Cherish Life / Promote Health

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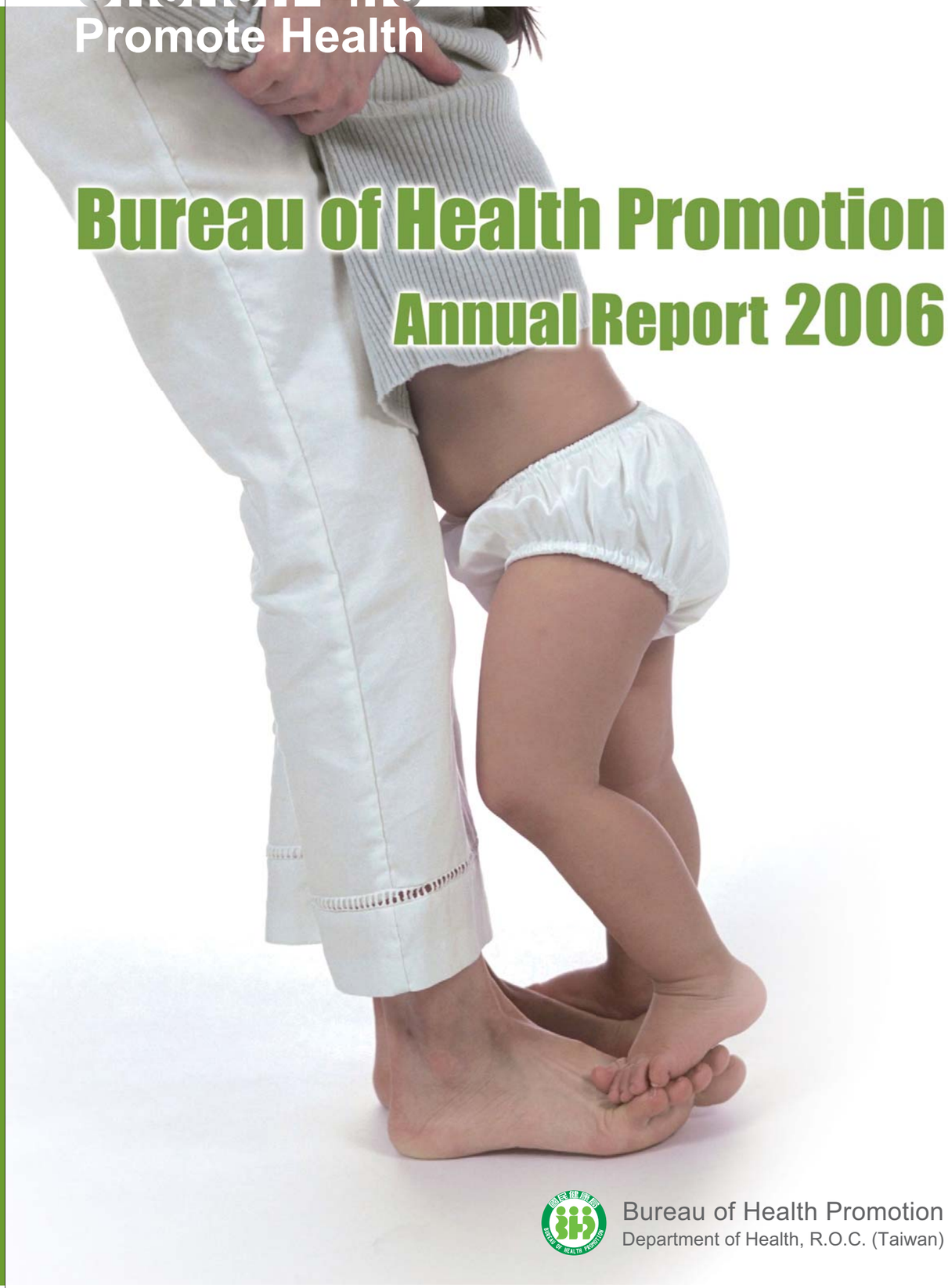
Cherish Life
Promote Health

# Bureau of Health Promotion
# Annual Report 2006



Bureau of Health Promotion
Department of Health, R.O.C. (Taiwan)

# Cherish Life
## Promote Health

# Content







Cherish Life







Promote Health

# Director General's Preface

Health promotion is one of the most important tasks of the World Health Organization (WHO), as stated in the Alma Ata Declaration, to achieve the universal objective of "Health for All," since the Ottawa Charter in 1986. But there are constant threats against the globalization of public health, especially after the establishment of the WTO. Health promotion pursues health equality for all by narrowing the gaps among different regions, various socio-economical and ethnic groups. Because health agenda are so diverse, priority setting in decision making is the most critical, considering the constraints of scarce resources. The Bureau of Health Promotion, of Department of Health, therefore must heed the current WHO health agenda and its topics in order to promote the evidence-based health care. Furthermore, the complicated results of the national researches in public health and ensuing decisions demand mandatory coordinated efforts with other ministries.

Dr. Bruntland, the former Secretary-General of the WHO, emphasized in the 2000 World Health Report that the best strategy to improve public health efficiency is to combine current medical providers and public health system. All kinds of integrated health promotion activities could be organized and introduced into different community settings - the workplaces, schools, armies, and hospitals - for grassroots empowerment. The Bureau of Health Promotion (BHP) also responds to the call of the WHO goal of health equity by making headways towards filling the gaps.

The six-year old BHP has held a vision of "Cherish Life and Promote Health" since its beginning. The efforts of the three previous director generals have established for the BHP a firm infrastructure and efficient execution. Dr. Sheng-Mou Hou, the Minister of the Department of Health, has stated four major tasks of the Department; to improve public health, to promote healthy lifestyles, to develop the biotechnology industry, and to participate in the international health concerns. In particular, the former two are closely linked with the BHP activities. In fact, health promotion increases public knowledge and as a result health-related business, because healthy life styles have become a fashionable trend. However, the BHP reminds the public that a healthy lifestyle does not need to be purchased, that it is a daily living concept and attitude. Information is readily available from various resources and can be integrated and managed to promote health and improve quality of life.

Health for all

The BHP has created a national information system providing the public with useful knowledge and concepts, targeting both individuals and specific groups. By encouraging schools, the workplaces, and communities for mutual care, by providing the health reminders, and by transforming health concepts into life and goals, everyone can thus be a health practitioner.

The Bureau of Health Promotion Annual Report 2006 was the first publication offering a complete and comprehensive report on health policy outcome and events produced since its establishment. The objective was to introduce to our citizens and foreign guests the recent national health promotion including policy planning, implementations, and achievements. We intend to present our work every year in order to share our visions and beliefs. It is my sincere wish that every employee of the BHP achieve the envisioned quality improvements and innovations.

Director General

Mei-Ling Ho Chiao

October 2006

Health for all

# Chapter 1

# Introduction





## Chapter 1 Introduction

### Background

The Bureau of Health Promotion (known as BHP) was established through a restructuring of the former Bureau of Health Prevention and Protection, the Institute of Public Health, the Institute of Population and Family Planning, and the Institute of Women and Children Health (Figure 1-1). It was established on the July12th, 2001, the first new bureau after the downsizing of the former Taiwan Provincial Government. The new Bureau unifies the public health prevention and health manpower and resources, develops and carries out the health promotion policies; in so doing, it thus functions more efficiently then before to attain the goal of government restructuring.

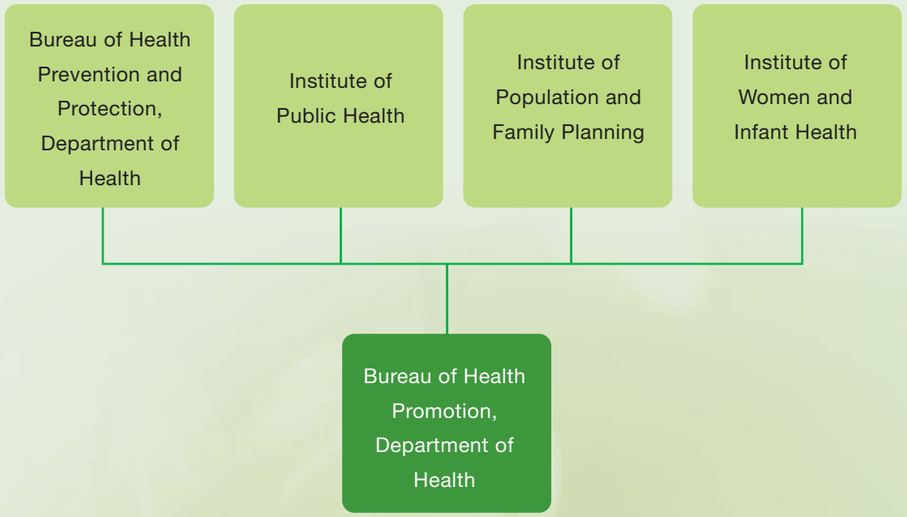



Figure 1-1 Bureau of Health Promotion reorganization; before and after



## Organization divisions

The BHP director general supervises all divisions' work. Below there are seconded by 2 deputy bureau directors and one secretary general. The organization structures are classified mainly as two groups: one is of human life cycles and the other is on supporting environment and processing of health information database. There are two centers and five divisions responsible for working units, together with the administration units as backup. The former are in charge of health promotion policy planning, financing, and implementation (Figure 1-2). Its mission is to promote health by using the most updated national health database and scientific evidences to make policy decisions. In addition, by appropriate budget reallocation, BHP reinforces basic health protection and creates supportive living environment for empowerment of community actions. Two approach ways can be used simultaneously, the one is to encourage the individual self-health management through health education, and the other combines all public health bureaus of all cities and counties, links up all levels of hospitals and clinics and NGOs as well. Both have been utilized to accomplish effective outcome and create a high quality of living environment for all.

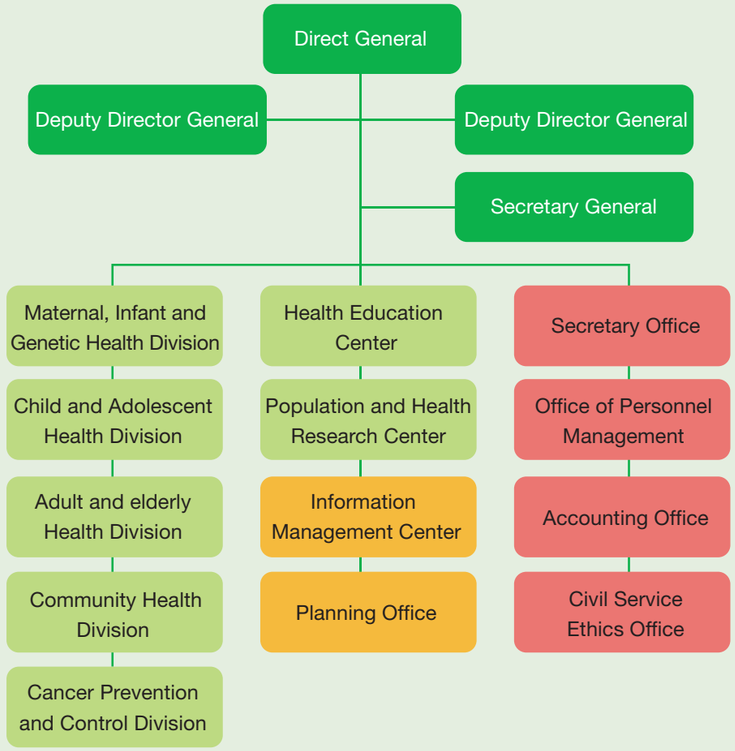



Figure 1-2 Organizational Chart of BHP

## Health promotion targets and challenges

Our society now faces population transition of aging society and decline in birthrate, with an increasing demand of health promotion and health care. BHP has been focused on more health researches specifically on women, children, adolescents, the elderly, and healthy community issues. Health information from surveys and investigations has been conducted and monitoring systems and databank built to collect key performance indexes and health statistics as references to detect problems and to provide guidance for policy planning and evaluation. All of the above use scientific approach to tackle the problems, through literature review to collect useful epidemiological information in order to find out risk factors. With available resources, evidence-based planning, carefully designed strategic actions, the target problem is estimated and analyzed to make priority setting for final decision making. Empower people with capacity building to practice healthy lifestyle for the prevention of mortality and morbidity. That is also our vision - "Cherish Life and Promote Health".

Health care is one of the major measurements of an advanced country. Healthy, productive people are the most valuable asset of our nation, with regard to its competitiveness and ability to sustainable development. In order to face the four major health problems of the future; decline in birth rate and increase of new immigrants, aging society, diversified lifestyles & living environments, women's health and increased social inequity. Information of BHP policy, visions, goals, and strategies are presented in figure 1-3:

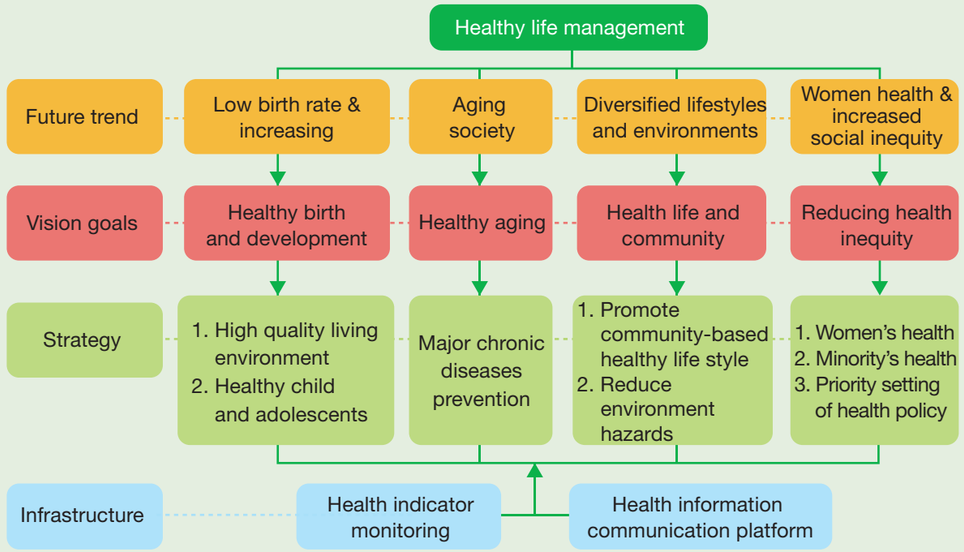



Fig 1-3 BHP visions and action plans



## 1. Healthy birth and development

1. Establish high quality living environments, which offer quality mother friendly childbirth environments; promote current breast-feeding policies; and develop further community service networks for pregnant women and newborn infants.
2. Healthy children and adolescence; to conduct studies about vision, dental care, and so on.

## 2. Healthy aging

1. Major chronic disease prevention and control including longitudinal and cohort studies for hypertension, high blood glucose, hyperlipidemia, and a national stroke registry data bank.
2. Conduct investigations on cancer prevention and control by using national diagnostic and treatment data to analyze contemporary health care systems, and outcome such as survival rates according to cancer staging in order to improve the quality of the cancer registry system.

## 3. Healthy community and lifestyle

1. Promote community-based healthy lifestyle plans able to address community health problems. Create Taiwan networks for healthy cities, safe communities, and health promoting hospitals.
2. Cooperation among different government ministries/departments and professional fields to conduct health-risk assessments in order to reduce health hazards. These include horizontal dimensions from inter-governmental communication as well as vertical dimensions of local county/city intersectoral communications. It is to formulate standard operational procedures for developing appropriate crisis management protocol of environmental hazards used by local health authorities.
3. Major health agenda plans, concerning their content, context, and communications for national health policy decision making.
4. The Tobacco Control Act and related regulations revisions; proceeding on tobacco surveillance and prevention controls, promotion of smoke-free environments, provisions for multi-channel smoking cessation services, and human resources training.

## 4. Bridging health disparities

1. Assessment of priorities of health policies; prioritization of women's health policy.
2. Improve the health of minorities.

## 5. Infrastructure networks of health promotion

1. The preventive health care services have been covered by the national budget of the BHP since 2006, and hence have been monitored to ensure service quality.
2. Using the health indicator monitoring system to continue examining the national health status, and record changes or trends of the entire population or specific groups (infants, children, adolescents, the elderly and women, etc.) Develop new research methods to improve information quality.
3. Establish health information network as a gate or platform for communication.
4. International cooperation and communication.

# Chapter 2

# Healthy Birth and Development





## Chapter 2 Healthy Birth and Development

### Section 1. Health conditions for infants, children, and adolescents

The United Nations Children's Fund has addressed the children's rights declaration by emphasizing, "Children are not yet physically, and mentally mature, therefore, they should be specially protected, cared for, and secured by law; they have the right to live in an environment full of happiness and love". The World Health Organization brought up another topic in 2004 saying, "Every child has the right to live in a healthy and secured family, school, and community; live, learn, and play under such supportive environments that would enable them to grow, develop, and prevent diseases". Therefore, providing a healthy birth and growth development for our children are issues that government, parents, and the public are highly concerned with solving.

Social transition and multi-cultural infiltration has led to a change in social patterns, family structures, and functions, which can be found in healthcare delivery system reform, economics, traffic conditions, social and physical environments, international marriages and diverse culture interactions, high divorce rates, generation gaps, the fast food culture, and entrance examination pressures, etc. It creates even more complex and difficult health problems for infants, children, and adolescents, which include developmental delay of children, premature birth, child obesity, child abuse, injuries, myopia, dental caries, teenage smoking, AIDS, substance abuse, suicide, malnutrition, and single parent problems. Therefore, our Bureau is planning policies specifically to facilitate the physical and mental development of infants and children as well as to consolidate healthcare delivery systems to create a healthy and safe environment.

Both neonatal and infant mortality rates are two important indicators to evaluate the quality of healthcare for women and children of a country or certain area. Neonatal mortality rates in Taiwan have dropped from 3.1‰ in 1981 to 2.7‰ in 2006, with infant mortality rates dropping from 8.9‰ in 1981 to 4.6‰ in 2006 (Figure 2-1). Certain conditions originating in the perinatal period are the major cause of death for neonatal infants. Although neonatal and infant mortality rates have decreased significantly, however, instead of no decline in premature birth rate, which on the contrary has increased from 3.8% in 1989 to 9.35% in 2006. A birth weight of lower than 2500g for a premature birth rate is increased from 4.4% to 8.2% in 2006. Since 1995 all premature births have been under full coverage scheme of the National Health Insurance program as a major illness. Currently, the survival rate for premature infants, with very low birth weights of lower than 1500g, has increased from 60.0% in 1995 to 82.9% in 2006.

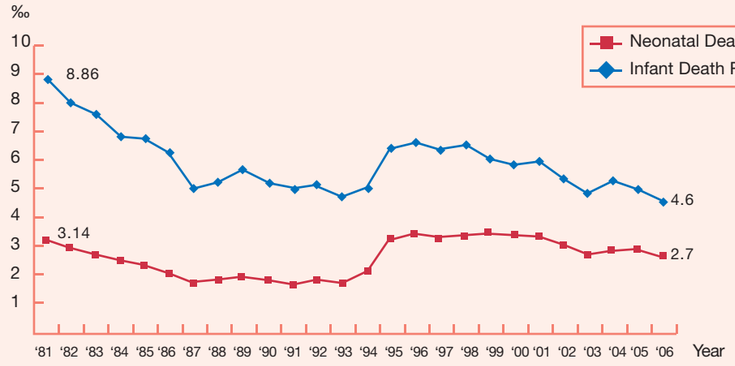



Figure 2-1 Neonatal death rates and infant death rates in recent years
Data source: Statistic Office of the Department of Health

A child with delayed development is related to a low birth weight or congenital metabolic disorders. Early treatment may reduce the risks of long-term disability or mental handicap. With current BHP policy and medical technology, the screening rate in congenital metabolic disorders is greater than 99%; however, the number of children reported with delayed development is relatively low. In 2006, there were 12,688 children between 0-6 years old suffering from delayed development, the most of them were reported from hospitals and clinics (5,945), the second source was reported from social welfare institutes (2,879), furthermore, 53.5% of these children reported, were between the ages of 3-6 years old. Moreover, incidences of congenital neonatal hearing impairments were 3‰, but only 20% of newborns received hearing screen tests. In comparison, the incidences of preschool children with congenital hearing impairment were 2%, but the screening rate was 63%. Hearing impairments not only influence children's physical and mental development but also incur a burden to the health care system of the country. With regard to improvements to infant and children development, breast feeding promotion policy was implemented to improve infant and child development. The percentage of exclusively breastfeeding babies, at the age of one month, was significantly increased from 5.4% in 1989 to 33.2% in 2004. The percentage of total breast feeding babies of one month old increased from 30.8% in 1989to 54.2% in 2004. Therefore, it is very important to identify any early abnormality for better chance of treatment. Besides, it is imperative to maintain a complete health network system for the purpose of healthy infant development.

From the 2001-2002 National Nutrition and Health Survey in Taiwan performed by the Department of Health, it was found that 15% of 6-12 year-old children were overweight, and 12% were obese. The Ministry of Education performed another health condition survey in 2005 targeting at elementary and junior high school students. It was found that 15% of 6-12 year-old students were overweight, and 10.3% were obese (Table 2-1). Child obesity is still a very important issue.

Table 2-1 Neonatal death rates and infant death rates in past years

| Year | Overweight[1] | | | Obesity[2] | | |
|---|---|---|---|---|---|---|
| | Total (%) | Male (%) | Female (%) | Total (%) | Male (%) | Female (%) |
| 2001-2002[3] | 15.0 | 15.5 | 14.4 | 12.0 | 14.7 | 9.1 |
| 2004[4] | 12.7 | 14.1 | 11.4 | 11.5 | 13.7 | 9.3 |
| 2005[4] | 15.0 | 15.9 | 14.0 | 10.3 | 10.9 | 9.7 |

Appendix: 1. Overweight: BMI >85th percentile
2. Obesity: BMI >95th percentile
3. Data source: 2001-2002 National Nutrition and Health Survey in Taiwan
4. Data source: National elementary and junior high school student health survey (Ministry of Education)

Among to the 10 major causes of death, accidents and adverse effects top all other death causes in age groups of 5-14 and 15-24 years of age. According to the statistical information on the five leading causes of death for children during years 2001-2006, accidents and adverse effects were ranked as first among ages 1-14 (Table 2-2), but especially for those aged 0-4 years old (Figure 2-2). The top five injuries were traffic accidents, drowning, fire, falling, and intoxication (Table 2-3). It was found from the 2005 National Health Information Survey (NHIS) data that 13.2% of children seeking medical care were due to injuries, among which the top three were falling, traffic accidents, and burns (Table 2-4).

Table 2-2 Major causes of death among 1-14 years old children during 2001-2006 in Taiwan (per100,000 death)

| Rank \ Year | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|---|---|---|---|---|---|---|
| 1 | Injuries (10.08) | Injuries (7.86) | Injuries (8.79) | Injuries (6.94) | Injuries (6.89) | Injuries (6.46) |
| 2 | Malignant Tumor (3.26) | Malignant Tumor (3.10) | Malignant Tumor (3.34) | Malignant Tumor (3.55) | Malignant Tumor (2.98) | Malignant Tumor (3.32) |
| 3 | Congenital Deformity (2.56) | Congenital Deformity (2.76) | Congenital Deformity (2.25) | Congenital Deformity (2.25) | Congenital Deformity (2.09) | Congenital Deformity (1.62) |
| 4 | Heart Disease (0.70) | Heart Disease (0.57) | Homicide (0.63) | Heart Disease (0.88) | Heart Disease (0.66) | Homicide (0.75) |
| 5 | Pneumonia (0.57) | Pneumonia (0.57) | Heart Disease (0.60) | Pneumonia (0.66) | Pneumonia (0.66) | Heart Disease (0.55) |

Data source: Statistical office of Department of Health

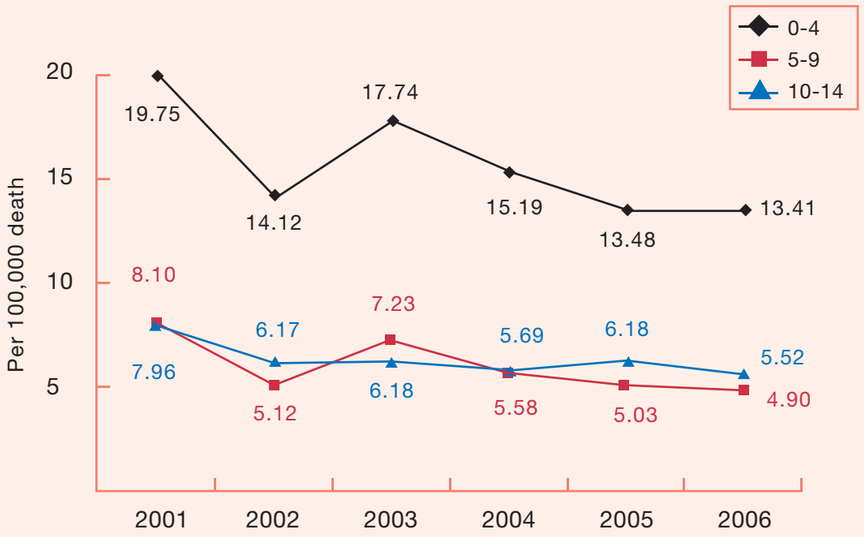



Figure 2-2 Injuries death rates of Taiwan for 0-14 year old children in recent years

Data source: Statistical office of Department of Health

Table 2-3 Main causes of injuries for children under 15 years old in Taiwan

| Rank / Age | 1st | 2nd | 3rd | 4th | 5th |
|---|---|---|---|---|---|
| 0-4 | Transport Injuries | Drowning | Fall | Fire | Intoxication |
| 5-9 | Transport Injuries | Drowning | Fire | Fall | Intoxication |
| 10-14 | Transport Injuries | Drowning | Fire | Fall | Intoxication |

Data source: Statistical office of Department of Health





Table 2-4 Prevalence rate of injuries seeking medical help of children between 0-12 years old in Taiwan, 2005

| Types | Sum | |
|---|---|---|
| | n=3,675 | % |
| Falls | 286 | 7.8 |
| Traffic accidents | 53 | 1.4 |
| Burns and scalds | 39 | 1.1 |
| Sprains and strains | 18 | 0.5 |
| Choked by toy, fish bone, food, or foreign bodies | 15 | 0.4 |
| Cutting wounds | 11 | 0.3 |
| Abrasions | 9 | 0.2 |
| Pinch wounds | 6 | 0.2 |
| Contusions | 6 | 0.2 |
| Hit by foreign body | 6 | 0.2 |
| Food Poisoning | 5 | 0.1 |
| Swallowed the wrong medicine | 3 | 0.1 |
| Animal bites | 2 | 0.1 |
| Chemical burns | 1 | 0.0 |
| Choked by smoke | 0 | 0.0 |
| Others | 26 | 0.7 |

Data source: National Health Survey 2005

Myopia is a very important health problem for Taiwanese children. From the prevalence investigation of myopia (≧-0.25D), which targeted 6-18 year old students during 1986 to 2006, the prevalence rate of 6-year-old students has increased enormously, from 3% in 1986 to 19.6% in 2006; for 12-year-olds, 27.5% in 1986 to 61.8% in 2006 (Table 2-5). The percentage of high myopia 12-year-old students has also been significantly increased from 0.7% in 1986 to 2.5% in 2006 (Table 2-6). As for other countries, although it was not possible to direct compare with the same age group and year, the prevalence rates of myopia of Taiwanese children are much higher than all other countries, except Singapore. The rate of high myopia (≧-6.0D) is also higher than South East Asia and European countries. This indicates that myopia occurs early in Taiwanese school children and the related studies show that the earlier myopia occurs, the greater the opportunity of becoming high myopia in the future. Therefore, eyesight care for myopia prevention among Taiwanese children is highly urgent and worth greater attention.



Table 2-5 Prevalence of myopia (≧-0.25D) on age 7-18 in Taiwan, 1986-2006

| Year / Age | 1986 (%) | 1990 (%) | 1995 (%) | 2000 (%) | 2006 (%) |
|---|---|---|---|---|---|
| 6 | 3.0 | 6.5 | 12.8 | 20.4 | 19.6 |
| 12 | 27.5 | 35.2 | 55.8 | 60.6 | 61.8 |
| 15 | 61.6 | 74.0 | 76.4 | 80.7 | 77.1 |
| 18 | 76.3 | 75.2 | 84.1 | 84.2 | 85.1 |

Data source: Myopia epidemiology investigation between ages of 6-18 in Taiwan

Table 2-6 Prevalence of high myopia (≧-6.0D) in age 7-18 in Taiwan, 1986-2006

| Year / Age | 1986 (%) | 1990 (%) | 1995 (%) | 2000 (%) | 2006 (%) |
|---|---|---|---|---|---|
| 6 | 0.1 | 0.2 | 0.0 | 0.2 | 0.0 |
| 12 | 0.7 | 0.5 | 2.0 | 2.4 | 2.51 |
| 15 | 3.1 | 6.1 | 7.5 | 12.7 | 6.64 |
| 18 | 9.2 | 6.7 | 15.9 | 20.8 | 16.85 |

Data source: Myopia epidemiology investigation between the ages of 6-18 in Taiwan

For the health burden of dental caries, BHP performed a national oral health survey for under age 6 children in 2005 (Table 2-7) and for 6-18 years-old students in 2006, and found an increasing caries rates as age grows (Table 2-8). From the results of the survey, although there was a decreasing pattern on cavities prevalence after implementation of all kinds of oral health policies between 2001 to 2006, it still showed that Decayed, Missing, Filled Teeth Index (DMFT Index) for 12-year-old permanent teeth is 2.58 (Table 2-9) which is still far from the WHO DMFT Index standard of 2 for 12-year-old in 2010. Therefore, reinforcement of children's oral healthcare policy deserves further work to do.

Table 2-7 Oral health status under age 6 in Taiwan, 2005

| Age | DEFT index (No.) of primary dentition | Caries prevalence rate of primary dentition (%) |
|---|---|---|
| 1-2 | 0.23 | 7.25 |
| 2-3 | 1.37 | 40.12 |
| 3-4 | 3.18 | 58.11 |
| 4-5 | 4.98 | 72.59 |
| 5-6 | 5.58 | 73.65 |

Data source: National oral health survey for children under 6 years old (2005)

Table 2-8 Oral health status between ages of 12-18 in Taiwan, 2006

| Age | DMFT index (No.) of permanent dentition | Caries prevalence rate of permanent dentition (%) | Filling rate of permanent dentition (%) |
|---|---|---|---|
| 12 | 2.58 | 37.30 | 60.01 |
| 13 | 3.78 | 55.17 | 52.17 |
| 14 | 4.23 | 55.92 | 54.12 |
| 15 | 4.52 | 54.89 | 57.80 |
| 16 | 4.72 | 60.77 | 51.94 |
| 17 | 5.14 | 65.77 | 50.69 |
| 18 | 4.86 | 64.20 | 50.79 |

Data source: National oral health survey for students between 6-18 years old (2006)

Table 2-9 Oral health status for 12-year-old children in Taiwan during 1981-2006

| Year | DMFT index of permanent dentition | Caries prevalence rate of permanent dentition (%) | Filling rate of permanent dentition (%) |
|---|---|---|---|
| 1981 | 3.76 | 85.1 | 14.0 |
| 1990 | 4.95 | 92.0 | 12.0 |
| 1995 | 4.22 | 85.0 | 28.7 |
| 2000 | 3.31 | 66.5 | 54.3 |
| 2006 | 2.58 | 37.3 | 60.0 |

Data source: National oral health survey for students between 6-18 years old (2006)

Open sexual attitudes and young pregnancies have become important health issues recently. Investigations conducted in 1995 and 2000 highlighted the sexual experiences of high school students in Taiwan. Male percentage was increased from 10.4% in 1995 to 13.9% in 2002, and female percentage was increased from 6.7% to 10.4%. The results showed that 27% of males and 34% of females did not adopt any contraception methods during sexual intercourse. The Ministry of the Interior conducted a population survey in 2006, which showed the fertility rate for teenaged Taiwanese girls of age between 15-19 years old was 6.6‰. This clearly demonstrated a decreasing pattern as compared to 14.1‰ in the year 2000 (Figure 2-3). Teenagers are physically and mentally not mature enough, neither are they financially stable, therefore, when they have children, adverse affect occur on both families and future careers of these young mothers. Thus under age pregnancy is an important adolescent health issue that can not allow for negligence.

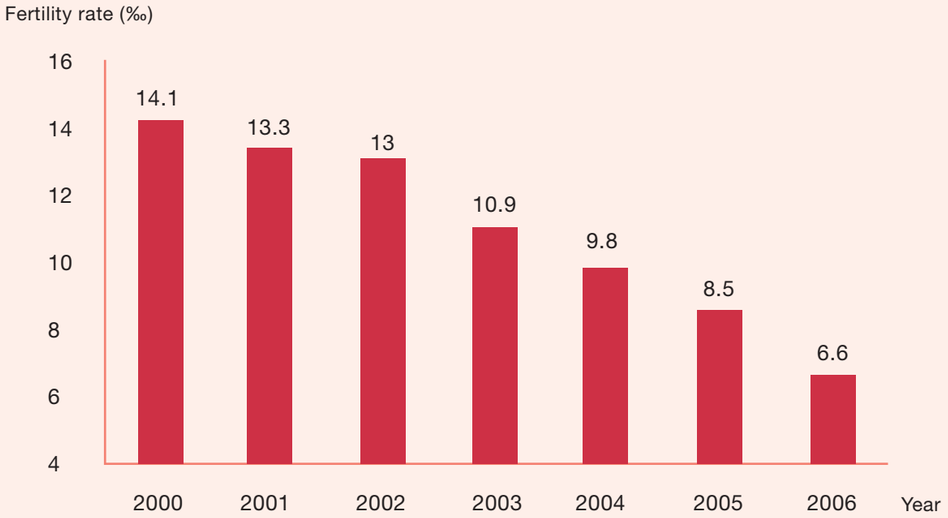



Figure 2-3 Under age women's fertility rate of ages between 15-19, in Taiwan (2000-2006)

Other aspects such as smoking, drug abuse, and mental health issues are also important issues, which require attention. A survey conducted in 2005 targeting high school students smoking behaviors showed the percentage of smoking adolescents between the ages of 16-18 years old was 14.0%, with 21.7% male and 7.8% female. Another survey conducted in 2004 targeting junior high school students smoking behaviors showed a smoking rate of 6.5%. A study targeting junior and senior high school students on drug abuse was performed in 2004, which showed a percentage up to 1.6%. Regarding adolescent's mental health issues, suicide has become the 8th, and 2nd, out of the 10 major causes of death in adolescents with respect to 5-14 years-olds and 15-24 years-olds.

Aside from these complex and persistent children and teenage issues, which require intense policy planning, students actually spent most of their time at school for learning, playing, and rest. Therefore, by promoting Healthy School concepts, which combine both health and educational resources together in accordance with guidelines from WHO, will create coherence between teachers and students, promote community participation, and establish healthy and safe school environments. There are many countries all over the world, which have effectively addressed health and relevant social economic issues, improved health education, and promoted public health systems through Healthy School programs.

## Section 2. Policy and Planning

Due to the complicated health natures with infants, children, and adolescents, and apart from considering specialties of each specific group, it is required that comprehensive plans be created for all aspects such as reconstruction of available resources, health policy planning, establishment of complete healthcare services, and support systems, which promote a healthy and safe environment.

### 1. Organization Integration

As for the purpose of children health promotion, the Children's Health Promotion Committee was established to promote future prospective policies and assist in communication between NGOs and all levels of governments.

### 2. Establish a complete healthcare service

#### 1) Health and Welfare for Children

Subsidize children health checks for preventive medical services of hospitals and clinics and establish health management systems and counseling.

#### 2) Newborn Screening Service

Newborn screening services have been available since 1985. Since 1997, the average screening rates were all up to more than 99% every year. Newborns early diagnosed as positive will be referred for treatment and genetic counseling to reduce the damage of disorders.

#### 3) Delayed developmental child screening and the suspected case follow-up management

Public Health Bureaus in all counties and cities performed "Delayed developmental child screening and the suspected case follow-up management plans since 2003 and target numbers were set for screening. In 2006, the goal of target numbers for screening was set to be larger than 15% of the total children population between 0-3 years old, for all cities and counties in order to early find out and early treatment.



### 4) Complete services for very low birth weight premature infants

Provide a complete service for very low birth weight premature infants, combining both hospital care and public health care systems. Database and tracking systems of very low birth weight premature infants after discharged have been constructed in the years of 2006-2007.

### 5) Breast feeding

Carry out Baby-Friendly Hospital Initiative: Taiwan's version of an accreditation program based on the Baby-Friendly Hospital Initiate: ten steps to successful breast feeding, set by the WHO and the United Nations Children's Fund which attracts attention from the general public and hospital to increase the breast feeding rate.

### 6) Hearing health and welfare for infants

1. Establish a specific website for neonatal hearing screening, and a hearing screening database system for case follow-up.
2. Establish hearing healthcare resource centers located in southern and northern Taiwan to assist local gynecologists performing hearing screening services.
3. Establish speech, language, and hearing disability protocols for preschool children, covering screening, prevention, and health education.
4. Promote hearing screening services for preschool children.

### 7) Vision health

1. Efforts of promoting visual health for school children have been undertaken to increase collaborations between the public and private sectors, such as the Ministry of Education, the Department of Social Work of Ministry of Interiors, Taiwan Ophthalmologic Societies, NGOs, and etc.
2. Conduct a nation-wide mass screening program of strabismus, amblyopia, and vision screening services among preschool children to ensure abnormal cases will be early detected and receive adequate treatments.
3. Establish community visual health centers and service networks to provide abnormal case referral, treatment, and consultation.
4. Conduct vision health workshops to enhance the professional knowledge of community medical personnel, and to assist them with advocating health care for eyes and prevention of myopia.
5. Strengthening promotions for vision health, the production of vision health educational materials, such as manuals, brochures, audio, and other information disseminated to primary health centers, kindergartens, and nurseries.

### 8) Oral Health

1. NHI preventive healthcare service provides at least 5 periodic oral screenings and corresponding health educations for children under 7 years old. Preventive dental care services provide two free topical fluoridations of teeth each year for children less than 5 years.
2. Local public health bureaus connect with dental associations and dental clinics for oral screening services and healthcare education targeting 6-year-old children in kindergartens.
3. Fluoride mouth wash programs for the prevention of caries have been promoted for all elementary students. Training workshops of this program have been conducted by the Taiwan Dental Association, the attendants including dentists and school staff seeds to promote oral health education at all schools.

### 9) Health promotion for adolescents

1. Sex education projects for adolescents: Conduct teenage sexual education seed programs for teachers, to develop core course activities, and new websites for sex education.
2. Assist hospitals to establish teenager sex health education consultation services, which include medical treatments, referrals, consultations, and counseling services.
3. Teenager reproduction information promotion: Develop outpatient clinics of friendly, private, respectful care, which will provide contraception methods, consultation, termination of first trimester pregnancy, or other types of services.

## 3. Establish a healthy and supportive environment

### 1) Injury control and safety promotion

1. Combine business, government, and educational aspects to create intersectoral cooperative system, establish an injury control team to promote plans to kindergarten children; household safety review and changes; and statistical data entries of accidental deaths for each county and city.
2. Promote safety plans for schools and communities.
3. Establish different child family care models with respect to urban or rural foreign spouses.

### 2) Integrate resources from all different areas with the Ministry of Education to promote healthcare plans at schools

1. The schools employ the six strategies of WHO, which are health policies, social environments, community relationships, personal skills, and health services to promote health plans in order to create safe school environments, and promote physical and mental health for all teachers and students.
2. Promote Health School plans at elementary, junior, and senior high schools.
3. Establish school health supporting systems for sustainable development.

# Section 3. Implementation results

## 1. Organize resources and health policy programs

On 29th March 2006, professor Ming-Liang Lee, the committee chairman, gathered the professionals from various areas such as public health, health promotion, genetic medicine, pediatrics, children social welfare, child abuse prevention, and education and nursing to establish a committee (Figure 2-4). "Children physical and mental development team", "Children developing environment team" and "Children medical healthcare policy team" prioritized the 3 health issues for promotion which are children obesity, child abuse and children health.

Committee members meet every 3-4 months to discuss about children obesity, injury, and health care expenditure, and then convene a press conference to attract public attention to children's health and plan to write Year 2020 Children Health Policy White book draft.

## 2. Establish a complete supporting system

Figure 2-4 Establishment of the 1st Children's health promotion committee, DOH

### 1) Children health and welfare service

Children under 7 years old are provided with 9 times of periodic preventive health check up. In 2006, there were 1,627,353 children-times underwent these services, it is approximately 85.5% of the total numbers of children. The 2006 children preventive service utilization is increased 12.8% compared with year 2005, and total health check up rates increased 12.4% as well.

### 2) Newborn screening service

In 2006, 204,554 newborn were screened (the coverage rate was 99.4%), and 3,751 infants were detected as abnormal. Those consisted 3,491 infants with Glucose-6-Phosphate Dehydrogenase Deficiency (G6PD) (1.7%); 217 infants with Congenital Hypothyroidism (0.1%); 12 infants with Phenylketonuria (PKU); 4 infants with Homocystinuria; 1 infant with Galactosemia; 18 infants with Congenital Adrenal Hyperplasia; 0 of infant with Maple Syrup Urine Disease (MSUD); 0 of infant with Medium Chain Acyl-CoA Dehydrogenase Deficiency; 4 infants with Glutaric Aciduria type I (GA1); 2 infants with Isovaleric Academia (IVA); and 2 infants with Methylmalonic academia (MMA).

### 3) Children with delayed development screening

In 2006, 320,852 children had delayed development screening, 2,830 identified suspected cases were found as well as 2,362 children, who were reported and referred (Figure 2-5). The National Taiwan University was authorized to conduct; reliability validity, and effectiveness analysis for the childhood developmental screening test. The purpose of this study was to investigate the reliability and validity of the developmental surveillance indicators in the Child Health Manual and to analyze the cost and effectiveness of the Children's Health Manual of BHP. Chang-Hua public health bureau was also authorized to produce demonstration project for both development screening on 3-4-year-old kindergarten children and integration model for children's healthcare services in order to evaluate its sensitivity able to early detect delayed development children.


Figure 2-5 Posters of children's development screening programs

9,000 children were expected to be screened and the data would also have 1 training for pediatric doctors as well as 3 other training programs for the primary health center, kindergarten, and day care staff.

### 4) Establish very low birth weight premature infants database and discharge planning and case management

During 2005-2006, the Society of Neonatology, R.O.C was authorized to establish very low birth weight premature infant's database and care network services for discharge planning and case management. Public health nurses from each primary health center will follow up their developing conditions. This database demands the registration of premature infant weights of between 400g and 1500g of all hospitals. Registration contents include birth conditions in hospitals, care methods, complications, discharged condition, and care information, etc. After discharge the information will be updated and managed by public health nurses.

### 5) Breast feeding

In order to improve breast feeding rates, create breast feeding friendly environment and implement baby-friendly hospital initiatives, which is Taiwan's version of an accreditation program. It intended to change the practices of hospitals and postpartum maternal care facilities through a ten-step implementation process. Decrease the distribution of free and low-cost supplies of formula milk to aforementioned health care facilities, in order to aid in the development of environment where breastfeeding is seen as the norm and feeds infant with the best start. Eighty-two hospitals and maternal facilities were approved by the accreditation program in 2006 and were provided with assistance program for the baby-friendly hospital initiative to improve their willingness and ability. In addition, this Taiwan's version of the baby-friendly hospital initiative help postpartum maternal care facilities and assist their preparations for accreditation, thereby, achieving the goals.

A toll free consultation line (0800-870870) has been established to answer breastfeeding related problems with an average of 27.8 phone calls being answered everyday. A breastfeeding website has been set up with an average of 33,648 visitors every month. A new model of a community support network, which includes training for breastfeeding volunteers and the further development of support groups to all cities and counties, which provides correct information and local support. For medical professionals to receive prompt updated knowledge, 4 newsletters a year are provided along with internet services where questions can be answered by breastfeeding experts. A consensus conference is held every year for members working on breastfeeding promotions, including assessors of the accreditation program and counselors of an assistance program, trainers, officials of health departments, non-government groups, and breastfeeding experts, sharing updated knowledge, experiences, and discussions of strategy in breastfeeding. To encourage and sustain breastfeeding programs and create breastfeeding friendly environments, education materials are produced and distributed to public through mass media. Establishment of mother friendly space for breastfeeding in the work place are encouraged and assisted by the Bureau of Health in each cities and counites. Reinforcement of intergovernmental cooperation is carried out to create breastfeeding friendly workplaces.

### 6) Hearing health and welfare for infants

1. Establish a health discussion area within BHP website: Establish infants' hearing information website to provide medical professionals and the public with hearing healthcare knowledge.
2. Establish free consultation hotline for infant's hearing health and welfare (0800-800-832 and 0800-889-881). Total number of 15,186 people have called the hotline throught a year with an average number of 1,318 calls every month. Consultation percentages regarding children under 3 years old has been raised to 75% compared with the results of 46% before the free hotline was established. This has proven to be effective in shorting treatment durations for hearing impaired children.
3. Promote hearing screening for all preschool children. In 2006, 154,214 children underwent screening. Those who did not pass the screening were referred to hospitals for consultation; the follow-up rate was increased to 97.6%. It was confirmed that there was 21.6% of those initial abnormal cases, which were diagnosed positive in the first screening examination. 71.9% of them were diagnosed as mildly hearing impaired, 12% of them were diagnosed as moderately to severely hearing impaired, and 16% of them were diagnosed as unknown. This demonstrates that this plan has achieved the goal for early detection and treatment.
4. After promoting hearing southern and northern infant hearing healthcare resource centers, 40 hospitals in 12 areas were involved in newborn hearing screening services and the exam rate was 67.7% of the total number of their newborn babies.

### 7) Vision health

1. Establish vision health consulting committee to discuss and plan visual health policies.

Figure 2-6 Integration network of ophthalmologists to provide school children screening of stereo vision

2. Arrange nation-wide mass screening programs targeting strabismus and amblyopia for all preschool children in 25 cities and counties. To strengthen the abnormal referral cases all aspects of early detection, treatments, follow-up, and case management. In 2006, 265,699 children were screened and 26,925 were detected as abnormal with a follow-up percentage up to 99%.
3. Subsidize 3 community visual health centers and 11 community visual health networks, combining local public health workers with ophthalmologist to establish visual health services in order to provide consultation, treatment, and referral services (Figure 2-6).
4. Conduct training workshops for community medical personnel to improve on screening quality and visual health of children and the elderly.
5. Conduct training workshop for children's health promotions for staff of local public health bureaus to improve their basic visual health knowledge and vision screening techniques.
6. In response to WHO, the second Thursday of October is set aside as World Sight Day. BHP supported ophthalmology societies and non governement organizations to arrange activities such as "love and protect your eyes" including press conferences, "protect the eyes, climb the mountain" activity, professional volunteer consultation and eye protection seminars.

### 8) Oral health

1. Utilization rate of free fluoridations of teeth for children under 5 years old was increased from 2.5% in 2004 to 9% in 2006.
2. Fluoride mouthwash program for the prevention of cavities for elementary school children was implemented. 2,655 elementary schools with approximately 1,800,000 children were involved, and the coverage rate is 98.5% (Figure 2-7).

Figure 2-7 Outreach of dentists to primary schools with fluoride mouthwash and gargle education to prevent dental cavities

### 9) Health and promotion for adolescents

1. Adolescent healthcare consultation services

Adolescents healthcare consultation service was set up through local hospitals to provide reproduction health consultation and various outreach community services to teenagers. In 2006, 37,526 people had the service, 795 school speeches were made with 148,071 people attending and 299 community promotion lectures were made with 19,434 people attending.

2. Teenage reproduction health consultation services- “Teen’s happiness NO. 9” (Figure 2-8)

In 2006, there were 4 hospitals and clinics; Far Eastern Memorial Hospital, E-Da Hospital, Dr. Wen-Lon Chen Gynecology, and Dr. Jian-Ming Chen Gynecology, which provided 359 teenagers with medical or consultation services, 181 underwent medical treatments, and 178 had consultation services.

3. Sexual education for seed instructors and human resources training

For increasing appropriate sex knowledge among social workers, trainers, and kindergarten teachers and providing consultation skills, there will be 113 well-trained seed instructors for sex education who will carry out 100 study seminars when they return. In addition, for improving teenager sex knowledge, targeting those who work at public health bureaus, “teenage sexual education seminars” have been arranged, with 44 members in training.


Figure 2-8 Consultation services of the adolescent reproduction health clinic

4. Teaching materials production

Production of sex education materials such as penis models, multi-media CD, condoms, and love cards are provided for sex education promotion in schools and all public health bureaus to use with production of a teaching video entitled “Love AP class- youth fellows” to help junior and senior high school teachers to use. 158 people attended the outcome performance conference.

5. Education, promotion, teaching, and contraceptive case management of underage pregnant women

3,286 activities on teenage sex educational promotions, with 560,114 attended. Up to 87.8% were taken into practice on contraceptive case management of nationwide underage pregnant women.

6. Young website for teenagers (http://www.young.gov.tw/)

There are 3 email addresses including teenagers’, parents’, and teachers’ which provided for online consultation services. In 2006, there were more than 480,000 website visitors and 3,720 replied were made. Arrange sex education promotion activities on the internet with an estimated number of 3,000 joining the activity.

## 3. Establish healthy and supportive environment

### 1) Children’s injury prevention and safety promotion

1. Establish and promote plans on education for children’s household safety (Figure 2-9). There were 11,431 families were visited and advised for how to create a safer environment.
2. Establish child care models with respect to urban (Miaoli county) or city (Hsinchu city) style foreign spouse.
3. According to international school safety verification standards of WHO, choose 4 schools for experiment, from which to build local safe school promotion models.
4. Conduct safe community website planning in Taiwan, establish community promotion centers, and 4 support centers located in northern, middle, southern, and eastern area in order to guide 9 new developing communities for all areas of safety tasks.


Figure 2-9 Minister Sheng-Mou Hou visited children’s home safety inspectior training workshops

### 2) Health promotions in schools

1. There are an estimated 516 health promotion schools, which is 15% of all elementary and junior high schools. Among them are 367 elementary schools (13.8%), 123 junior high schools (10.8%), and 26 senior high schools (5.5%). Tobacco control and betel nut prevention are compulsory discussion topics for all different levels of schools. In addition, depending on the required evaluation of each school, oral healthcare, vison health, physical activity / fitness and diets, sex education (including AIDS prevention), safety education, cardiopulmonary resuscitation procedures, mental health promotion, safe drug usage, drug abuse prevention, infectious disease prevention, and consumer health, etc. are optional topics for discussion. The first 3 most favorite optional topics for school promotions are health conditions, oral healthcare, and vision healthcare (Table 2-10).

Table 2-10 Optional health discussion topics distribution patterns of health promotion schools in 2006

| Optional Health discussion topics | Number of school | Percentage |
|---|---|---|
| Tobacco Control | 516 | 100.0 |
| Betel nut prevention | 516 | 100.0 |
| Physical activity / fitness and diets | 263 | 51.0 |
| Oral health | 165 | 32.0 |
| Vision health | 131 | 25.0 |
| Safety education and first aid | 84 | 16.0 |
| Sex education (includes AIDS prevention) | 70 | 14.0 |
| Mental health promotion | 32 | 6.2 |
| Safe drug use and drug abuse prevention | 25 | 4.8 |
| Infectious disease control | 9 | 1.7 |
| Consumer health and food safety | 8 | 1.6 |

2. Establish complete supportive systems and division structures (Figure 2-10, Figure 2-11)

(A) Health promoting school supportive network

For combining central and local government powers, a complete supportive network was established. In 2006, 53 professional scholars set up professional counseling teams to assist and guide 18 counties and cities to establish local support teams and complete the counseling manuals. Providing guidelines on school promotion to counselors as well as providing multi-channel school, telephone, internet on line Q&A consultation.

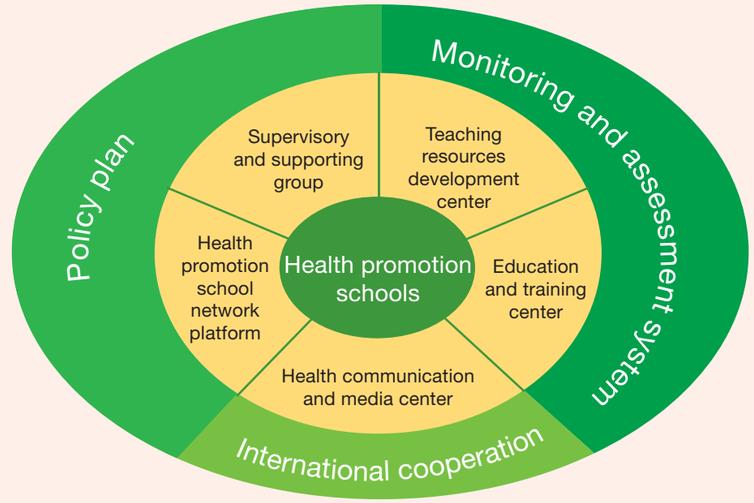



Figure 2-10 Health promoting school support network

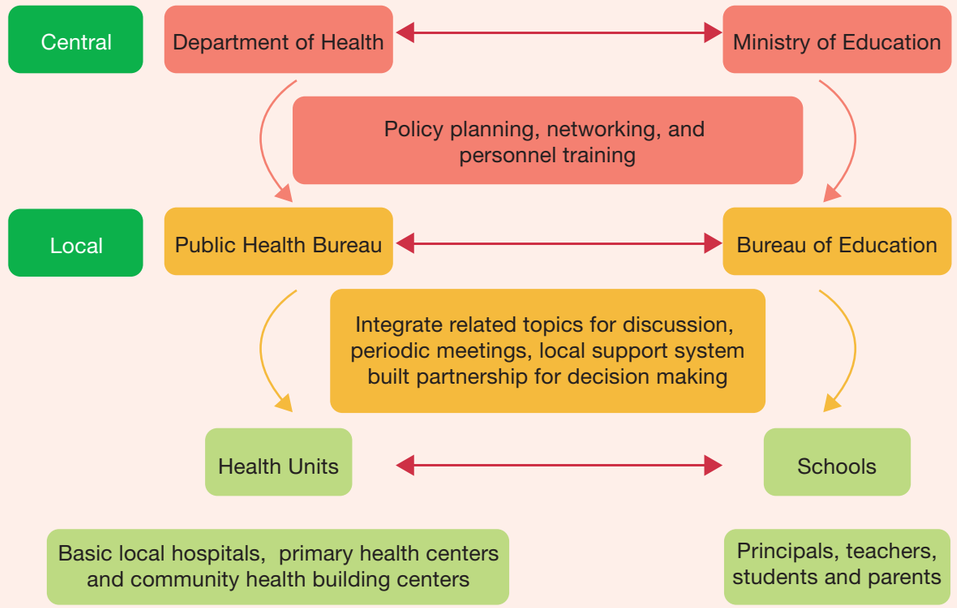



Figure 2-11 Health promotion schools from central to local government, and executive unit

(B) Teaching resources development center

Current teaching resources and demand evaluation investigations are completed as well as elementary, junior, and senior high school teaching resources manuals (Figure 2-12); translated and edited 30 international health promotion school articles, complete tobacco control, betel nut hazards, vision health, as well as 10 projects on health issues, provided to schools to use for promotions, set up 02-23693105 teaching materials service hotline, and posted completed educational cases profiles onto health promotion school website.


Figure 2-12 Educational Materials for Health promoting schools

(C) Education and training centers

In 2006, there were more than 3,500 people, who completed promotion training programs. In order to promote all school teachers to involve living skills into their curriculum for students to learn communication abilities, friendship interactions, temptation refusal, and other life techniques. An estimated number of more than 700 teachers were involved and 4 life skill symposiums for students and parents were held.

(D) Health promoting school website; http://www.hps.pro.edu.tw/

The website includes promotion healthy school in Taiwan, laws and regulations, school lists, supportive system, resources, consultations, online Q&A, teaching games, article presentation from health promotion schools, and related website links.

(E) International cooperation and media marketing

The first Asia-Pacific International Conference on Health Promoting Schools was conducted in 2006 (Figure 2-13), which gathered more than 550 professionals and experienced practitioners from Taiwan, Japan, Thailand, Singapore, Hong Kong, Australia, and other countries to share experiences, make integrative thinking, and sign a cooperation commitment for health promotions in schools. In addition, marketing activities on 17 counties and cities were arranged and 7 mayors announced further extensions for Health Promoting Schools activities.

(F) Monitoring and assessment systems

Monitoring centers were established in July 2006 involving government and local education and health resource analysis, cost effective analysis of each supportive system, devotion and output of schools, supportive system demands, customer satisfaction surveys, and current health promotion school situation analysis.


Figure 2-13 The first Asia-Pacific International Conference on Health Promoting Schools

# Chapter 3

# Healthy Aging





## Chapter 3 Healthy Aging

### Section 1. Health promotion for the middle-aged, elderly, and cancer prevention and treatment

Rapid aging has become a common phenomenon resulting from reduced mortality and prolonged life span of the global population. In fact, Taiwan moved into an aging society since 1993 after the population over of the age of 65 years old reached 7.1% of the overall population. Followed by an increasing fraction of elderly every year, the population of the elderly in 2006 almost reached 2,280,000, which is about record high of 10% of the total population. Due to the fast growing amount of the elderly, along with an increasing mid-age population, the government is very concerned with their health, therefore, to maintain and promote health for the elderly through “health promotion” and “prevention and control” in order to reduce disease occurrences and control harmful and other negative effects.

Following with the transitional changes on aging population structure, people’s dietary habits, and lifestyles, the key point of healthcare has moved from treatments for acute infectious disease to prevention and treatment on chronic disease. From the health statistics in 2006, among the ten leading causes of death in Taiwan (Table 3-1), death population due to heart disease, cerebrovascular disease, diabetes mellitus, nephritis, nephritic syndrome, nephrosis, and hypertensive disease had taken 30.4% of overall death population. Bronchitis, emphysema, and asthma were ranked as 11th on the list. Although cancer was not an “elderly only” disease, most are still aged patients and its occurrence increases with age. Therefore, it is obvious of importance and urgency towards the prevention and treatments on chronic disease and cancer.

Table 3-1 Ten Leading Causes of Death in 2006

| Rank | Cause of death | Number of deaths | Crude death rate * | Increment percentage from last year |
|---|---|---|---|---|
| 1 | Malignant neoplasms | 37,998 | 166.5 | 1.7% |
| 2 | Cerebrovascular disease | 12,596 | 55.2 | -4.5% |
| 3 | Heart disease | 12,283 | 53.8 | -5.7% |
| 4 | Diabetes mellitus | 9,690 | 42.5 | -8.1% |
| 5 | Accidents | 8,011 | 35.1 | -4.6% |
| 6 | Pneumonia | 5,396 | 23.6 | -5.5% |
| 7 | Chronic liver disease and cirrhosis | 5,049 | 22.1 | -10.5% |
| 8 | Nephritis, nephritic syndrome and nephrosis | 4,712 | 20.6 | -2.7% |
| 9 | Suicide | 4,406 | 19.3 | 2.5% |
| 10 | Hypertensive disease | 1,816 | 8.0 | -4.4% |

* : Death rate is measured in every 100,000 people

Data source: Statistic office of Department of Health

## 1. Current health status of the middle-aged and elderly

According to the report from the “2002 Survey of the Prevalence of Hypertension, Hyperglycemia, and Hyperlipidemia in Taiwan”, the “three high” prevalence rates for the population over 45 years old are 39% for hypertension, 14.7% for hyperglycemia, and 18.3% for hyperlipidemia. The prevalence rates for the population over 65 years old are 56% for hypertension, 20.7% for hyperglycemia, and 21.5% for hyperlipidemia.

Metabolic syndrome is a phenomenon when blood glucose, blood lipid, and cardiac vascular disease related risk factors clustering gather. The reason behind this is physical inactivity, diet lacking of vegetables and fruits, smoking, family disease history, etc. For the target population toward early detection, prevention, and treatment; it is necessary to adopt proactive lifestyles to reduce and prevent occurrences. The Taiwan metabolic syndrome prevalence rate between 20-79 years old is 15.7% (18.3% male and 13.6% female) in 2002.

The National Health Interview Survey (NHIS) in 2005 showed the prevalence rate for the population between 40-64 years old with kidney disease was 5.1%, and 8.3% for those over 65 years old; the prevalence rate for population between 50-64 years old with chronic obstructive lung diseases was 3%; 7.8% for those who are over 65 years old. The prevalence rate of falls was 18.7% in 1999, but climbed up to 20.5% in 2005 (27.3% of them were injured).

The prevalence of falls in the elderly is associated with a tremendous number of years of potential life loss and health care burdens. During 1980-2004, the mortality rate, due to accidental falls, increased exponentially after age 55 in both genders, up to a peak at over age 65. Moreover, about two-thirds of hip fracture patients, aged 60 and over, hospitalized in northern Taiwan during 1990-1991 reported a preceding fall. There was a steep age trend after age 50 and sex-specific incidence rates of hip fractures during 1996-2000. Due to limited resources and the susceptibility of older people to falling injuries, the growing number and consequent needs of the elderly will widen the gap between demand and supply of services unless falls prevention is taken into action.

## 2. Cancer prevention and treatment

Cancer has ranked the first leading cause of death since 1982. There were 37,998 cancer deaths in 2006 which was 28.1% of overall death population. Crude death rates showed 166.5 cancer deaths in per 100,000 deaths. From the calculation of the world population structure, by WHO, in 2000, the standardized cancer mortality rate were 139.3 per 100,000 deaths, which is 1.4% less than 2005. The national major cancer deaths are ranked as follows; (1) Lung Cancer (2) Liver Cancer (3) Colorectal Cancer (4) Women Breast Cancer (5) Stomach Cancer (6) Oral Cavity Cancer (including oropharynx and hypopharynx) (7) Prostate Cancer (8) Cervical Cancer (9) Esophagus Cancer (10) Pancreatic Cancer (Table 3-2).

Table 3-2 Top 10 major cancer deaths in 2006

| Rank | Cancer site | Number | Death rate* |
|---|---|---|---|
| 1 | Lung | 7,479 | 32.8 |
| 2 | Liver | 7,415 | 32.5 |
| 3 | Colorectum | 4,284 | 18.8 |
| 4 | Breast | 1,439 | 12.8 |
| 5 | Stomach | 2,398 | 10.5 |
| 6 | Oral Cavity | 2,202 | 9.6 |
| 7 | Prostate | 957 | 8.3 |
| 8 | Cervix | 792 | 7.0 |
| 9 | Esophagus | 1,304 | 5.7 |
| 10 | Pancreas | 1,247 | 5.5 |

* : Death rate is measured in per 100,000 people

Data source: Statistic office of Department of Health

The most updated cancer registry data shows that 62,542 new cancer cases (excluding carcinoma in situ) were established in 2003 (36,285 males and 26,257 females). Crude cancer incidence rates per year was 276.7 persons per 100,000 population, and 315.1 persons per 100,000 population for male and 236.8 persons per 100,000 population for female, separately. If the adjusted calculation of the global population structure, by WHO in 2000, were used, then the standardized cancer incidence rate in Taiwan is 250.8 cancer cases from per 100,000 people. The standardized male and female cancer incidence rates are 289.0 and 212.0, respectively, from per 100,000 people.

Recently (1999-2003), according to the statistics of the age-standardized incidence rates of cancer for males and females, female cancer cases have dropped 2.8%. Except an obvious increase in breast cancer cases, which would require reinforcement on prevention tasks, otherwise, cervical cancer showed a decreasing pattern throughout past few years. Male cancer cases have increased by 2.6%. Esophagus cancer and oral cavity cancer showed a significant raise of more than 20%. This is related to risk factors such as smoking and chewing betel nuts (Figure 3-1 and 3-2). Moreover, lung cancer, liver cancer, and colorectal cancer are common cancer cases for both male and female. Currently there are independent prevention and treatment programs available for lung cancer and liver cancer.

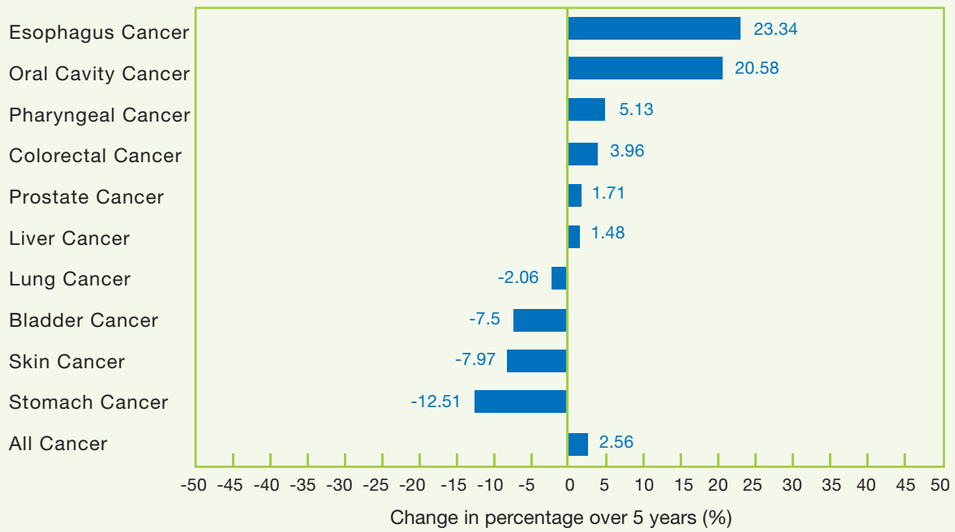



Figure 3-1 10 Major age-standardized incidence rates of cancer for males, 1999-2003

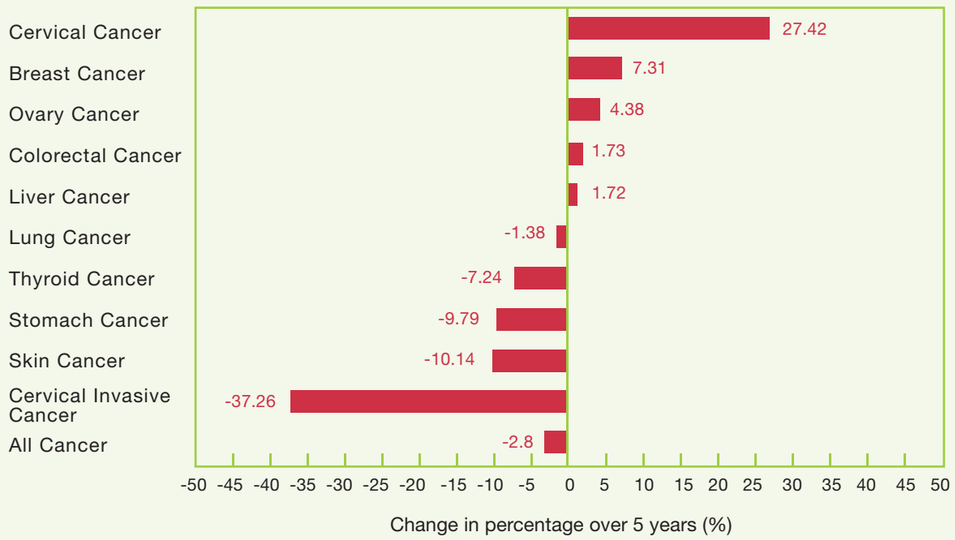



Figure 3-2 10 Major age-standardized incidence rates of cancer for females, 1999-2003





# Section 2. Policy and Planning

## 1. Health for the middle-aged and elderly

To respond to the rapid growth of middle aged and the elderly population, the adults and elderly health consultation committee of 2001, from the Department of Health has concluded that the main points for adults and elderly health is to prioritize urgent, high prevalence, and diseases that are treated with effective outcome after intervention. Diabetes mellitus, cerebrovascular and cardiovascular disease, asthma, kidney disease, and women's post-menopause healthcare are selected as the top 5 main tasks. Metabolic syndrome usually progresses to diabetes mellitus and cardiac vascular disease, and is an emerging healthy issue in Taiwan and developed countries around the world. Recent evidence implied that the falls of the elderly increased every year, and the likely health care burden due to falls also increased, too. Good vision is a key factor for elderly quality of life. Visual disabilities will affect and limit their social functions and make them more dependent on others. The importance of vision health-care cannot be overemphasized. In addition, the statistical data from the Ministry of Interior in 2006 showed that 52.2% of the vision-impaired population was over 65 years old. With all the reasons above, metabolic syndrome, falls prevention, and vision healthcare are chosen as the first priority for health promotion of the elderly. Health promotion strategies for the elderly are as follows;

( 1 ) Encourage healthy diets, living environments, and culture
( 2 ) Guide the public towards healthy life styles
( 3 ) Reinforce health education and disease screening
( 4 ) Abnormal case detection, referral, and follow-up management
( 5 ) Prevention and control policies and interventional models through evidence-based health care
( 6 ) Establish a comprehensive prevention and control healthcare system

## 2. Cancer prevention and control

In order to master the current status of cancer occurrences and screening more effectively, the cancer prevention information system which include Cancer Registration System, and Cancer Screening System in Taiwan was established. They will be the basis for planning and assessment of cancer prevention schemes, and for academic research purposes as well.

1) Taiwan Cancer Registration System; the Department of Health requested all hospitals with more than 50 beds to establish cancer registration systems to report new cancer cases, diagnosis, and treatment information. In addition, for the purposes of improving treatment quality, by evidence based medicine, BHP has progressively established 6 types of common cancer diagnosis and treatment information

since 2003. They are; cervical cancer, breast cancer, oral cavity cancer, colorectal cancer, liver cancer, and lung cancer, which included primary sites, stages, detailed treatments, and follow-ups. There are 31 hospitals involved with the registration system by 2006, which covers 80% of the 6 types of cancer cases. This information can be used to analyze and compare medical care, follow-ups, and prognosis between hospitals around the country.

2) Cancer Screening Information System; for monitoring the effectiveness and quality of cancer screening program, BHP established it for cervical cancer, breast cancer, oral cancer, and colorectal cancer. Pap smear cervical cytopathology units, mammography facilities, oral cancer and colorectal cancer screening, participation hospitals to on-line case reporting and confirmation for positive cases. It provides not only information to the health care institues but also it can monitor the progress and effectiveness of cancer screening programs. Besides, it also provides quality control information to cervical pap smear cytopathology units and mammography facilities.

3) Cancer prevention and control is regulated and directed by the Cancer Control Act, which followed the National 5-year Cancer Control Plan according to public health prevention strategies according to staging, and to collect relevant important information and improve quality of life of patients. The final goal is of course reducing cancer incidence rates and cancer mortality rates. Some important cancer policies are briefed as follows:

1. Reduce cancer risks: To improve cancer risk factors awareness, including the hazards of chewing betel quids.
2. Early detection: Provide accessible cancer screening services (cervical cancer, breast cancer, oral cavity cancer, and colorectal cancer) in order to reduce screening obstacles.
3. Improve cancer diagnosis and care quality; implement the quality guaranteed principles of cancer diagnosis and treatment, polish quality cancer diagnosis and treatment evaluation systems to improve patient care quality.
4. Improve quality of life for cancer patients; Provide services to cancer patients and establish the cancer palliative care website.
5. Reinforce cancer prevention and control systems; establish cancer incidence monitoring and registration system, conduct R&D programs for cancer prevention and control including personnel training.





# Section 3. Implementation results

## 1. Middle-aged and elderly health promotion

### 1) Multidisciplinary health promotion and educational programs

1. Develop health promotion materials and manuals (Figure 3-3)

Create posters, self-care manuals, and DVDs for coronary artery disease, hypertension, diabetes mellitus, asthma, kidney, chronic obstructive pulmonary disease, and other chronic diseases to provide reference to the medical professions and the public, establish metabolic syndrome guidelines (for medical professions only), waist soft rulers, and methods to measure waist circle. These are to provide health care workers standards to reinforce health promotion on chronic diseases.

2. Initiate diverse chronic disease education approach

In cooperation with International Chronic Disease Day (such as heart disease, diabetes mellitus, and asthma, etc.) and combining community resources from local public health bureaus, local NGOs, and industry in place. Total 7 large promotion campaigns on chronic disease prevention and control were arranged with an estimated 10,700 people being involved. In order to disseminate more health knowledge and improve health status, chronic disease prevention and post-menopause health information are published through media of newspapers, magazines, and the radio.


Figure 3-3 Chronic disease health promotion brochures and manuals

## 2) Health promotions for high risk groups

1. Metabolic syndrome

Integration of various medical professionals and review of international and domestic literatures, BHP announced the “metabolic syndrome criteria” information for adults (20 years old and over) in 2004. Because there were some international criteria changes made in 2006, BHP followed and revised the criteria (Table 3-3). BHP conducted investigations on health promotion intervention in communities on metabolic syndrome involving 453 high risk individuals, comprised of 276 people of the experimental group and 177 people of the control group. Through various community-based intervention programs, including volunteer training, medical profession consultation and telephone calling, and community activities. Health promotion behaviors were observed to be improved in the aspects of exercise, nutrition, inter-personal relationship support, pressure coping, health responsibility, etc..

Table 3-3 Newly revised 2006 criteria for the diagnosis of the metabolic syndrome

| Risk factors | Abnormality |
|---|---|
| 1. Central Obesity | Waist：Male≧90cm (35.5 inches)<br>Females≧80cm (31.5 inches) |
| 2. Raised high blood pressure | Systolic blood pressure≧130mmHg<br>Diastolic blood pressure≧85mmHg |
| 3. Raised fasting blood glucose | Fasting blood glucose≧100mg/dl |
| 4. Raised Triglycerides (TG) level | ≧150mg/dl |
| 5. Reduced High density lipoprotein -cholesterol (HDL-C) | Male <40mg/dl<br>Female <50mg/dl |

Note: 1. Those 1 and 2 of increased blood pressure and fasting blood glucose should include those who take medication prescibed by physicians, except traditional Chinese or herbal medicines.
2. With 3 or more out of above 5 risk factors is considered as the metabolic syndrome.

2. High-risk groups for Diabetes Mellitus(DM)

Interactions between 25 cities and counties, total 181 communities, and 89 hospitals and clinics targeting high risk groups of 26,122 patients with family histories of DM or have had gestational DM, to promote eat healthier, physical acitivities, weight control, and other health interventions. Final outcome from 89 hospitals with 8,944 people are 44.9% have decreased fasting blood glucose levels; 49.9% and 43.6% of those whose blood pressure and cholesterol level were improved. Moreover, to respond to the WHO-health promoting hospitals and reinforce health promotions for high risk groups, 116 medical care institutions for health care of diabetic patients have gradually transformed to the Organizations of Diabetes Health Promotion (Figure 3-4).

3. High-risk groups of cardiovascular diseases

To encourge and assist the 6 public health bureaus of cities and counties (containing 23 villages and towns) BHP aimed at the high risk heart disease population (high blood pressure, high blood lipid, high blood glucose, obsity) to provide group or individual health education. Approximately 2,153 cases were enrolled into the service program offering practical knowledge and self-care tips and improved thereafter.

4. High-risk groups of renal diseases

BHP subsidized the Public Health Bureau, Kaohsiung City Government for community-based renal disease case management program. The Public Health Bureau is in charge of (1) integrating complete screening and healthcare services (2) identify high risk groups and abnormal cases of renal disease (3) establish kidney disease case management and follow-up systems within communities. The high risk groups were composed of the elderly over 65 years old, and drivers as the targeting group. There were an accumulated number of 28,977 people, of which 544 taxi drivers had been screened. Of these, 23,234 patients with moderate kidney disease were found and referred to hospitals; 20,910 patients were entered into follow-up management systems (management rate of 90%); an estimated number of 5,302 patients were diagnosed as mild, with 1,596 of them having high blood glucose, high blood pressure, high blood lipids, or abnormal urine tests, with 1324 of these entered into follow-up management (coverage rate: 83%).

## 3) Early disease screening and early detection

Early detection and treatments are very important in preventing chronic disease. BHP positively supervised and directed 25 cities and counties to promote the community-based three-in-one (blood pressure, blood glucose, and cholesterol) screening. In 2006, 550,000 people were screened, an increase of 50,000 over the 50,000 from 2005. Abnormal blood preesure, blood glucose, and cholesterol consultation and referral rates were up to 90%. Moreover, in order to establish effective screening models, combining medical healthcare service resources from cities and counties, integration of National Health Insurance adult preventive check up services and cancer screening, have been encouraged since 2002 about screening items, resources, human resources, budget, case referrals, and information systems. In 2006, 20 out of 25 cities and counties had successfuly joined integrative screeing care service model. The amount of people who have accepted the preventive health services from 2003 to 2006 have reached up to 980,000 and satisfaction rates were high.

## 4) Improve quality of care

1. Supervise all 25 cities and counties that have joined the national diabetes shared care network, 352 towns are involved with a coverage rate of 95%. Revise and announce the medical personnel certification criteria for the diabetes shared care network. To further develop our medical personnel certification

criteria system, by 2006, 6,998 people have accepted certification and 3,026 are certified as teachers. Continuous improvements to diabetes health care from 116 Institutions of Diabetes care health promotion participate with the involved diabetic patient numbers of 403,292. 65% of them had professional medical team care from nurses, dieticians, pharmacists, etc. other than physician alone. Over107,279 patients have joined the national health insurance Diabetes case payment project for diabetes medical treatment, over 5,241 people have underwent smoking cessation consultations, over 1,130 professionals were provided with intern and clerk training, and 583 case conferences were conducted. Progressive establishment of diabetic patient support groups with a total number of 450 diabetic patients groups established. 2,492 patients are able to self monitor their blood glucose at least once a week. The number of obese diabetic patients who have lost at least 2 Kilograms is 1,037. According to a reserach report from data of diabetic patients from National Health Insurance medical utilization files, from 2001-2003, there were 1,160,979 diabetic patient record in Taiwan. (If based on, 2002 Survey of Prevalence of Hypertension, Hyperglycemia, and Hyperlipidemia in Taiwan the estimated number of diabetic patients is approximately 1,350,000. Hence, diabetic patient under medication rate is 86%). The above diabetic patient care evaluation revealed that a diabetic patient's HgbA1c level, after one-year of care, can reveal significant 0.3% decrease of HgbA1c, and for those whose HgbA1c are higher than 9%, approximately 5% of them can be improved. Therefore, in order to reduce hospitalization rates and costs, the "Primary healthcare model for diabetic patients" has been promoted in Chunghua county to assist in the care of 23,577 patients. Complication screening rates are as follows; 38% on nephropathy, 53% on retinopathy, 86% on foot care, and 86% on blood lipids. Care results are; 32 % of A1c <7.0%, 25% of A1c >9.0%, and 67% with well-controlled blood lipid composition.

2. To provide continuous and complete management for stroke cases after discharge, to reduce stroke recurrence rates; to promote "a community-based health management project for stroke patients"; to combine discharge planning with community care for stroke patients; establish a model for the care of community stroke patients by status of serverity and disability; offer case management services through telephone interviews or home visits or other community care activities, including nursing, rehabilitation, nutrition, medication consultation, and health education. In 2006, 5 cities and counties were involved in managing 3,317 stroke cases, which presented overall improvement results of blood pressure and drug compliance.

3. To delay the progression of chronic renal diseases and assist patients in fully prepared for dialysis, and construct interdiciplinary, multi-professional care team model, 17 'kidney protection organizations' and 27 'kidney healthcare organisations' have been established to cooperative care. There have been 5,318 new cases managed within this framework. In between, 1,064 managed cases were

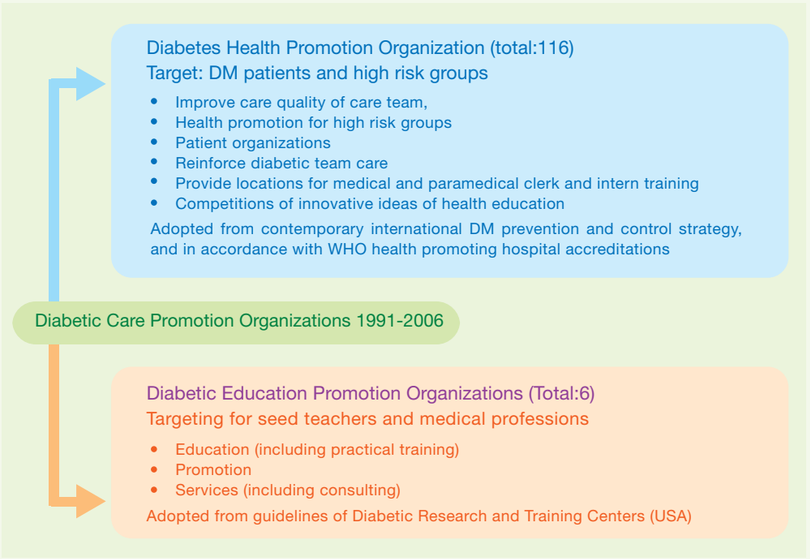



Figure 3-4 Development and division of Diabetic Care Promotion Organizations

in the end stages of renal disease (ESRD) and had to receive hemodialysis, peritoneal-dialysis, or kidney transplantation, which is 182 more cases than in 2005. In addition, up to 26% of ESRD patients received peritoneal-dialysis, which is increased 6.5% compared to 2005. There were 189 patients who received their first hemodialysis without admission, which is 45 patients more than in 2005. Up to 54.5% of these ESRD patients have already had the A-V shunt placed in preparation for dialysis treatments.

4. Conduct health promotion pilot study for Chronic Obstruction Pulmonary Disease patients at 5 hospitals, which are located in northern, middle, and southern areas. Go through detailed evaluation process and case management program to improve self-care abilities and medical care quality.

5. Subsidize the National Taiwan Normal University team to conduct a program for the establishment of safe living environments and falls prevention program for the elderly in Taiwan. Work with 8 local governments to cooperate with the public health bureaus, the social affairs bureaues, medical organizations, and related social groups to provide living environment safety and falls prevention (audio) manuals for the elderly of the community. Authorize Taiwan School Health Association to arrange development and promotion on multi-dimension intervention model for falls prevention of the elderly to ensure and improve their health.

6. Promote vision health for the elderly, subsidize 3 visual health centers, and 11 community visual health networks, and provide screening services for the middle-aged and the elderly. Prioritize elderly from rural and mountainous areas. Annual number of vision screening is approximately 15,000 people.

## 2. Cancer prevention and control

### 1) Reduce cancer incidences

According to WHO 2002 National Cancer Control Programs, early prevention of cancer can at least reduce 30% of new cancer cases. Therefore, strategies related to cancer prevention and control had been utilized. Effective interventions such as tobacco control, betel quid chewing control, as well as whole population approach for obesity control, and Hepatitis B vaccination to prevent HBV infection were listed as high priorities in National Cancer Control Programs.

From all kinds of major cancers in Taiwan, significant changes in proportion of more than 20% have been observed for both male oral cancer and esophageal cancer in the past 5 years, i.e.; these two are the fastest growing ones, inclusive of both incident rates and mortality rates. To reverse this trend, betel quid chewing health hazard prevention ranked as highest priority. Concerning about reducing betel quid hazards in all aspects, the BHP appraised and promoted “betel quid control project” in 1995 and carried out by 9 ministries of the cabinet. This project raised the agenda of hazards coming from chewing betel quid and analyzed current situations for the public to look deeply and thoroughly about its severity. In the past decade, related prevention activities has been done in the setting as schools, army, work places, communities and other places. Currently, there are over 700-health promoting schools that teach skills for resisting betel quid chewing in their formal education. A betel quid free environment has been promoted in the army and community centers combine folklore units to encourage a culture of not chewing betel quid. A program called “Quit & Win”, with activities to assist those addicted, have been conducted within the past three years to further local promotion campaign in more than 20 towns located in high prevalence areas. After all the efforts made throughout the years, the national results for adult chewing rates have significantly decreased from 10.9% to 8.5%.

Based on these experiences and results of the past decade, BHP has incorporated the “Five year prevention and control program for betel quid chewing health hazards and oral cancer” as a future guidance principle.

### 2) Early cancer detection programs

The screening results of four different cancers are as follows; up to the end of 2006, the number of women, over 30 years old, who have had pap smear tests are approximately 3,550,000. Rates of Pap smear screening, at least once in 3 years, is 53.9%. The effectiveness of Pap smear screening showed a deceasing pattern on both incidence rates and mortality rates of cervical cancer. Cervical cancer included carcinoma in situ and invasive cancer. Cancer cells that stay in their original place are called carcinoma in situ, whereas, cancer cells passed through the basement membrane are called invasive cancer, and if invasive cancer were detected at a later stage, the prognosis would be poor. According to the statistical results, which show the standardized incidence rate for cervical invasive cancer has decreased from 24.3 people in 1995 to 16.4 people in 2003 for every 100,000 people and the standardized mortality rate for cervical cancer has decreased from 10.9 people in 1995 to 5.7 people in 2006 for every 100,000 people (based on WHO standard population structure in 2000). There are almost 170,000 women between 50-69 years old that have had mammography screening within the last two years. The screening rate is 7.8%. In 2006, approximately 220,000 people between the ages of 50-69 years old underwent fecal occult blood test and its screening rate is 5.2%. Almost 280,000 smokers or people who chew betel quits underwent the oral cancer screening.

In addition, in order to provide the public with accessible screening services, apart from the screening service provided by hospitals or clinics, the local Public Health Bureau will also provide the screening services at mobile screening units during community activities; BHP subsidized 27 hospitals in 2006 to develop outpatient clinic automatic reminder systems displaying on the CRT for cervical smear screening.

### 3) Improve cancer diagnosis, treatments, and patient care quality

In order to improve national cancer diagnosis, treatments, and patient care quality, the Regulations for Cancer Care Quality Assurance Measures were drafted according to the 15th regulation of the Cancer Control Act and announced on March 10, 2005. In addition, 25 hospitals were subsidized in 2006 to conduct cancer prevention activities for overall improvements to cancer diagnose and treatment quality programs, which mainly included cancer prevention, screening, diagnosis, treatments, patient care, palliative care, cancer diagnosis and treatment information database to prompt the hospitals to fully implement the Regulations for Cancer Care Quality Assurance Measures. In addition, there were “Investigation programs for cancer center quality improvements”, which consisted of complete core measuring indicators for cervical cancer, breast cancer, lung cancer, colorectal cancer, oral cavity cancer, and liver cancer to establish chemotherapy drugs safety monitoring and efficient working protocols of professional teams, etc.

To ensure the implementation of “Regulations for Cancer Care Quality Assurance Measures” at hospitals, the National Health Research Institute is authorized to develop accreditations on cancer diagnosis and treatment quality, which have either of 2 types, basic or individual cancer accreditation. There will be announced commendations and awards presented to the hospitals, which excelled in accreditation results of diagnosis and treatment quality, which will be disclosed in public for their choices of seeking medical consultation.

### 4) Improve quality of life for terminal cancer patients

In order to help patients to live with, or even overcome, their cancer and maintain their rights to normal lives, direct services to the ward mates have been provided by cooperative folk organizations. It has reached 70,000 man-hours annually. This service is aimed at providing newly enrolled cancer patients, relapsed patients, and their family assistance from their local cancer ward to answer questions about chemotherapy rooms and provide warm telephone follow-up. Furthermore, trainings for cancer care professionals and volunteers are also provided. Up to 2006, BHP successfully achieved network integration of local cancer NGOs in Taiwan and organized the First Meeting of Global Chinese Breast Cancer Patient Union Association. There were 31 national and international organizations and associations participating, which signified the first step toward network services for breast cancer patients.

Moreover, in order to relieve pain and other symptoms, for end-stage cancer patients, thereby, improving their life quality, 32 hospitals with hospice palliative care services and another 55 palliative home care services were provided in 2006. In 2006, 38 hospitals organized palliative care program services and provided cares for 8000 end-stage cancer patients. These local programs have improved hospice palliative care acceptance in their areas.

Furthermore, in order to maintain hospice palliative care quality and encourage hospitals to provide patient-centered palliative care, benchmarking for hospice palliative care units with the “Best hospice palliative awards competition in 2006” to reward good service quality and establish best practice learning among hospitals.

### 5) Strengthen cancer prevention and control systems

Cancer has remained as the top one cause of death since 1982. The standardized incidence age for every 100,000 people increased from 187 to 250 people in 2003, which imposed the biggest burden to national health.

In order to promote cancer prevention and control, the “Cancer Control Act” was established and announced in May 2003, offering regular cancer prevention newsletters and hosts committee meetings. Communications and coordination for policies and strategies led to the drafting and the implementation of the “5-Year National Cancer Prevention and Control Program”. To conclude its effectiveness, standardized death rates from cancer, for every 100,000 people, has decreased from 143.1 in 2001 to 139.3 in 2006.

The Cancer Control Act is currently undergoing revisions, which means cancer patients and the quality of their care will receive more attention. Cancer diagnosis rates and treatment quality accreditation can be considered as one key element of hospital accreditation, which will meets the demand of shortage of professional manpower of rural areas to prompt progressive solutions.

# Chapter 4

# Healthy Community and Lifestyle



# Chapter 4 Healthy Community and Lifestyle

## Section 1. Building healthy communities

### 1. Preface

WHO emphasized in 1986 that the ultimate purpose of health promotions is to achieve the goal of “Health for All”. Five health promotion strategies from the Ottawa Charter was announced which were to build healthy public policy, create supportive environments, strengthen community actions, develop personal skills, and reorient health services. In 1997, WHO announced the Jakarta Declaration, which emphasized health promotion was a key investment and suggested the secure the infrastructure and hence settings for health including communities, cities, workplaces, etc. and has proven itself one of the most efficient health promotion models to the world.

Therefore, we encourage community residents to collaborate with local resources, strengthen their actions, and establish multi dimension fundamental networks. To discover their local important health issues, and seek solutions to those problems on their own initiative. We expect build native models which community residents can imitate and develop their own working ways to solve community health problems independently.

### 2. Policy and planning

Taiwan began promoting community health building in 1999 and has developed in various aspects to reach the goal of “Health for All” including, communities, schools, workplaces, hospitals, cities, and all areas. In 2002, the “Community-based Healthy Life Plan” was subsumed by “Challenge 2008：National Development Plan”, which was proposed by the Executive Yuan. The program started in 2002 and finishes in 2007. In March 2005, this program was included into “Six-star Community Medical Welfare Plan” of the Executive Yuan then later into “Great Social Welfare Plans” of the Executive Yuan in September 2006. In spite of above cabinets and prime ministers changed, it is still listed under the national development plan of the central government.

Except for the available resources from the existing healthcare system, the “Community-based Healthy Life Plan” aims at transforming the attitude of the general population toward healthy life styles, to change from passive acceptance to active participation. Through the operations of community organizations, we have been devoted to raising community awareness on health issues on their own places, and encouraging them to collaborate with other organizations to solve those problems and to support them in achieving and maintaining a healthy lifestyle.

### 3. Implementation Results

#### 1) Health promotion communities

BHP posted applicant qualification and requested for proposals to choose best plans, which were proposed by county health bureaus, working with local resources to manage health promotion. There were 199 communities subsidized for community-based healthy lifestyle plans. There were 70 non-government organizations, 66 public health centers, 63 public and private hospitals, and clinics participating in the plan. In addition, the communities initiated healthy diet, walking and physical activities, and other health issues which met the residents’ demands. The number of health promotion communities and local health issues are shown in Figure 4-1, below.

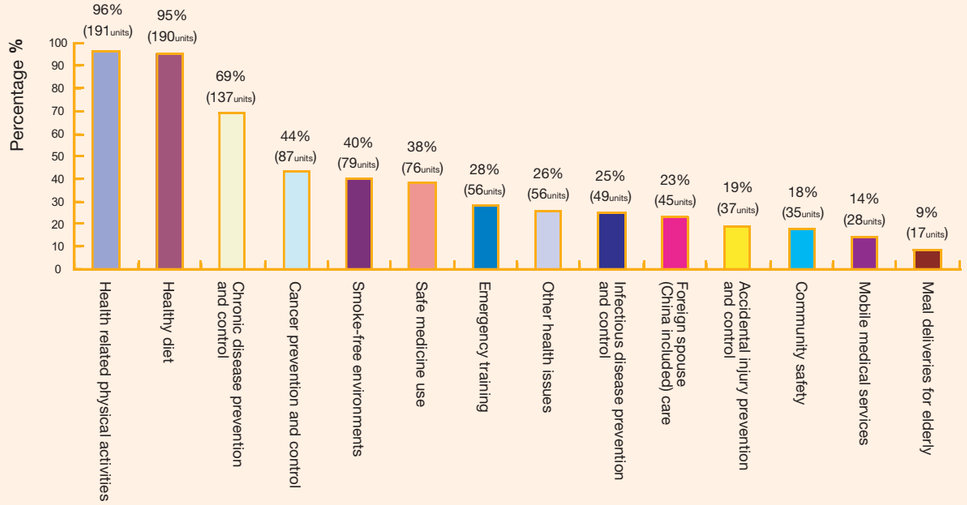



Figure 4-1 Community health building organization and fractions of health promotion issues

There were 20 county public health bureaus in collaboration with 101 local experts and according to their assistance plans, they held 111 community health meetings, 1,181 person-times consultations (includes on site and telephone consultation) and 136 seminars or workshops were arranged for communities to empower volunteers to work on healthy communities.

To promote community residents conscious of self-management for their own health conditions; 747 community blood pressure measurement stations were established to provide them accessible to regular blood pressure tests; 305 healthy diet restaurants; 733 smoke-free restaurants were set up to create a health supporting environment; 6,732 health courses were held with 402,378 attendances; communities have recruited 12,162 long term volunteers for health community construction with an average 19.9 hours of work each month; arranged 983 volunteer training courses; cooperated with



3,031 other organizations; organized 706 large propaganda rallies with 266,049 attendances; combined community screening services used by 946,483 people, 89,830 people were provided with mobile medical services; meal deliveries were provided for 156,908 person-times for the elderly. On the sustainable development of the budget, the ratio of budget, which communities raised, by other sources and by government is approximately 1：2.4. In 2006, for further understandings of the needs of volunteers and participants, we carried out a satisfactory sampling survey, which showed satisfaction for community-based healthy lifestyles was up to 87.4%

Physical activities can reduce obesity and decrease the occurrence of chronic diseases. The BHP promoted physical activities including “Ten thousand steps a day makes you healthier” and “Ten thousand steps for all together” to encourage people to increase their daily walking. For creating supportive environment, up to the end of 2006, 197 recommended walking trails by all public health bureaus announced on the website of the BHP. From 2006 on, The DOH set Oct.11 as “National Walking Day”, which signified two couples, with two pairs of feet walking together, its essence to integrate walking into daily life. Furthermore, the concept of “more movement and less sitting, anytime you can move more” was proposed, with ten thousand steps a day for the target, the BHP encouraged our citizens to move or walk whenver possible for better health.

As for the primary health care centers, in 2006, under the central government scheme of “Reimbursement for Basic Service: reconstruction for primary health centers”: there were 8 newly built and complete, and 10 partially rebuilt. For improvement of service quality, the primary health center awards were given to those with the best practices of their goals. Through benchmarking, the standard operation procedures and management skills can be shared, and at the same time, the moral of excellent primary health centers was raised during the participation process. “2005 Annual report of the public health center statistics” is published every year and is downloadable from the BHP website with updated information. It mainly gathers all statistics about current personnel, hardware, facilities, and operational conditions. Through comparison, the local government demonstrate their ability and creativity for policy implementation, quality improvement , and renovation of services.

### 2) Healthy city

In response to WHO, regarding their healthy city concept and improvements to health issues in cities, professional investigation teams and local governments viewed the health needs and problems and established cooperative relationships across different public and private sectors and disciplines in accordance of the 20 steps toward healthy city promotion recommended. The National Cheng Kung University team was authorized to implement healthy city plans in Tainan from 2003 to 2005.

The main achievements are listed as follows; 1) National Cheng Kung University team have accomplished the assessment and analysis to the health problems in Tainan; collected WHO healthy city indicators and established local indicators; gathered international literature on healthy cities and published two volume journals; 2) They also developed a Tainan city health profile; compiled information associated with Tainan healthy city indicators; held two international conferences; and built a bilingual Tainan healthy city website; 3) Encouraging communities to promote the residents’ health by proposing and administrating small plans; with competitions to select 11 of the best communities and held meeting to share their experiences with one another. In addition, they held healthy city national workshops; cultivated and provided their experiences and achievements for other cities to use as reference. They built 21 demonstrative plans and completed a Tainan healthy city white book; 4) They integrated and trained associated departments and bureaus of the Tainan city government and set 2005 to be a healthy city year. The Tainan city government offered an integrated budget plan, which linked up the healthy city indicators to promote their public health policy. In July 2005, Tainan, the first healthy city in Taiwan, affiliated with WHO, in their Western Pacific Region, under the name of “Tainan Healthy City Association”, of which the director-general is Mayor Hsu, Tain-Tsair; 5) In February 2006, they held a symposium on the Taiwan Healthy City Alliance, and 23 counties and cities mayors or their representatives endorsed the “Taiwan Healthy City Declaration.” They held healthy city workshops to share their experiences and convened a healthy city alliance meeting in October. There were 110 persons from different sectors of 21 county/city governments attending this meeting.

In addition, to encourage more cities or counties willing to promote healthy city projects, in 2006, BHP cooperated with Miaoli and Hualien counties to promote healthy city projects.

### 3) Community safety promotion network

In 2005, the Neihu District Taipei (metropolitan area), Dungshr Township Taichung (town), Alishan Township Chiayi (mountainous area), and Fongbin village Hualien (rural area) were approved as international safe communities through the inspection of WHO International Community Safety Promotion Center. In 2006, BHP established one community safety promoting center, simultaneously with 4 supporting centers respectively located in northern, middle, southern, and eastern areas, to assist and guide the other nine safe communities-to-be, issue safe-community electronic newspapers, and improve injury prevention measures and environmental safety. Moreover, in order to follow the global trend, organized international seminars on safe communities in Taiwan was arranged to invited scholars from New Zealand, Korea, and Thailand to share safe community promoting experience. As Dungshr and Neihu safe communities are internationally well known, Japanese professional scholars came to Taiwan to learn promoting experience and share related knowledge (referring to fundamental construction for health promotion in chapter 6, page 98) with us.



### 4) Health promoting hospitals

To respond to WHO's health promoting hospital declaration in Budapest in 1991 and follow the world trend, BHP have cooperated with hospitals since 2003 to conduct "Workplace health promotional programs" and in 2006 had authorized 3 hospitals to conduct "Hospital health education efficiency investigation-health promoting hospital program". In addition, diabetes shared-care, outpatient smoking cessation, mother and baby friendly hospital projects, etc. have been promoted in all hospitals. In 2006, there are 5 hospitals (Taipei Municipal Wangfang Hospital;Cardinal Tien Hospital, Yung Ho Branch;Taichung Hospital; Fon-Yuan Hospital;Ping Tung Christian Hospital) and 2 schools (National Yang Ming University and Yuanpei University), which have joined WHO health promoting hospital networks.

### 5) Health promoting schools

(Refers to Healthy Birth and Development in Chapter 2, page 28).

## Section 2. Workplace health promotion and health risks

### 1. Preface

In 1997, the Healthy Workplace Approach from WHO clearly stated 4 main factors that should be included in a healthy workplace; health promotion, occupational health and safety, human resources management, and sustainable (social and environmental) development. Taiwan is facing work environment changing situations like rapid industry transition, business globalization, and diversification of work arrangements, therefore, adjustments on workplace health should be made. Thus, health promotion in the workplace has been carried out to change the workplace health from passively reducing work related sickness (health protection) to proactive "workplace health promotion". To promote workplace health, apart from potential work hazards prevention that may happen in workplaces and provide staff with better occupational disease prevention, health education, and consultation. It is also expected to create healthy workplace environments and improve on employee health through staff involvement, conformance with work protocols, organizational culture, and development of health promotional with its characteristics.

When the National Council for Sustainable Development (NCSD) decided to reorganize at the 13th committee meeting on June 11, 2002, they realized the health threat from environmental hazards were going to challenge the public health authorities of the next generation. Therefore, the Health Risk Working Group was established. The Department of Health was in charge of assembly, the Bureau of Health Promotion serves as secretariat job, gathering the Environmental Protection Agency, the Council of Labor Affairs, the Council of Agriculture, and the Ministry of Economic Affairs to work together and solve health risk challenges from environmental pollutions. The missions for the Health Risk Working Group are health risk evaluation and management and securing health for particular groups. The six major tasks are as follows: scheme on national guidelines for health risk assessment; health risk control and safety standards review; monitoring certain substances and media that would cause health risks; survey and strive for solutions to health risk problems from the environmental pollution of certain areas; infectious disease control; health protection policy targeting particular groups of people. Regarding the 2 latter tasks, it suggests reinforcement of monitoring policy on scientific evidence based possilbe pollutants which may prove harmful to human and environment and seek appropriate management to the already existed environmental pollution.

### 2. Policy and Planning

It is aim to encourage the work staff for active participation and to set up common goals and safe supportive environments to secure physical and mental health for work staff. BHP arranged open request for proposal of "Reinforcement of workplace health promotions program" and 34 workplaces were subsidized. Based on the knowledge that smoking is a top leading risk factor and of human health threat, occupational tobacco hazard control centers in northern, central, and southern areas were established from 2003 to 2005, which proactively promoted a smoke-free workplace. There have been 503 businesses involved within the last three years with awards presented to 1,375 extraordinary smoke-free workplaces. Considering that tobacco hazards effect to various chronic diseases, therefore since 2006, it was decided to combine workplace health promotions with tobacco control at the same time. BHP authorized the establishment of "centers for workplace health promotions and tobacco control" in northern, central, and southern areas to assist the setting up of healthy working environment. They offers occupational health and tobacco control network for workers, which provide consultations, health education and website available information.

The National Council for Sustainabl Department had organized 14 working group meetings in 2006 regarding all aspects of promotion. The Executive Yuan organized meetings on 21st and 22nd of April 2006. Among one of the 8 discussion topics, "Reduction of hazards and risks by establishing healthy and safe environments" was discussed, including investigation and control of pollution origins on environmental hazards, avoiding pollutions that produce environmental risks, and protecting victims of environmental hazards, all of which were headed by the Health Risk Working Group. After the meetings, the Health Risk Working Group added above tasks to their working list, which included: "reinforce investigation and management of hazards (including poisonous substances and poisonous medication" ; "establish safe consuming systems" ; "proceed with health risk assessment system" ; "Secure that the public have the right to know environmental hazards information" ; "establish victim care system of pollution" and "establish and reinforce national risk assessment systems." The Working Group has 64 concrete jobs to perform with the addition of the above.



## 3. Performance

In 2006, centers for workplace health promotion and tobacco control in northern, central, and southern areas had consulted with 189 work sites, where they; discussed either smoke-free or tobacco-limited policies (66 of these workplaces also carried out health promotion programs); assisted 7 labor or industry unions to implement tobacco control and workplace health promotions; arranged evaluations and rewards for excellent promotion methods regarding smoke-free workplaces (113 work-places were rewarded); carried out investigations on national tobacco hazards in the workplace (in 2006, 22.8% smoked in the workplace, which is 2.2% less than the 2003 results). Meanwhile, the percentage of those who quit smoking or are still working hard on quitting increased to 9.9% (8.7%, 5.8%, 7.0%, and 9.9% in year 2003 to 2006, respectively); complaints of second-hand smoke exposure were reduced from 32.8% in 2005 to 31.8% in 2006; (exposure time for occasional cigarette smell at the workplace was reduced from 6.38 hours in 2005 to 5.80 hours in 2006). This indicates that tobacco control promotions have shown concrete effects in the workplace.

Apart from continuous cooperation between actions plans of the Health Risk Working Group and relative ministries, since its establishment, the Bureau of Health Promotions has had several important experiences including management for the pollution cases of the An-Shen Factory of the China Petro-chemical Company in Tainan, and the Dioxin polluted duck eggs in Chunghua. There is ongoing investi-gation into other unknown environmental media, such as the question of whether electromagnetic fields are harmful, which requires inter-government cooperation across different ministries.

### 1) Pollution case of An-Shen Factory of the China Petrochemical Corporation in Tainan

Dioxin, mercury mud, and mercury contained waste water were produced during the production of sodium hydroxide, chorine gas, and hydrochloric acid and disposed into seawater reservior without being processed, which exposes residents and sea life to a highly polluted environment. In 2003, the Tainan City Public Health Bureau was co-subsidized from the BHP and EPA for studying of the “Epide-miology and care needs for residents near the An-Shen Factory of the China Petrochemical Corporation in Tainan” including blood tests for Dioxin. Further subsidization from BHP and executed by the Tainan City Public Health Bureau in 2004 organized the “healthcare program for residents near An-Shen Factory of the China Petrochemical Corporation” which included health examinations and follow-up services to pregnant women, newborns, preschool children, and people over 40 years old. In 2005, BHP and EPA again co-subsidized the Tainan City Public Health Bureau to organize the “Mercury pollu-tion exposure evaluation and healthcare investigation for residents near the An-Shen Factory of the China Petrochemical Corporation in Tainan” to investigate the percentage of total mercury and organic mercury contained in the blood of residents and carry out examinations for renal and neurological function tests, and dietary exposure assessment. According to task division of the “An-Shen Factory of the China Petrochemical Corporation task force team”, the BHP (also for Department of Health) is in charge of “resident health assessments” and “assistance in patient’ medical consultation and healthcare”. BHP will continue in assisting Tainan City to provide professional medical consultations and the aforementioned work which budget is part of the NT130 million dollars funding provided by Ministry of Economic Affairs.

### 2) Dioxin polluted duck eggs in Changhua County

1. Duck farms on the western side of Changhua were found excessive Dioxin levels in duck eggs. In 2005, “The examination of Dioxin level in blood and health care of duck farmers in Hsienhsi village of Changhua County” program was done to evaluate Dioxin levels in blood, effects on health conditions and diet habit questionnaires for duck farmers and their families who could be high risk groups exposed to the Dioxin. “Dioxin self-care manuals” were edited. Health education campaign and risks communication conferences were organized by the Changhua County Public Health Bureau for further healthcare work.
2. On January 2006 after communications with people from the village regarding the examination of Dioxin in the blood, a common agreement was made to process screening first, followed by the examinations, then continued to “Dioxin screening investigation on duck farmers who had not been examined in Hsienhsi village of Changhua County” program and another conference in June was called for to confirm the principles of further Dioxin screening.
3. The Center for Health Risk Assessment and Policy from the National Taiwan University were authorized to use “Dioxin pollution in Changhua” as an investigation case study in 2006. Health risks policy analysis and risk management mechanism reviews were conducted to achieve the quantitative evaluation of plausible influences of health hazards on this area.

### 3) Health risks assessment and management of electromagnetic fields

To improve public knowledge of non-ionization radiation and its safety issues, WHO began “The International EMF Project” in 1996 with 54 countries and 8 international organizations involvement. Before this 10 years project was completed, BHP translated relative updated reports about electromagnetic fields publications from WHO, and posted them on the BHP website to improve communications on the health risks to the public. Related information summaries until the end of 2006 are provided below:

1. Base stations and wireless technologies (WHO Fact sheet No. 304 report):

Conduct health risk explanations regarding the rapid development of wireless technology. The available scientific evidence shows that the health effect from radiofrequency EMF is raising of the body temperature (thermal effect).

2. Electromagnetic Hypersensitivity (WHO Fact sheet No. 296 report):

Symptoms including skin, nerve, and other uncomfortable symptoms were reported by electro magnetic hypersensitive individuals. There is no scientific evidence on the relationship between electromagnetic hypersensitivity and electromagnetic fields exposures.

3. Health risks management and communications of mobile phones and base stations:

Edited by the Center for Health Risk Assessment and Policy of the National Taiwan University, introduced the precautionary principle that WHO had advised, and suggested special attention on the use of mobile phones by children with developing brains.

4. “Talks about electromagnetic fields (EMF) Manual”:

This health education manual about electromagnetic field were completed in 2006, which provided appropriate non-ionization EMF health risks information to the public.

5. Electromagnetic field strength of household electrical appliances:

Translated information gathered by WHO about electromagnetic field strengths of household electrical appliances and environmental common sources of electromagnetic fields.

6. Electromagnetic field strengths of common electrical appliances in Taiwan and their points of attention:

Organize the results of “Monitoring on electromagnetic field strengths from televisions, electro magnetic stoves, microwaves, and computers, etc. and establishment of standard methods of measurement”, implemented by the Environmental Protection Agency in 2002 and transformed them into figures/tables as references to the public.

## Section 3. Health Education and Promotion

### 1. Preface

As the development of economic condition of the society and medical Hi-Tech grows, public lifestyles and disease patterns also change. Healthcare has changed from traditional medical treatments to health promotion. With the developed media technology, there are various ways for the public to receive health information. It is worth the hard work to cooperate with other industries and fields to produce creative and effective health education strategies and methods (Figure 4-2) that will meet health demands and develop evidence-based evaluation systems.


Figure 4-2 Posters for encouraging childbirth

With the rapid growth of media technology and its diversity, all types of health information, spread through internet and other media, are flooding the public with unlimited health messages. Any incorrect or inappropriate information may be easily adopted and used, which will affect the users’ health condition. How to provide accessible, convenient, and accurate health information to the public and help them to self-manage health conditions, with “Cherish Life and Promote Health,” which is the vision of the Bureau of Health Promotion.

Moreover, with the rapid social transition, the current speed of life is faster than ever. When facing the different dilemma in life, as births, aging, sickness, or death of the individual or the family, the likelihood of negative emotions or uncomfortable symptoms will prevail as the pressure increases. This will influence personal relationships, work, learning efficiency, or even possibly give rise to chronic physical or mental disorders. If these feelings cannot be relieved through appropriate ways, it can easily lead to different levels of self-destruction, such as suicide. According to DOH released information, the number of suicide deaths has increased from 6.24 to 18.84 per 100,000 people, between 1993 until 2005. This indicates that we must put more emphasis on national mental health as well as assisting in proper and healthy methods for releasing pressures.



Low birth rates have become a common phenomenon for many developed countries. Taiwan is also facing this serious problem. With changes to society, economics, education, family structures, values, and other factors, the national average age at marriage has increased. According to statistical information from the Ministry of the Interior, the total fertility rate in Taiwan has decreased to 1.115 people in 2006. If it continues to drop at this trend, it will cause economic and social heavy burdens, such as aging of population structure, increasing the burden supported by younger generations, and shortage of labor force. In Taiwan, the expected number of children, for married women aged 22-39, is dropping every year; 2.8 people in 1980 decreased to 1.9 people in 2002; 5.7% of married women do not want any children. Decreased proportion of married women and older age at marriage are two of the reasons for the low birth rate. Moreover, from the "Survey on the attitudes of national marriage and reproduction" and Health Policy Forum report, we found many more reasons that influence the perceptions of the younger generations against marriage and children, including changes in social values, considerations of financial burden, keen for single life, lacking in family support, and imperfect raising environment for children. Another fact worthy of attention is, although close to 70% of the population reckoned that 2 children is good and adequate, only half of them would be willing to have the second child after the first baby was born. Therefore, the question of how to raise the fertility rate in Taiwan has become an important issue, which requires the reinforcement of education and promotion.

## 2. Policy and Planning

It includes integrating industry-government-academy resources to promote competency to target changes to population structures and disease types, followed by developing national health promotion policy plan. Based on overall social requirements, integrate national health promotion projects, rationally increase government investment on health promotion and effectively utilization of technology resources. Apart from establishing evaluation indicators for effects of health promotions and various methods for technology developments, actively promoting health education and related works in creative and efficient health education promotion strategies, and methods. It is expected that promoting health education will guide the public with regard to self-health management, empower health promotion capacities, and maintain health for all.

In order to provide the public and public health workers with accurate information and knowledge the website, "Health99 Educational Resources" (http://health99.doh.gov.tw) was established in October 1998 (abbreviated as "Health 99" below). Apart from online videos and audio information downloads on health educational materials, it provides circulation delivery services of real samples. Since "Health 99" was established, almost 2, 800 pieces of health educational materials have been collected and recorded. Other than health educational materials, "Health 99" also provides attractive health information, such as health headlines, cherish life, health educational theme parks, game 99, video and audio theat, FAQ, etc. for the public.

The "Health 99" website was recognized for its excellence in 2005 and 2006 by RDEC, the Executive Yuan. There are e-news and on-site services to improve interactions between website users and "Health 99". The idea is to build up this website as the most creditable information source and help improve the health of the public as a whole.

When implementing R&D programs, the main points include; establishing various health educational service modules in the waiting rooms of hospitals; to establish and evaluate foreign labor health educational methods; organize the "Excellent Health Books" competition; trial plans for integrated community mental health promotion models; educate the public and caregivers through creative educational materials; improve methods to pass on health knowledge and skills. By sharing the creative health educational program, BHP expects to; improve the knowledge of the public and caregivers on disease recognition; self-care abilities; provide comprehensive health care services; promote the concept of childbirth and family value reconstruction; marriage and childbirth responsibilities; and "cherish and respect life continuity" to the public through "Health education on encouraging childbirth promotion program" for improving willingness to have children.

## 3. Performance

On the aspect of media distribution of health information, integrate television, radio, newspapers, outdoor displays, internet, and other media approaches to provide accurate health promotion messages with clear, colorful ways and evaluate the results after the health messages have been sent (Figure4-3, Figure 4-4).


Figure 4-3 Activities of health promotion on childbirth


Figure 4-4 Childbirth and breastfeeding promotion activities

To encourage the publication and promotion of health books, the “Excellent Health Book” competition was held, beginning in 2002, to introduce and promote 91 excellent healthy books for reading. In 2004, 65 health books were selected from 7 major themes, which were physical activities and fitness, healthy diet, sex education, AIDS prevention and control, cancer prevention and control, drug education, and metal health. With the introductory manuals through local Public Health Bureaus, hospitals and clinics, schools, and libraries to provide the pubic guidance for book purchase. For related information, please visit;
http://tobacco.bhp.doh.gov.tw:8080/2007book/pg-01.html

Use “Automatic reminder outpatient clinic system for public hospitals governed by the Department of Health”, which provided automatic reminder from computer terminals to provide doctor about tobacco control, cervical cancer, oral cancer, and other information consultations to create instantaneous, complete, constant, and continuous health care. “R&D evaluation programs of health education innovation model for primary health care ” had found 96% of clinics could accept health education working patterns, 95.2% replied the contents met the daily working demands, and 92.9% of clinics responded that the contents could be applied into daily practice. 97.9% of patients are willing to come back to the clinics and 93.8% of patients are willing to introduce the clinic to their families and friends. This indicates the health educational modules are helpful in improving doctor- patient relationships.


Figure 4-5 “Healthy Life from the Mind” seed training workshop

On the intervention of health education for foreign laborers, acute respiratory infections was found to be the most common reason when seeking medical advice for foreign labors. Medical treatment and emergency room visit rates of injury and trauma for male Thai labor are twice as high as local male labor; but more cases on diseases of urinary systems and reproductive systems for Philippine labors. An obvious improvement in health knowledge and empowerment after health education information was introduced, indicating satisfaction with health education materials and activities; health promotion programs on the workplace and living environments for foreign labors is available and deserves more attention.

Regarding pilot programs for integrated community mental health promotion based on; 1) emotional perceptions; 2) laughing for pressure release; 3) smile exercises: concerns and happiness as the theme that is short and easy to learn for better mental adjustments of mental health promotion program. Training for; learning techniques of seed personnel; individual creativity; interactions among community members to develop diverse and various methods of mental health promotion. Training of 380 seed personnel for community mental health promotions (Figure 4-5), with 27 communities currently promoting.

Regarding improving the national willingness to reproduce by arranging health policy forums for “Survey on the attitudes of national marriage and childbirth” and “Establishing a high quality and healthy childbirth environment” offered through diverse media channels to promote conceptions of “Children are our future hope”, “Give your child a companion” and “First baby before 30 years old, second baby before 35 years old”, and design childbirth consultations and mother and baby-friendly websites, reinforce prenatal and postnatal health care, childbirth, supportive systems, etc.. The Ministry of the Interior and the Council for Economic Planning and Development will work together to offer concrete policies for providing supportive environments including day care service and adjustable working hours for reproductive aged women. Evaluations of this program showed that the concept of “encouraging childbirth” could achieve a result of “recognition” through advertisements, however, no obvious effects in the response of “behavior”.



Regarding the aspects of the skills and knowledge of professional personnel, BHP conducts career training seminars for health education staff at local public health bureaus/centers, hospitals and clinics, to improve personnel skills for strategy planning, evaluations, health education techniques, and implementing skills. It is aimed at quality improving of health promotion programs.

## Section 4. Tobacco Control

### 1. Preface

The WHO has estimated that there would be more than 10 million deaths around the world caused by cigarettes smoking every year if the smoking behaviors cannot be controlled effectively by 2020. For effective control of global health, social, economic, and environmental problems caused by tobacco hazards, the first global public health convention "World Health Organization Framework Convention on Tobacco Control, WHO FCTC" entered into law enforcement on February 27, 2005. This convention stated that all parties should proceed via governmental legislation, administration, and international cooperation methods for tobacco prevention. As of the end of 2006, 142 countries had completed the ratification procedures.

Tobacco control in Taiwan was set into action by the private sector beginning in 1984. In 1987, the Department of Health promoted a 3-year program on stopping smoking. In 1990, a 5-year tobacco control program in Taiwan was set into action combining all ministries of the Executive Yuan and private sectors to adopt and implement all tobacco controls. In 1997, the Tobacco Hazards Prevention Act was approved and implemented, which provided guidelines for tobacco control regulations and administrative work to follow. In 2000, the Tobacco and Alcohol Tax Act and the Tobacco & Alcohol Administration Act were approved. According to Article 22 of the Tobacco and Alcohol Tax Act, NT$5 on each packet of cigarettes (Health and Welfare Surcharge) has been collected since 2002, in addition, 10% of these funds will only be used for national tobacco control procedures. To fit international trend by following the spirit of the WHO FCTC, in May 2000 and May 2002, Tobacco Hazards Prevention Act amendments were submitted to the Legislative Yuan for approval, however, it had not proven successfully passed.

According to a Taiwan Tobacco & Liquor Cooperation survey, conducted from 1973 to 1996, the smoking rates for male adults, was approximately 55% to 61%, and the smoking rates for female adults was approximately 2.9% to 4.6%. In order to understand the effects of Tobacco Control from the Health and Welfare Surcharge, studies to survey the smoking behavior of adults were performed in 2004, 2005, and 2006. It was found that the smoking proportions of male and female adults, over 18 years old, in Taiwan were; 42.8% and 4.5%, respectively, in 2004; 39.9% and 4.8%, respectively, in 2005; 39.6% and 4.1%, respectively, in 2006. While there seems to have been a decreasing pattern for male smoking rates, the female smoking rate still warrants close observation.

Regarding teenager tobacco usage behaviors, the Global Youth Tobacco Survey of junior high school students found the smoking rate for junior high school students, between the ages of 13-15 years old, in 2004, was approximately 6.5% of the respondents; male smoking rate was 8.5%; and female smoking rate was 4.2%. The smoking rate in 2006 was 7.5% of the respondents; male smoking rate was 9.6%; and female smoking rate was 4.7%. The survey in 2006 included 23.3% of junior high school students who responded to their exposure to second hand smoke at schools. The Global Youth Tobacco Survey of senior high and vocational school students in 2005 showed the smoking rate, for students between the ages of 16-18 years old, was 14% of the respondents; male smoking rate was 20.7%; and female smoking rate was 7.8%. The smoking rate seemed to rise with an increase in age, which showed the importance of youth tobacco control.

### 2. Policy and Planning

Due to the Health and Welfare Surcharge, tobacco control in Taiwan is comprehensively implemented. In order to respond to international trends and express the determination of tobacco control in Taiwan, approval of the WHO FCTC was complete March, 30, 2005, and the current Tobacco Hazards Prevention Act will be amended accordingly. The main focus points for 2006 included active amendments on Tobacco Hazards Prevention Act, complete law enforcement of local tobacco control works, reinforcement of tobacco control manpower and training, promotion of tobacco control education and supportive environment, accessibility of diverse smoking cessation services, development of international communication and various cooperation approaches, tobacco control related surveillance and investigation, etc. It is expected to reduce smoking rates, increase smoking cessation rates, and reduce second hand smoke exposure through both R&D programs and tobacco control field work.

### 3. Performance

#### 1) Amendment of Laws and Regulations Related to Tobacco Hazards Prevention

The Tobacco and Alcohol Tax Act amendment was passed on January 3, 2006 which raised the Health and Welfare Surcharge from NT $5 to NT $10. It stated that 90% of the funds will be placed in the safety reserves of National Health Insurance and the inspection and confiscation of illegal tobacco products and the prevention of tax evasion of tobacco products was added. The regulations regarding distribution and utilization in dealing with the collected surcharge were announced on January 27, 2006 and implemented on February 16, 2006. Of the 10% surcharge, 3% is used for tobacco control affairs at both central and local governments, 3% is used for health promotion at both central and local governments, 3% is used for the promotion of social welfare, and the remaining 1% is used for the anti-smuggling of illegal tobacco products and prevention of tax evasion in relation to tobacco products.



The amendment of the Tobacco Hazards Prevention Act regulates the total banning of advertisement for tobacco products, mandatory labeling of pictorial health warnings, exhibition of products at sales sites, and prohibition of smoking in indoor public areas. These are the recommended measures of the WHO FCTC; they are also the world trend in tobacco control.

## 2) Tobacco Control Research and Surveillance

Establishment of a smoking behavior surveillance system is one of the important fundamental constructions of the national tobacco control strategic planning. Smoking behavior surveys in Taiwan were performed simultaneously with international surveys which covered junior high school students and staff members, senior high school students and staff members, and adults. The survey results are posted on the smoking behavior online search system. (Smoking Behavior Online Search System, SBOSS) (http://tobacco.bhp.doh.gov.tw:8080/boss/) (Figure 4-6)


Figure 4-6 Smoking behavior online search system website

Other tobacco control surveillance works included tobacco control policy and database maintenance, collection of domestic and international tobacco control information, messages delivery through electronic newsletter and websites. "The Tobacco Products Testing, R&D Center" is in charge of monitoring the content of nicotine, tar, and carbon monoxide in local and imported tobacco products. Studies have also been conducted on issues such as the advertisement and sale of tobacco products, smoking-cessation and intervention, consumption, economics, trade, smuggling of tobacco products, and laws and regulations on tobacco control. Several research projects, such as an analysis of the characteristics of audiences of health information:using tobacco control as a case, an assessment of the impact on tobacco products consumption market after the adjustment of health tax on tobacco products, a three-year project on the analysis of the secondary data on tobacco control, and the establishment of websites for online searching (Smoking Behavior Online Search System, SBOSS), and an assessment of the achievements of the enforcement of the Tobacco Hazards Prevention Act have been conducted.

## 3) Tobacco Control Education and Promotion

In order to combat commercial marketing of tobacco business, improve tobacco hazard knowledge to the public, then move promotions to anti-smoking and quit smoking, some key issues of tobacco control, such as hazards of tobacco products, laws and regulations governing tobacco control, services at smoking-cessation outpatient clinics, smokers' helpline service, smoke-free restaurants, workplaces, campuses, and armies have been advocated through the use of wireless and cable TV, local radio stations, magazines, newspapers, internet, outdoor media, public welfare platforms, and other approaches to proceed on integrated marketing (Figure 4-7). In addition, to organize the "May 31 World No Tobacco Day" and "Sisters Join Together to Fight against Smoking" campaign (Figure 4-8) and publish both Chinese and English versions of the 2006 Taiwan Tobacco Control Annual Report.


Figure 4-7 On November 22, 2006, the Legislative Yuan urged the public to protect the babies, keep them away from tobacco hazards by heading an activity where they gathered 106 female organizations and appealed to commissaries for support of "Prohibition of smoking in indoor public places" to secure women and children away from tobacco hazards


Figure 4-8 Poster of the "Sisters Join Together to Fight Against Smoking"

For maintaining a smoke-free environment, establish “The Hotline Service for Complaint on Tobacco Hazards 0800-531-531” (Figure 4-9) for public complaints service on tobacco hazards and related regulation consultations. There were approximately 400 complaints in 2006; assisted 189 smoke-free workplaces (Figure 4-10); combining local governments to recruit more than 10,000 smoke-free restaurants (Figure 4-11); work with the Ministry of Education to launch 516 health promoting schools; 38 institutions have developed smoke-free campuses plan; work with Ministry of National Defense to promote a smoke-free armed forces program; combined 3 major museums in 2006 to initiate the special exhibition “The Youth Paradise of Oxygen and No Smoking” with the theme aimed at teenagers, tobacco control, and healthy lifestyles as the background (Figure 4-12). There were 254,993 visitors during the exhibition, which lasted 232 days in Kaohsiung, Taipei, and Taichung.


Figure 4-9 Logo of hotline for complaint on tobacco hazard


Figure 4-10 Smoke-free workplaces logo

## 4) Diverse Smoking Cessation Service System

Both Article 18 of the Tobacco Hazards Prevention Act and Article 14 of the WHO FCTC state that the diagnosis, treatment, and consultation of tobacco dependence should be brought into the national health program. According to the knowledge, attitudes, and behaviors survey from a national health promotion in 2002, Taiwan, 46% of smokers responded that they would like to quit smoking. In addition, from the surveys on the smoking behavior of adults in 2006, it was found that of the 32.7% of smokers, who would like to quit smoking, 59.5% of them knew the government provides smoking cessation services. Obviously, the smoking cessation services provided by government is getting recognized and accepted. Beginning in 2002, efforts to improve the smoking cessation percentage have included intensive promotion of diverse smoking cessation approaches. This includes drug therapy at outpatient clinics, free helpline for smoking cessation consultation, and behavior therapy of smoking cessation classes in communities.


Figure 4-11 Table calendar for promotion of smoke-free restaurants

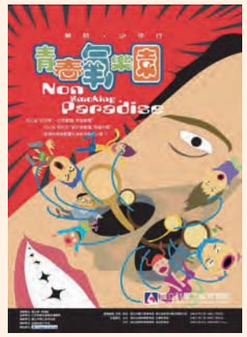


Figure 4-12 Opening ceremony of “Youth Paradise of Oxygen and No Smoking” in Taipei, all guests poked the cigarette balloons off and revealed to refuse cigarette on November 21, 2006.

As of 2006, there are 2,259 hospitals and clinics that provide services of smoking-cessation at outpatient clinics distributed in 357 towns and cities (97%) in Taiwan, Penghu, Kinmen, and Matsu; the serviced population has accumulated to 247,731 people as of December, 2006, the successful rate of 6-month smoking cessation is approximately 20%. In addition, the smokers’ helpline service center (0800-636363) was established for those who would like to quit but do not want to go to hospitals for smoking cessation consultation, they are provided with free telephone smoking cessation consultation services, 6 days a week, 12 hours a day (Figure 4-13). Up to the end of 2006, general telephone consultations had serviced 127,441 person-times; telephone smoking-cessation consultations had serviced 38,872 person-times with a successful 6-month smoking cessation rate of 22.1%. In addition, hospitals and clinics of cities and counties set up 313 smoking cessation classes, attended by 5,161 people.


Figure 4-13 Smokers’ helpline service

### 5) Manpower Development and Promotion of International Cooperation for Tobacco Control

More efforts have been made to develop manpower in order to train and upgrade the quality of manpower at the local public health bureaus; to urge the participation of medical professionals; to integrate and promote participation of NGOs with interests in tobacco control, to implement an integrated development program to encourage the participation of nurse professionals in overall tobacco control and smoking-cessation activities; to organize training for law-enforcement personnel in tobacco control; and to organize workshops for health bureau personnel in developing their own action plans. Experts in tobacco control from the Center for Disease Control and Prevention (US-CDC), and Southeast Asia and Pacific areas have also been invited to the tobacco control workshops and seminars.

Regarding international communication of promoting tobacco control, please refer to page 97 on fundamental constructions of health promotion in Chapter 6.

### 6) Complete Implementation of Tobacco Control from Local Government

In 2006, approximately NT$190 million were subsidized to local public health bureaus in each city and county to implement law enforcement inspections, develop local smoking-cessation service networks, continue tobacco control educational programs to special groups, and reinforce tobacco control promotion, etc. to promote local tobacco control. Including 110 workers newly recruited for implementing local tobacco control, to organize a total of 185 tobacco control volunteer training seminars with an accumulated results of 3,536 volunteers who were well trained; to cooperate with local groups to promote smoke-free campuses (Figure 4-14), smoke-free restaurants, and smoke-free workplaces with 5,969 promotion related activities (Figure 4-15); national inspections are up to 480,000 person-times with punishment for approximately 7,000 cases; to make available, instant statistics of all cities and counties through “inspection and punishment announcement systems for the Tobacco Hazards Prevention Act and case management information.”


Figure 4-14 Anti-smoking model contest, the winners are on posters


Smoking cessation helpline


Prohibiting the sales of tobacco products to minors under 18 years of age.


Smoke-free restaurants

Smoke-free families


Smoke-free armed forces

Services at smoking-cessation outpatient clinics

Figure 4-15 Tobacco control promotion logos of different settings

# Chapter 5

# Bridging the Gap in Health Disparities





## Chapter 5 Bridging the Gap in Health Disparities

WHO mentioned “health equality” in The World Health report 1998-Life in the 21st century: A vision for all which brings equity issues like gender, ethnic, poverty, etc.. More and more evidence based results have shown that there are different combinations and patterns of health risk factors and associated disease prevention behaviors towards gender, ethnic, poverty, physical, and mental disabilities.

Special health demands and unfair social positions for women or minorities have caused special health problems. For example, related to women’s health are breast cancer, cervical cancer, hormone therapy related to menopause, osteoporosis, and incontinence; for minority’s health, examples like foreign spouse prenatal examination, insufficient attending rate of children’s health checkups, difficult to obtain medical information and poor accessibility ;difficulties in obtaining therapeutic drugs for rare disease patients; oral health problems for physical and mental disabled; health care for Yu-Cheng patients, etc. The question is of the most importance about how to use the 3 major concepts which is composed of health protection, disease prevention, and health promotion together to adopt different strategies, plans, and interventions to bridging the equity gap of health.

## Section 1. Women’s Health

### 1. Current Situation Analysis

In 2006, the life expectancy of the Taiwanese female was 80.8 years old, which is 6.2 years more than males. The population of Taiwanese females is 11,284,820, which is 49% of the overall population. The major causes of death for males and females are not the same. In 2006, malignant cancer was the leading cause of death for females followed by cerebrovascular disease, diabetic mellitus, heart disease, nephritis/nephritic symptoms/nephropathy, etc. The main causes of cancer death among the Taiwanese female are as follows; lung cancer 17%, liver cancer 15%, colorectal cancer 13.3%, breast cancer 10.6%, stomach cancer 6.1%, and cervical cancer 5.8%. From the statistics of women’s cancer screening, only 53.9% of women over 30 years old had a Pap smear within the last 3 years (Table 5-1), and close to 21% of women over 30 years old had never had a Pap smear examination. In 2006, the percentage of women between 50-69 years old, who have had mammography screening, within the last 2 years, was 7.5%, which is far lower than the United Kingdom (75.5%) and the USA (74.6%).



Table 5-1 Cervical Pap smear screening rates of Taiwanese women over 30 years old from 2002-2006 ‰

| Year | Cervical Pap smear screening rate within the recent 3 years | Accumulated cervical smear screening rate since 1995 |
|---|---|---|
| 2002 | 53.8 | 68 |
| 2003 | 53.5 | 71 |
| 2004 | 53.9 | 74 |
| 2005 | 53.8 | 76 |
| 2006 | 53.9 | 79 |

Data source: BHP Statistics

Surveys regarding the obesity ratio of the national population, between 20-79 year old, which were carried out in 2002, the proportion of obese 20-79 year old females was 13.4%, which was lower than males (19.2%), however, female obesity proportions were greater than males after the age of 50. The survey also found that among the adults, among those BMI (Body Mass Index) greater than 24, 65% of females and 68% of males have relative symptoms of metabolic syndrome.

In 2006, the maternal mortality rate was 7.3 (15 deaths per 100,000 live births), however, attending rates of prenatal examination has achieved 96.8%. According to The 8th Women Health, Family, and Fertility Survey in 1998 showed the proportion of married women, aged 20-59, who ever had induced abortion is 28.6% and their average number of abortion is 0.4 (Table 5-2). The proportions were 5.8% among unmarried women of the same age and their average number of abortions was 0.1. An increasing trend of the abortion rate was observed as the age got older (Table 5-3). Survey on adolescences showed the proportion of them who ever had sexual intercourse was lower in females aged 15-19 years than in their male counterparts; however, the proportion had climbed from 6.7% in 1995 to 10.4% in 2000. However, the age-specific fertility rate for women aged 15-19 years has decreased from 17‰ in 1994 to 8.46‰ in 2005.

## 2. Policy and Planning

The Taiwan government announced and implemented the Cancer Prevention Act in May 2004. According to this law, BHP carried out a 5-year program of national cancer prevention and control. Regarding women's cancer prevention and control, the National Health Insurance provides cervical Pap smear examination for women over 30 years old, once every year. Since July 2002, the trial program of the two-stage breast cancer screening for those aged between 50-69 years old was applied to filter out the high-risk groups to refer for mammography. Since July 2004, the National Health Insurance service provided free mammography once every 2 years for women between 50-69 years old in order to reduce the threat of cancer towards women health. After 2006, national Pap smear screening and mammography screening were refinanced from the budget of the BHP

In order to improve health for Taiwanese women, encourage women to have regular physical activities, BHP promoted the 10,000 steps a day makes you healthier, and reinforce health promotions for high-risk groups of the 3-highs (hypertension, hyperglycemia, and hiperlipidemia), and carry out health educational programs for post-menopause women's health and about hormonal therapy.

In order to improve reproductive health and ensure health and safety for pregnant women and babies, the Genetic Health Act amendment draft was carried out to clearly specify that medical organizations should provide consultation service to pregnant women; to ensure the correct use and development of Assisted Reproductive Technology (ART); fully secure rights for infertile husband and wives, artificial reproduction children, and donors; launch and complete the "Artificial Reproduction Act" legislation.

Table 5-2 Abortion rates and number of abortions for married women between 20-59 years old

| Age group | Sample population | Abortion Percentage | Average number of abortion |
|---|---|---|---|
| 20-29 years old | 427 | 17.3 | 0.2 |
| 30-39 years old | 911 | 29.3 | 0.4 |
| 40-49 years old | 779 | 33.1 | 0.5 |
| 50-59 years old | 455 | 30.3 | 0.5 |
| Total | 2,572 | 28.6 | 0.4 |

Data source: "The 8th family and fertility survey in 1998, Taiwan"

Table 5-3 Abortion rates and number of abortions for unmarried women between 20-59 years old

| Age group | Sample population | Abortion Percentage | Average number of abortion |
|---|---|---|---|
| 20-29 years old | 564 | 5.0 | 0.1 |
| 30-39 years old | 97 | 8.3 | 0.2 |
| 40-49 years old | 35 | 11.4 | 0.5 |
| 50-59 years old | 7 | 14.3* | 0.1 |
| Total | 709 | 5.8 | 0.1 |

Data source：1. Same as Table 5-2

2. About the information of abortion experiences and number of abortions of unmarried women are gathered by self-reporting questionnaires

3. In this table, sampling number adopts maximal utilization values, those with (*) represent the proportion rate is less than 20%

## 3. Implementation results

### 1) Cancer prevention and control for women

For improvements on cervical smear screening percentages, BHP subsidized hospitals to initiate automatic reminder systems for outpatient clinics. Until the end of 2006, there were approximately 3,550,000 women, over 30 years old, who have had cervical Pap smear examinations within the last three years, screening rate was 53.9% (Figure 5-1). Moreover, Human Papilloma Virus (HPV) vaccine was approved and brought into the Taiwan market in October 2006, It helped the public to know the HPV vaccine and improve their knowledge for their choices of vaccination out of the pocket. In addition, in order to reduce breast cancer mortality rates, one free mammography x-ray every 2 years is provided to women between 50-69 years old. Approximately 170,000 women between 50-69 years old have had x-ray mammography examinations within the last 2 years, with the coverage rate of 7.8%.



Figure 5-1 Breast cancer and cervical cancer screening posters with Taiwan's most popular actress and model

### 2) Improve physical activities of women

Based on the 2001 and 2005 National Health Survey results, there were 53.5% of females, over 18 years old, who had regular exercises. After comparing both study results, there are about 330,000 more exercising females in the population. The most common female exercises is walking which accounted for 49.3%, followed by stretching exercises (12.1%), hiking (11.4%), and jogging (10.9%), etc (Figure 5-2).

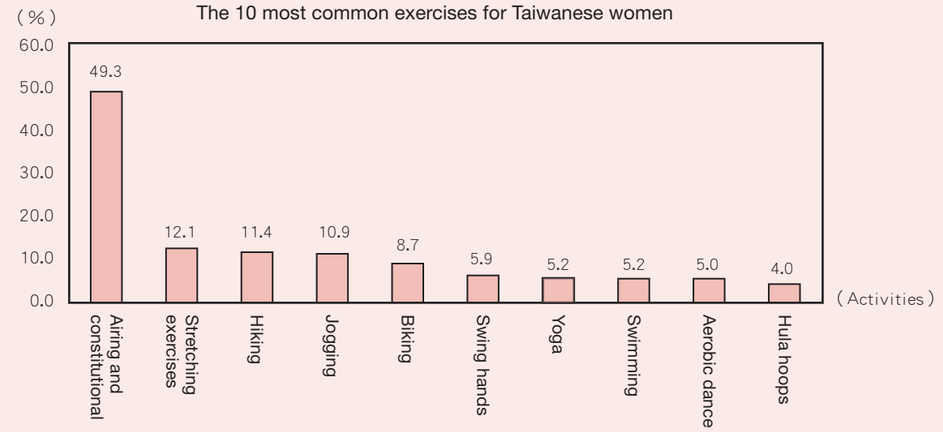



Figure 5-2 The 10 most common exercises for Taiwanese women in 2005

### 3) Menopausal health care

Since 2004, the Taiwanese Association of Menopause has been authorized to establish a menopause toll free telephone consultation hotline 0800-00-5107, providing professional health information. In 2006, an estimated 2,258 consultation phone calls were answered and 3 trainings courses for the volunteers, with 260 attendances, were arranged. Followed with Mother's Day, World Osteoporosis Day, and other important days, hormonal therapy, osteoporosis, incontinence, and menopause related information were published. Health promotion for pelvic muscle exercises , and incontinence prevention and control programs were conducted. The training of 79 seed instructors for incontinence prevention and control workshops in this program combined with some community-based activities promoting pelvic muscle exercises and calisthenics were conducted, respectively, in Keelun and Taichung two cities with an accumulated number of 232 people involved. In these communities, other than incontinence prevention and control activities, local public health nurses had provided accurate health care education and medical referral services. Medical consultation in the hospital is not widely accepted due to the conservative thinking of the middle-aged women.

### 4) Create friendly childbirth supportive environments

The National College of Nursing is authorized to conduct "The effect of mother friendly childbirth programs" during 2006-2007, planning childbirth choices program and providing pregnant women with their right to choose birth methods. There were 7 hospitals selected for trial programs to establish the communication platform between medical professions and pregnant women, which provide them with positive labor and delivery experiences, and involvement in the medical decision procedures (Figure 5-3). Continue to promote "Construction program of supportive network for the breast feeding community", by inviting business CEOs to create breast-feeding environments together in order to reduce the working women's anxieties on working and feeding.

Figure 5-3 Giving birth methods and posture teaching for pregnant women

### 5) Reinforce pregnant women case management

In 2006, “The development of community-based perinatal case management and register system program” was authorized and conducted, to develop case management procedures and documents for the public health bureaus and primary health centers, and to develop overall medical referral service and surveillance systems for communities with local hospitals or clinics. Utilize the prenatal examination items, self-care skills to assist hospitals and clinics in providing prenatal examination services and quality evaluations, and then proceed onto understanding of hospital services and quality. Taichung city and Hsinchu County were chosen for trials. It was predicted that future monitoring, analyzing, and evaluation of the service including case numbers and types, typical case management activities (e.g., timing, home visit, health education, health related activities, resources integration), case management duration (from received to closed), as well as before and after birth care (e.g., first procedure of prenatal check-up percentages, referral rates, breast feeding rates), appropriate timing and integrity of information registration, and satisfaction of customers.

### 6) Provide pregnancy consultation services

“Building the counseling model and mechanisms of induced abortion” was authorized and conducted during 2005-2006 to establish termination of pregnancy consultation services. BHP chose 7 hospitals from Taipei and Hsinchu for trials. Conduct training for medical professions, social workers, and psychology consultants from the 7 chosen hospitals, approximately 90 people were involved. Psychology consultants were also sent to the hospitals for assistance to ensure the mechanisms were working efficiently. In 2006, an accumulated number of 273 people had pregnancy consultation services. Main points of the consultation include; mental support, medical information, contraception consultation, decision making, life conflict, and responses, etc. Of them, 71 people had the consultation service beforehand, 90 of them had the counseling beforehand, and 112 people had the counseling afterwards.

### 7) Bring up Genetic Health Act and amendment draft

To respect fetal life and protect women’s right to act on their own, the “Genetic Health Act” draft was brought up and sent to the Legislation Yuan on October 20, 2006 for deliberation.





## Section 2. Minority’s Health (Foreign Spouse, Rare Disease, Physical and Mental Disables, and Yu-Cheng Patients)

### 1. Current Situation Analysis

Overall numbers of foreign and Chinese spouses has accumulated to an estimated number of 384,000 until the end of 2006, with 134,000 foreign spouses reaching 34.94%, and 250,000 spouses from China, HK, and Macao accounting for 65.06%. Their children account for 11.7% of the overall birth population in 2006 (Figure 5-4). Until the end of 2006, people who hold valid foreigner registration, and grouped according to their nationality, Vietnamese have the highest proportion of 56.6%, followed by Indonesians at 19.4%, then Thai at 7.1% (Figure 5-5). The investigation has found the marriage age and childbirth age for foreign spouses is lower than for local women. Social positions, as well as characteristics of language and culture barriers caused insufficient prenatal and infant health check-ups through difficulties in obtaining sufficient medical information and medical consultation.

There were 2,372 patient cases of rare diseases reported to BHP from August 9, 2000 to December 31, 2006. Due to few rare disease patients and the lack of economical scale for the drug market, under the free market operation system the drug companies were short of incentive to manufacture, import, and sell these drugs for rare diseases. This has made it very difficult for patients to get the required drugs.

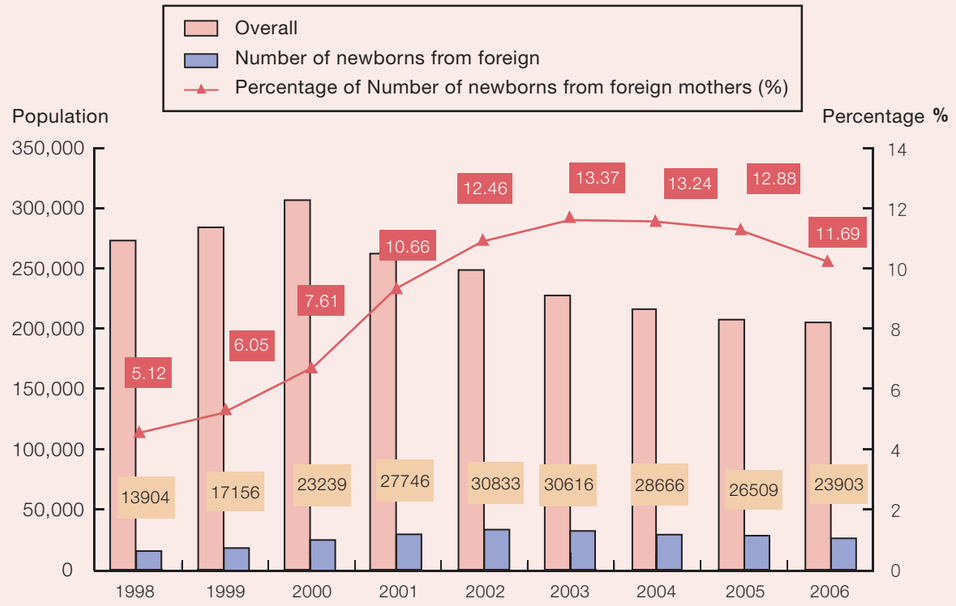



Figure 5-4 Childbirth structure analysis of female foreign spouses and Chinese spouses

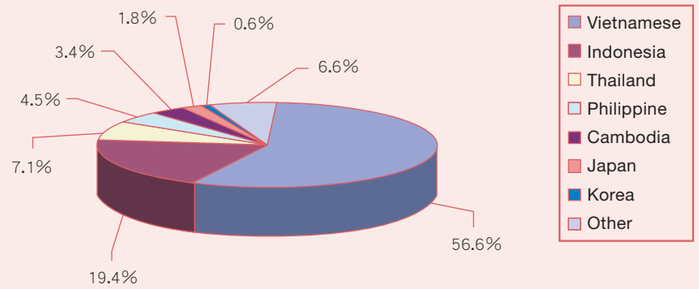



Figure 5-5 Original nationality distribution for female foreign spouses data source: Statistical office of the Ministry of Interior (according to those who held valid foreigner registration until the end of December 2006)

In 2006, there were 981,015 physical and mental disabilities accounting for 4.3% of the overall population. Of these, 704 of the cases were caused by rare diseases. From the investigation of oral health conditions for physical and mental disabilities, the tooth decay index (DMFT index) was 9.94. Permanent teeth decay was 92.0% and filled decayed teeth rate was 27.2%. Compared to the investigation from 2005, the DMFT index for people over 18 years old was 7.84, permanent teeth decay was 86.6%, and the filling rate was 40.2%. This clearly indicates the oral health conditions for physical and mental disabilities are not as good as for the normal public.

Since April 1979, people from Lugang and Fuhsing of Changhua county, etc. had unknow skin disease. Meanwhile, teachers and students from Huei-Ming school in Da-Ya Village of Taichuan County, and people from Shengang, Tantz Village, etc. were also diagnosed with the same skin disease, and thousands of people were poisoned. After a series of investigations, it was found that the skin diseases resulted from intakes of rice oil, which were contaminated with polychlorinated biphenyls. This disaster is known internationally as Yu-Cheng. Following this, the National Health Insurance has implemented the “Yu-Cheng” to be listed as a chronic disease. Yu-Cheng patients who take their “medical consultation manual” to contracted medical care institutions can waive part of the medical fees. The local public health bureaus are progressing on patient management, regular health check-ups, follow-ups, and health education, etc.

## 2. Policy and Planning

The “Foreign spouse childbirth health management program” was brought into practice in 2003 to promote foreign spouse health card management system. In addition, volunteers, trained to assist in promoting foreign spouse childbirth health management programs have been in effect since 2004. The foreign spouse Fund Committee of the Ministry of Interior agreed to subsidize the prenatal check-up fees and fertility control service fees for foreign spouses. In 2006, the Committee agreed to bring the 3-year subsidization plans into their budgets.

The Taiwan government announced and implemented the “Rare Disease Control and Orphan Drugs Act” on August 2000, which makes us the 5 th country in the world to legislate law related to rare diseases, after the U.S., Japan, Australia, and the European Union. According to this Act, the government subsidized medical fees of rare disease cases, which are not fully covered by National Health Insurance. It will encourage the supply, manufacturing, research and development of rare disease medications. The Committee for Review of Rare Diseases and Orphan Drugs was established to review on the designation lists of rare diseases, as well as the application for medical subsidy to secure healthcare and rights for rare disease patients.

In addition, to implement the “Physical and Mental Disabled Oral Health Preventive Scheme”; conduct 2-year projects to prevent dental cavities in disabled children through the use of fluoride tablets; establish service models for Taiwan’s disabled children including fluoride tablet administration and fluoride mouthwash gargling programs for prevention of dental cavities for disabled elementary school children to reduce their occurrence rates of cavities.

The Yu-Cheng case management was transferred to the CDC-Taiwan of the DOH after the reform of the previous Taiwan Provincial Government. On May 18, 2001, the CDC-Taiwan changed the original Yu-Cheng patient medical consultation manual to the Yu-Cheng patient outpatient clinics ID card. In 2004 were then again transferred to BHP to take in charge.

## 3. Performance in 2006

### 1) Foreign Spouse Childbirth Healthcare

1. Implement health card management and childbirth health guidance

All public health bureaus and primary health centers, from each city, county, town, and village reinforce issues of establishing health cards and develop service models for case management, provide family planning, prenatal and postnatal healthcare, genetic healthcare, and vaccination education, etc. In 2006, the foreign spouse health-card coverage rate was 96.5%; spouses from mainland China card coverage rate was 97.1%.

2. Health Education Interpreter training Program

In 2006, a workshop of interpreters for foreign spouse perinatal care standard operating procedures, as well as application of developed training materials was given to recruit 63 seed trainers (Figure 5-6), there were also local public health bureaus and primary health centers to train in-place foreign spouses as volunteers for translation of foreign languages. Up to the end of 2006, a total 14 out of 26 counties and cities around Taiwan offered these services.

Figure 5-6 A workshop of interpreters for foreign spouse perinatal care standard operating procedures, as well as applications of developed training materials.

3. Conduct prenatal examinations and fertility regulation medical subsidization.

All public health bureaus from each city and county followed the medical subsidization guidance procedures for foreign spouses to receive funds to reinforce medical subsidization for foreign spouses.

The above programs helped 8097 foreign spouses without coverage of the national health insurance for their prenatal examination fees; and family planning subsidization of a total amount of 1004 implantations of intrauterine devices and tubal ligation for 269 females and 12 males.


Figure 5-7 Foreign spouse mother's manual and educational manual for raising children in Thai language

4. Multi-language health educational materials development

In 2006, the Taiwan Normal University was subsidized to complete the "Foreign spouse childbirth health care frequently used words manual" in 5 different languages. In addition, BHP edited and printed the "Health educational manual for raising children" into Vietnamese, Thai, Indonesian, Cambodian, and English languages (Figure 5-7), health educational manual for raising children DVDs and other health educational materials to provide health care workers as references.

## 2) Rare Disease Prevention and Control

1. Rare Disease Control and Orphan Drug Act and associated regulations

After the Rare Disease Control and Orphan Drug Act was approved in 2000, BHP establish the "Committee for the review of rare diseases and orphan drugs" and the supply center of special nutrient foods and drugs for rare diseases. There were156 rare diseases, in 143 categories, were designated and announced; 80 items of rare disease drugs, as well as 40 items of special nutrient foods were announced; case applications for medical subsidy were reviewed. Apart from including rare diseases into the categories of major diseases and injuries under the National Health Insurance,

Figure 5-8 Forum for patients and their families conducted by rare disease supply chain and logistic center.

BHP also arranged the annual special budget to subsidize rare disease patients for providing required special nutrient foods. In 2006, reserve and provide 27 items of special nutrient foods, which were offered to 15 hospitals for 250 rare disease patients to use. The subsidizing budget achieved up to NTD$ 25.73 millions. In addition, 10 emergency medications were reserved for rare disease patients provided to hospitals. In 2006, a total of 30 patients received these emergent medications. The subsidization budget is up to NTD$280,000.

2. Establish completed medical service networks for genetic disease and rare disease

Build rare diseases online reporting database and service systems. There are an accumulated of 2,372 rare disease cases reported from hospitals and clinics from August 2000 to the end of December 2006. BHP also set up genetic diseases consultation centers in northern, middle, southern, and eastern Taiwan areas at 10 medical centers.


Figure 5-9 "Dignity of rare disease patients" manual

3. Provide international medical laboratory referral services for rare diseases

Integrate and establish information for domestic rare diseases cases and specimens delivery abroad and provide international cooperation approaches for rare diseases. The government and the Taiwan Foundation for Rare Disorders each subsidize 40% of examination fees. There were 222 cases subsidized from the August 9th, 2000 to the end of December 2006. BHP formulates the fast deliberation principles of 12 rare diseases by June 2006 to reduce the deliberating procedures of international laboratory referral.

4. Conduct reward programs for medical personnel who contribute to report rare disease cases and advocate the prevention and control of rare diseases

Conduct campus lectures and design the books such as, "The world less than 1/10000" advocacy poster (Figure 5-9), "Rare disease health passport", "Adrenoleukodystrophy caring manual", "Pompe's disease caring manual", and "Metabolic disorder-Taiwan experiences". Cooperate with the Taiwan Foundation for Rare Disorders and Taiwan Public TV Service to produce TV programs and books of "The Garden in Hopeless Land-life stories of rare disease patients", and develop leaflets of rare diseases (Figure 5-10) as well as disease care manuals to provide related personnel as references.


Figure 5-10 Leaflet of Adrenoleukodystrophy (one of the rare diseases)

### (3) Oral Health Promotion for the Disabled

1. Conduct oral health promotion workshops for caregivers of the disabled.

Train 460 seed instructors, and develop short videos of teeth cleaning demonstrations for the disabled. These seeds went to 25 disabled institutions and guide the caregivers with teeth cleaning techniques and reinforce caregivers and teachers oral health knowledge. A total of 40 services were provided (Figure 5-11).

Figure 5-11 Oral health promotion activities-establish oral health care models for the disabled. The disabled students help to brush teeth for another one at the disabled institution.

2. Provide health education guidance

Provide evaluations on safety of fluoride tablets and urine to 400 physical and mental disabled children, promotional campaign of fluorine substance for caretakers and oral health education. Provide fluoride mouthwash services to more than 20,000 physically disabled children and empower oral health care knowledge for them and caregivers in order to reduce their dental caries.

### 4) Health Care for Yu-Cheng Patients

BHP has provided free health examination every year and subsidizes copayment fees of medical consultation for Yu-Cheng patients since 2004. From July 1, 2005, the second generations of female Yu-Cheng patients are eligible to apply for Yu-Cheng patient outpatient clinics ID card and free health examination every year. There were approximately 511 people who underwent the health examination service in 2006.

# Chapter 6

# Health Promotion Infrastructure and Network

# Chapter 6 Health Promotion Infrastructure and Network

Public health services should consider the responsiveness and timing of its effects, cost benefits, and accessibility, and equity on decision making. Apart from the importance of preventive health care towards the public health traditions, the arrival of the internet technology era has brought heavy impacts to the health systems of the world. On one side, it has changed from the passive reporting system in the past to the automatic monitoring system and feasibility of multi-player online interactions. It is better for situtional control. On the other side, both inquiries from public representatives and news media instant reports, and the appropriate response depends on the importance of accurate health information and risks communication. Establishment of health indicators and objective public opinions are important as references for implementing policies. To improve national health, make connection with international standards through two directional information communications from internet and media. It is also the responsible duty for being part of the global village. BHP would like to share the health promotion experiences and outcomes in Taiwan to all the countries of the world.

## Section 1. Health Screening Service

Preventive health care can secure all national health by early disease detection and early treatment. Since 1995, DOH with National Health Insurance scheme provides 4 main preventive health care services, which are prenatal check, preventive health care for children, cervical Pap smear examination, and preventive health care for adults. Mammography X-ray services and fluorination of children's teeth health care services were added in July 2004.

To relief the financial burden of National Health Insurance, the above public health expenditures from National Health Insurance have progressively moved into public financed budgets since 2006. The categories that moved into BHP annual budgets in 2006 include:

| Type | Category of the service provided |
|---|---|
| Prenatal examination | Provide 10 prenatal examinations, which include whole body examination, blood and urine lab tests, ultrasound examination, and health education. |
| Children's preventive health care | 9 periodic health examinations for children under 7 years old, include physical and developmental examinations and health education. |
| Cervical Pap smear examination | Annual check-up for women over 30 years old. |
| Mammography X-ray examination | An examination in every two years for women between 50-69 years old. |

All preventive health care results in 2006 include: 1,800,000 person-times visits of pregnant women prenatal examinations with a usage rate of 97.84%; 1,360,000 person-times visits of children underwent children preventive health care service with a usage rate of 71.72%; 1,660,000 person-times of women underwent cervical Pap smear examinations with a usage rate of 25.23%; and 110,000 women underwent mammography with a usage rate of 5%.

## Section 2. Health Indicator and Surveillance System

### 1. Current Situation Analysis

"Discover the evidence for better possibilities". During the past decades, the focus of public health policy in Taiwan has shifted from passive disease treatment and care into proactive health prevention and promotion approaches. Since the establishment of the Bureau of Health Promotion in 2001, a series of policy relevant surveys and researches have been conducted for collecting empirical data and information that are necessary for policy making, program planning, and outcome evaluation.

### 2. Policy and Planning

In order to provide objective and accurate information for policy planning, a survey-based health surveillance system that focuses on people's health status, health behaviors, and medical utilization has been established. Serial health surveys that aim to understand health issues of the whole population, and of specific age groups, have been conducted periodically. By incorporating measurements of bio-makers, a rich set of database has constructed for policy planning and decision making. Please find below the timeline of the survey series. (Table 6-1):

Table 6-1 Timeline of Population and Health Survey Series Conducted by the Bureau of Health Promotion

| Survey Series | Timeline | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| (a) National Health Interview Survey | | | | | | | ● | ● | | | ● | | | | ● | |
| (b) Women Health , Family and Fertility Survey | | | | ● | | | | | | ● | | | | ● | | |
| (c) Taiwan Youth Health Survey | ● | | | | | ● | | | | | ● | ● | ● | ● | ● | ● |
| (d) Taiwan Longitudinal Study on Aging | | ➡ | | | ➡ | | | | ➡ | | | | ➡ | | | ➡ |
| (e) Taiwan Birth Cohort Study | | | | | | | | | | | ➡ | ➡ | ➡ | ➡ | | ➡ |
| (f) Social Environmental Biomarker of Aging Study | | | | | | ● | | | | | | ● | | | | |

● cross-sectional ➡ longitudinal

Instruments have been developed to meet both domestic policy need and international comparison purposes. Health-related data are collected through various means, including face-to-face interview, telephone interview, and self-administered questionnaire of students in class. In recent years, computer-assisted tools have been increasingly adopted to facilitate data processing and ensure data quality. To provide health professionals, as well as the public, with better accessibility to acquire timely information on important health indicators, a web-based data query system, equipped with major survey findings, has recently been set-up and currently in operation.

## 3. Implementation results

### 1) School Surveys on Adolescents' Smoking and Other Health Behaviors

Through the collaboration with US Centers for Disease Control and Prevention (US-CDC) Office on Smoking and Health (OSH), A Taiwan version of the Global Youth Tobacco Surveys (GYTS), which utilized strict school survey protocol, developed by CDC for global comparison use, has been devised and conducted annually since 2004. The periodic surveys provide rich data for surveillance on adolescents' smoking behaviors and attitudes as well as their exposures to second-hand smoke and tobacco advertisement in media, etc. Inspired by the GYTS surveillance model, a new plot called Taiwan Youth Health Surveys (TYHS) has recently been initiated. The TYHS aims at a wider range of adolescent health behaviors including various substance use, diet behaviors, exercise, mental health, safety, and reproductive health issues. Survey findings from both GYTS and TYHS are used to provide good evidences for policy making and program evaluations.

### 2) Telephone Surveys on Health-related Issues

Telephone surveys have been widely used to collect timely policy relevant information at relatively low costs. Since the establishment of the Telephone Survey Center in 2003, a variety of national and/or city/county representative surveys, or follow-up surveys, have been conducted regularly. In 2006, five telephone surveys were administered. The surveyed issues included people's knowledge and attitudes toward chronic diseases, adult smoking behaviors, physical activity levels, youth's attitudes toward marriage and child-bearing, and utilization of children's car safety seats.

### 3) Taiwan Birth Cohort Study (TBCS)

From the viewpoint of life course epidemiology, health status in childhood is supposed to potentially correlate with health status in adulthood. In order to establish the norms of Taiwanese children's growth, development, and health condition, to investigate how child health might be affected by social and physical environments, and to explore the impact of foreign born mothers on their children's health and development, a national representative sample of newborns in 2005, of around 20,000, were selected and consecutive interview surveys have been applied to their parents. Baseline and follow-up surveys were conducted when the sample babies were at the age of 6 months old and 18 months old, with response rates over 80%. Valuable information on child health and development were collected during the past two waves of the TBCS surveys. The next follow-up in the near future is scheduled to be carried out in 2008 when the sample children are at age of 3 years old.

The first investigation was completed in 2006 (6 months old babies) with 21,648 cases, response rate was 87.8%; then proceed onto the second follow-up investigation (18 months old). Samples from the first investigation follow-ups are estimated to complete information collection by July 2007, the accumulated response rate until December 2006 is greater than 94%.

### 4) Preliminary Report of National Health Interview Survey (NHIS)

The National Health Survey has been one of the principal sources of information that enables us to monitor the health status of the population. The first NHIS was conducted with joint efforts from the National Health Research Institutes and BHP in 2001. The survey results have enabled us to obtain objective and accurate information on actions and policies. The second National Health Interview Survey was completed in 2005 with 24,726 samples and the response rate up to 80.6%. Analyses on 29 policy relevant topics were completed in 2006.

### 5) Social Environmental Biomarkers of Aging Study

In order to cope with the upcoming aging society and its impact, BHP worked with experts from Georgetown University to conduct the Social Environmental Biomarkers of Aging Study. The aim of this study was to elaborate on the relationship between life challenges and health and to explore how the social environment affects that relationship. The period of study is from 2005 until the end of 2009, with a budget from U.S National Institute of Health. Pretest was conducted in 2005 to draw lessons for island-wide fieldwork in 2006. Data were collected based on questionnaire interviews, health assessments, physical exams, and assays of blood and urine specimens. The final data set comprised a uniquely rich set of information for the study of social factors, life challenges, and physical and mental health.

## Section 3. Health Information Network

The Health Information Network is constructed mainly with the portal of the Bureau of Health Promotion and Health99 Education Website; added databank and systems setup to have health subjects integrated for user's easy access and inquiries of health information. The Health Information Network was awarded with the "Excellent Health Information Network Award" in 2005 and 2006, it contains easy-to-use websites in Chinese and English for the information of mother and baby, baby's hearing ability, oral care, health and welfare for adolescences, senior citizen's health, cancer prevention and control, community health, tobacco control, health education, disease prevention and control, health research and survey, and childbirth reporting systems.

BHP had the information network simplified as a single portal system platform and added an introduction and construction of knowledge search, composition, and management to have the comprehensive service reinforced and refined. BHP also has information security measures established to protect the safety of personal information. The mission is to provide the public with convenient services and to have health education knowledge composed and broadcasted effectively through the portal platform.

Figure 6-1 Bureau of Health Promotion Website in Chinese Language
http://www.bhp.doh.gov.tw/BHP/index.jsp
Bureau of Health Promotion Website in English Language
http://www.bhp.doh.gov.tw/english/

Health theme in BHP website http://www.bhp.doh.gov.tw/BHP/index.jsp

some of the following websites are constructed in Chinese only, right now new English websites are under construction and hence the following explanation is a brief functional introduction.

| Theme | Explanation |
|---|---|
| Mother and baby | Construct comprehensive maternal and child health and genetic health service system；to help prenatal and postnatal healthcare information. |
| Breast feeding | Breast milk provides neonates with necessary nutrients and is irreplaceable with formula milk. |
| Baby's hearing ability | Hearing is an important channel for humans to communicate to the surrounding environment and it is crucial to knowledge gathering and physical and mental development. |
| Promoting healthy vision and vision care | In terms of national health, the effort of promoting healthy vision and vision care for preschool children is fruitful and the rapid rising trend of nearsightedness (myopia) of elementary school students is declining. |
| Oral health | Provide the results of oral health care surveys in Taiwan and the teaching materials and educational information of oral health epidemiology. |
| Health and welfare for adolescences | Provide sex education and information to teenagers through online services confidentially, for protection of their privacy. |

| Theme | Explanation |
|---|---|
| Senior citizen's health | Construct a comprehensive disease prevention and healthy environment; provide information of various chronic diseases prevention and control, and healthcare for menopause. |
| Cancer Prevention and Control | Empower the cancer knowledge of the public to get the necessary online help. |
| Health related physical activities | The "No break for health, exercise is convenient for the whole family" leads to the healthy concept of "Move anytime to improve health". |
| Community health | Propagate community health promotions through community development. |
| Occupational health | The effort of occupational disease prevention from early diagnosis and early treatment to environmental detection, bio-detection, and work environment surveillance and control has been improved substantially. |
| Health education | The focus is diverted to the "Health 99 Education Website." |
| Survey & Research | Establish a population and health surveillance system to provide objective, accurate, and detailed data and analysis for policy planning, performance evaluation, and business promotion. |
| Childbirth reporting system | The system helps the public health workers to share information from a convenient website and databank easy to retrieve and retains the information of postnatal woman and newborn babies. |
| Preventive health care | It includes prenatal examination, children's preventive health care, cervical Pap smear examination, mammography X-ray examination. |

## Health 99 Education Resource Website http://health99.doh.gov.tw/en/

| Website | Explanation |
|---|---|
| Health 99 Education Resource Website | http://health99.doh.gov.tw/en/<br>"Health 99 Education Resource Website" contains health information collected from and composed of medical institutions, public health sector, and NGOs. Around 2,800 pieces of teaching materials have been collected since the establishment of the website. There are around 950 pieces of teaching materials online, with over 8 million visits documented. An average of 5,600 visits daily have been made since the update of the website and with 8,000 members recruited and 9,200 subscribers for e-news. "Health 99 Education Resource Website" was awarded with the "Excellent Health Information Website" in 2005 and 2006. Users and health education personnel are able to locate the intended health education materials online by the classification of teaching materials, age groups, media, index, key words, issuing units, and text search; or have a hardcopy retrieved by the logistic service. Moreover, health education information in Chinese edition includes health headlines, newsflashes, cherishing life concepts, virtual health education theme park, game99, video and audio theater, Q&A, and online health checkup. Heath education blogs provide senior members with a place sharing for creations, including daily log sharing, e-albums, case studies, and online messaging to inspire the moral of the health education team by resource sharing. Currently, the interaction between the website users and the "Health 99 Education Resource Website" is reinforced through the issuance of e-news and on-site services. The English teaching material available in the website is divided into the 21 categories by theme and content. This English website will be enriched and updated by the end of 2008. |

## Databank and system

These systems are constructed in Chinese and hence the following explanation is a brief introduction of function of each system.

| System/Website | Explanation |
|---|---|
| Maternal and child health databank system | Construct Maternal and Children's Health Databank; arrange special group medical subsidized records to understand the healthcare provided to special groups. Upgrade service quality, accountability, and timing. |
| Extremely underweight premature baby databank and after discharge care network | Construct databank for extremely underweight premature baby's in order to understand the healthcare provided to premature infants and follow-ups of these babies to monitor their outcomes. |
| Newborn G6PD examination and screening quality assurance website | In response to the introduction of newborn screening plans of BHP, implement quality control and monitoring of newborn screening center and G6PD testing hospitals to upgrade the quality of screening and diagnosis. |
| Rare diseases online reporting and service system | The system serves as a rare disease online reporting system, which also provides online application services of special nutrient foods, emergent medicines, and international laboratory referral service. |
| National genetic health diagnosis reporting and database system & communication website | The system is a web-based reporting and database system developed to input data of individuals eligible for genetic health testing fee subsidy. The data is then further processed for medical subsidy and statistical analysis. A "Communication Web Site" has been constructed for this system and serves as the communication platform for laboratories and BHP. |
| Genetic disease consultation service window | Provide domestic medical professionals and public health personnel with comprehensive genetic knowledge and resources to help them acquire sufficient information to improve service quality and validity while taking care of complicated and rare genetic diseases on the frontline. |
| Taiwan Cancer Registry System | Collect epidemiology data including types of cancers, histological classifications, and locations. The data comes from all domestic hospitals that have over 50 beds equipped. |
| Health energy | http://www.bhp.doh.gov.tw/health_body<br>Build up the health concept of "Move for health", based on the idea of "around-the-clock health & exercise." |
| Community health building website | http://hpnet.bhp.doh.gov.tw/hpnet/<br>Promote the "community health building" concept by providing an interactive, sharing, and communicative platform. |
| Workplace health promotion & tobacco control website | http://health.cish.itri.org.tw/nosmoking/<br>This site includes 3 parts of smoke-free workplaces, workplace health promotions, and autonomous validation. |
| Tobacco control | http://tobacco.bhp.doh.gov.tw:8080/<br>Promote tobacco control and share the performance experiences of tobacco control. Provide health bureaus, health education workers, and the public with a knowledge platform accessed from one single portal to link, search, and download data including laws and policies, media broadcasting, smoke-free environments, smoking cessation services, international cooperation, survey, monitoring, research and development, and annual reports. |
| Health 123 | http://olap.bhp.doh.gov.tw/<br>Health indicator with figures computed from datasets of various health surveys and childbirth reporting system were installed on the website, equipped with flexibility on stratification to provide interactive on-line data-query services. |
| Population and health survey research information sharing system | http://rds.bhp.doh.gov.tw/<br>Use research results and information for promoting health with comprehensive online data provided and service system constructed. |

## Section 4. International Cooperation & Communication

Based on international activities established prior to the reorganization, the Bureau of Health Promotion has cooperated with the Center for Disease Control and Prevention (USA) for global health research projects, and through attending international meetings to share experiences of health promotion around the globe.

## 1. Cooperation between Taiwan and Vietnam

For the purpose of sharing the experiences of Taiwan in public health with the world, and supporting the international health tasks to establish international friendship and to enhance Taiwan's image, the Department of Health initiated a cooperation program on population and family planning with Vietnam on population, family, and children's care issues. To date this cooperation program has lasted for over 10 years, and hundreds of Vietnam experts and professionals have visited Taiwan. The cooperation program in 2006 included the following items:

### 1) Vietnamese delegate training and visits in Taiwan

Three Vietnamese delegations associated with population, family planning and maternal and child healthcare came to Taiwan. The visiting schedule included attending related workshops and visiting government and non-government organizations. The training focused mainly on community population, family, and children in special circumstances, newborn screening, and early intervention care to prevent genetic defects, care and rehabilitation of physically or mentally disabled children, the roles of family and society for the healthcare of mothers, children, and senior citizens, and the stipulation and enforcement of family and community development policies.

### 2) Two missions from Taiwan's Bureau of Health Promotion to Vietnam

1. From Aug. 6 to Aug.13, 2006, BHP invited three genetic medicine specialists to attend the "Upgrading Population Quality" workshop in Da Lat (S. Vietnam) and Hanoi (N. Vietnam). There were over 200 attendees, including scholars, provincial representatives, and government specialists. The theme of the meeting was to discuss methods to promote the 2006-2010 population quality upgrading plan. The visitors from Taiwan had visited the Tu Du Hospital in Ho Chi Ming City and the Obstetrics and Gynecology Hospital and National Pediatric Hospital in Hanoi and had offered Taiwan's experience and suggestions in prenatal diagnosis and newborn screening for a solution to birth deformations and for the population quality improving in Vietnam.

2. From December 23-29, 2006, a mission led by the Director General of BHP who visited Vietnam, including the local government in Khanh Hoa Province, the Rehabilitation and Education Center for Physically & Mentally Disabled Children, Childbirth Health Center, and Vietnam Family Planning Association offices and workers. The purpose of the mission was to understand the efforts and difficulties of Vietnam in enforcing family planning, population quality, healthcare for physically and mentally disable children, and sex education and reproduction health of teenagers for continuing of future cooperation. In addition, further agreements were arranged by both for the cooperation and communication activities in 2007.

## 2. A Study of Sexual and Reproductive Health among Adolescents and Young Adults in Three Asian Countries

The Globalization enables adolescents and young adults to access foreign information from media, internet, and international communication. This resulted in changes in trends of adolescents and young adults' attitudes toward the other sex, sexual activities, marriage, child-bearing, and the family which needs to be studied. This study is designed by the Bureau of Health Promotion with joint efforts from scholars based at Johns Hopkins University in the United States and researchers in China and Vietnam. The aim of this study is to understand sexual behaviors and reproductive health of adolescents and young adults in three Asian cities; Taipei, Shanghai, and Hanoi. It is aim at comparing of their difference among the countries under the influences of economic development, the capability of access to information, and culture differences. Research findings will be provided as reference for adolescents and young adult health related policy making and service program planning.

## 3. Tobacco Control Activity

To link with international tobacco control, in addition, to continue to collaborate with the U.S. Centers for Disease Control and Prevention on surveys of smoking behavior, it is also important to seek opportunities to hold international conferences on tobacco control in Taiwan. Moreover, in compliance with regulations of Articles 20-22 of the "WHO Framework Convention on Tobacco Control" on regionalized international cooperation, which encourages non-governmental organizations to share Taiwan's success in tobacco control and to help other countries in promoting tobacco control. Important results achieved are as follows:

### 1) Global Youth Tobacco Survey (GYTS)

The youth tobacco survey conducted in Taiwan is not only synchronized with GYTS, it is also a global pioneer to have established distinctive characteristics that symbolize cities and counties as well as students of junior high, senior high, and vocational schools. The results of the surveys over the years have been presented in the global tobacco control conferences as well as published on the "Smoking Behavior Online Search System (SBOSS)" (http://tobcco.bhp.doh.gov.tw:8080/). The results of the survey have been organized and analyzed by the category of cities and counties. Current smoking conditions of youth and the trends are provided for use as reference for strategic planning and assessment of the youth tobacco prevention and control from central to local governments.

### 2) International Cooperation

1. BHP had worked with the "Southeast Asia Tobacco Control Alliance (SEATCA)" to have the "Regional Workshop on Women and Tobacco Control" held in Taipei in March 2006. A total of 112 participants from 13 countries have joined this workshop. These participants came from Bangladesh, Cambodia, Indonesia, Laos, Malaysia, Mongolia, Philippines, Singapore, Thailand, Vietnam, and Taiwan. The main theme of this workshop was women tobacco control.

2. BHP works with international non-governmental organizations in Cambodia to develop the guidelines on the establishment of smoke-free environments to promote "Smoke-free armed forces," "Smoke-free military hospitals," "Smoke-free schools," and "Smoke-free tricycle & small loan plan," to train local tobacco hazard seed teachers, to arrange tobacco hazard awareness courses, to hold smoking cessation classes, and to conduct "knowledge, attitudes, and behavior survey of cyclists on tobacco products." Current achievements include "Tobacco control policy advocacy workshops" to lobby for the legislation of the tobacco control laws. Work with the Cambodia Movement for Health and the Women's Media Center to produce TV broadcasting programs. Moreover, the Cambodia Movement for Health becomes the first native anti-smoking group in Cambodia in November 2006.

### 3) Participate in International Conferences and Publish Research Papers

1. Two students of Anti-Smoking Ambassadors Program (ASAP) were sponsored by the Campaign for Tobacco Free Kids and Essential Action in 2006 to participate the Global Youth Advocacy Training of the 13th World Conference on Tobacco OR Health (WCTOH) in Washington DC, USA. They had shared their experience of attending the ASAP in Taiwan (Educate, Motivate, and Advocate: Global Youth Advocacy 101 Experiences from Taiwan).

2. Fourteen members of the Bureau of Health Promotion attended 9 global and regional tobacco control conferences in 2006, where they shared the achievements of Taiwan in tobacco control.

## 4. Health Promoting Hospitals and International Connection of Safe Community Network

To make Taiwan's health promoting hospitals connect to the world, BHP has contributed to 5 hospitals including Taipei Municipal WangFang Hospital, Cardinal Tien Hospital-Yung Ho Branch, Taichung Hospital, Fon-Yuan Hospital, and Pingtung Christian Hospital to obtain the certifications from WHO-HPH collaborating center.

The updated information of injury prevention and safety and international community safety news, can be obtained through the well known Safe Community Network. Information exchange can be through the media link for Safe Community Weekly. In addition, Taiwan has participated in the International Safe Community Conference and hosted The Third Asian Regional Safe Community Conference and its authentication ceremony at 2005. The four communities including the Neihu District Taipei (metropolitan area), Dungshr Township Taichung (town), Alishan Township Chiayi (mountainous area), and Fongbin village Hualien (rural area) have passed international authentication in June of 2005 and become official members of the International Safe Community Network. The concrete achievements in 2006 include:

## 1) International cooperation activities

1. Attend international safe community workshops

The Taiwan safe community groups attended 15th Safe Community Conferences at Cape Town, South Africa, in April 2006. In addition to learning the experience from other nations, the groups also shared the Taiwan experiences in safe communities, both in oral presentation and in poster.

2. Invited guests of WHO Collaborating Centre on Community Safety Promotion to Taiwan

(a) Invited the Chairman, Dr. Yousif Rahim, of European Safe Community Network (ESCON) who is also the editor of International Safe Community Weekly to visit the safe community development in Don-Sun, village of Ilan, Chung-Cheng District of Taipei city, Hsin-Kong Village of Chiayi county, and Shih-Kong Village of Taichung County in July 2006.

(b) Discussed the availability of safe community model with domestic scholars and government representatives at the library of Shih-Kong Village in July 2006.

3. Assisted the promotion of safe communities overseas

Invited 3 visitors from Japan including Ms. Yoko Niiyama, who was the regional nursery supervisor in Aomori Prefectural Government, Mr.Hiroshi Ishizuki who is CEO of International Society of Traffic Safety at Tokyo; and Mr.Yoshihide Sorimachi, who was a senior supervisor of the Public Health Bureau of Aomori Prefectural Government to visit the international safe communities in Dungshr and Neihu in July 2006. This shared experience will promote safe communities in Taiwan and Japan.

4. Reinforce international communication and arrange regional safe community workshops

Arranged “2006 Taiwan Safe Community Workshop” in September 2006 and with the attendance of scholars and specialists from New Zealand, Korea, and Thailand to share their experience in promoting safe community and to make suggestions for the development of safe communities in Taiwan.

5. The Sweden Headquarters of the Safe Community Center (WHO) appointed Taiwan to help translate the Safe Community Weekly into Chinese.

6. Publication of Taiwan Safe Community Network Periodicals

The first issue of Taiwan Safe Community Network Periodicals is published in Chinese and English to report the development of safe community in Taiwan and to share the movement of global safe community with readers in Taiwan for realizing the goals of sharing synchronous safe community growth.

## 2) The four Taiwan certified international safe communities and their proposed issues (Table 6-2)

Table 6-2 Promotion of Taiwan Safe Community

| Issues \ Community | Fongbin Village safe community | Dungshr Town safe community | Alishan safe community | Neifu District Safe community |
|---|---|---|---|---|
| Injury surveillance | * | * | * | * |
| Home safety improvement | * | * | * | * |
| Agricultural safety improvement | * | * | * | |
| Campus safety improvement | * | * | * | * |
| Road safety improvement | * | * | * | * |
| Aquatic safety improvement | * | | * | * |
| Violence prevention | | * | | |
| Marketplace safety improvement | | | | * |
| Care for single senior citizens | * | | * | |
| After-school safety for children | * | * | | |
| Country inn safety | | | * | |

## 3) Construct Taiwan safe community promotion network

Construct the Taiwan Safe Community Promotion Center to link to the world, with four supporting centers setup in North, Central, South, and East Taiwan for injury prevention and safety promotion of the four certified international safe communities and supervising the setup of new safe communities.

## 4) Expand Safe Community Project

The newly developed safe community project covers 9 locations including the Chung-Cheng District of Taipei City, Shih-Kong Village of Taichung County, Bei-Tun District of Taichung City, Nan-Tun District of Taichung City, Jo-Yin District of Kaohsiung City, Chung-Zon Community of Tainan City, Chung-Jwong Community of Hsin-Kong Village of Chiayi County, New-Li Community of Hualian county, and the Dong-Sun Village of Ilan County. Moreover, all of the community organizations and operation modes had completed and the proposed community safety issues had assessed.

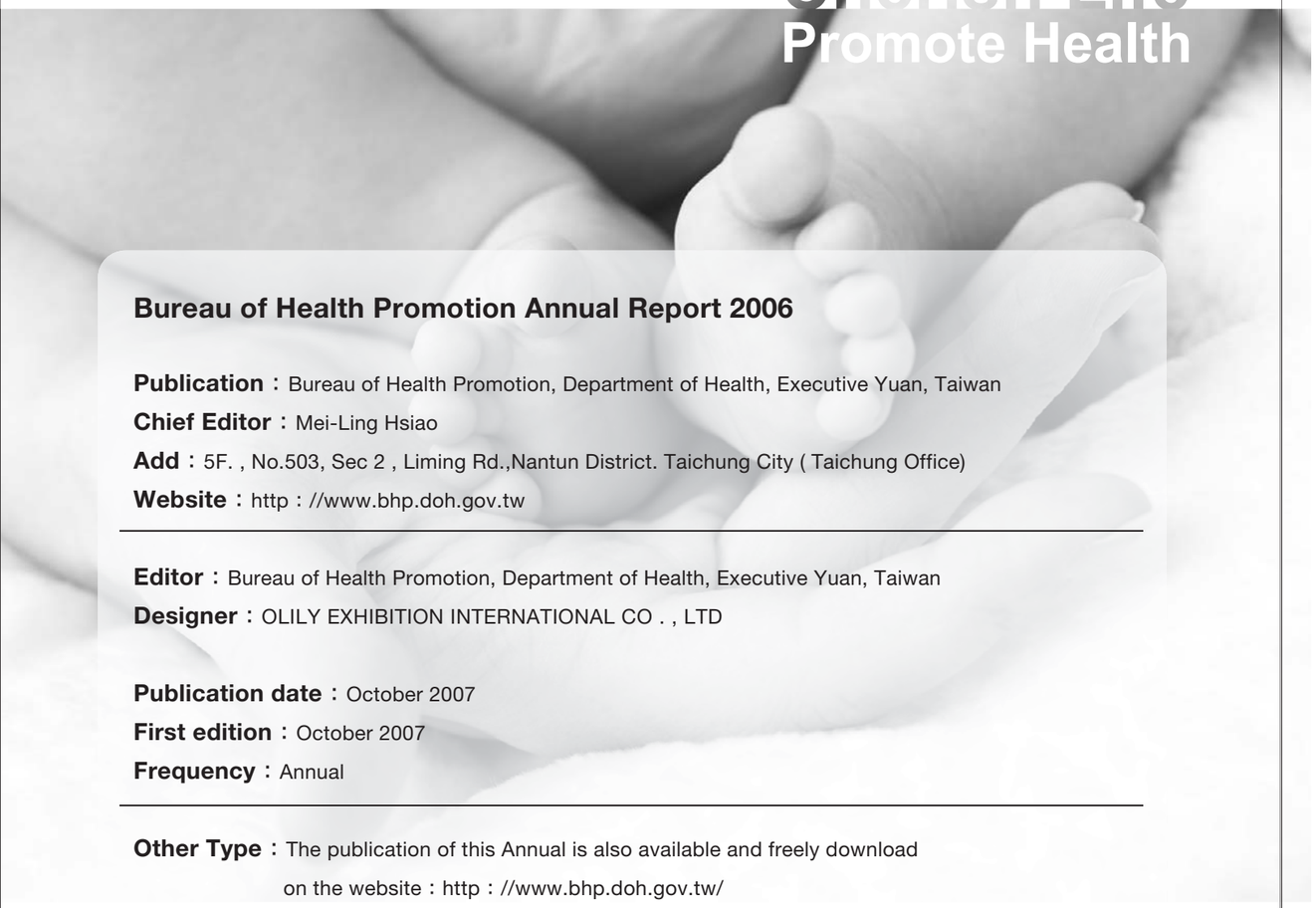
# Appendix

## Chronicles of the Bureau of Health Promotion

| Date | Events |
|---|---|
| July 12, 2001 | The Bureau of Health Promotion was in service, headed by the first Director General, Dr. Red-Helm Weng. |
| October 15, 2001 | The Bureau of Health Promotion arranged the first survey and research on the prevalence rates of hypertension, hyperglycemias, and hyperlipemia in Taiwan and was completed in March 2003. |
| January 1, 2002 | All the public hospitals under the Department of Health started smoking-cessation outpatient clinics services. The smoking-cessation consultation helpline was set up. |
| January 1, 2002 | The Ministry of Finance began collecting Health and Welfare Surcharge. |
| May 24, 2002 | Setup Tobacco Control & Health Foundation and arranged the first meeting. |
| June 11, 2002 | It was resolved in the 13th meeting of the National Council for Sustainable Development, Executive Yuan to have eight work divisions organized, in which the Department of Health served as the executive secretary of the Health Risk Division. |
| June 18, 2002 | Started fully financial sponsoring local health promotion and tobacco control projects. |
| December 1, 2002 | Started promoting Diabetes Joint Care in 25 counties and cities of Taiwan. |
| December 2, 2002 | The “Community-based healthy life plan” of BHP was included in “Challenge 2008：National Development Plan–New Community Construction Plan of the Executive Yuan” and was reported to and approved by the Executive Yuan. |
| December 10, 2002 | The Department of Health, Executive Yuan announced the “Regulation for Exemption or Subsidy of the Fees of Genetic health Measures”. |
| December 25, 2002 | Arranged “Comprehensive smoke-free environment program” including smoke-free restaurants, smoke-free workplaces, and smoke-free campuses projects for elementary and high schools. |
| January 3, 2003 | Contracted the “Teacher Chang Foundation” to start toll-free 0800-636363 “Smokers’ Helpline Service” and with psychological counseling personnel available to help smokers quit smoking. |
| January 23, 2003 | Announced the “Medical Personnel Certification Criteria for Diabetes Joint Care Network”. |
| May 21, 2003 | The “Cancer Control Act” took effect. |
| May 21, 2003 | The “Oral Health Act” took effect. |
| August 1, 2003 | The second-term Director General Dr. Shio Jean Lin reported to duty. |
| August 14, 2003 | Stipulated the “Review Directions for Tobacco Control & Health Care Funds.” |
| November 6, 2003 | For the promotion of smoke-free armed forces, worked with the Ministry of National Defense to hold the “2003 The Ministry of National Defense Tobacco Control Campaign.” |
| November 24, 2003 | Enforced the Childbirth Health Management Project for Foreign-born Spouse and Chinese Spouse to encourage public health bureaus having the health records management of foreign-born spouses. |
| March 18, 2004 | Processed the medical personnel certification criteria for diabetes joint-care network. |
| April 2, 2004 | The “Healthy Life in Communities Scheme” amendment under the Challenging 2008 National Major Development Scheme–New Homeland Community Construction Scheme was submitted to the Executive Yuan for approval. |
| August 18, 2004 | Arranged the “Childbirth encouragement and health education promotion project” for three years at the order of the Executive Yuan. |
| October 29, 2004 | The “Guidelines for Establishment of the Council on Tobacco Control, Department of Health, Executive Yuan” was in effect. |
| December 19, 2004 | Arranged the 1st “Certification for Cancer Registrar”. |
| January 1, 2005 | The Executive Yuan invited the Ministry of Economic Affairs, Environmental Protection Administration, Department of Health, Council of Agriculture, and Tainan City Government to discuss the organization of the “Taskforce team for the pollution of An-Shen Plant of China Petroleum Corporation in Tainan City.” |
| January 19, 2005 | The Department of Health and the Executive Yuan had the “Rare Disease Control and Orphan Drug Act” amended and took effect. |
| March 30, 2005 | The President signed the instrument of accession to the “WHO Framework Convention on Tobacco Control”. |
| April 11, 2005 | The “Community-based healthy life plan” was included in the Executive Yuan’s Taiwan Health Community Six-star Project–Social Welfare & Medical Aspect. |
| July 4, 2005 | The Yu-Cheng Patient healthcare had been assigned to BHP since 2004. Those who had Yu-Cheng ID cards can have outpatient clinics co-payment deduction. |
| July 11, 2005 | The Executive Yuan approved the Five-Year Cancer Prevention and Control Program. |
| August 1, 2005 | The Director General, Dr. Chun-Ming Wu, reported to duty (the 3rd term). |
| August 7, 2005 | Attended the Global Conference on Health Promotion in Bangkok, Thailand |
| August 18, 2005 | The four types of safe communities including “Taipei Neihu Metropolitan,” “Taichung Dong-Shih Suburban,” “Chiayi ALiShan Mountain,” and “Hualian Fong-Bin Coastline” promoted by BHP were all certified by WHO. |
| October 14, 2005 | After years of promoting Healthy City Project, National Cheng Kung University team helped Tainan City Government join the West Pacific International Health City Alliance (WHO) in the name of “Tainan Health City Association.” |
| October 17-21, 2005 | Chairperson, Dr. Leif Svanström, of the Safe Community Center of the World Health Organization (WHO) and the Chairman, Dr. Yousif Rahim, of the European Safe Community Network (ESCON) attended 3rd Asian Regional Safe Community Conference Workshop & Certification Ceremony in Taiwan and offer certifications for 4 Taiwan safe communities. |
| January 1, 2006 | Preventive health care services, including Children’s preventive health care, prenatal health check-ups of pregnant women, pregnancy test, cervical Pap smear screening, and mammography paid by BHP public budget instead of National Health Insurance scheme. |
| January 1, 2006 | Directorate-General of Budget, Accounting & Statistics, and the Executive Yuan had authorized to have the “public health center (expansion) construction” included in the “national grants budget” in 2006. County (city) government was to have budget planned according to the general grants received annually for the construction (expansion) and hardware improvement of the public health centers in order to have the construction of the public health centers improved gradually and to provide the public with a fresh and safe community health environment. |
| January 1, 2006 | A total of 116 institutions of diabetes health promotion set up. |
| January 20, 2006 | Amended and published the “Mammography medical institution certification criteria.” |
| February 13, 2006 | The “Guidelines for the preventive health care services provided by medical institutions” was stipulated and published and was brought into effect on January 1, 2006. |
| February 16, 2006 | Amended Article 22 of the “Tobacco and Alcohol Tax Act.” Health and Welfare Surcharge was increased to NTD$10 per pack. |
| February 16, 2006 | Amended the “Regulations of Distribution and Utilization in Dealing with the Collected the Health and Welfare Surcharge.” |
| February 22, 2006 | Amended the “Cervical Pathology Diagnostic Unit Certification Criteria.” |
| February 24, 2006 | Preliminary meeting for Taiwan health city alliance. |
| March 1-3, 2006 | Asia Pacific Regional Workshop on Women and Tobacco Control. |
| March 19, 2006 | The year’s first delegation from the Vietnam visited Taiwan. The training was focused on the topics of the management of population, family, and children in special circumstances. |

| Date | Events |
|---|---|
| April 4, 2006 | The “Children’s health promotion committee, DOH” was organized. |
| May 1, 2006 | Amended the “Guidelines for Tobacco Control & Health Care Funds.” |
| May 1, 2006 | Stipulated the “Operation Protocol of Preventive Health Care Services of Medical Institutions” and it was approved for record with the authorization of the Department of Health. |
| May 9, 2006 | Reinforced the prevention of breast cancer in remote areas of Taiwan and the “Breast Cancer Special Free Service” by the public hospitals of DOH was initiated. |
| May 29-30, 2006 | 2006 National Health Meeting. |
| June 2, 2006 | The Legislative Yuan had decided to contract the Bureau of Health Promotion to stipulate the “Health Promotion Law.” |
| June 4, 2006 | The year’s second delegation from the Vietnam visited Taiwan. The training was focus on the topics of newborn screening, early intervention to prevent genetic defects for children, care and rehabilitation for disabled children, role of family and society in health care for mothers, children, and the elderly. |
| June 15, 2006 | The resolution of the 3rd Cancer Prevention & Control Policy Commission in 2006 urged BHP to draft up the Five-year Prevention Plan of Health Hazards on Betel Quid Chewing. |
| June 26, 2006 | International physical activity surveillance system and health promotion workshop was held. |
| June 30, 2006 | Draft up the “Quality improvements of cancer service certification criteria and procedures.” |
| June 30, 2006 | Amended the “Medical personnel certification criteria for diabetes joint care network (new standard).” |
| July 1, 2006 | Enforced Article 2, Article 7, and Table 1 of Article 4 of the “Eugenic Health Exemption or Compensation Act.” |
| July 1, 2006 | Eleven items qualified for the “Congenital Metabolic Diseases Screening of the DOH.” |
| July 11, 2006 | 2006 Occupational Health Promotion Forum. |
| July 28, 2006 | Arranged international oral health workshop for the physically and mentally disabled. |
| August 1, 2006 | The the 4th term Director General, Ms. Mei-Ling Hsiao reported to duty. |
| August 6, 2006 | First BHP mission this year assisted prenatal diagnosis and newborn screening workshop and observed related care service system in Vietnam. |
| August 24, 2006 | Established the “Promoting healthy vision and vision care advisory commissions.” |
| August 25-26, 2006 | Arranged the “International Oral Health Policy Workshop.” |
| August 29, 2006 | 2006 annual conference for 10th National Alliance of Breast Cancer Organizations. |
| September 20, 2006 | The “Community-based Healthy Life Plan” was included in the “Economic Development Stage I Three-year Project (2007-2009) Social Welfare of the Executive Yuan in 2015.” |

| Date | Events |
|---|---|
| September 23, 2006 | Summoned the “Cancer Care Network Workshop” for the upgrade of man power quality and introduced care networks, promoted by government for cancer prevention and control. |
| September 24, 2006 | Arranged the “How Young is Your Heart?” activity on the world heart day. |
| September 29, 2006 | Arranged the 14th work meeting of the “Health Risk Division” of the “National Council for Sustainable Development of the Executive Yuan” to have the EMF health risk task force team for organized action among all involved ministries of the government. |
| October 1, 2006 | 1001 World Hepatitis Day – “Wish for good health ~ Hepatitis and Liver Cancer Prevention.” |
| October 15, 2006 | The year’s third delegation from the Vietnam Commission visited Taiwan. The training was focus on the topics of policy making, implementation of support policies to family, and community development in transition. |
| October 18, 2006 | The Executive Yuan had the “Genetic Health Act” amendment draft approved and it was submitted to the Legislative Yuan for review on October 20. |
| October 23, 2006 | Worked with the American Cancer Society to arrange the Cancer Prevention and Control Training courses named “American Cancer Society University.” |
| November 1, 2006 | Arranged the “Public Health Center Award” for the first time to have the outstanding health institutions standard operational procedures awarded. Provided with the SOP and management experience to other health centers for reference in order to upgrade service quality and provide inspiration to the best practice of primary health centers. |
| November 7, 2006 | Arranged the “2006 Health related physical activities” workshop. |
| November 11, 2006 | The campaign “Walk Around Formosa with You” & “Walk Around Taipei Botanical Garden” were held with the participation of the Premier of the Executive Yuan, Mr. Tseng Chang Su, and the Minister, Dr. Sheng-Mou Hou. The “National Walking Day” was announced on November 11. |
| November 13, 2006 | The 1st Asia-Pacific international conference on health promoting schools. |
| November 13, 2006 | Arranged press conference for the “2006 Workplace Tobacco Hazard Survey.” |
| November 16, 2006 | Arranged the “Smoke-free workplace and good taste for health – 2006 Outstanding Tobacco Control Workplace Award and Press Conference.” |
| November 17, 2006 | Arranged press conference for health promoting schools. |
| November 20, 2006 | Reported the “Management for EMF health risk” at the 20th meeting of the National Council for Sustainable Development of the Executive Yuan. |
| November 27, 2006 | The First Meeting of Global Chinese Breast Cancer Patient Union Association. |
| November 28, 2006 | Arranged Press Conference for the “123 Betel quid Prevention.” |
| November 30, 2006 | 2006 Outcome presentation of community health building. |
| December 6, 2006 | International Workshop on EMF Health Risks. |
| December 23, 2006 | Sponsor the international conference and workshop for accidents and injuries of adolescents. |
| December 23-29, 2006 | BHP delegates visited Vietnam and signed further cooperation documents. |

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