# 2013
# Health Promotion Administration
## *Annual Report*
Promoting Your Health

Health Promotion Administration, Ministry of Health and Welfare, R.O.C. (Taiwan)
December 2013

# 2013 Annual Report

## Health Promotion Administration Annual Report

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## The Bureau of Health Promotion has been restructured to become the Health Promotion Administration

## We implement national health promotion from womb to tomb, and from family to community

### From “bureau” to “administration,” we take on greater responsibilities

The Bureau of Health Promotion was established on July 12th, 2001. It was made up of the Healthcare Department of the previous Department of Health and 3 research institutes (the Public Health Research Institute originally affiliated to the provincial health department, the Family Planning Research Institute, and Women and Children Health Research Institute). It was responsible for women and children’s health and chronic diseases. Currently, in response to the organizational adjustment of the central government, on July 23rd, 2013, it was officially restructured from “bureau” to “administration.” Now, we take on greater responsibilities, and uphold the spirit of “prevention is better than treatment.” We have reinforced preventive medicine and community health, especially in response to the structural change of population, and have integrated social welfare and cross-department resources more intimately. We implement national health promotion from womb to tomb, and family to community. The goal is to improve health and longevity, reduce health inequality, and allow citizens to live longer and better regardless of wealth, region, gender, and ethnic group.

### Witness the change of an era, actively reinforce health promotion policies, and complete the building of a national health foundation

In 2001, we experienced the number of births in Taiwan lower than 250,000 annually, first time in the history of Taiwan. In the coming years, the birth rate decreased rapidly, which resulted in rapid ageing. In the same year, the Bureau of Health Promotion was established. For 12 years, it has laid the foundation of a national health promotion system, covering the national health monitoring system of all ages, major chronic diseases, and risk factors. Many laws and regulations were also passed. They include: artificial reproduction law, cancer prevention law, public place breastfeeding law, and the revision of the Tobacco Hazard Prevention and Control Act. In 2002, we started to collect a surcharge on tobacco products, which was increased twice afterwards, thus providing the budget sources for the construction of national health. In 2006, when preventive healthcare services were introduced by the National Health Insurance Administration, The Bureau of Health Promotion continued to renew the benefit items. Regarding health promotion strategies, we introduced the “ecosystem” that is widely advocated internationally; we integrated all the departments, counties, and cities, through the improvement of social and organizational systems, allowing people from different walks of life to start exercising, making the pursuit of health a fashion, and also enhancing health promotion’s importance in public policy.

With respect to overall policy implementation in this period, pertaining to women and children's health, we actively investigate the imbalance of gender birth. The ratio of gender birth was reduced to 1.074, which was the lowest in 25 years. In terms of international ranking, we went from number 3 in 2003 to number 15 in 2012. We provide comprehensive Group B Streptococcus screening (The screening rate was 91% at the end of 2012) and newborn hearing screening (The screening rate was 89.4% at the end of 2012). In our effort to promote mother infant friendly hospital certification, the number of medical institutions certified has reached a birth covering rate of 75.1%. The pure breastfeeding rate for infants under 6 months was 49.6% in 2012. This was higher than the global average value of 37%, and close to the global goal of 50% set by WHO in 2005.

In response to the challenge of population ageing, we promoted a chronic disease cooperative healthcare network, reducing the diabetes death rate by 10%. We expanded the promotion of screening for 4 major cancers. We screened approximately 5 million people. We discovered that there were 10,000 people who had cancer and 36,000 had precancerous lesion. We also promoted preventive medicine. 125 medical institutions obtained WHO health promotion hospital member certificate. Now we have become the largest global health promotion hospital network. We established proactive comprehensive health promotion services for citizens. We evaluated the problems of smoking, chewing betel nuts, and obesity when people came for treatment, and provided them with preventive healthcare services for tobacco cessation, betel nut cessation, weight loss, and cancer screening. We advocate active ageing, promote age-friendly cities and healthcare, and have become the first country in the world in which all the counties and cities have signed and promoted the WHO age-friendly city plan. With respect to changing danger factors, we actively create all kinds of health fields, including healthy cities and communities, safe communities, health promotion schools, safe schools, health promotion workplaces, and health promotion hospitals. We have introduced all kinds of health promotion activities. With respect to tobacco hazard prevention and control, the adult smoking rate went from 27.0% in 2002 to 18.7% in 2012, a 30.7% reduction. Exposure to second-hand smoke in smoking-prohibited public places was only 8.3%. We also promoted second generation tobacco cessation services with revenue from the tobacco product surcharge. Service points cover 97% of townships and cities. The betel nut chewing rates for males over 18 years of age has reduced from 17.2% in 2007 to 10.9% in 2012,a 36.6% reduction. In the recent three years, we have also promoted national healthy weight management and improvement of obesity-causing environments, winning a response from 1.4 million people. They have collectively lost over 2,200 tons in weight. As for internationalization, we actively engage in exchange with the WHO international cooperation center, international academic institutions and organizations, and governments of each country. We have participated in world health meetings and related technical meetings, and the HPA's leaders were selected as WHO health promotion hospital international network deputy director and director, respectively. The HPA's leader was also elected international health promotion and health education league global director, an honor that symbolizes the professional standard set by Taiwan in the area of health promotion, and shows that our efforts are gradually being recognized globally.

## Future mission and goal of the Health Promotion Administration

In the era of rapid population ageing and the increasing threat of non-communicable diseases, the Health Promotion Administration will take on the missions of increasing healthy life expectancy and reducing health inequality. We advocate the 25X25 goal set by WHO. By 2025, we will reduce early death rate of four major non-communicable diseases to lower than 25%. According to the national health goal get by the Golden Decade, we will reduce the cancer rate to lower than 20% before 2020; adult regular exercise will increase, and the smoking rate will decrease. Through the reinforcement of cross-regional integration of origin prevention, promotion of electronic media, upgrading of national health knowledge, and strengthening manpower and organizational professional efficiency, the depth and breadth of services will be increases in order to protect the health of citizens.

Director-General, Health Promotion Administration

December, 2013

# Promoting Your Health

Chapter 1

# Introduction

# Chapter 1 Introduction

## 1. Evolution

Health Promotion Administration is formerly known as Bureau of Health promotion, its history goes back when the Department of Health Care, the Institute of Family Planning, Institute of Public Health and Institute of Maternal and Child Health were merged and became the "Bureau of Health Promotion" on July 12, 2001, responsible for health promotion and non-communicable disease prevention work. In accordance with the government organizational restructure, Bureau of Health promotion became Health Promotion Administration in July 23rd 2013. It holds greater responsibility, and the spirit of "prevention is better than cure." We reinforce preventive medicine and community health, especially in response to the change of population structure, and more closely integrate social welfare and cross-department resources. The Health Promotion Administration, or HPA, provides comprehensive health promotion services from the womb to tomb, for the health promotion from families to communities. The goal is to prolong healthy expectancy, reduce health inequality, so the citizens can live longer and better regardless of wealth, region, gender, and ethnic group.

## 2. Organization and Mission

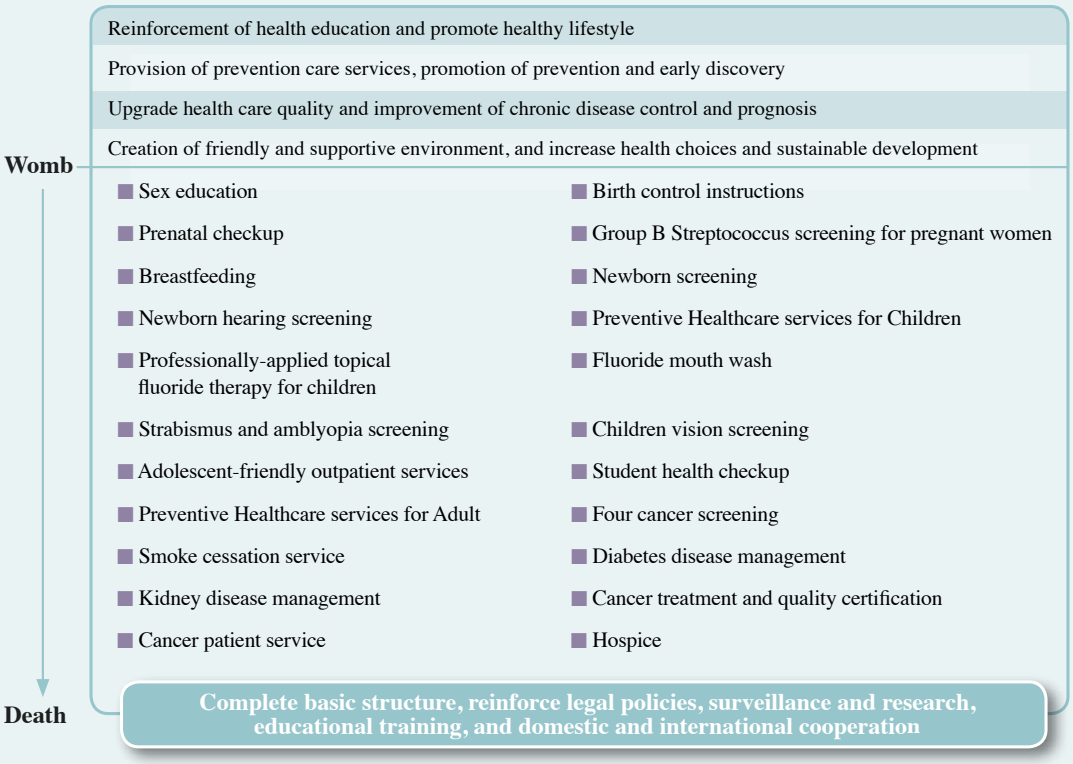
The Health Promotion Administration, or HPA, provides comprehensive health promotion services from the womb to tomb for all groups and gender. We aim to do the following based on the basic health information of the citizens: set public health policies that best fit the local population based on its health characteristics; strengthen foundational healthcare and create a supportive environment; to strengthen community actions; bolster people's capacity for health decisions and self-management by means of health education; and join forces with public health agencies in all the counties and cities, hospitals and private groups to enforce health policies and bring about a healthy environment for the entire population.

By reinforcing health education and promote healthy lifestyle, providing preventive health care services and promoting prevention and early discovery, upgrading health care quality and improving chronic disease control and prognosis, creating friendly and supportive environment, and increasing health choices and sustainable development, we plan and enact measures to promote reproductive health, maternal and child health, adolescent health, and the health of middle aged and elderly people as well as to advance the prevention and control of health hazards such as smoking and betelnut chewing, cancers, cardiovascular diseases, and other major non-communicable diseases; conduct public health surveillance and related research and address other special health topics. (Figure 1-1)

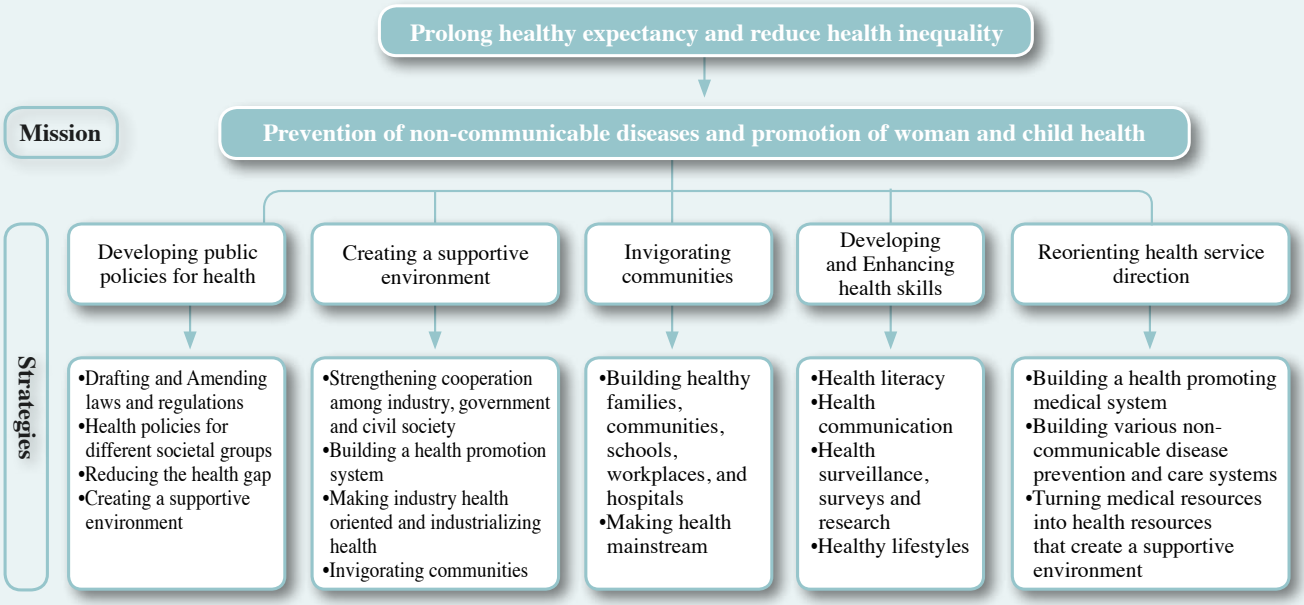
## 3. Health Promotion-Vision and Challenges

National health is a key gauge of national competitiveness. To increase physical, mental and social health in Taiwan, the HPA has taken its lead from the Alma-Ata Declaration of 1978 and the five action areas for health promotion identified in the Ottawa Charter of 1986. As such, it has been striving to do the following: set health friendly public policies; bring about healthy communities, hospital, schools and workplaces; enhance public consciousness of health to usher in a society where health always comes first; and develop citizens' health skills and readjust health services. The ultimate goal is to achieve health for all enunciated by the World Health Organization. Meanwhile, clearly defined promotion policies have been mapped out to better cater to maternal infant health, child and adolescent health, the health of middle-aged and elderly people, and women's health, thus keeping health inequalities in different periods of life to a minimum. Equally important are policies laid down to address cancers and chronic diseases, which become increasingly common among local people due to obesity, smoking, betelnut chewing, unhealthy diets and lack of exercise. The HPA is also called upon to conduct public health surveillance and related research and development, based on which it will set new policy goals and strategies that best meet present needs and future development. In turn, it aims to play a due part in promoting the health of the entire person, society and planet over the long run. (Figure 1-2.)

## Figure 1-1 The Organizational Mission of The Health Promotion Administration




## Figure 1-2 The Vision and Strategies of The Health Promotion Administration



# Promoting Your Health

## Chapter 2
## Healthy Birth and Growth

# Chapter 2 Healthy Birth and Growth

Social change and multicultural stimulus have transformed societies as well as family structure and functions. They have brought about changes in the medical treatment and healthcare system, in the economy and transportation, and in the social and material environments. People of different nationalities often must learn to come to divorce, it is mostly grandparents who end up with raising their children. Taiwan's youngsters are used to fast food culture and they are subject to tremendous pressure of passing exams for entrance to esteemed high schools and colleges. Combined, these phenomena have aggravated complications for maternal and infant health as well as child and adolescent health. What results is a worsening of such problems as postponement of childbearing, developmental delay among children, premature birth, teenage smoking and extramarital pregnancy. As such, the HPA makes it a point to strengthen the nation's healthcare system and create a healthy and safe environment favorable to the physical and mental development of expectant mothers, infants, children and teenagers.

In addition, hearing loss, myopia, strabismus, amblyopia, and dental caries are common health problems in children, and they can affect life quality into adulthood. Thus, the HPA has promoted early screening, intervention, and the establishment of good living habits and healthcare behavior in order to prevent abnormalities from these three diseases (hearing, eyesight, dental) from affecting overall growth and development of children. This provides good assurance for the public in terms of health and life quality.

## Section 1 Maternal Health

### Status Quo

In 1989, the women of Taiwan had their first childbirth when they were 25.2 years old on average. This was deferred to 30.1 years of age in 2012. Structural analysis by mothers' age: mothers' age between 20 and 24 fell from 29.5% to 8.5%, between 25 and 29 fell from 44.6% to 28.9%, between 30 and 34 increased from 17.4% to 42.3%, and between 35 and 39 increased from 3.4% to 16.7%. Late fertility trend is quite evident.

In addition, Taiwan in 2012 maternal mortality rate was 8.5/100,000. In comparison to the OECD countries (2010), maternal mortality rate in Taiwan (2012) was lower than that of Mexico, Chile, Hungary, United States, Luxembourg, Turkey, Korea, New Zealand, Canada, Denmark, Republic of Slovenia, England, and higher than that of Belgium, France, Portugal, Switzerland, Australia, Germany, Israel, Norway, Ireland, Holland, Slovakia, Spain, Czech Republic, Finland, Iceland, Japan, Poland, Austria, Italy, Sweden, Greece, and Estonia.

## Target Indicators

(1) To have more than 90% of pregnant women take prenatal examinations and more than 98% take at least one such exam.

(2) To have more than 90% of pregnant women aged 34 and more take cytogenetic diagnosis; to have more than94% of abnormal cases of high-risk pregnant women taking prenatal genetic diagnoses are followed up.

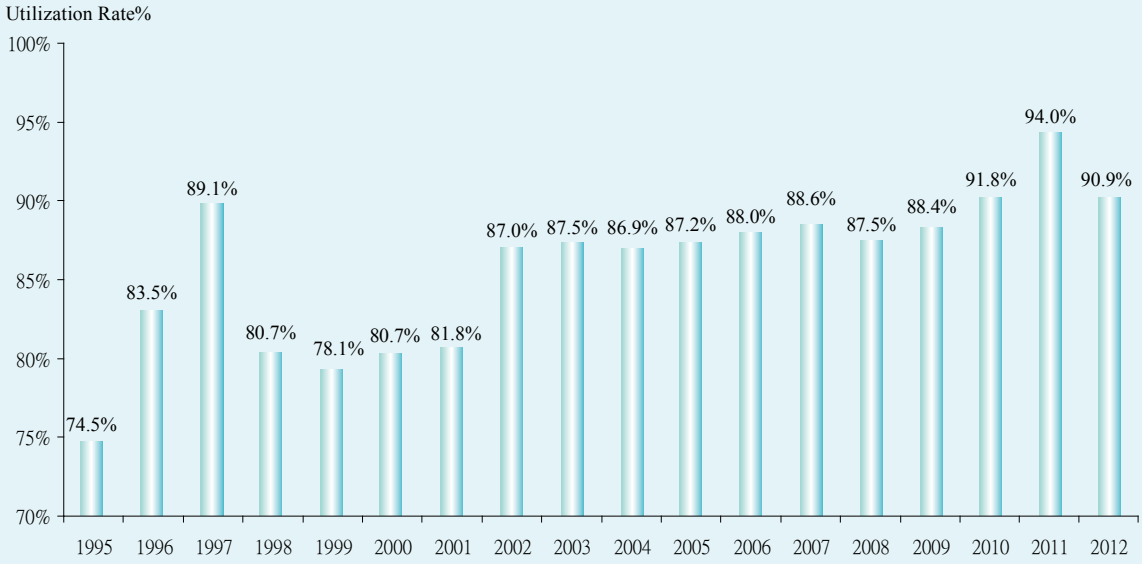
## Policy Implementation and Results

### 1. Systematic Reproductive Health Services

#### (1) Prenatal Examinations for Pregnant Women

To ensure the health of expectant mothers and their unborn babies and to uncover various possible complications over the course of pregnancy early on, the HPA offers 10 prenatal examinations to pregnant women through medical institutions contracted under the national health insurance program. Since 2001, uses of this service have stayed in the neighborhood of 90%. In 2012, uses of the 10 prenatal examinations averaged 90.9% (Figure 2-1), a total of approximately 2.09 million pregnant women utilized these prenatal examinations. At least 1 visit antenatal care coverage

**Figure 1-2 Utilization Rates of 10 Free Prenatal Examinations**




Source: National Health Insurance Administrationl/Health Promotion Administration prenatal exam data, birth registration, subsidies for uninsured new immigrants to receive prenatal exams (Joined in 2011).
Remark: Data for 2002-2005 is taken from National Health Insurance Administrationl; data for 2006-2012 is based on Health Promotion Administration files submitted.

is 98.58%. At least 4 visits antenatal care coverage is 97.35%.

### (2) Comprehensive Genetic Testing Services

One hallmark of advanced countries is preventive medicine. In the same spirit, genetic testing is now conducted in various stages-before marriage, pregnancy and childbirth, at birth, and throughout one's adulthood. These practices of primary prevention, prevention through reproduction options, and secondary prevention go prevention and control of genetic diseases can be illustrated as Figure 2-2. A summary of what the various genetic testing services have achieved in different stages of reproductive process is as follows:

#### 1) Screening for Thalassemia in Pregnant Women

If abnormalities are detected in prenatal blood testing, the husband will be brought in for testing as well. If both spouses are found to have abnormalities, the blood samples are then sent to one of six government-certified thalassemia genetic testing centers for re-examination. If both husband and wife are confirmed to be either alpha- or beta-thalassemia carriers, villi, amniotic fluid or umbilical cord, blood is collected depending on the stage of pregnancy, for prenatal genetic diagnosis. In 2012, a total of 444 people underwent thalassemia genetic testing. Prenatal care was provided to those mothers with abnormal fetuses depending on mothers' will.

#### 2) Prenatal Genetic Diagnosis for High-Risk Pregnant Women

In accordance with the "Reduction and exemption or subsidy of Genetic Health Measures" such benefits are accorded to high-risk pregnant women (aged 34 or more, with an abnormality found in a current or past pregnancy, or with a history of genetic disorders in her or her spouse's family) for taking prenatal genetic diagnosis.

In 2012, a total of 56,117 people benefitted from the subsidies; of them, 45,318 were aged 34 or more. That is, some 93.4% of pregnant women of advanced maternal age took prenatal genetic diagnosis during the year, up from 17.9% in 2000 (Figure 2-3). In 2012, abnormalities were detected in 1,256 expectant mothers, or 2.24% of the tested women. Medical institutions or public health centers that conducted the tests were responsible for following up the abnormal cases and offering counseling so that the pregnant women in question could secure timely and proper care. When necessary, they would be referred to genetic counseling centers or other related institutions for treatment.

To ensure the quality of their services, the HPA evaluates institutions that perform genetic disease examinations on a regular basis in accordance with a clearly defined set of criteria. Certified institutions are subject to evaluation every three years. As of 2012, a total of 27 clinical cytogenetic laboratories and 9 genetic laboratories had won HPA certification. Likewise, guidelines are put in place for the periodical accreditation of genetic counseling centers to ensure their quality of genetic counseling, diagnosis and therapy. As of 2012, the HPA had thus accredited a total of 11genetic counseling centers.

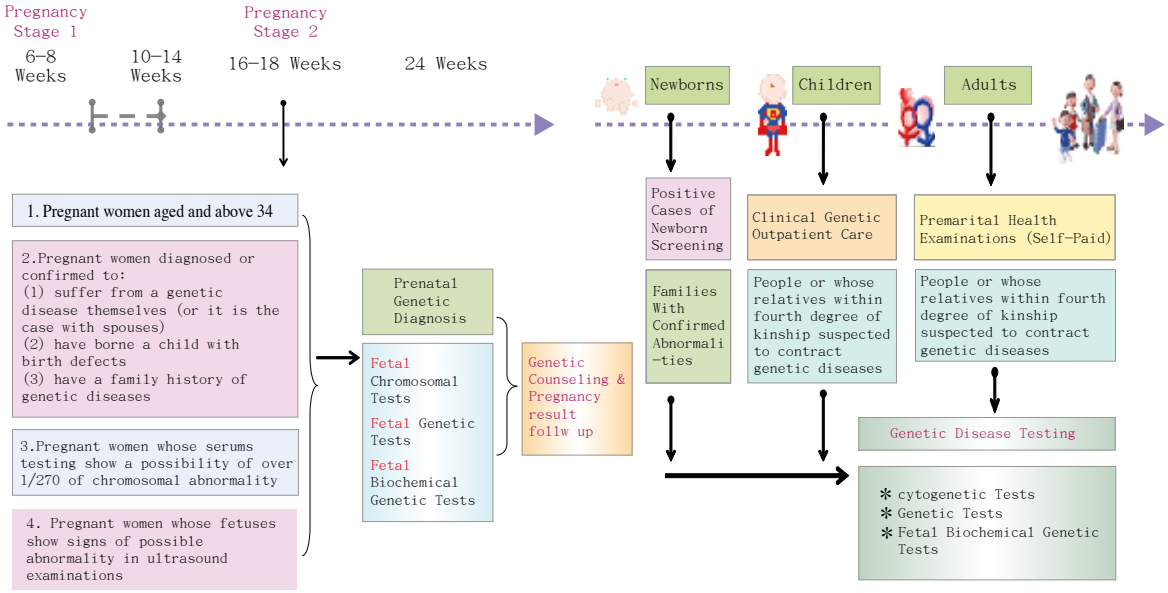
#### 3) Genetic Disease Testing and Counseling in Relation to Reproductive Health

Genetic disease testing and counseling are offered to people with reproductive health concerns: those who are suspected of suffering from a hereditary disease screening. In 2012, a total of 13,302 people took such tests. Of these, 761 people were found to have chromosomal disorders; 1,262, thalassemia carriers; and 3,673, other abnormalities.

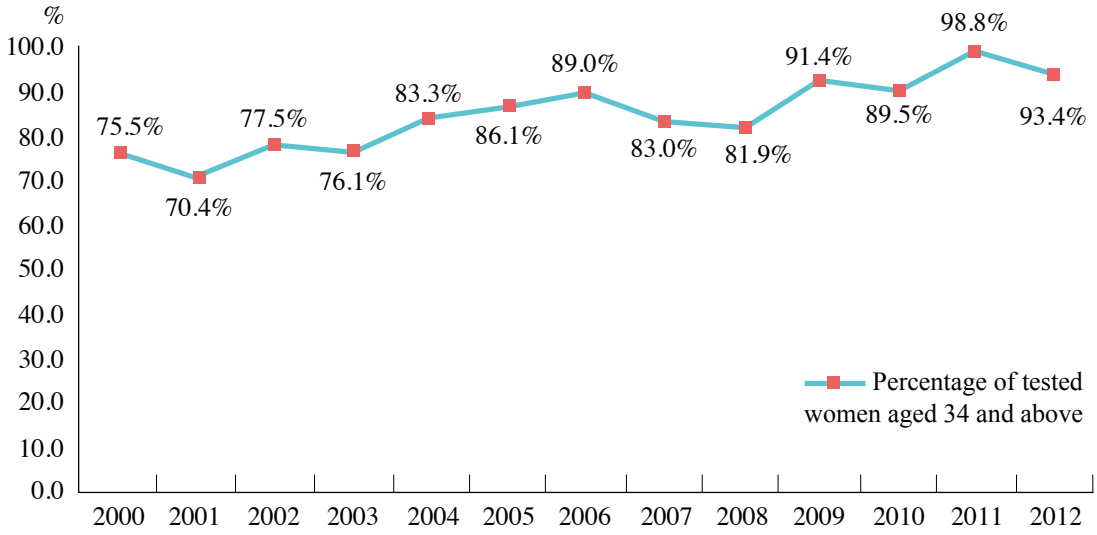
### (3) Establishment of Pregnant Women Care Center

We use holistic healthcare as the core. Through domestic free hotline for pregnant women 0800-870-870 (Hug you tightly, Hug you tightly) and pregnant women-care website (http://mammy.hpa.gov.tw). We provide prenatal and postnatal care for pregnant women and family of the psychological support and referral parental and child care, breast milk feeding

## Figure 2-2 Network for Genetic Disease Prevention




## Figure 2-3 Rates of Pregnant Women Aged 34 and Above Taking Subsidized Prenatal Cytogenetic Diagnosis, 2000- 2012



instruction, postnatal nutrition and weight management, physical and mental adjustment, pressure adjustment, emotional disturbance, and health counseling, attention, care, support, and services of necessary resource referrals.

### 2. Comprehensive Reproductive health Regulations and Systems

#### (1) Enactment of Artificial Reproduction Laws and Regulations

Taiwan has introduced a series of laws to ensure the proper development and use of artificial reproduction technologies and protect the rights of infertile couples, sperm and egg donors, and children conceived through artificial reproduction. The Artificial Reproduction Act, enacted on March 21, 2007, was followed by the Regulations for Query on kinship of Artificial Reproduction Child, Regulations for Artificial Reproduction Institutions Permit, Regulation for Verification on Kinship of Sperm/Oocyte Donors and Receptors, Regulations for Artificial Reproduction Information Notification and Administration as well as the Notice of Maximum Payment Limit of A Donor's Expenses by the Recipient Couple. As of December 2012, a cumulative 72 artificial reproduction institutions had secured accreditation.

#### (2) Draft Revision to the Genetic Health Law

To better ensure the health and safety of expectant mothers and their babies, the HPA set out to revise the Genetic Health Law, renaming it the Reproduction Health Law, in 2000. Alongside newly added provisions on services for the prevention and control of genetic diseases, there are revised regulations on medically induced abortions that specify what consultation services are supposed to be provided by medical institutions to pregnant women. The draft was submitted to the Legislative Yuan, Taiwan's parliament, on February 22, 2008 for deliberation.

#### (3) Quality Assessment for Prenatal and Ultrasonography Examinations

The women of Taiwan are now entitled to 10 prenatal examinations and one ultrasonography examination with government subsides. The numbers of prenatal examinations are no inferior to those in such industrialized countries as the U.S. and Japan. High-risk pregnant women who require further medical attention are given the option of turning to the national health insurance program. To further enhance the quality of prenatal examinations, the HPA is set to conduct compensations while the quality of services is upgraded.

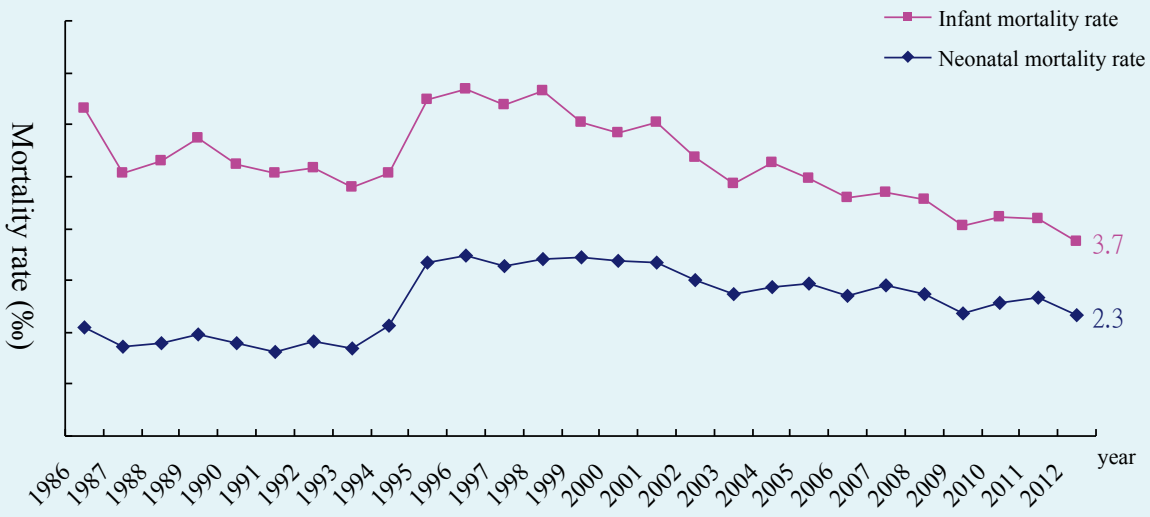
In Taiwan, ultrasonography examinations are now part of prenatal examinations. Established studies in the international community have found that an ultrasonography examination taken at an early stage of pregnancy (not recommended later than 24 weeks) is often effective in detecting a multiple pregnancy. As such, low-risk pregnant women are ill-advised to take routine ultrasonography examinations late in their pregnancy (after 24 weeks). In order to further enhance the quality of supersonic examinations, improve subsidy payments, and build consensus over such examinations, the HPA is now conducting an empirical review and gathering and reviewing data from abroad. The objective is to come up with proposals best suited to Taiwan that qualify as useful reference for the obstetrical and gynecological staff of local medical institutions.

## Section 2 Infant and Child Health

### Status Quo

The infant mortality rate is a key gauge of a country's child health. Taiwan's neonatal mortality rate fell to 2.3‰ in 2012 from 3.5‰ in 1996 and 2.1‰ in 1986, with infant mortality rate also decreasing to 3.7‰ in 2012 from 6.3‰

## Figure 2-4 Neonatal and Infant Mortality Rates




Information sources: Statistical room of Ministry of Health and Welfare- 2012 the results of the cause of death

of 1986 (Figure 2-4). In comparison with OECD countries in 2011, Taiwan's infant mortality rate in 2012 is lower than that of Mexico, Turkey, Chile, Slovenia, United States, Hungary, New Zealand, Canada, Poland, and similar to Korea, England, Belgium, Switzerland, Australia, Israel, Spain, Austria, and Greece, and higher than Denmark, France, Portugal, Germany, Norway, Ireland, Holland, Czech Republic, Italy, Estonia, Luxembourg, Republic of Slovenia, Finland, Iceland, Japan, and Sweden.

Childbirth-reported Statistics showed that a total of 234,575 births in 2012. Of these, 8.4% were live births with low birth weight (less than 2,500 grams) and 0.8%,extremely low birth weight (less than 1,500 grams). The low birth weight rate from 2003 to 2009 in Taiwan was 8%, which was similiar to the U.K,the USA, Japan and Singapore.

Taiwan's total live births were 234,575 (Figure 2-5). In the absence of artificial intervention, the sex ratio at birth came in at about 1.05-1.06. However, preference for males has been a longstanding phenomenon in Asian societies. Many nations have a preference for male heirs and varying degrees of the sex ratio at birth imbalance. The Sex ratio at birth in Taiwan (ratio of male to female newborns) ranked third in the world in 2003. Though the government has repeatedly instructed medical facilities to refrain from gender selection activities, the longtime trend of birth sex ratios has seen only a slight decline (Figure 2-6) due to declining birth rates and people hoping to have male heirs as their first or second born child. From 2006 to 2009, the sex ratio at birth in Taiwan stayed approximately at 1.08 to 1.09, which still showed a sex ratio at birth imbalance. (Table 2-1, 2-2).This indicated that some part of the public remains sexual discrimination due to the influence of traditional concepts such as having male heirs and preferring males over females.

In addition, the rate of congenital hearing impairment for newborns is 3‰. In 2012, out of the 399 medical institutes that deliver babies, 309 hospitals provide hearing screening for newborns, which takes up 77.4%. The rate of hearing screening for pre-school children is 87.6% in order to boost healthy growth of neonates and children. We put great effort in promoting breastfeeding policies. Less than one month after birth, the total rate of breastfeeding raised from 26.6% in 1989 to 92.8% in 2012. In order to promote healthy growth development of babies, other than early discovery of abnormalities and early treatments, we must continue to provide complete health care system. For this, we have stipulated the following important target indicators.

## Target Indicators

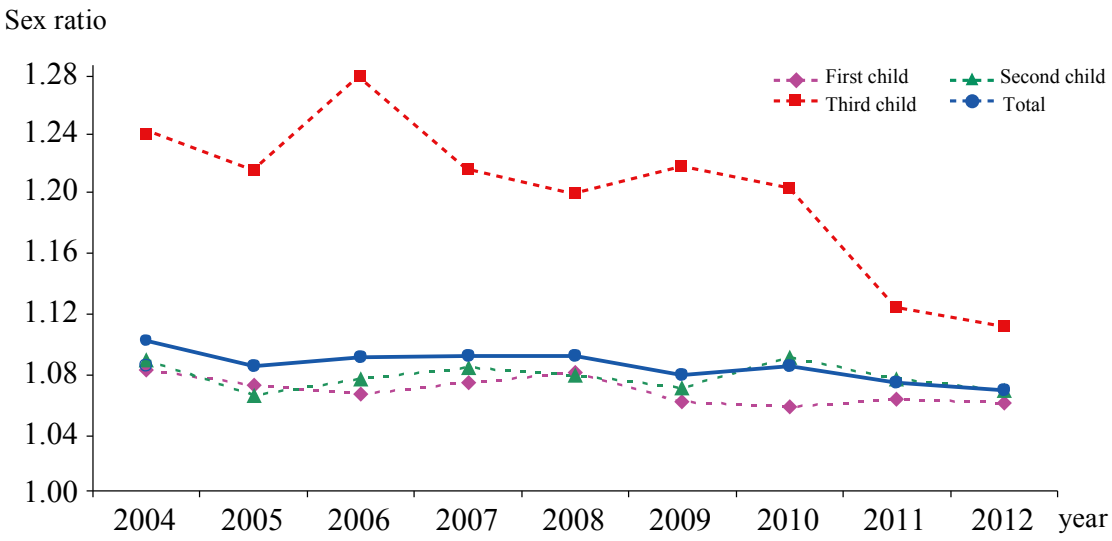
1. To screen more than 99% of the newborns for congenital metabolic disorders each year.
2. Raise the utilization rate for children's preventive health services to 85%; to have more than 98% of infants less than one year old using such services at least 1 visit.
3. Breastfeeding Rate: According to the suggestions of World Health Organization and the United Nations Children's Fund, mothers worldwide should exclusively breastfeed infants the first six months to achieve optimal growth, development and health. Thereafter, they should be given nutritious complementary foods and continue breastfeeding up to the age of two years or beyond. The HPA aims to push Taiwan's Exclusive breastfeeding rate under 1 month up to 72% at the end of 2013.

## Policy Implementation and Results

The health of the nation's future generations-infants and children-constitutes a multifaceted, complicated challenge. In the charting of policies, emphasis must be placed on integrating resources in the formulation of a comprehensive care and service system while taking into account the special features of different segments of society. Above all, all endeavors should be geared toward the establishment of a supportive environment conducive to health and safety:

**Figure 2-5 The Number of Reported Live Births**

## Figure 2-6 Sex Ratios of Live Births by Order of Birth




Information sources: Statistics of reported births

## Table 2-1 Sex Ratios among Live Births

| Year | Live Births | Male (%) | Female (%) | Sex Ratio |
|---|---|---|---|---|
| 2004 | 217,386 | 52.55 | 47.45 | 1.108 |
| 2005 | 206,925 | 52.18 | 47.82 | 1.091 |
| 2006 | 205,026 | 52.29 | 47.71 | 1.096 |
| 2007 | 203,377 | 52.33 | 47.67 | 1.098 |
| 2008 | 196,373 | 52.30 | 47.70 | 1.096 |
| 2009 | 192,465 | 52.04 | 47.96 | 1.085 |
| 2010 | 166,630 | 52.14 | 47.86 | 1.090 |
| 2011 | 198,386 | 51.89 | 48.11 | 1.079 |
| 2012 | 234,575 | 51.78 | 78.22 | 1.074 |

Remarks: Sexual ratios by birth= Total number of boys delivered/total number of girls delivered (Only live births are calculated)

## Table 2-2 Sex Ratios of Live Births by Order of Birth

| Year | | First Birth | Second Birth | Third & Later Birth | Total |
|---|---|---|---|---|---|
| 2004 | Persons | 113,181 | 77,854 | 26,345 | 217,380 |
| | Male | 58,87 (52.02) | 40,873 (52.5) | 14,488 (54.99) | 114,239 |
| | Female | 54,30 (47.98) | 36,981 (47.5) | 11,857 (45.01) | 103,141 |
| | Sex ratio | 1.084 | 1.105 | 1.222 | 1.108 |
| 2005 | Persons | 104,549 | 77,163 | 25,211 | 206,923 |
| | Male | 54,219 (51.86) | 39,965 (51.79) | 13,788 (54.69) | 107,972 |
| | Female | 50,330 (48.14) | 37,198 (48.21) | 11,423 (45.31) | 98,951 |
| | Sex ratio | 1.077 | 1.074 | 1.207 | 1.091 |
| 2006 | Persons | 105,700 | 74,897 | 24,424 | 205,021 |
| | Male | 54,684 (51.74) | 38,976 (52.04) | 13,551 (55.48) | 107,211 |
| | Female | 51,016 (48.26) | 35,921 (47.96) | 10,873 (44.52) | 97,810 |
| | Sex ratio | 1.072 | 1.085 | 1.246 | 1.096 |
| 2007 | Persons | 106,005 | 74,234 | 23,136 | 203,375 |
| | Male | 54,940 (51.83) | 38,780 (52.24) | 12,702 (54.9) | 106,422 |
| | Female | 51,065 (48.17) | 35,454 (47.76) | 10,434 (45.1) | 96,953 |
| | Sex ratio | 1.076 | 1.094 | 1.217 | 1.098 |
| 2008 | Persons | 102,854 | 71,565 | 21,954 | 196,373 |
| | Male | 53,545 (52.06) | 37,283 (52.1) | 11,872 (54.08) | 102,700 |
| | Female | 49,309 (47.94) | 34,282 (47.9) | 10,082 (45.92) | 93,673 |
| | Sex ratio | 1.086 | 1.088 | 1.178 | 1.096 |
| 2009 | Persons | 101,338 | 70,724 | 20,403 | 192,465 |
| | Male | 52,262 (51.57) | 36,780 (52) | 11,113 (54.47) | 100,155 |
| | Female | 49,076 (48.43) | 33,944 (48) | 9,290 (45.53) | 92,310 |
| | Sex ratio | 1.065 | 1.084 | 1.196 | 1.085 |
| 2010 | Persons | 86,656 | 60,754 | 19,220 | 166,630 |
| | Male | 44,756 (51.65) | 31,694 (52.17) | 10,435 (54.29) | 86,885 |
| | Female | 41,900 (48.35) | 29,060 (47.83) | 8,785 (45.71) | 79,745 |
| | Sex ratio | 1.068 | 1.091 | 1.188 | 1.090 |
| 2011 | Persons | 103,300 | 71,042 | 24,044 | 198,386 |
| | Male | 53,445 | 36,772 | 12,777 | 102,994 |
| | Female | 49,855 | 34,270 | 11,267 | 95,392 |
| | Sex ratio | 1.072 | 1.073 | 1.134 | 1.079 |
| 2012 | Persons | 122,633 | 87,204 | 24,738 | 234,575 |
| | Male | 63,261 | 45,158 | 13,043 | 121,462 |
| | Female | 59,372 | 42,046 | 11,695 | 113,113 |
| | Sex ratio | 1.066 | 1.074 | 1.115 | 1.074 |

Source: Remarks of reported births

1. Reported births do not include the information regarding the order of birth. This analysis is based on the number of total live births reported by the women giving births (Including the current birth) as the order of births.
2. In 2004, there were 6 cases of unknown sex, 5 cases of first child, one case of first child.
3. In 2005, there were 2 cases of unknown sex, 1 case of first child, one case of second child.
4. In 2006, there were 5 cases of unknown women giving births, 3 cases were male, and 2 cases were female.
5. In 2007, there were 2 cases of unknown sex, one case of first child, and one case of second child.
6. Sex ratio by birth= Total number boys delivered/Total number of girls delivered (Only live births are calculated)

## 1. Integration of Organizations and Resources

On March 29, 2006, the Department of Child Health Promotion set up a committee charged with promoting child health by mapping out forward-looking policies and facilitating communication and cooperation between government agencies and the private sector. Its duties include drafting policies in relation to child health and safety; promotion of public awareness of child health education; and developing pediatric technologies.

## 2.Provision of Comprehensive Healthcare Services

A summary of Taiwan's primary policies regarding children's healthcare is presented in Figure 2-7. Here are some highlights:

### (1) Implementing the Birth Reporting System

Since 2004, all hospitals fitted with delivery wards have been incorporated into an online birth reporting system. By nationality, birth data reported to the system simultaneously finds its way to the Department of Household Registration, Ministry of the Interior. The latter in turn passes it on to the National Immigration Agency and to various local household registration agencies. The purpose is to make sure that local health and household registration agencies can get hold of birth data quickly and accurately, especially those with regard to high-risk newborns (including those with congenital defects), so that they can render all the needed services early on. To ensure a secure system better protected against hacking, The health care certification authority (HCA) mechanism since 2004. In 2012, the online birth reporting system registered a total of 237,043 births, of which 234,575 were live births (hence a live birth rate of 98.96%); there were 2,468 stillbirths (a still birth rate of 1.04%). The online birth reporting rate was 99.9%. The data and statistics thus collected and compiled can certainly serve as reference for charting policies, strategies and services in the areas of reproduction and healthcare.

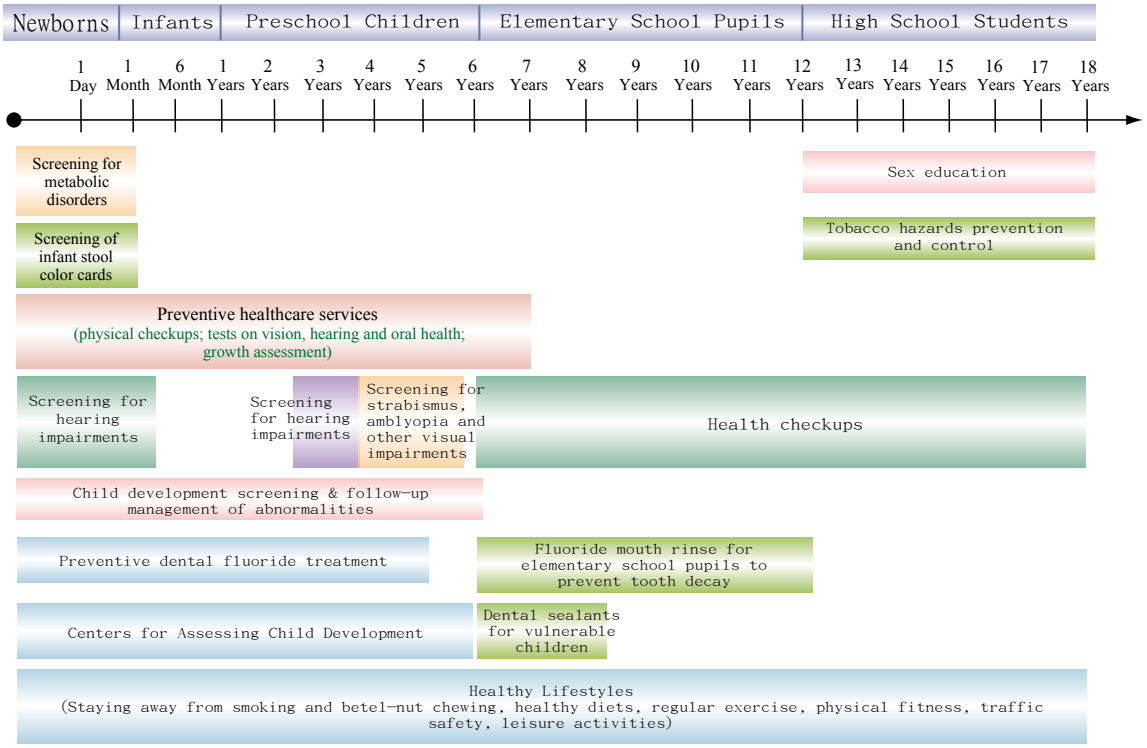
### (2) Newborn Screening Services

Since 1985 newborn Congenital Metabolic Disorders screening services have made available nationwide. Alongside a screening rate of more than 99% over the past few years, proper treatment and counseling would be provided in the event of confirmed abnormalities to keep any sequelae to a minimum. In 2012, a total of 234,072 newborns underwent the screening (hence a screening rate of 99.8%). Of these, 4,523 were diagnosised for G6PD-deficiency, commonly known as favism; 310, congenital hypothyroidism;12, congenital adrenal hyperplasia; 12, phenylketonuria; 20, maple syrup urine disease; and 2,methylmalonicacidemia. There were no detections of homocystinuria, isovalericacidemia, galactosemia, glutaricacidemia Type 1, or medium-chain acyl-CoA dehydrogenase deficiency (Table 2-3).

### (3) Preventive Healthcare Services for Children

Through medical institutions contracted under the national health insurance program, the HPA subsidizes preventive healthcare services intended for children aged under 7. The objective is to prevent any interruption in health management and healthcare guidance and to offer early treatment if any abnormality is detected. Since 2002, the utilization rate of this service has maintained at about 70%. Of the total, 65.9% was offered from community clinics and the other 34.1% at medical centers, regional hospital and local hospitals. In 2012, approximate 1,110,000 children use of this service; the average utilization rate was 77%. The rate of at least one by infants less than one year old came in at 97%. The HPA is keen to further enhance the use and quality of the preventive healthcare service for children. A

## Figure 2-7 Health Policies for Infants and Children




## Table 2-3 Incidence Ration and The Number of Abnormalities Detected among Newborn in 2012

| Categories of screening | Incidence | Number of abnormalities |
|---|---|---|
| Glucose-6-Phosphate dehydrogenase deficiency | 1: 51 | 4,523 |
| Congenital hypothyroidism (CHT) | 1: 1,027 | 310 |
| Congenital adrenal hyperplasia (CAH) | 1: 15,032 | 12 |
| Phenylketonuria (PKU) | 1: 24,021 | 20 |
| Homocystinuria (HCU) | 0 | 0 |
| Isovaleric acidemia (IVA) | 1: 308,395 | 2 |
| Maple syrup urine disease (MSUD) | 1: 106,225 | 0 |
| Galactosemia (GAL) | 1: 177,041 | 1 |
| Methylmalonicacidemia (MMA) | 1: 73,540 | 3 |
| Glutaricacidemia Type 1 (GAI) | 1: 119,503 | 2 |
| Medium-chain acyl-CoA dehydrogenase (MCAD) | 1: 956,023 | 0 |
| Total | | 4,873 |

Total 234,072 people were screened

fully revamped program was implemented in 2010. In addition to seeking out less-used items and services, it placed greater emphasis on the screening of child development and integration of medical resources available for primary care with a view to offering a greater diversity of services. Moreover, the HPA authorized county and city public health agencies to offer the preventive healthcare services to kindergarten and preschool children. In addition to monitoring and analyzing what the services might have accomplished, they were supposed to help promote referrals with regard to the screening of child development so that medical institutions under their jurisdiction could deal with any suspected cases of developmental delay in a timely fashion.

### (4) Enhance the Competence of Health Professionals

The HPA is keen to enhance the child development screening competence and skills of parents and medical professionals alike. In 2013, through subsidizing basic childhood special education training with comprehensive considerations for the family-for early intervention childhood related personnel and practical training courses.

### (5) Commissioning a "Centers for Assessing Child Development" in Hospitals

To offer accurate, accessible and comprehensive services for developmentally delayed children, in addition to establishing one Centers for Assessing Child Development in each county and city starting in 2010, the HPA has also established Centers for Assessing Child Development depending on the number of inhabitant's under the age of 6 and distribution 1 to 4 centers of medical resources in each county and city. In 2012, this number increased to 45 Centers for Assessing Child Development in total.

### (6) Creating a Friendly Environment Conducive to Breastfeeding

1. A baby-friendly hospital accreditation system is implemented to foster positive changes at hospitals. In particular, hospitals are told to stop offering formula for free or at a discount so that breastfeeding can be taken for granted and newborns can have the best possible start in life. In 2001, a total of 38 medical institutions were certified as baby-friendly hospitals. The number has increased to 163 in 2012. In turn, these baby-friendly hospitals covered 75.1% of Taiwan's total births in 2012, a big jump from 39.2% in 2004 (Table 2-4). During the same period, the exclusive breastfeeding rate under 1 month rose to 71.9% in 2012 from 46.6% in 2004; the exclusive breastfeeding rate under 6 months increased to 49.6% from 24.0%.
2. A seed instructor training program is put in place so that more medical professionals can acquire the expertise needed to assist in the cause of promoting breastfeeding. In 2012, a total of 2international breastfeeding training sessions were held, while 377 new seed instructors attended. 3 additional training sessions for seed instructors were held, and 114seed instructors received training in breastfeeding.
3. Cross-sectoral coordination is an ongoing task to make the workplace as breastfeeding friendly as possible. In particular, the HPA has joined forces with local public health authorities to help companies set up breastfeeding rooms. In 2012, it also teamed up with the Council of Labor Affairs to hold a series of seminars on the Gender Equality in Employment Act as well as prevention and control of sexual harassment. Some 2,606 people attended a total of 25 such sessions that are also intended to foster a working environment friendly to breastfeeding mothers.

### (7) Promoting Legislation on "Public Breastfeeding Act"

1. In 1989, the World Health Organization and the UN Children's Fund issued a joint declaration on protecting, promoting, and supporting breastfeeding. In 1990, we saw breastfeeding further cited as a key indicator of child survival and development. All countries were thus urged to map out their respective breastfeeding policies and lay down laws to protect women's rights in this regard.
2. In Taiwan, "Public Breastfeeding Act" went into effect upon presidential promulgation on November24, 2010. In accordance with Paragraph 3, Article 5 of the statute, the HPA made Standards for Establishment and Administration of Public Breastfeeding (Collecting) Rooms on May 11, 2011. On August 23rd 2011, the definition of total floor area for locations which are legally obliged to set up a breastfeeding (collecting) room was announced to serve as a reference for county and city governments in enforcing the act. On September 28th, the Standards and Certification for Public Locations to Apply not to Establishing Breastfeeding (collecting) Rooms was announced. In 2012, a total of 1,788 breastfeeding (collecting) rooms were due to be set up in public places according to the act.

## 3. Countermeasures to Rectify Sex Ratio at Birth Imbalances

The government has set out to draft and implement regulations governing the medical industry to uphold the right of all babies to life and eliminate sexual discrimination, thus keeping to a minimum all the social complications that may arise from too drastic an imbalance between the two sexes in the population. To combat illicit abortions, the HPA and two other Department of Health subsidiaries-the Department of Medical Affairs and the Food and Drug Administration-jointly form a sex ratio at birth panel. For its part, the Food and Drug Administration is responsible for the management of medical equipment designed for sex selection as well as for the gathering and tracking of imported testing materials and their sales in Taiwan. The Bureau of Medical Affairs is charged with regulating sex selection undertaken by private laboratories or biotechnological ventures in accordance with the Medical Technicians Law. On January 13, 2011, a new decree went into effect: Any prenatal sex selections as part of diagnosis of non-gender-related genetic diseases or any medically induced abortion performed only for the sake of the unborn baby's sex is considered a banned act of medical care under Paragraph 1, Article 28-4 of the Physicians Law. As such, physicians found to have conducted sex selection or abortions in ways described above are now subject to a fine of NT$100,000-NT$500,000. Serious offenders may even have their physician's license revoked.

**Table 2-4 The Number of Accreditation of Baby- Friendly Hospitals**

| Categories \ year | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number of certified hospitals | 38 | 58 | 74 | 77 | 81 | 82 | 94 | 94 | 113 | 144 | 158 | 163 |
| Exclusive breastfeeding rate under 1 month | - | - | - | 46.6 | - | - | - | 62.7 | 64.4 | 65.7 | 68.6 | 71.9 |
| Exclusive breastfeeding rate under 6 months | - | - | - | 24.0 | - | - | - | 35.1 | 41.2 | 44.5 | 45.6 | 49.6 |
| Coverage rate of certified hospitals | - | - | - | 39.2 | 40.8 | 41.3 | 47.4 | 46.3 | 53.9 | 67.2 | 71.4 | 75.1 |

Likewise, restrictions have been imposed on technologies that may dictate the sex of babies around the time of conception. For instance, those who employ artificial reproduction technologies in selecting the sex of an embryo face a fine of NT$200,000-NT$1 million, as is specified in Paragraph 3, Article 16 of the Artificial Reproduction Act. The physician in question faces disciplinary action while the hospital involved may have its status as a certified artificial reproduction institution revoked and cannot reapply for a new permit until two years later. In addition, the Department of Medical Affairs was announced on March 23rd , 2012 that medical technicians carrying out prenatal sex selection in diagnosis of non-gender-related genetic diseases constitutes illegal and improper behavior as outlined in Paragraph 36, Article 2 of the Medical Technicians Law.

On top of setting and enforcing the aforementioned laws and regulations, the HPA monitors the sex ratio at birth recorded by medical institutions and midwives on a regular basis. From 2010, the sex ratio was made a key indicator in its monthly checkup of medical institutions and midwives in all the counties and cities for any irregularities or advertisements that pitch sex selection services. Local health authorities would be alerted to any offenses. Birth data submitted by artificial reproduction institutions are also analyzed on a regular basis; local health authorities will be notified to take a closer look if certain institutions and physicians have been found to record irregular sex ratios.

In fact, the monitoring and checking of sex ratios by public health agencies in the counties and cities weighs heavily in the HPA's evaluation of their overall performance. After dedicated efforts to promote and ban non-medically necessary sex screening and sex selective abortions, the sex ratio at birth fell from 1.090 in 2010 to 1.079 in 2011 to 1.074 in 2012. The number is closer to the normal range of 1.060, which is the lowest value in 25 years (Since 1987).An estimated 1,680 female babies were prevented from vanishing. The sex ratio at birth for the third child, which is always much more skewed than that of first born and second born children, fell from 1.203 in 2010 to 1.130 in 2011 and fell to 1.115 in 2012, the lowest value in 24 years (since 1989). In the future, we will reinforce the management of the origins of the reagent and inspection, including the inspection of facilities, behaviors, and reagent.

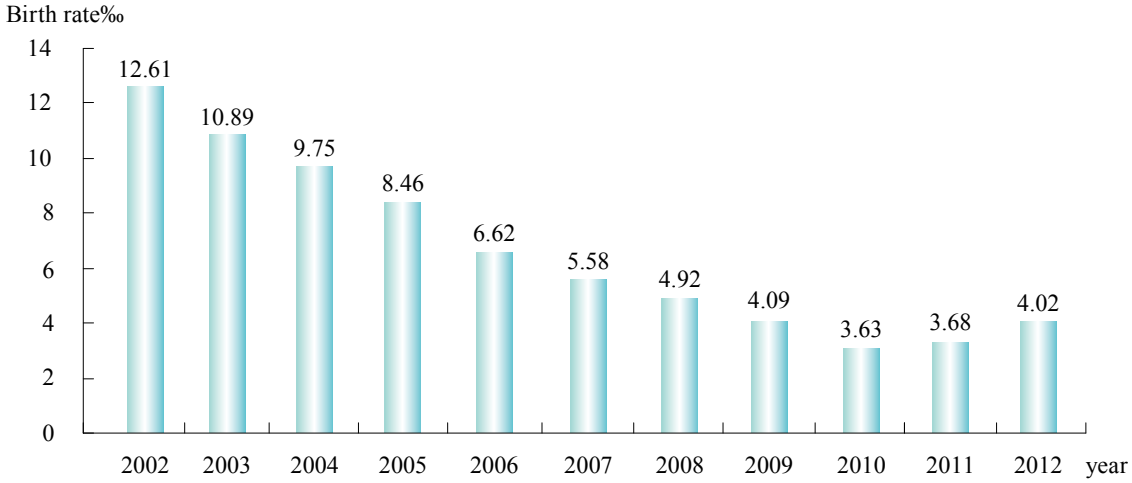
## Section 3 Adolescent Health

## Adolescent Sexual Health

### Status Quo

As a society moves ahead and becomes increasingly open, it is not uncommon for teenagers to be exposed to a deluge of pornography. In turn, they are often increasingly open in sexual attitudes and pregnancy, random abortions and venereal diseases. In a HPA health behavior study of high school, vocational, and five-year vocational school students, 12.9% of male respondents aged 15-17 in 2011 and 8.8% of female respondents aged 15-17 said they engaged in sex. Among these students, 74.1% of male respondents and 77% of female respondents said they used birth control in their most recent sexual encounter. In 2009, 13.5% of males aged 15-17 and 13.5% of females aged 15- 17 said they engaged in sex, while 68.4% of males and 68.6% of females said they used birth control in their most recent sexual encounter. These results show that the rate of sexual activity among 15-17-year-old students dropped between 2009 and 2011 while the prevalence of birth control in the students' most recent sexual encounter increased. Also Ministry of the Interior population data from 2011 showed the fertility rate of teenage females aged 15-19 in Taiwan was 3.68 per 1,000, a significant drop compared to the 12.61 per 1,000 rate in 2002 (see Figure 2-8). The 2011 fertility rate among this age group in Taiwan was lower than the United States (41.2 per 1,000), the United Kingdom (29.6 per 1,000), Australia (12.8 per 1,000), Sweden (6 per 1,000), and Japan (5 per 1,000), but it was higher than Hong Kong (3.2 per 1,000) and South Korea (2.3 per 1,000).

## Figure 2-8 Taiwan's adolescent Fertility Rate in 2002-2012




Premature sexual activity tends to result in unexpected pregnancies among adolescents, who are neither financially stable nor physically, therefore, stands out as an adolescent health issue not to be taken lightly.

### Target Indicators

To reduce the adolescent fertility rate among girl aged 15-19 by 0.05 percentage point annually.

To raise the use of contraception among teenagers by 1 percentage point annually.

### Policy Implementation and Results

Subtle physiological and psychological changes take place as one moves from adolescence into adulthood. At this point, it is crucial for qualified professionals to provide teenagers with comprehensive services-care for both physical and mental health, diagnosis and treatment, referrals and counseling-and express genuine concern over their wellbeing. This in turn goes a long way toward reducing underage births and increasing the use of contraception among teenagers.

Here is a summary of the strategies adopted by the HPA and what they have achieved so far:

### 1. Video Counseling for Adolescents

A website (http://www.young.gov.tw) is installed to provide teenagers with all the formation they need that has to do with sexual health. According to the 2012 statistics, a total of 445,903 visitors have browsed the website. The "Secret Garden", a webpage that provides video counseling on adolescent sexual health has served a cumulative 2,221 visitors.

### 2. Stations for Promoting Adolescent Sexual Health

With blogs, Microsoft's Messenger (MSN), and the telephone also serving as platforms for counseling, teenagers are referred to psychiatric counselors or medical institutions when the need arises. The 2012 statistics showed that a total of 131 people have sought counseling by means of the HPA's toll-free telephone or MSN. Separately, a total of 21,750 people attended 120 seminars on adolescent sexual health jointly held by the HPA and 113 schools in 19 counties and cities.

### 3. Adolescent-Friendly Medical Professionals/Outpatient Services

To date the HPA has teamed up with 39 medical institutions to introduce "No. 9 Outpatient Services for Teens' Happiness." In addition to preventive care and reproductive health services, adolescents are provided with assistance in communicating with parents about their unexpected pregnancies. In 2012, a total of 4,044such visits have been recorded.

## Tobacco Hazards Prevention on Campus

### Status Quo

In 2012, the smoking rate among Taiwan's junior high school students was 6.7% (9.3% for males and 3.7% for females). A further breakdown shows that the higher the grade, the higher the rate: 4.5%, 7.8% and 7.7% for seventh, eighth and ninth graders respectively. Pitted against the findings of the World Health Organization's Global Youth Tobacco Survey (GYTS). Taiwan's smoking rate among junior high school students runs lower than those of the U.S. (13.0%), Singapore (9.1%) and New Zealand (14.5%), Malaysia (20.2%), Soviet Union (25.4%) and close to that of South Korea (8.8%). On the other hand, Taiwan's senior and vocational high school students reached a 2012 smoking rate of 14.1% (19.0% for males and 7.5% for females), which no longer pointed to an upward trend. While Taiwan's junior high school students posted a lower smoking rate than most countries, the tally still rose slightly from previous years (Table 2-5). But the problem of teenage smoking can not be ignored.

**Table 2-5 Comparison of Adolescent Smoking Rate over the years**

| HPA Survey | | Junior High School Students | | | | Senior and Vocational High | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 2008 | 2010 | 2011 | 2012 | 2007 | 2009 | 2011 | 2012 |
| Smoking Rate (%) | Total | 7.8% | 8.0% | 7.3% | 6.7% | 14.8% | 14.8% | 14.7% | 14.1% |
| | Male | 10.3% | 11.2% | 10.5% | 9.3% | 19.3% | 19.6% | 20.3% | 19.0% |
| | Female | 4.9% | 4.2% | 3.7% | 3.7% | 9.1% | 9.1% | 8.1% | 7.5% |

Information sources: Adolescent smoking behavior investigation

### Target Indicators

In 2012, the smoking rate of male student in junior high school is less than 10.5%, while the smoking rate of male student in high school and vocational school is less than 20.3%.

### Policy Implementation and Results

1. The Ministry of Health and Welfare worked together with the Ministry of Education to promote and implement the plan of "campus tobacco hazards prevention." We emphasize strategies of tobacco hazard prevention education, promote tobacco-free campus environment and quitting tobacco education. We also cooperated with the Ministry of Education and local government to conduct random inspection work of tobacco hazards prevention on campus, and the schools that were prosecuted were the primary subjects of inspection. Upon the recommendations of the visiting committee members, the local governments and the schools were asked to make improve. We hope to lower the smoking rates of students and educators, and students' exposure to the second hand smoke on campus.
2. We cooperated with local health department and community resources. Through promotion or subsidy, we create a plan for creating a healthy community, in order to maintain the health of adolescent, free of tobacco hazard. In addition, we continue to use the disguise method of testing, and undercover inspection of adolescents who were rejected for the selling tobacco products at point of sale. We then publicized the testing results of all the counties, cities, and convenience stores, in order to create competition and improvement. According to Article 12 of the Tobacco Hazards Prevention Law, which stipulates that people under 18 are prohibited from smoking. We have fined a total of 3,111 cases, and 2,969 cases completed smoke quitting education, and the testing continued to be executed.
3. In order to establish concepts of not smoking for adolescents, we actively conducted campus activities. A total of 684 schools solicited articles, 20 cross school promotion, through creative events, and communicated with young groups of people. We used "I am cool, no smoking" as the Facebook Fanpage, and cooperated with social media and blog sharing. For example, we used Facebook, Youtube, and Google advertisements to promote smoke-free life, and establish social atmosphere of "I am cool, no smoking." This allows 4.6 million students to feel that by saying no to cigarettes is a confident and honorable life attitude on campus or in daily life. In the future, through the quantification of overall goals, guidance, evaluation methods, we conducted random inspection of campus hazard prevention work. We continued to educate seed instructors on campus from all counties and cities regarding smoke quitting education, expand tobacco hazard prevention guidance activities on campus, create smoke-free campus environment, and implement smoke quitting education, in order to reinforce tobacco hazard prevention work on campus.

## Section 4 Vision, Hearing and Oral Health

## Vision Health

### Status Quo

In Taiwan, myopia is a major pediatric concern. A 2010 survey showed that the percentage of first graders with myopia rose to 21.5% from 19.6% in 2006 while that of six graders increased to 65.8% from 61.8%. According to an earlier survey, conducted in 2006, the tendency for the percentage of Taiwan's elementary school pupils suffering from myopia (-0.25 diopters or less) to increase year after year seemed to have eased somewhat. But the percentage of pupils with high myopia (-6.00 diopters or more) remained higher than those of Southeast Asian and European countries as well

as the U.S., as was shown in Table 2-6 and 2-7. As high myopia tends to cause other ophthalmological complications, vision screening among children is crucial for early detection of visual impairments and timely treatment.

## Target Indicators

Reducing the prevalence of myopia among first graders by 0.15 percentage point annually, hopefully to under 19%; reducing the prevalence of myopia among sixth graders by 0.5 percentage point annually between 2007 and 2010, hopefully to under 60%.

## Policy Implementation and Results

To ensure early detection and treatment of visual impairments, the HPA offers screening services to preschool children aged 4-5 for detection of myopia, strabismus and amblyopia. Referrals for follow-up management are provided when warranted so that treatment can be rendered in a timely fashion and children's vision health be cured. Separately, the HPA is joined by the Ministry of Education in implementing a vision health program intended for both preschool

### Table 2-6 The Percentage of Students Aged 6-18 with High Myopia

| Grades \ Year | 1986 (%) | 1990 (%) | 1995 (%) | 2000 (%) | 2006 (%) | 2010 (%) |
|---|---|---|---|---|---|---|
| First Grade | 3 | 6.5 | 12.8 | 20.4 | 19.6 | 21.5 |
| Sixth Grade | 27.5 | 35.2 | 55.8 | 60.6 | 61.8 | 65.8 |
| Ninth Grade | 61.6 | 74 | 76.4 | 80.7 | 77.1 | - |
| 12th Grade | 76.3 | 75.2 | 84.1 | 84.2 | 85.1 | - |

Source: HPA-commissioned epidemiological survery on refractive errors among children and teenagers aged 6-18 that is conducted every five years

### Table 2-7 The Prevalence of High Myopia Around the World

| Region / age | Age Group | Prevalence% |
|---|---|---|
| Europe & the U.S. | Entire Population | 2 |
| Hong Kong (2006) | High School Students | 6 |
| Singapore (2001) | Universitiy Students | 15 |
| Taiwan (2006) | Teengers Aged 18 | 16.8 |

Source: Studies on Refractive Errors in Taiwan and Aboroad- A Review of Journals & Documents Concerning Epidemiological Research of Myopia and Its Prevention and Screening, undertaken by Shih Yung-feng and Hsiao Chu-hsing of the Department of Ophthalmology, National Taiwan University Hospital in 2004-2005.

and school children lest they are inflicted with myopia that readily leads to high myopia later in life. All in all, the HPA strives to establish a comprehensive network of vision health services for preschool children by joining forces with ophthalmology associations and local communities as well as local public health agencies to undertake propaganda, education and screening, as well as offer referrals. A summary of the strategies adopted and their achievements is as follows:

1. Vision Health Services for Preschool Children

(1) The HPA offers various preventive healthcare services that have to do with children's vision health. Pediatricians or family physicians are called on to conduct tests on children's pupils, visual fixation, eye position (screening for strabismus and amblyopia) and corneas, as well as random dot stereograms.

(2) To ensure early detection and treatment of such visual impairments as strabismus and amblyopia, the HPA offers screening services to preschool children aged 4-5 in counties and cities. Referrals and consultation are provided when warranted. In 2012, a total of 356,563 children were screened. More than 98.7% of them were referred to other institutions for remedial action. A total of 51,367 individuals were screened in 2012, with a 98.9% abnormal case referral tracking rate.

(3) In order to provide accessible care in order to correct and discover vision problems early on, a myopia prevention work plan for ophthalmologists to intervene in kindergartens and daycare was established.

2. We conducted the plan of "Prevention strategies and relative references of myopia." We have come up with the conclusion that near-sighted people see from a short distance in the long run, and the sufficient outdoors activities are protective factors. We conducted the plan of "intervention of visual health for preschool children and elementary school children. The intervention has received basic results.

3. In 2012, we have conducted the guidance of healthy media and integration of myopia prevention. We have created guidance tapes and mass media to promote 2~3 daily outdoor activities. Children who are under 2 years old should avoid looking at screens. Children who are over 2 years old should look at the screens no more than 1~2 hours, in order to avoid looking at the screen in short distance in the long run. When looking at the screen for 30 to 40 minutes, children should rest for 10 minutes, and outdoors activities are beneficial for visual health. The advertisement is played 2,100 times. Through 7-11, we have given out 150,000 flyers, and added visual health education information in the new version of children health manuals. We interacted with the parents and provided them with the records of visual conditions and eye protection behaviors of their children. Through the health education of pediatrician, we reminded the parents to take great importance of the visual health of their children.

4. In order to for children to avoid children stay home watching television and play on computers during long weekends, and the worsening of near-sightedness. We have made the news announcement during winter and summer breaks, and reminded the parents to take their children out for outdoors activities.

## Hearing Health

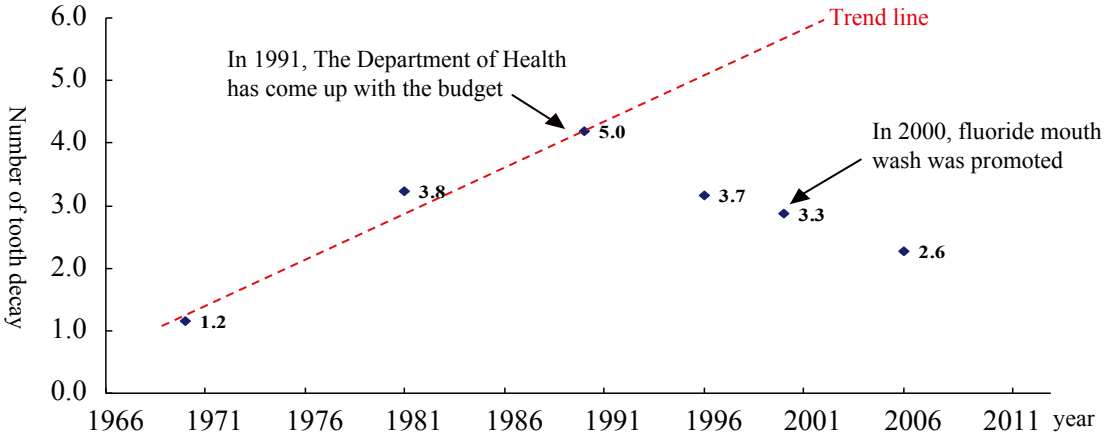
### Status Quo

The research shows that out of 1,000 newborn babies, approximately 1~2 of them are diagnosed with congenital moderate and severe hearing loss. Babies with congenital hearing impairment, through early discovery of newborn hearing screening, and receives treatment, in the future, their development of languages, knowledge, and communication techniques will almost be the same as normal children. Hearing plays an important role in the language development of children. Hearing loss not only influences children's abilities of language learning and communication with outside world, it can possibly cause incoordination of knowledge, socialization, and emotion. The influence is very deep. Before age 2, it the critical period learning and development. The hearing impairment of children is not easily discovered because they cannot express themselves, and parents usually neglect this area. Hearing screening is an effective method of discovering children's hearing impairment. In 2007, the participation rate of newborn hearing screening was 28.7% domestically, it has increased to 79.5% in 2012. The hearing screening for preschool children raised from 30.3% in 2002 to 87.6% in 2012.

### Policy Implementation and Results

Since 2010, we have provided subsidies for hearing screening for newborns from low income families who are born within 2 months. Babies with hearing impairment who are discovered early, can have normal language knowledge and development. For the notice on March 7th, 2012, we implemented the "Service project of newborn hearing screening subsidies." Babies who were born within 3 months since March 15th, 2012 can receive hearing screening. Each case is subsidized for 700 dollars. In 2012 a total of 309 hospitals provided this screening subsidy. This covered 95.9% of the total births, and the screen rate was 89.4%. A total of 170,380 people received screening. 216 babies were diagnosed with

**Figure 2-9 DMFT Index for Permanent Teeth among Children Aged 12**




Source: Survery on Oral Health of Children and Adolescents

## Table 2-8 DMFT Index for Children Aged 12 by Country

| Country | Year | DMFT index |
|---|---|---|
| Taiwan | 2006 | 2.6 |
| United States | 2004 | 1.2 |
| Japan | 2010 | 1.3 |
| Korea | 2010 | 2.1 |
| Hong Kong | 2001 | 0.8 |
| Singapore | 2002 | 1.0 |

Sources: WHO

## Table 2-9 Prevalence of Periodontitis among People Aged 35-44 by Country

| Country | Year | Prevalence（%） |
|---|---|---|
| China | 1997 | 36 |
| Hong Kong | 1991 | 74 |
| Japan | 1992 | 56 |
| Australia | 1996 | 37 |
| New Zealand | 1989 | 48 |
| Norway | 1983 | 65 |
| Italy | 1985 | 48 |
| Britain | 1988 | 75 |
| France | 1989 | 23 |
| Germany | 1997 | 46 |
| Canada | 1995 | 73 |
| Taiwan | 2008 | 54 |

Source: WHO Oral Health Country/Area Profile Programme.

hearing impairment. In order to upgrade the quality of hearing screening for newborns, we have conducted 4 newborn hearing screening seminars all over Taiwan. A total of 279 people participated. 4 newborn hearing diagnosis seminars were conducted. A total of 254 people participated. We have conducted "service plans of hearing screening for preschool children, and the screening was conducted in the communities or kindergartens. In 2012, 152,344 people received screening. The screening rate was 87.6%. The recheck rate was 95.5%.

## Oral Health

### Status Quo

According to surveys conducted in recent decades, Taiwan's DMFT index (number of decayed, missing or filled teeth) for children aged 12 rose to 5.0 in 1990 from 3.8 in 1981. It was predicted that a further increase to 7.0 in 2000 would be inevitable if the trend persisted. This prompted the Department of Health to begin setting aside if funds on promoting children's oral health in 1991. The new policy paid off. The DMFT index fell to 3.7 in 1996, 3.3 in 2000 and 2.6 in 2006 (Figure 2-9). But much remains to be done to attain the World Health organization's goal of a DMFT index fewer than two for children aged 12 by the year 2010. A comparison of MFT readings of various countries is shown in Table 2-8.

In Taiwan, periodontal disease is a common threat to oral health. In more serious cases, it tends to cause alveolar bone loss, loose teeth, and tooth loss. Without timely intervention or corrective treatment, the patient is likely to lose his or her teeth or even oral functionality together. Also victimized is certainly the quality of living. According to HPA's nationwide survey conducted in 2008, 54.2% of people aged 35-44 were found to have developed periodontal pockets (i.e. with CPI scores of 3-4). It also showed that the prevalence of the disease intensified with age, with males more vulnerable than females. Listed in Table 2-9 are prevalence of periodontitis in various countries for people aged 35-44.

### Target Indicators

Reducing the DMFT index among children aged 12 to 2.2 in 2012.

### Policy Implementation and Results

#### 1. Reduce the Rate of Tooth Decay for Children

##### (1) Free Professionally Applied Fluoride Treatment for Children Aged under Five

The World Health Organization considers fluorides the safest and most economical and effective means of preventing tooth decay. A majority of medical literature also points to the conclusion that application of fluoride gel can reduce the odds of children's tooth decay by 28%. Started in July 2004, children aged under five with fluoride treatment, an oral checkup, and oral hygiene education for free every six months in hopes to develop the habit of parents taking their children to the dentist periodically to learn about oral health and tooth decay prevention. In 2012, the service benefitted a total of 372,607 children. The rate for at least one application per year is 33.3%. As an increased reminder for parents and caretakers to develop the habit of seeking prevention before treatment is necessary, reminders are placed in children's health handbooks for doctors to make referrals to dentists for fluoride treatment. Additional columns were included for parents to check off fluoride treatments every six months, in addition to including healthcare information related to oral health for children.

### (2) A Nationwide Fluoride Mouth Rinse Program for Elementary School Pupils

Since 2001, we have promoted the plan of fluoride mouth wash for elementary school students. In 2012, we have executed educational training of 29 dentists, and 170 school nurses and new teachers. School from remote mountain regions in Taiwan all participated, and conducted seminars of children oral health for dentists and campus health team outside of school. We also cooperated with dentist unions from all the counties and cities. Dentists go to school to monitor the implementation quality of schools and promotion of tooth cleaning after meal, and educational guidance activities of fluoride prevention of tooth decay and oral health.

### (3) Pit and Fissure Sealant Subsidies for Disadvantaged Children

The widespread use of fluoride mouth rinse among elementary school pupils has little effect on preventing pit and fissure caries on the chewing surface of their teeth. By contrast, pit and fissure sealants can reduce the odds of these dental caries by 57%. For this reason, the HPA began offering such sealants to first and second graders in aboriginal townships and first graders from low-income households in non-aboriginal townships in 2010. 2,500 students benefitted from the service during 2011. In 2012, the pit and fissure sealant service was expanded to first and second grade elementary school students in offshore regions, indigenous mountainous regions, non-indigenous first and second grade elementary school students from medium low and low income families, and all mentally and physically handicapped first and second grade elementary school students. We have served a total of 10,259 people in 2012.

## 2. The Oral Health Care Intervention that Uses Workplace as the Foundation of Promotion

In 2012, we have completed the manuals of research and development educational training and printing, intervention of oral care educational training in workplaces, certified training for oral health screening dentist and educational training manual of research and development, etc.

# Promoting Your Health

## Chapter 3
## Healthy Living

# Chapter 3 | Healthy Living |

Some of the most formidable threats to human health derive from unhealthy lifestyles. Examples abound: smoking, unhealthy diets, and lack of exercise as well as threats from the external environment such as injuries caused by accidents. Of these mortality risk factors, tobacco stands out as the most easily preventable. Empirical evidence shows that smoking causes respiratory and cardiovascular diseases, cancers, miscarriages, underweight births and sudden infant death syndrome. As many of these conditions show, smokers are not the only victims of addiction: secondhand smoke, or environmental tobacco smoke (ETS), is harmful to nonsmokers. Tobacco hazards prevention and smoking cessation education are both long-term causes. Refraining from smoking will not be recognized as social consensus overnight. Above all, priority should be given to discouraging nonsmokers from ever smoking.

According to the World Health Organization's Global Strategy on Diet, Physical Activity and Health, unhealthy diets and physical inactivity are key risk factors of non-communicable diseases. To address these issues and discuss four major diseases and four major risk factors, the United Nations convened a High-Level Meeting on NCDs in September 2011. Among the main risk factors targeted were obesity, unhealthy diet and physical inactivity.

Children, and in particular toddlers, are heavily reliant on others. Their well-being depends on the attention of caregivers and the safety of the environment. Therefore, the HPA encourages staff of local health departments to assist these caregivers. Officials inspect homes to determine whether they are safe, and they certify safe communities and schools. The goal is to reduce accidental injuries and build a safe and healthy living environment.

## Section 1 Tobacco and Betelquid Hazards Prevention and Control

### Tobacco Hazards Prevention and Control

#### Status Quo

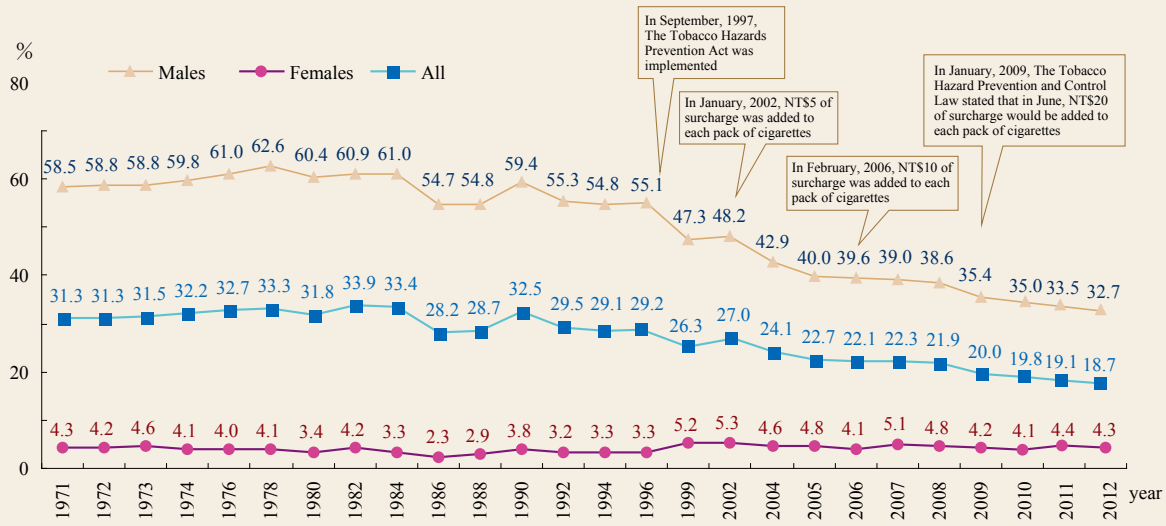
More than four years have passed since new regulations under the Tobacco Hazards Prevention Act went into effect on January 11, 2009. The act focused on expanding the smoke-free environment, such as indoor public spaces and indoor workplaces with three or more people. The results have been impressive. In 2008, the smoking prevalence among adults aged over 18 was 21.9% (38.6% for males and 4.8% for females), in 2009, the prevalence was 20.0% (35.4% for males and 4.2% for females), in 2010, the prevalence was 19.8% (35.0% for males and 4.1% for females), 2011, the prevalence was 19.1% (33.5% for males, 4.4% for females), 2012, the prevalence was 18.7% (32.7% for males, 4.3% for females). The prevalence decreased by over ten percent. (Figure 3-1). In 2007, the smoking prevalence for senior high school students was 14.8% (19.3% for males, 9.1% for females). The prevalence lowered to 14.1% in 2012 (19.0% for males, 7.5% for females). In 2008, the smoking prevalence for junior high school students was 7.8% (10.3% for males, 4.9% for females). It was lowered to 6.7% in 2012. (9.3% for males, 3.7% for females).

Generally there has been a significant decline in the smoking rate among adult males in recent years, from 42.9% in 2004 to 32.7% in 2012, while the smoking rate among adult females has remained unchanged. The youth smoking prevalence among junior high school males and senior/vocational high school females had been increasing since 2007, but was finally suppressed for the first time. Significant progress was made in reducing the secondhand smoke exposure rate in smoke-free public places, from 23.7% before the new regulations went into effect to 8.2% by 2012. The protection rate was 91.8%. However, the second hand exposure rate at home reached 21.6%, and daily average consumption of cigarettes by smokers failed to decrease (between 2008 and 2012 it was 19.0, 18.0, 18.6, 18.7, and 17.0 respectively). Many hard works remain.

On March 1st, 2012, we actively promoted the comprehensive, full-course second generation smoking cessation payment scheme for every person, and trained more professional staffs for smoking cessation education. We conducted smoking cessation education and managed case study services using the face-to-face method. Through the integration of resources within the jurisdiction, we worked as a team and provided smoking cessation and health educational instruction, counseling, and educational services of smoking cessation. We use the health and welfare surcharge of tobacco products to help smokers quit smoking. We effectively upgrade the success rate of smoking cessation, and upgrade the inspection work of traditional stores and betelquid stalls for illegally supplying tobacco products. We try to cut off the sources of tobacco products from adolescents, and integrate with all sectors to initiate all-around promoting and create a smoke-free and supportive environment.

Main Tasks in 2012: 1. Enforcement of the Tobacco Hazards Prevention Act 2. Creating smoke-free supportive environments 3. Providing diverse smoking cessation services 4. Surveillance and research 5. Personnel training and international communications. Details are as follows.

## Figure 3-1 Smoking Rates among Adults over 18 years of age




Sources:

1. Data for 1971-1996 from the Taiwan Tobacco and Wine Monopoly Bureau.
2. Data for 1999 from Professor Lee Lan.
3. Data for 2002 from the HPA's Survey on Citizen's Knowledge, Attitude, and Behavior Regarding Health Promotion.
4. Data for 2004-2011 from the HPA's Adult Smoking Behavior Survey.
5. For 1999-2012 data, current smokers were defined as those who had smoked more than 100 cigarettes (five packs) and had smoked within the past 30 days.

## Target Indicators

To Reduce the smoking rate below 18.4% among adults in 2012.

## Policy Implementation and Results

### 1. Enforcing the Tobacco Hazards Prevention Act

Emphasis was placed on carrying out compliance checks, expanding the network of smoking cessation services, bolstering targeted education programs and increasing publicity. Local smoking hazards campaigns reminded people to abide by the Tobacco Hazards Prevention Act so a more comprehensive smoke-free environment could be achieved.

(1) Local health departments contributed to enforcement. In 2012, 6.35 million compliance checks took place at over 1.01 million locations. There were 8,500 were citations issued. More than NT$41.81 million was collected from fines for the entire year. According to Article 6, Item 2 of the Tobacco Hazards Prevention Act, the warning labels and relative information regarding smoke cessation should not be less than 35%. 10 cases were fined, for a total fine of 5.04 million dollars. Article 9 of the same Act that tobacco products should not be promoted for sale for advertised, 15 cases were fined, for a total fine of 16.75 million dollars.

(2) About 120 staffs were added to boost local tobacco hazards prevention. Workshops, seminars and training sessions were held and enforcement guidebooks were compiled to assist staffs. We also conducted training for tobacco hazard volunteers.

(3) We conducted 9,660 guidance seminars, 182 training sessions for medical staffs. 13,026 people passed the training. 426 smoke cessation classes were conducted. 8,252 people participated, and 284 locations of smoke-free environment were promoted.

(4) In December 2008 a toll-free helpline (0800-531-531) was installed to handle queries about smoke-free environments and complaints about possible violations. In 2012, the hotline received 3,119 queries and 816 complaints, the latter of which were passed on to local public health authorities for subsequent actions.

### 2. Supportive Tobacco-Free Environments

Tobacco hazards prevention involves not only reducing the population's smoking rate but also the exposure to secondhand smoke. To help people stay healthy, the HPA contributes to supportive tobacco-free environments in the community, at restaurants, school campuses, workplaces and in the armed forces. It also promotes tobacco hazards prevention through multimedia education and events.

#### (1) Tobacco-Free Public Places

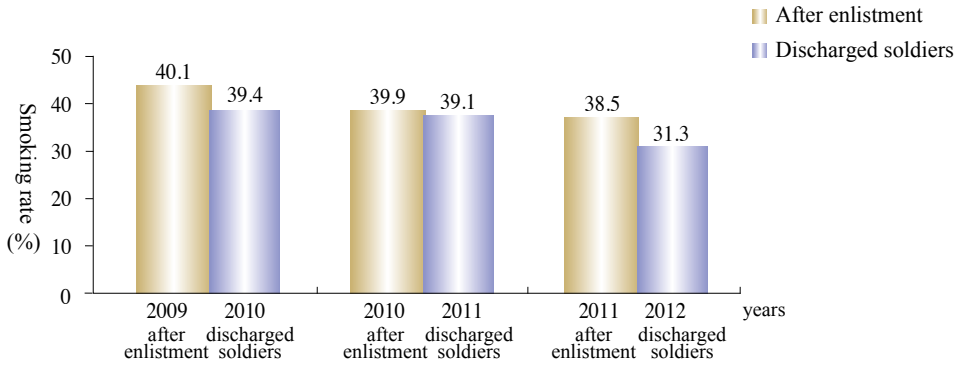
1. Regarding campus hazard prevention and control: Many domestic smokers often started smoking when they were young. No matter if it is male or female, the smoking rate has increased after the age of 18. For this, HPA actively promotes "Tobacco hazard and control work plan for young groups of people." 209 students participated in smoking hazards prevention workshops organized by 48 schools. Also health officials assisted 29 schools in setting specific tobacco hazards prevention plans and guidelines.
2. Community: We subsidized the counties and cities to conduct healthy community construction plan. Especially for the part regarding the control of tobacco, alcohol, and betelnut, we have guided and established 1,294 smoke-free locations. We have conducted 2,900 creative health educational guidance. In the area of community construction, there are 16,182 tobacco-selling stores with related guidance warning.

3. Smoke-free military: The HPA and the Medical Affairs Bureau of the Ministry of National Defense, through the command headquarters of the Army, Air Force and Navy, set the Armed Forces Tobacco Hazards Prevention Policy. The policy gave health officials greater control over smoking cessation services as well as surveillance and research. The smoking prevalence among new recruits fell from 40.1% upon enlisting in 2009 to 39.4% just before their discharge in 2010. Likewise, the prevalence decreased from 39.1% to 38.5% for the new recruits enlisted in 2011 and discharged in 2012 (see Figure 3-2). The results show progress in the armed forces on the tobacco hazards prevention.
4. Hospitals: The HPA established the first network in Asia-Pacific for the Global Network for Tobacco Free Healthcare Services. As of year 2012, 113 hospitals received tobacco-free hospital accreditation, 82 of which had met the standards for Gold Level Award eligibility, and 5 hospitals achieved GOLD Forum Membership.
5. The Workplace: Under a voluntary healthy workplace accreditation system, there were 207 workplaces in 2012 that achieved certification for tobacco hazards prevention. On-site guidance was extended to 207 workplaces. In the same year, a total of 626 workplaces were certified for tobacco hazard prevention and control, and the smoking rate of employees in the workplaces fell from 16.9% in 2011 to 15.8% in 2012.

### (2) Tobacco Control Advocacy: The HPA uses multimedia channels and public communication to promote smoking cessation services and tobacco hazards education.

1. In order to encourage smokers to quit smoking, promote smoke cessation services, reinforce people's knowledge of tobacco hazard, reduce the hazard of second hand smoking, this year we promoted "You quit smoking, we avoid second hand smoking." Through marketing, we target labor groups, young females and adolescents, which have the highest rate of smoking. We use various short documentary, anti-smoking love letters, micro-film, and selected creation of anti-smoking for young people, anti-smoking games (APPs), and interscholastic anti-smoking promotional event, to reach the anti-smoking consensus and encourage smokers to quit smoking.

## Figure 3-2 Smoking Rates in Armed Forces




| | | | | |
|---|---|---|---|---|
| Change of smoking rate | -0.7% | -0.8% | -7.2% | (Decrease significantly) |

2. We played the 30sec smoke cessation TV Ad "Smoke cessation hotline-Hsu Feng's Monologue" shot by experienced actor, Hsu Feng. He told the story of himself diagnosed with cancer because of smoking, and advocated smokers to quit smoking. There are also the smoke cessation Ad for the bride, another Ad for smoke cessation hotline by Shen Yi Yi. By integrating broadcasts, newspapers, magazines, online events and Ad, outdoor TV wall, commercial Ad, and transportation, we penetrate into people's lifestyle to enhance promotion and encourage smokers to quit smoking.
3. During the competition of "Quit and Win campaign!" in 2012, we use the slogan "The decision of love, quit smoking, you will win." With the support of family, loved ones, and friends, one can successfully quit smoking. We reconfirm the winners' qualification by conducting urine cotinine test publicly according to international standard. A total of 31,067 groups signed up for the contest, which set the new record.
4. In the 2012 research of "Healthy topic communication, performance evaluation, and inspection of tobacco images in the movies ,TV or animated films." the people who came in contact with all kinds health topic, the rate of smoke cessation guidance was the highest (Approximately 82.9%). 85% of the people maintained high satisfaction rate for indoor smoke-free environment. 2 out of 3 people know that the government provides smoke cessation services.

### (3) Diverse Smoking Cessation Services

WHO clearly states that smoking cessation is an important part of the whole tobacco hazard prevention and control policy. It prevents cardiovascular and respiratory diseases along with cancer. It offers individuals, families and societies immediate benefits, effectively reducing high blood pressure, diabetes and hyperlipidemia rates while lowering health expenditures. Those who quit are less likely to need lifelong medications or expensive examinations. Within six months they can easily and effectively bring serious diseases under control, whether they were at risk for heart disease, stroke, cancer, or chronic respiratory disease. Smokers can obtain assistance from smoking cessation clinics, the toll-free smoking cessation hotline, and special classes. In order to help smokers quit smoking and reduce disabilities, the HPA provides diverse smoking cessation assistance.

(1) Second generation smokeing cessation payment scheme: In 2012, we have promoted the second generation smoking cessation payment scheme. Over 2,200 hospitals and community pharmacy provide therapeutic medicine services of smoke cessation. The smoke cessation medicine is subsidized by health and welfare surcharge. Each time, the drug fee is no more than NT$200. This is suitable of the stipulation of the social subsidy law that the fee is waived for low income household, aborigines, and people in the outlying islands. The surcharge is reduced by 20% for regions that lack medical resources. Some hospitals or community drug stores even integrated smoke cessation health staffs and provide services to people who are willing to receive smoke cessation services. People who are not suitable for drug use, pregnant women, and adolescents all receive the benefits. People can go online and search for medical institutes or community drug stores that provide services (Website: http://ttc.hpa.gov.tw/quit/). In addition, we also developed the mobile APP, "Smoke Cessation League." Through the interaction of instant messages, we support everyone to get away from tobacco hazard, successfully quit smoking. From 2002~2012, 512,064 people received smoke cessation services. In 2012, there were a total 64,965 people, 169,073 visits, and the 6-month point cessation rate was 30.1%.

(2) Smoking Cessation Hotline: The Taiwan Smokers' Helpline Project was launched in 2003 to provide convenient, private and accessible smoking cessation counseling from 9:00 to 21:00, Monday to Saturday. Users could simply dial 0800-63-63-63 from a local landline, public phone or mobile for a toll-free service. On line there were professionals who provided one-on-one consultations to help callers develop a personal plan to quit. As of 2012, 710,646 calls had been made to the service. In 2012 alone there were 98,237 calls. The six-month smoking cessation success rate was about 39%.

(3) We cooperated with The Ministry of Justice, and conducted "2012 Correction Agency Smoking Cessation Implementation Plan." We provided inmate smoking cessation services. We assisted 4,944 inmates to quit smoking.

(4) Smoke cessation class: In 2012, 582 classes were conducted, and approximately 65,000 people participated.

## 4. Research and Monitoring

The HPA established long-term smoking behavior surveillance systems to monitor the effectiveness of tobacco hazards prevention. These included "Adults Smoking Behavior Surveillance", "Global Youth Tobacco Survey" and "Global School Personnel Survey". Authorities also monitored nicotine, tar and carbon monoxide content in tobacco products. In 2012, the HPA studied the media publicity, law enforcement, and government policy. It also monitored tobacco ingredient reports, media promotion evaluation, drug information inspection, achievement evaluation, and policy evaluation.

Under its "Development in on Testing and Research of Tobacco Product," the HPA tested 44 domestic and imported products for the nicotine, tar and carbon monoxide contents of their mainstream cigarettes, as well as their concentration of heavy metals and N-nitrosamines. 43 of the samples were found to be in compliance, with 1 of the samples with tar content over the tolerated amount. The HPA also gathered detailed information on these and other tobacco products to better understand the local tobacco market. The WHO's Framework Convention on Tobacco Control (FCTC) calls for disclosure of information about the toxic constituents of tobacco products on the websites (including additives) and the emissions they may produce. In Taiwan, tobacco manufacturers and importers were required to start such filings on June 4, 2009, in accordance with the Tobacco Hazards Prevention Act. As of December 31$^{st}$ , 2012, 114 companies had submitted filings on 2,621 tobacco products. These data were gathered on a database and made available to the general public online. To increase compliance, as of December 31$^{st}$, 2011, 6 companies had been fined a combined NT$600,000 for failure to make their filing on time.

## 5. Personnel Training and International Contacts

To promote the newly amended Tobacco Hazards Prevention Act, the HPA held Tobacco Hazards Control Exchange Workshops as a platform for local public health staffs to share their experiences nationwide. A total of 188 staffs attended. The HPA also held five training sessions for 220 officials tasked with enforcing the Tobacco Hazards Prevention Act and certified 919 physicians under the smoking cessation clinical training program. In a training program to nurture smoking cessation instructors 1,255, trainees received elementary certification and 279 advanced certification. In a similar program for pharmacists, 651 trainees received elementary certification and 263 advanced certification.

From the relative survey or statistics show that nearly 85% of the people think that smoke-free environment has improved due to the implementation of new policy. The smoking rate decreased for adults over 18 years of age. We estimated that over the past 4 years, the smoking population has decreased by 470,000 people. World Lung Foundation and American Cancer Society compared the price of the average cigarette price of all the countries. The average price for our cigarettes was USD 2.33, which was lower than USD 2.56 for Thailand, USD 3.3 for Malaysia, and USD 2.25 for China. As for advanced countries, the price for Norway is USD 15.11, USD 10.92 for Ireland, USD 10.35 for New Zealand, and USD 9.29 for Singapore. The average was 4 to 6.5 times higher than that of Taiwan. If the purchasing power was adjusted, the price of cigarettes in Mainland China is more expensive than that of Taiwan. WHO recommends that by increasing tobacco price is one of the most cost beneficial strategies for the prevention of chronic disease globally. The price of cigarettes in Taiwan is too low, and the smoking rate for disadvantaged groups and males is still high. We will be responsible for maintaining the health of the people, and conduct the evaluation and adjustment work of tobacco surcharge, and refer to the recommendations from all circles. We will stipulate more complete measures, in order to reach the goal of reducing the smoking rate in 2020.

## Betel Quid Hazards Prevention and Control

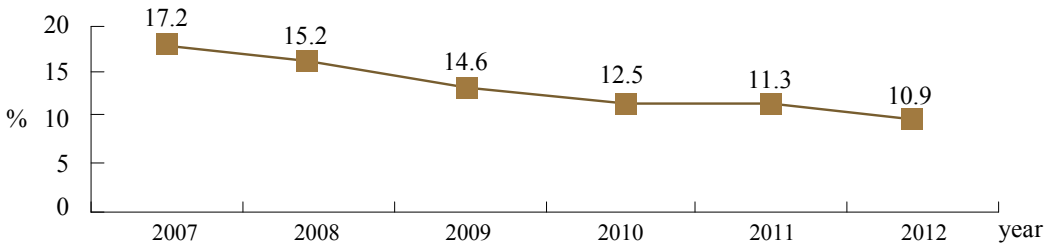
### Status Quo

The International Agency for Research on Cancer has listed betel quid as a Group 1 carcinogenic agent to humans. In Taiwan, betel quid chewing is a primary cause of oral cancer. Some 88% of oral cancer patients are found to have the habit of betel quid chewing. In comparison with smoking and excessive use of alcohol, betel quid chewing carries a high risk for oral cancer.

In Taiwan, there are around 1.39 million regular betel quid chewers. The standardized incidence rate of oral cancer among males incresed 24% in the past five years and is a common threat to men aged 25-44. To reduce the threat of oral cancer in Taiwan, a major publicity campaign was undertaken in 2011 that sought to discourage people from chewing betel quid.

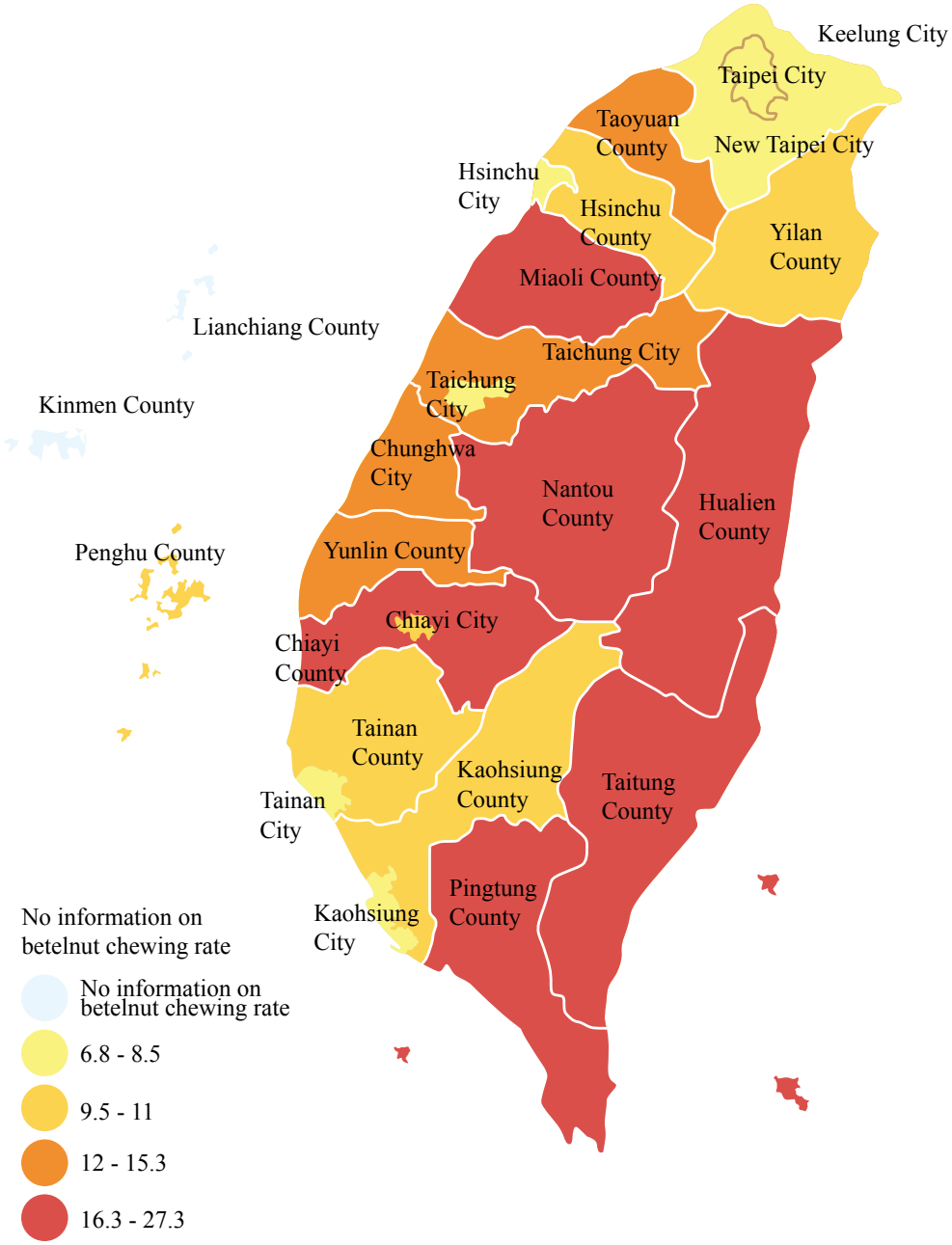
Success in getting men to quit betel quid has been achieved in recent years. From 2007 to 2012, Taiwan's overall betel quid chewing rate fell by 37% (Figure 3-3). However, the rate for adolescents remains the same (Table 3-1). In a breakdown by county and city, Hualien and Taitung registered the highest betel quid chewing rates nationwide. High rates were also reported in central and southern Taiwan, while metropolitan areas posted much lower rates (Figure 3-4).

**Figure 3-3 Betel Quid Chewing Rates among Adult Males, 2007-2012**




Betel quid Chewing Rate: Refers to those who have chewed within the past six months.
Source: Behavioral Risk Factor Surveillance System (BRFSS) Survey, Adult Smoking Behavior Survey.

## Figure 3-4 Betel Quid Chewing Rates among Adult Males by County/City in 2012




Betel quid Chewing Rate: Refers to those who have chewed within the past six months.
Source: Behavioral Risk Factor Surveillance System (BRFSS) Survey, Adult Smoking Behavior Survey

## Table 3-1 Betel Quid Chewing Rate among Adolescents

| Subject | Senior/Vocational High School Students | | | | | Junior High School Students | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Year | 2005 | 2007 | 2009 | 2011 | 2012 | 2006 | 2008 | 2010 | 2011 | 2012 |
| Betel quid chewing rate | 3.4 | 3.5 | 3.8 | 3.8 | 3.4 | 1.9 | 1.8 | 2.0 | 1.5 | 1.5 |

Betel quid Chewing Rate: Proportion that chewed less than 1 per day, 1-5, 6-10, 11-15, 16-20, and over 20
Source: Global Youth Tobacco Survey (GYTS)

A milestone in Taiwan's campaign against the hazards caused by betel quid arrived when an interdepartmental, five-year initiative was adopted in 1997: Program for Managing Problems Related to Betel quid. In accordance with a proposal by NGOs, December 3 was designated as “No Betel quid Chewing Day.” In 2011, rigorous efforts were made by all levels of government to strengthen betel quid prevention and control through media promotions. Government agencies and NGOs also joined forces to create betel quid free communities, workplaces, schools and barracks. The efforts paid off: the chewing rate among men aged 18 or above fell to 10.9% in 2012 from 17.2% in 2007.

### Target Indicators

In 2012, the betel quid chewing rate for adults over 18 years old is lower than 6.0%.

### Policy Implementation and Results

#### 1. Publicizing No Betel Quid Chewing Message

##### (1) Adopting a Soft Approach and Having Patients Share Their Experiences

The HPA developed and produced a variety of promotional materials that feature stories of oral cancer patients. These gently and directly get the message across to people who have the habit of chewing betel quid. "The Lost Smile" is Taiwan's first documentary on people inflicted with oral cancer because of betel quid chewing. "Happiness of Rebirth" is an audio book featuring the voices of oral cancer patients and their families. Both highly rated among not only oral cancer fighters but also the general public. To gain wider public attention to the topics of betel quid chewing and oral cancer, the documentaries were played throughout 2012 on the internet and broadcast media, as well as hospitals, schools, communities, workplaces and barracks. The objective was to have patients and families share their personal experiences to raise greater awareness of betel quid hazards among chewers and the general public.

##### (2) Developing a Betel Quid Cessation Service System and New Awareness Channels

The HPA urges people to quit betel quid chewing to reduce their likelihood of oral cancer. It put a comprehensive service network in place, with teaching materials and seed instructors developed for offering cessation classes. To reach people with a high tendency of betel quid chewing, the HPA has been distributing tissue boxes printed with oral cancer and betel quid warnings since 2007 at gas stations. The campaign elicited a positive response among local health authorities and the general public. Besides emphasizing the carcinogenic nature of betel quid, additional information on oral cancer screenings was also printed on tissue boxes and distributed at nearly 130 gas stations nationwide in 2012.

### (3) Starting with Schools

In 2012, we guided 73 middles school and elementary schools in Chunghwa County, Chiayi County Kaohsiung City and Yilan County that have high occurrence rates of oral cancer to promote betelnut-free campuses, and conducted energy boosting courses and training workshops.

## 2. Fostering a Culture of No Betel Quid Chewing in the Community and Workplace

### (1) Bolstering Cooperation with NGOs to Combat Betel Quid Chewing

To put community resources to optimal use, local health departments serve as the platform to integrate private organizations that also seek to promote prevention and control of betel quid hazards. These include the Sunshine Social Welfare Foundation, the Cancer Prevention and Education Foundation, and local hospitals such as Hualien Armed Forces General Hospital and Cardinal Tien Hospital Yungho Branch, as well as more than 70 community groups. To create communities and workplaces free from betel quid chewing, these groups work together in conducting publicity, setting conventions and regulations, starting cessation classes and offering support services to oral cancer patients.

Moreover, special courses are available to local health officials to enhance their capacity for promoting prevention and control of betel quid hazards. Emphasis is placed on teaching strategies, tools and communication techniques so the officials can establish an environment free from betel quid chewing in their community and increase the effectiveness of betel prevention.

### (2) Promoting Interagency Coordination of Oral Cancer Screenings

Thanks to collaboration between the HPA and the Council of Labor Affairs, oral cancer screenings were added to labor health checkups. The council agreed in 2009 that hospitals designated for labor health checkups provide oral cancer screenings to high-risk workers aged 30 or over. In 2010, the HPA was further joined by the Ministry of the Interior, Ministry of Education and Council of Agriculture in mapping out a program for keeping betel quid away from children and adolescents. In 2012, the program was continued to reduce the harm caused by betel quid and keep children and adolescents healthy.

# Section 2 Promoting Physical Activity

## Status Quo

Physical inactivity is one of the 10 leading causes of global mortality and disability as stated by the WHO in 2009; it is estimated to account for more than 2 million deaths per year. In addition, 60-85% of adults have been shown to live inactive lifestyles, with two-thirds children who do not engage in sufficient physical activities. These are the factors that affect people's health and contribute to serious public health problems.

Physical inactivity has also become is the fourth leading risk factor of global mortality accounting for 6% of deaths, which is just below hypertension (13%), tobacco use (9%) and hyperglycemia(6%). In 2012, WHO has stated that around 21-25% of breast and colorectal cancer cases, 27% of diabetes cases and 30% of ischemic heart disease cases are a result of insufficient physical activity. It not only seriously affects the health of individuals and raises national health expenditures and adds costs to the society, but it also creates a significant burden to public health.

Research shows that in comparison with individual with no exercise, individuals who exercise 15 minutes a day (about 90 minutes a week) have reduced total mortality by 14%, cancer mortality by 10% and cardiovascular mortality by 20% while adding three years to life expectancy. In the 2007 Behavior Risk Factor Surveillance Survey, 51.5% of adults who are 18 years old and above responded they had exercised in the past two weeks. By 2012, this number had increased to 70.8%, showing that the percentage of the population who exercises was increasing.

In the 2012, The City Sports Investigation, Sports Administration, Ministry of Education investigated the ratio that the population exercises (Figure 3-5). Among people aged 13 and above who participated in the investigation, 30.4% exercised at least three times a week, 30 minutes each time, and were carrying out activities that were sufficiently rigorous to induce perspiration and shortness of breath. This number had grown significantly from only 15.5% in 2005; however, the population who does not engage in regular exercise was still considerably high (69.6%). This showed that there are still rooms for improvement. By the promotion of active lifestyles, we could foster the habit of regular exercise, and thereby raising people's fitness and reducing the incidence of chronic diseases.

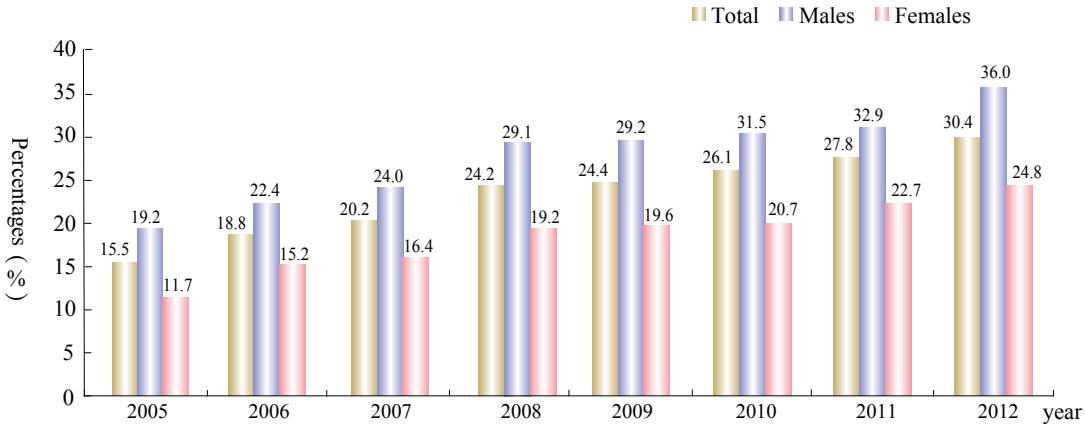
## Target Indicators

The government is committed to increase the ratio of population who engages in regular exercises. Correspondingly, the ratio targets of policies under the Executive Yuan's "Golden Decade" plan has been doubled from 26% in 2010 to 38% in 2016., and 52% in 2020.

## Policy Implementation and Results

1. November 11th was designated as National Walking Day in Taiwan to encourage people to walk 10,000 steps a day. By cooperating with civil groups and corporations, the walking event "10,000 steps everyday, your health is guaranteed" promotion continues. On March 7th, 2012, an achievement banquet of "Being healthy is so good!" was held to further infuse the idea of integrate walking with health lifestyles.
2. "The development of body modes of exercise for disadvantage groups project" was executed to assist visually impaired people in the community to be involved in exercises such as walking, swimming, and Taichi. The "healthy life, move our bodies" manual was also edited to further promote the benefits of bodily exercise.

### Figure 3-5 The Exercising Population in Taiwan




Sources: 2005~2012 Survey of Exercise City from Sports Administration Ministry of Education

3. The HPA website offers various resources on Obesity Prevention for free downloads. These include: 192 community walking trails recommended by the health offices at each county and city; the videos of "healthy exercise for workers (15 minutes)", "conference version of healthy exercise for workers (10 minutes)", and 15 additional videos of healthy exercise produced by each county and city.
4. The HPA also provides a free weight management hotline (0800-367-100) so callers can inquire about exercise related questions.

## Section 3 Obesity Prevention

### Status Quo

According to the results of Nutrition Health And Nutrition Examination Survey conducted between 1993 and 1996 as well as between 2005 and 2008, the prevalence of overweight and obesity among adults increased from 33% to 44%. Male prevalence of obesity rose from 33% to 51% and female prevalence of obesity went from 33% to 36%. According to the Student Health Promotion Survey conducted by the Ministry of Education, the prevalence of overweight and obesity was 25% in elementary school students and 28% in junior high students respectively in 2011. In elementary school, the prevalence was found to be 29% among boys and 22% among girls. In junior high school, the prevalence was 32% among boys and 22% among girls. Among the top 10 leading causes of death in Taiwan issued in 2012, eight of them were related to the obesity, including cancer, heart disease, cerebrovascular disease, diabetes, chronic respiratory disease, chronic liver disease and cirrhosis, kidney disease, and hypertension. Obesity is also a risk factor associated with degenerative joint disease, metabolic syndrome, and blood lipid abnormalities. Studies show that at least 2.9% of medical expenditures are used to treat obesity-induced diseases such as heart disease, cerebrovascular disease, diabetes, hypertension and hypercholesterolemia. The disability and lost productivity due to the obesity are incalculable.

Primary reason of obesity is due to the caloric intake is more than caloric need, while other causes, like heredity, physiological or psychological reasons, may lead to the consequence of obesity as well. Increase in the prevalence of overweight and obesity is related to westernized food and lavish meals with higher calorie, higher frequency of sedentary activities such as watching television and internet usage along with low physical activity and increased availability of sugary drinks and high-calorie junk food. Many kinds of food without nutritional labels make it difficult to determine whether these food are healthy or not; also, some communities lack for convenient mass transportation systems or convenient recreational sports facilities. Disabled groups continue to have insufficient health education opportunities, and for economic reasons, they tend to buy low nutrition, high calorie foods. Advertisements promoting unhealthy foods packaged with free gifts cause people to consume more high calorie, fatty and sugary foods.

To prevent obesity, HPA joined 22 cities and counties to launch the "Healthy Centenary, Healthy Taiwan" weight management campaign in 2012. It gathered 600,000 people who were committed to "smart eating, joyful moving, daily weighing". Together, participants lost 600 tons. The purpose of the event was to raise public health and prevent chronic disease by promoting an active lifestyle and increasing the knowledge of calories and nutrition. On January 22, President Ma Ying-jeou urged everyone to work hard toward losing weight. He emphasized the importance of proper nutrition habits and regular exercise. Two days later on January 24, Premier Wu Den-yih hosted a news conference to launch the "Healthy centenary, Healthy Taiwan". He led officials from the 22 cities and counties along with agency representatives in a pledge to battle obesity. Anyone aged 6 to 64 who was overweight or had excessive body fat levels could form a team and join this weight management campaign. Participants could register with local health departments and health centers by email, fax or phone.

## Target Indicators

The government called on 600,000 people to lose 600 tons.

## Policy Implementation and Results

### 1. To Formulate Public Health Policies

Taiwan remains committed to building healthy cities along with health promoting hospitals, workplaces, schools and communities. It has formulated the draft of a national nutrition act and a health promotion act. It announced adjustments to the daily nutrition guidelines. It also enacted the Statute for Breastfeeding in Public Places to increase breastfeeding and prevent childhood obesity. Lawmakers are considering revising the revised draft food and drug administration act to include rules on advertisements, and the government tracks height and weight trends among citizens. To target obesity prevention the government also called a task force to propose white paper and clinical guidance.

### 2. Building a Health Supportive Environment: Inspect and improve the obesity environment, construct information supportive environment, and establish healthy food intake system and diverse exercising environment.

(1) Building a health supportive environment: The HPA launched the obesity prevention website and free service hotline 0800-367-100. It promotes "smart eating, joyful moving, daily weighing" as the framework to a healthy body weight, while also providing other valuable related information. In 2012 there were 3,010 calls made to the hotline, and 826,125 hits on the website.

(2) Preventing Obesity by Recognizing and Improving Environmental Factors: The HPA compiled the "Strategies to Prevent Obesity in Taiwan: Community Implementation and Measurement Guide." Local health departments in Taiwan's 22 cities and counties, together with community leaders and volunteers, can use the guide to determine and improve environmental factors contributing to obesity in the nation's 368 districts, county-level cities and townships.

(3) Creating a Supply System for Healthy Food: The HPA wants to turn health into an industry while making industries focus on health issues. It encourages accessible and affordable health foods that are prominently placed in the surrounding environment. To make it easier to choose healthy foods, the HPA promotes clear, easy-to-understand nutrition labels that include calories, and it encourages restaurants to provide calorie data on menus. At schools it checks that school lunches meet daily nutrition guidelines. The HPA's efforts encouraged 72% of all schools at the high school/vocational level and below to offer at least one vegetarian meal a week, and it urges workplaces and hospitals to provide healthy foods and calorie information.

(4) Forming an Environment Conducive to an Active Lifestyle: The government aims to build a living environment suited for exercise anytime of the day by anyone, anywhere. It builds safe, comfortable pedestrian walkways, bicycle paths, walking paths, and hiking trails. Along these routes it installs signs that tell people how many calories they burned, and the diversity of routes means there are options suited to people of any gender, age or group. Meanwhile the HPA encourages workplaces to plan exercise times before and after work and it promotes forming exercise groups. In addition, the healthy exercise for working people is revised with warning, and 10 minutes of meeting version of health exercise is produced.

### 3. Re-orienting Health Services

The government encourages medical centers to transform from traditional forms of diagnosis and treatment toward health promotion and preventive medicine. It established an alert system that provides preventive care and health maintenance information to patients and other people along with valuable weight management services. It also added health promotion and educational materials to cancer screening reports; promoting baby friendly hospitals, breastfeeding, and providing related healthy body weight information.

### 4. Strengthening Community Actions

To strengthen the healthy weight promotions, the HPA relies on organizational action and cross-departmental resources. It forms support teams that help carry out a variety of activities in communities, schools, workplaces and hospitals. There were 31 news where releases to boost healthy weight trends, and where created a social atmosphere where people are motivated to maintain a healthy weight. For its community weight loss program the HPA held news conferences. Of the 22 cities and counties in Taiwan, 8 saw their mayor or magistrate lead the launch news conference and pledge to join the battle against obesity.

On March 20th, 2012-At the health meeting-All the counties and cities take an oath together

### 5. Developing Personal Skills

The HPA revised the "Move for a Healthy Lifestyle" handbook along with pamphlets and signs that encourage people to eat healthy, exercise happily and weigh daily. It also produced handbooks for local health departments, hospitals, workplaces and schools that teach people how to maintain in a healthy weight. For office workers, the HPA designed and promoted a fitness routine, and it launched an obesity prevention website and hotline. Through these channels the HPA can increase people's knowledge of calories, nutrition, exercise and maintaining a proper weight, thereby giving them the tools they need to stay healthy. In 2012, the HPA held 6 educational training workshops for local health department and health center officials. Participants shared their experiences and explained how they teach workers to maintain a healthy weight.

On June 6th, 2012-Everybody move at all the workplaces press conference was conducted.

On December 18th and 19th, 2012, the HPA held Exploratory Meeting on Building Healthy Communities & Obesity Prevention Achievements Conference. At the conference, 235 localities and individual units were honored for helping residents lost weight in 2012, and they had a chance to present achievements in promoting healthy lifestyles. The event also offered an excellent opportunity for each area to share the models it used to promote health and weight loss along

with the experiences and innovations it had realized along the way.

## 6. International Communication and Cooperation

From July 10th~11th, 2012, we conducted 2012 Europe-Taiwan Health Dialogue. We invited 11 experts from Europe and America, and engaged in discussion and interaction in obesity prevention with over 200 experts in the industry, government, and scholar circles. On September 27th, 2012, the director of HPA, Chu Shu Ti was invited to Hong Kong, and

On December 19th, 2012-The Community and Health Building Seminar was conducted.

The manuals of all kinds of organizations
(Hospitals, workplaces, schools, health departments.)


production guidance


The weight management manual

people's weight management guidance 6 pages


healthy exercise CD

participated in the Feeding the World: Asia's prospect of plenty of The Economist. In the meeting, we discussed topics such as international trade, agriculture, health, and nutrition. Director Chu was the spokesperson in "Health & nutrition discussion: Asia's double burden." She shared Taiwans' achievement of promoting healthy weight management, and solve the burden caused by malnutrition and over-nutrition. From October 3rd to 6th, we conducted the 15th Annual European Health Forum in Gastein, Austria. Director Chu discussed "Whole society development againstobesity: strategy or fantasy?

### 7. Achievement of Weight loss

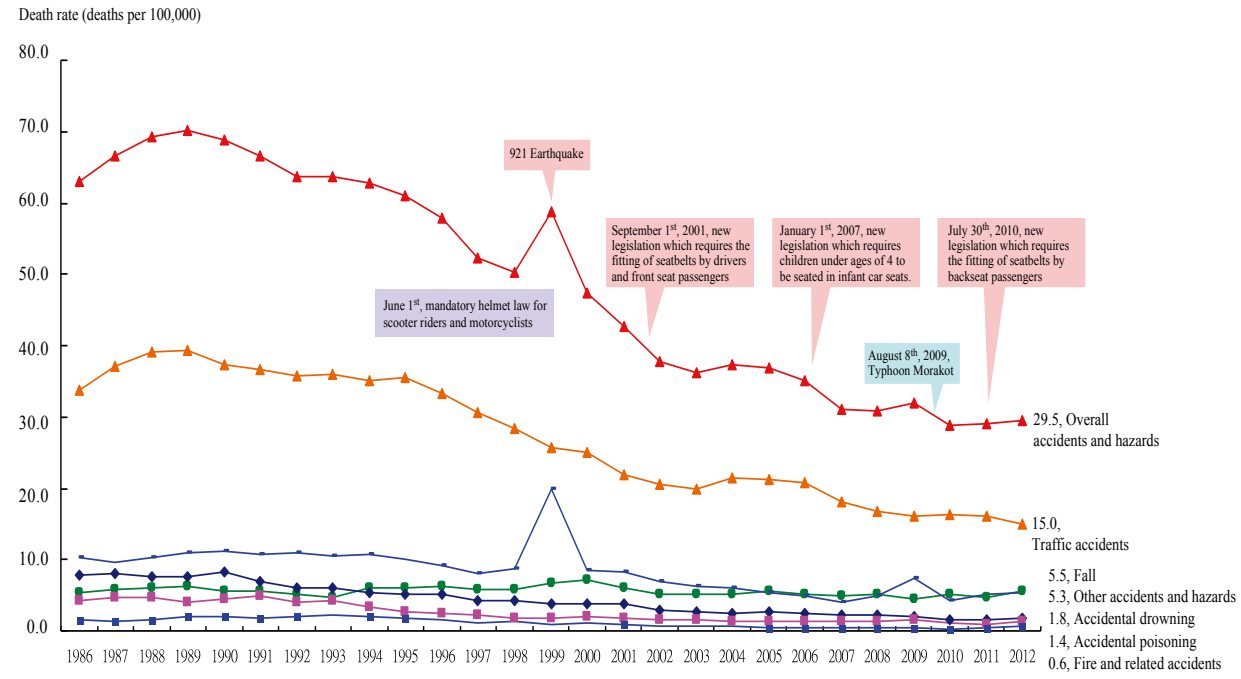
At the end of 2012, there is a total of 779,000 people in Taiwan that consists 7,013 groups who participate in the healthy weight loss plan of "Taiwan 101, healthy exercise." A total of 1,137 tons were lost. Each participant lost an average of 1.5 kilograms. The overweight and obesity rates of participants went from 67% to 59.9%. A total of 7.1% was lost.

## Section 4 Accident and Injury Prevention

### Status Quo

The accident-related mortality rate in Taiwan has been declining since 1989, and the long-term trend is also decreasing; apart from the outliers in 1999 (58.9 per 100,000) due to 921 earthquake, and in 2009 (31.9 per 100,000) due to typhoon Morakot. In 2012, the accident-related mortality rate dropped down to 29.5 per 100,000 (Figure 3-6), which was the sixth leading cause of death in Taiwan. However, since the endorsement of the mandatory helmet laws for scooter riders and motorcyclists in 1997, the traffic-related deaths had steadily declined annually from 33.4 per 100,000 in 1996 to 14.1 per 100,000 in 2012.

**Figure 3-6 The Main Causes of Accidental Deaths and Rates in Taiwan, 1986~2012**




Sources: Statistics of the cause of death by the Ministry of Health and Welfare

From 1987 to 2012, the leading causes of accidental death were traffic accidents, accidental falls, drowning, accidental poisonings, and fires related accidents (Figure 3-6). The data from 2012 showed that accidental deaths ranked 4th in the cause of death among infants of age 0, and was the leading cause of death in children of ages 1-4, 10-14, and 15-19 (Table 3-2). The leading causes of accidental deaths in 2012 among the various age groups from 0-19 are: age 0 - traffic accidents, followed by accidental falls; ages 1 to 4 - drowning, followed by traffic accidents ; ages 5 to 9 – drowning, followed by traffic accidents; ages 10 to 14 and 15 to 19 - traffic accidents, followed by drowning (Table 3-3).

## Table 3-2 Five Major Causes of Death in 0-19 years old Children and Adolescents in 2012

| Cause of death | Age 0 | Age 1-4 | Age 5-9 | Age 10-14 | Age 15-19 |
|---|---|---|---|---|---|
| 1st | Congenital abnormality, malformation; chromosomal abnormality | Accidental injury | Malignant tumors | Accidental injury | Accidental injury |
| 2nd | Special conditions in perinatal period | Malignant tumors | Accidental injury | Malignant tumors | Malignant tumors |
| 3rd | Perinatal infections | Congenital abnormality, malformation; chromosomal abnormality | Congenital abnormality, malformation; chromosomal abnormality | Cardiovascular disease (not including diseases related to high-blood pressure) | Self-inflicted bodily harm (suicide) |
| 4th | Accidental injury | Harm | Cardiovascular disease (not including diseases related to high-blood pressure) | Congenital abnormality, malformation; chromosomal abnormality | Cardiovascular disease (not including diseases related to high-blood pressure) |
| 5th | Sudden Infant Death Syndrome (SIDS) | Pneumonia | Pneumonia | Self-inflicted bodily harm(suicide) | cerebrovascular disease |

Sources: Statistics of the cause of by the Ministry of Health and Welfare

## Table 3-3 Three Major Causes of Accidential Death in Children, Adolescents, and the Elderly in 2012

| Cause of death | Age 0 | Age 1-4 | Age 5-9 | Age 10-14 | Age 15-19 | Over 65 |
|---|---|---|---|---|---|---|
| 1st | Traffic accident | Accidental drowning | Accidental drowning | Traffic accident | Traffic accident | Traffic accident |
| 2nd | Accidental falls | Traffic accident | Traffic accident | Accidental drowning | Accidental drowning | Accidental falls |
| 3rd | Accidental drowning | Accidental falls | Accidental falls | Accidental falls | Accidental falls | Accidental drowning |

Sources: Statistic of the cause of death by the Ministry of Health and Welfare

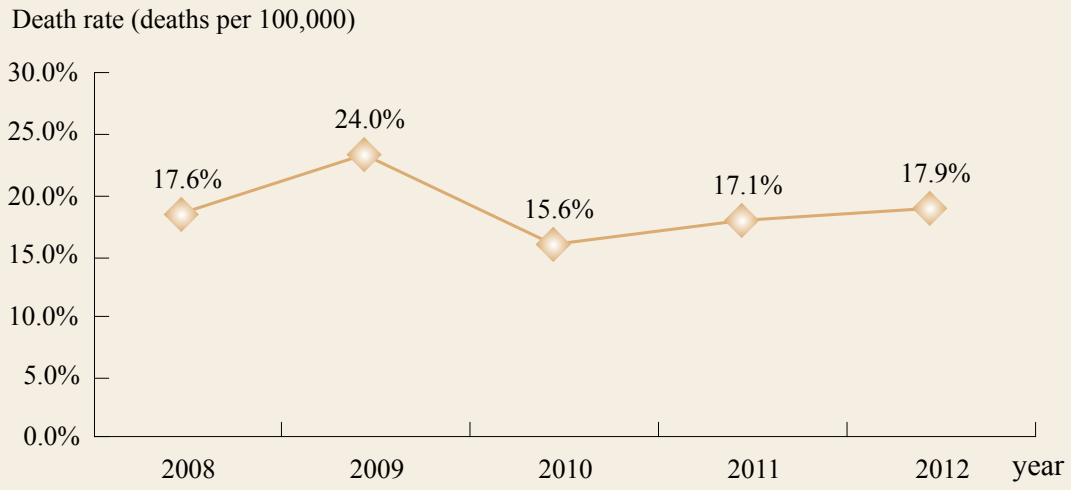
Sudden Infant Death Syndrome (SIDS) is the main cause of deaths in infants of age 0 other than diseases and accidental hazards. According to the statistics from 2008 – 2012, SIDS ranked 5th and 6th in the leading causes of death in infants. In 2012, SIDS death rate accounted for 17.9 per 100,000 (Figure 3-7).

In 2012, accidental death ranked 10th in the top leading causes of death in the elderly over 65 years old, accounting for 2,629 deaths (102.5 per 100,000). Falling was the 2nd top leading cause of death for the elderly, followed by traffic accidents (Table 3-6). Falling affects the physical, psychological, social functions and quality of life of the elderly, and also becomes a burden for caregivers. According to the results of national health survey, the standardized prevalence of falling of the elderly was 20.5% in 2005, which decreased to 16.6% in 2009. The top 3 locations for falling incidences in the elderly are: bathrooms, living room, bedroom of their own homes; and streets/roads, vegetable gardens/farmland, park or sports field outside of homes.

## Target Indicators

In 2012, over 15,000 disadvantaged households with children 6 years older and under participated in the Home Safety Assessment program.

### Figure 3-7 SIDS Death Rate, 2008-2012




Sources: Statistics of the cause of death by the Ministry Health and Welfare

## Policy Implementation and Results

### 1. Laws and Policies

(1) Incorporation of Injury Prevention, Safety Promotion to the "Healthy People 2020 White Paper": injury prevention and safety promotion was incorporated into "Healthy People 2020 White Paper" as new themes. Its goals include the prevention of death and injury caused by traffic accidents, malicious injury, falls, drowning, and carbon monoxide poisonings. A national monitoring system for accidental injuries was established as a responsive strategy towards the promotion of Safe Communities Program. These have gradually reduced the accidental injury and mortality rates.

(2) Accommodation with cross-sectoral policies: HPA accommodates with other governmental departments to promote children safety in homes. HPA worked with the Ministry of the Interior to enact the Protection of Children and Youths Welfare and Rights Act along with its Children and Adolescent Safety Implementation Program. Together, officials were able to improve children's education and care, and enhance their safety and health.

## 2. Building a Safe Household Environment for Children

(1) Building a Safe Household Environment for Children: HPA created a checklist that people could use to assess whether their home was safe for children. Parents and caregivers could investigate and improve areas deemed unsafe in their households. Also, staffs from local health bureaus and departments assisted with the investigation of homes of disadvantaged families with children of 6 years old and under. A total of 24,257 such homes were investigated and offered with basic improvement suggestions in 2012.

(2) Incorporation of health education into Children's Preventive Services: In order to elevate the levels of knowledge toward accidental injury prevention among parents and caregivers, HPA provides experts offering age-specific tips for preventing accidental injury during the seven preventive care sessions for children 7 years old and under. The children's health handbooks also include assessment forms providing information about accidental injuries among children along with information on basic steps that can be taken to prevent such injuries.

(3) Creating an Intervention Model for Pediatricians to Help Prevent Accidental Injury: In 2012, data from 269 caregivers of children (age 0-4) who encountered accidental injuries were collected and randomly divided into experimental group and comparison group. After the follow-up test, a total of 152 caregivers (84 from experimental group; 68 from comparison group) responded. The results showed higher improvement rates in caregivers from experimental group over comparison group after receiving health education from pediatricians in the following unsafe behaviors: carry/transport infants by scooters, and make milk or hold hot beverages while holding the infants. In addition, there was a disparity between the statistics, and the rate of accident reoccurrence in infants is lower than that of the comparison group.

## 3. Prevention of Sudden Infant Death Syndrome (SIDS)

(1) Through the statistical data of the causes of death by the Ministry of Health and Welfare, we continue to monitor the mortality rate of SIDS and the trends of the number of deaths.

(2) In order to reinforce the health educational guidance of parents and main caregivers, we refer to the relative improvement measures in SIDS prevention from American Pediatric Association. We also incorporated recommendations of sleeping positions and sleeping environment in the infant health manual for each newborn baby. The evaluation chart of SIDS prevention and control is also added to the manual.

(3) The SIDS preventive guidance is listed as: 1. one of the health education items for infant preventive care (the 1st session when infants are 0 – 2 months old and the 2nd session when infants are 2 – 4 months old). 2. the key points of the training courses and the contents of doctor's service manual in the regional child preventive care educational trainings (a total of 13 sessions) jointly organized by HPA and Taiwan Pediatrician Society.

(4) In order to prevent occurrences of SIDS, Shaken Baby Syndrome health guidance was added to the health manual in assisting caregivers to understand the risk of shaking babies, to convey the techniques in consoling crying babies, and to avoid fierce shaking of babies.

## 4. Promotion of Fall Prevention for Elderly People In the Community

(1) The "Fall prevention for the elderly" manual was produced to reinforce the health guidance of fall prevention. The contents included: the possibilities of fall, preventive measures of fall, exercises of fall prevention, examples of household environment safety, examples of safe activity for the elderly, household environment evaluation chart, responses in occurrence of fall, and prescription of fall prevention.

(2) Integration of care service points to promote the health of the elderly in the community: 1,473 community care service points consisting of 367 health centers and 458 hospitals to promote health of the elderly in the community in 8 aspect: promote fall preventing exercise at places where the elderly usually go, reinforcing their muscle strength, walk, and balance. The environmental evaluation of community and household are also assessed to promote fall prevention work for the elderly.

(3) We established the "Integrated clinical and community fall prevention network for the elderly and its evaluation plan": The hospital is used as the location to screen for and to collect case studies of the elderly with high risk of falling. We then reinforced the community service points by staff training and mediation (such as the care service points or community centers), through referral of high risk group to the community for intervention. 223 elderly participated, and it was shown that they displayed improvements in the aspects of knowledge, participation in exercise, muscle strength of lower limbs, and balances.

## 5. Creating a Network of Safe Communities and Safe Schools

In 2002, Taiwan has complied with WHO's safe community principles of promotion of safe communities plan. From 2005 to 2012, there are a total of 18 communities that have passed the certification of international safe community. From 2006 to 2012, 79 schools have passed the international safe school certification since its launch in 2006. These certifications serve functions of reinforcement of international connection, expansion of safe community, in order to lower the occurrence rate of accidents and hazards, and bring out the benefits of building a safe and healthy living environment.


Anniversary of Safe Community Development in Taiwan & International Safe Community / School / Hospital Designation Ceremony
COMMITMENT
A SAFE COMMUNITY

# Promoting Your Health

## Chapter 4
## Healthy Environment

# Chapter 4 | Healthy Environment |

In the Ottawa Charter adopted in 1986, the World Health Organization identified five priority action areas for health promotion: build healthy public policy, create supportive environments, strengthen community actions, develop personal skills, and reorient health services. It is a set of guidelines applicable to health promotion on all occasions. This includes: Healthy cities integrate healthy values and principles into city planning, improve city health problems, and through cross-department and field cooperation, we establish healthy public policies, in order to promote the cities and community residents to actively participate in the health promotion work. Healthy community integrates civil resources and existing healthcare systems, establishes diverse basic network, emphasize the establishment of partnership relationship of community participation.

We hope through community operation to solve community health problems, and realize healthy life. Through the policies of school health policies, health promoting schools create agreement among teachers and parents, promote collective participation of community, provide health services, and integrate health into campus learning and life. We then build a healthy learning campus environment, and upgrade overall student health. Health promoting workplaces integrate employers, employees, and society to promote the health and happiness of occupational workers, emphasize on improving the organization and work environment of workplaces, reinforce healthy lifestyles of employees, in order to promote personal techniques and professional development. Health promoting hospital is a medical or health service organization that focuses on structure, culture, decision, and process developments, in order to upgrade the health benefits of patients, employees, and communities. Organizational change is the strategy, in order to reach the goal of upgrading health through medical processes.

## Section 1 Healthy Cities

### Status Quo

21 cities in Europe conducted a meeting in Lisbon in 1986. They have decided to collectively develop city health, and promote healthy city plans. In 1997, WHO has introduced 20 steps of developing healthy city plans, in order to assist other countries to promote healthy cities. Its aims to engage cross-agency efforts, building policies and citizen participation in the setting of public health. Echoing the WHO's Healthy Cities Initiative, the Taiwan Public Health Association took the lead to usher in the concept to the country in 1995. As the mayor of Taipei City, President Ying-Jeou Ma designated 2002 as the first year of the city's aiming for a healthy city. Drawing on the WHO's five priority action areas, he implemented the "Make Taipei a City of Healthy Longevity by a 100-Ton Weight Reduction" initiative. In 2003, the HPA began a project to make Tainan a healthy city. Specialists were called in to work with the local government in promoting cross-agency, interdisciplinary cooperation among government, industry and academia. The health needs of local residents were taken into account as parties concerned (cross departmental and cross-sectoral). In 2005, Tainan City became a member of the Alliance for Healthy Cities (AFHC), which was set up in 2003 by the World Health Organization Regional Office for the Western Pacific. This in turn prompted other county and city governments to seek admission as well. Between 2006 and 2007, the HPA commissioned the relevant authorities to adopt the Healthy Cities initiative in Miaoli County, Hualien County, Kaohsiung City and Taipei County. This was followed in 2007 by the establishment of a set of national indicators for healthy cities and a platform for nationwide information exchange. Specialists brought in by the HPA continued to assist the county and city governments in making residents healthy, sharing experiences with one another, and undertaking international exchange.

## Policy Implementation and Results

### 1. Promoting Healthy Cities Nationwide

Conselting team comprised of scholars and specialists was set up for the sake of assisting 16 counties and cities in carrying out the Healthy Cities program. These counties and cities include Keelung City, Taipei City, New Taipei City, Taoyuan County, Hsinchu City, Hsinchu County, Miaoli County, Nantou County, Yunlin County, Chiayi City, Tainan City, Kaohsiung City, Pingtung County, Taitung County, Hualien County, and Kinmen County.

The 4th Health City Awarding Ceremony, Taiwan.

### 2. Building Information Exchange Platform among Healthy Cities

There is a sustainable work on information collection, including the collection of both the domestic and international intelligence about healthy cities. Also, the HPA advocates sharing experience on successfully promoting the program of healthy cities in countries and cities and uses these results as a reference for cities/counties promotion. In 2012, the HPA along with the Alliance for Healthy Cities (Taiwan) held the "The 4th Healthy City Awarding Ceremony, Taiwan". Vice President Den-Yih Wu attended and deliveried remarks on the ceremony. Counties and cities were commemorated, praised, and awarded with one excellent healthy city award, 49 innovative achievement awards, and two outstanding contribution awards. Approximately 200 people from various county and city governments, institutions of tertiary education and communities participated in the rite.

### 3. Enhancing International Interchange

As of end of 2012, a total of 10 counties and cities as well as 11 districts in Taiwan admitted to the AFHC as NGO members. They are Tainan City, Hualien County, Miaoli County, Chiayi City, Kaohsiung City, Taitung County and Nantou County, Hsinchu City, New Taipei City, and Taoyuan County as well as Da'an District, Shilin District, Beitou District, Zhongshan District, Songshan District and Wanhua District of Taipei City, Tamsui District, Shuangxi District, Pingxi District and Pinglin District of Taipei County and Pingtung City.

**Figure 4-1 The Number of Counties in Taiwan as Members of WHO AFHC 2005-2012**


Sources: Health Promotion Administration


2012 WHO CCCSP participated in The Ceremony of International Safety Community Certification

In 2012, AFHC held the 5th Global Conference of the Alliance for Healthy Cities in Australia. A total of 68 people, including senior officers and cross-department colleagues from Hsinchu City and Nantou County along with the chief of the Department of Health from Taipei City, Miaoli County, Kaohsiung City, Tainan City, and Taoyuan County attended the conference. Thirteen oral theses and 44 poster exhibitions were presented, among which Tainan City, Miaoli County, Pingtung City, and Hsinchu City received the Award for Creative Developments in Healthy Cities.

## Section 2 Healthy Communities

### Safe Communities

#### Status Quo

In 1989, the World Health Organization established the WHO Collaborating Centre on Community Safety Promotion (WHO CCCSP) at the Karolinska Institute in Stockholm, Sweden to emphasize the integration of community resources. Basing on evidence-based research, HPA promotes hazard prevention and control plan to lower the occurrence of community accidents and hazards, and to assist communities around the world in promoting injury prevention plans, as well as to provide a rigorous and transparent system for assessment and certification to publicize the concept of safe communities, and to form a worldwide "Safe Community Network". As of 2012, a total of 299 communities had been certified as safe communities internationally.

In 2002, Taiwan promoted various safety promotion projects that suit community features and needs in accordance with the safe community criteria laid down by the WHO. In 2006, the Northern, Central, Southern, and Eastern Safe Community Support Center were established to assist the promotion safe community plans within the community. From 2005~2012, a total of 18 communities had received international safe community certifications (Table 4-1). In addition, hospitals and schools also participated. Taipei Medical University Hospital was certified as an international safe hospital, and Taipei Medical University was re-certified as an international safe school, gradually building a comprehensive safe community network in Taiwan.

#### Target Indicators

(1) To guide at least 50 communities in promoting safety themes in establishing safe communities and decreasing incidences of injury.

## Table 4-1 Communities Received the International Safe Community Certification

| Name of community | Year Certified | Remarks |
|---|---|---|
| Fengbin Township, Hualien County | 2005 | Passed re-certification in 2010 |
| Alishan Township, Chiayi County | 2005 | Passed re-certification in 2012 |
| Neihu District, Taipei City | 2005 | Passed re-certification in 2010 |
| Zhongzheng District, Taipei City | 2008 | |
| Shoufeng Township, Hualien County | 2008 | |
| Shigang Township, Taichung County | 2008 | |
| Zuoying District, Kaohsiung | 2009 | |
| Xingang Township, Chiayi County | 2009 | |
| Heping Township, Taichung County | 2009 | |
| Dongshan Township, Yilan County | 2009 | |
| South District, Tainan City (Jinhua Community) | 2010 | |
| Su'ao Township, Yilan County | 2010 | |
| Toucheng Township, Yilan County | 2010 | |
| Wenshan District, Taipei City | 2010 | |
| Nangang District, Taipei City | 2010 | |
| Datong District, Taipei City | 2010 | |
| Xinyi District, Taipei City | 2010 | |
| Xizhi District, New Taipei City | 2011 | |
| Certified Shiufen Community | Eighteen | |

Remarks: According to the certification methods of WHO CCCSP. Certified community has to apply for re-certification every 5 years, in order assure that the promotion work of community safety can be sustained.

(2) To reinforce a supportive safe community framework in strengthening cross-border integration, and broadening safe community capacity for reduced incidences of injuries.

## Policy Implementation and Results

### 1. Development of Evidence-based Health and Safety Promoting Communities

(1) Draw on international health and safety promotion strategies, and take community as the platform, HPA sets up organization and framework responsible for promotion of the program; take into account community needs while promoting injury prevention and safety promotion in a variety of ways.

(2) Adopt a gradual approach toward integrating other health promotion projects, such as collaborating with those responsible for promoting healthy hospitals to focus on the medication safety among the elderly. Incorporate healthy city items into the healthy community program. Use health promoting schools as a platform for safe communities to promote campus safety, thus enabling schools in the community to be certified as safe schools.

(3) Adopt a bottom-up independency accounting for both the vision and methods within the community, and a top-down dedicated promotion from the government.

(4) Integrate resources and put them to optimal use on the back of policy support from the government and cross-agency, interdisciplinary cooperation.

(5) Establish a professional team w to help communities promote safe community program.

## 2. 2012 Topics in the Spotlight

The development of health safety themes in 2012 include: Environmental safety inspection of shopping malls, household safety, road safety (valet services to prevent driving under the influence of alcohol, safety helmets for motorcyclists, and road improvements), safety promotion of new residents (assisting foreign spouses to obtain driver's licenses, safety knowledge and language learning courses), safety of school children, safe waters and drowning prevention, safety of elderly (care for the elderly who lives alone or are economically disadvantaged as well as accidental fall prevention for the elderly), and other topics such as prevention of carbon monoxide poisoning, recreational and travel safety promotion (zoo safety guidance education, and electricity safety inspection of home stays, etc).

## 3. Representative of Safe Communities in 2012

### (1) Alishan International Safe Community

In 2005, Alishan community passed the international safe community certification, and was re-certified in 2012. Originally 3 villages participated, and expanded to all 12 villages in the township. According to the 7 principles of safe community by WHO CCCSP, the Alishan Safe Community Promotion Committee was established to execute safety promotion tasks including to promote traffic safety; inspection of road conditions in the tribes, installation of delineators, and reflecting mirrors; to increase the helmet wearing rate in the tribes; to offer guidance in accidental fall prevention and safe use of medicine for elderly in the tribes; to establish task forces of fire and flood; to promote agricultural safety and campus safety. The accident rate has decreased from 2.06% in 2006 to 0.71% in 2012 since implementation of the certification.

### (2) Taipei Medical University Hospital International Safe Hospital

In 2008, Taipei Medical University Hospital became a member of the international network of WHO health promotion hospital, and later became the first international safety certified hospital in the world in 2012. Meanwhile, it also became an important member of promoting safe community in the Xinyi District of Taipei City. In the emergency room, the injury data of the Xinyi District is registered, and statistical analysis on the injuries is regularly provided as a reference for community promoting committee to draft corresponding actions and plans. In addition, needle injury avoidance plan for employees was also promoted, and the ratio of needle injury of new employees had reduced from 71% in 2012 to 48.7% in 2011. The promotion of drug use safety, accidental fall prevention, and emergency room safety works were also carried out, creating a safe medical environment for patients.

### (3) Taipei Medical University International Safety Schools

According to the 7 principles of school community of WHO CCCSP, through the partnership and relationship among schools and communities, the safety of campus and staff was collectively promoted to reinforce students' concepts of safety, and to integrate campus safety into policy consideration of the school. In 2009, Taipei Medical University passed the certification, and was re-certified in 2012.

## Health Promoting Communities

### Status Quo

The public health community of Taiwan had noticed natural conditions of a given community, the government policy and other artificial factors can impose effects on people's health early on. In the line with this, community health promotion committee was established, and volunteers were recruited by the local public health center and community leaders to discuss and to promote the health issues that the local required. This was as early as the days when the Taiwan Provincial Health Department was still around. In 1996, Yilan County unveiled a three-year community health building program that was intended as a community empowerment project. In 1999, the Department of Health officially launched the Community Health Building Program, establishing the nation's first Community Health Building Center in Hsin Kang Township of Chiayi County. Over the years a total of 50 such centers had been established nationwide. Drawing on the five action areas for health promotion identified in the WHO's Ottawa Charter, these centers are given the duty of integrating community resources and bringing together the public and private sectors to foster greater awareness of health issues and willingness to cultivate healthy behavior in life. The ultimate objective is to confront and resolve whatever threats to community health so that a healthy community is no longer a mere vision.

In 2002, HPA began to assist all entities set up under the Community Health Building Program to promote healthy living, so that community health can be greatly improved. When the Executive Yuan (Cabinet) introduced the "Challenge 2008: National Development Plan" in 2003, the Healthy Living Community Program was listed as one of the top priorities. In order to sustain community health building initiative, HPA drafted guidelines and criteria for the certification of health promoting community in 2008, and the two areas of emphasis were "stay healthy with exercise" and "healthy diet". The objective is to promote sustainable development of communities by setting up a universally recognized benchmark for healthy communities. As of 2010, a total of 84 local communities had been certified by HPA as health promoting communities.

Previous themes under the Community Health Building Program:

(1) 1999-2001: HPA promoted 6 main health issues: promoting healthy diet, physical fitness, tobacco prevention and control, betel nut prevention and control, personal hygiene, and safe use of medicines; as well as encouraged people in receiving regular preventive health services.

(2) 2002-2005: HPA allowed communities to determine their target health themes based on their own health needs.

(3) 2006~2007: HPA designated physical fitness, healthy diet, and tobacco prevention and control etc. as the appointed themes, and the communities could propose other health themes based on their particular needs.

(4) 2008~2009: HPA launched the "Health Promotion Community Certification Trial and Community Integration Project" to promote themes such as healthy diet, physical fitness, breast and cervical cancer screening, smoke-free communities, betel-nut-free communities, seniors health forever, and safe communities.

(5) 2010: HPA launched the "Community LOHAS & Health Promotion Project", "Exercise more and eat healthier" initiative to promote themes such as healthy diet, physical fitness, screenings of the four major types of cancers, smoke-free communities, betel nut-free communities, safe communities, and senior health promotion communities.

(6) 2011: HPA designated cancer screening promotion for the four major types of cancer and senior health promotion as the main themes. Other themes that communities could choose for themselves included tobacco prevention and control (among youths), betel nut prevention (and smoking cessation), and safety promotion, in accordance with the promotion of the "Healthy Centenary, Healthy Taiwan" healthy weight management campaign.

(7) 2012: HPA designated 4 themes for discussion: tobacco, alcohol, betel nut prevention and control, improvement of obesogenic environment, obesity prevention, healthy aging, and 2 self-selected themes of safety promotion and discussion of local health characteristics.

### Policy Implementation and Results

1. Taking community as the platform, HPA subsidizes 17 cities and counties and 142 community units in promoting a community health building plan in 141 villages, townships, and city districts; 4 themes were designated, including: tobacco and alcohol prevention and control, improvement of obesogenic environment, obesity prevention, healthy aging, and 2 self-selected themes of safety promotion and discussion of local health characteristics. Results are as follows:
   (1) Tobacco prevention and control guidance or warning stickers were posted in 16.182 locations that sell tobacco products; 1,315 smoke-free locations were established, and 2,925 creative educational guidance of tobacco prevention and control were conducted.
   (2) HPA had called on 110,945 participants to participate in oral mucous examination or fecal occult blood test, 3402 participants betel quid cessation classes, promoted 288 betel quid-free workplaces, and disclosed 249 betel quid prevention and control press releases through local media.
   (3) We conducted 2,557 elderly health promotion actives. A total of 115,196 elderly people participated in at least 3 health promotion actives, and 275 elderly people health promotion contests. A total 46,985 of elderly people were called on to participate.
   (4) HPA guided 1,022 stores to label the calories on food products, provide healthy meals, and improve 505 exercise spaces, and build diverse life environments.
   (5) HPA subsidized 28 construction units to conduct community safety promotion work, promoting the safety in households, roads, recreation and sports, and school campus, enhancing people's safety.
2. On December 18th and 19th, 2012, the community healthy lifestyle building and obesity prevention and control achievement seminar was conducted to commemorated healthy weight loss counties, cities, and 235 units with excellent achievements. This seminar exhibited the achievement of community healthy lifestyle of all the counties and cities, and shared the weight loss promotion mode, experience, and creativity of each field and region.
3. Five community health assessment workshops were held in the Northern, Southern, and Eastern region of Taiwan. A total of 475 students participated to elevate the community health assessment knowledge of Local bureau, public health center, and community units.
4. By the end of 2012, 397 Community Health building units continue to be active in health promoting related themes.

## Section 3 Health Promoting Schools

### Status Quo

School is an important venue for children to develop a healthy lifestyle. World Health Organization defined Health Promoting School as "a school that is constantly strengthening its capacity as a healthy setting for living, learning and working". Priority has long been given to advancing health promoting schools in the U.S., the U.K., New Zealand, Hong Kong and Singapore. Since 2002, Taiwan has paid special attention to the components and checkpoints for health

promoting schools in six components identified by the WHO: school health policies, the school physical environment, the school social environment, community relationships, individual skills, and health services. Through setting health policies, fostering consensus between students and staff, promoting involvement of community members, and providing health services, the ultimate goal is to create a healthy learning environment where children and adolescents' health is ensured.

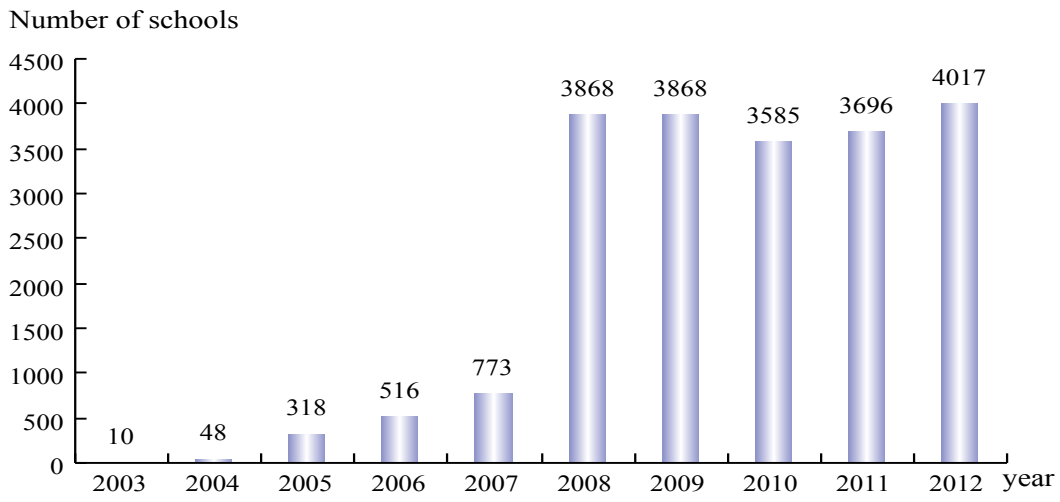
In order to display the results of health promoting schools, and enhance our country's international visibility, the HPA developed a national accreditation system in 2011 based on key components and checkpoints set by the WHO and current Ministry of Education health promoting school indicators. In addition, the HPA conducted interventions in health issues such as oral health, vision care, healthy body weight, tobacco hazards prevention, betel nut prevention, etc., and held 2011 Conference on Health Promoting Schools in Taiwan to carry out international exchange and enhance the international visibility of our national health promoting schools.

## Policy Implementation and Results

### 1. Advocating Health Promoting Schools with the Ministry of Education

In April 2002, Ministry of Health and Welfare Minister Lee Ming-Liang and Minster of Education Huang Jong-Tsun signed a Joint Declaration on the Health Promoting School Program. This was followed by the two agencies, local governments, and representatives of teacher and parent groups jointly pledging to carry out the program on September 13, 2004. A total of 48 schools were singled out as the first batch to do so and 120 seed teachers were trained. Between 2005 and 2007, the HPA established educational resource development centers, support networks, staff training centers, and the Health Promoting School website and Health Promoting School assistance website. It sought media promotion and provided surveillance and evaluation support systems to provide educators a platform to share health promotion resources and experiences. In 2008 and 2009, the HPA launched the Health Promoting School Promotion Center. It brought together resources amassed since 2005 and gathered 98 scholars and experts into a support team. The team

**Figure 4-2 The Number of Health Promoting Schools in Taiwan, 2003-2012**



Members of the international certified committee and Director-General Shu-Ti Chiou visited the Dagang Elementary school in Tainan City, who has received the Golden Quality Award.

Health Promoting School International Certification Presentation and Award Ceremony

operated centrally and locally, providing local governments and schools of all levels with uniform assistance. In 2010 the Ministry of Education established the nine national indicators of health promoting schools, including: healthy body weight, oral health, visual health, tobacco hazards and betel nut prevention and control. As of 2012, a total of 4,017 schools had been engaged in the Health Promoting School Program. In addition, the HPA convened numerous meetings with the Ministry of Education in 2011 and 2012 to study and discuss joint promotion matters in order to conduct the "Health Promoting School Certification and International Convergence Plan" and to promote the health promoting school plan.

## 2. Strategies and Topics for the Health Promoting School Program

In 2011, the Ministry of Education implemented a new project designed to introduce an evidence oriented next-generation mechanism for the Health Promoting School Program. A "Health Promoting School Center" was established with 101 experts and academics as a single resource center to facilitate the sustainable development of Health Promoting School in Taiwan. It laid down a number of indicators for evaluating school performance in the top five health topics: oral health, vision care, healthy BMI, tobacco hazards prevention, and betel quid prevention. It also established nine items for the "National Indicators of Health Promoting Schools" and the "Local Indicators of Health Promoting Schools' Student Health and Behavior." In a similar vein, it came up with a unified set of appraisal tools for assessing the success of health promoting schools in completing all of the compulsory projects. It is applicable to all levels of schools nationwide.

## 3. Achievements of the Health Promoting School Program

(1) The HPA formulated the health promoting school accreditation program according to the WHO'S "Health Promoting Schools A Framework for Action" in 2008, as well as HPA's the "Community Obesity Preventing Environment Evaluation Tool" indicators set by the health promoting school international certification standards include 6 standards, 21 sub-standards, and 63 checkpoints as follows:

Standard 1 School Health Policy (2 sub-standards, 7 checkpoints)

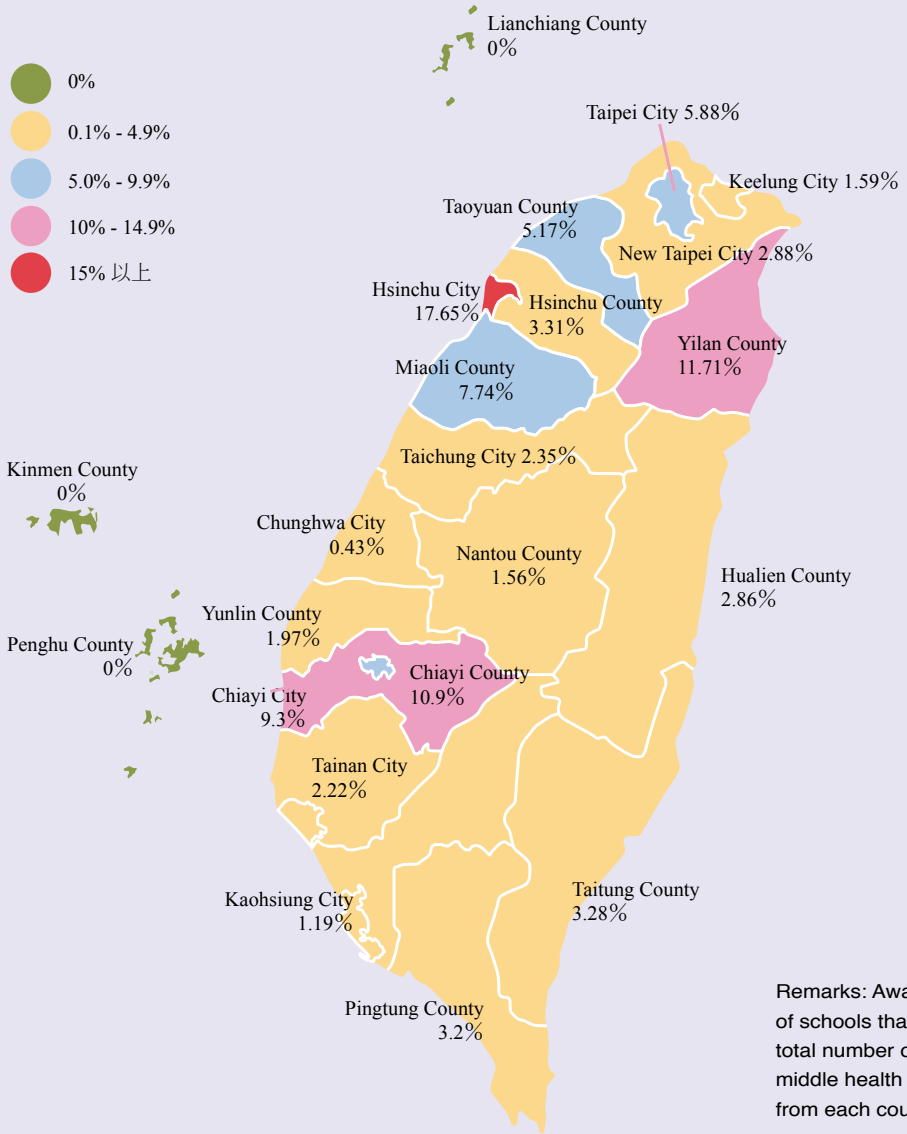
Standard 2 Physical Environment of Schools (5 sub-standards, 14 checkpoints)

Standard 3 Social Environment of Schools (Health Culture) (5 sub-standards, 9 checkpoints)

Standard 4 Health Education Courses and Activities (4 sub-standards, 10 checkpoints)

Standard 5 Community Relations (3 sub-standards, 9 checkpoints)

Standard 6 Health Services (5 sub-standards, 14 checkpoints)




Remarks: Awarding rate=Number of schools that were awarded/the total number of elementary and middle health promoting schools from each county and city

(2) A total of 214 schools participated in the health promoting school international certification. In the first stage, the Department of Education in every county and city invited local accredited commissioners to conduct initial review. In the second stage, the Ministry of Education and HPA invited central accredited commissioners to conduct online re-evaluation and field surveys. Afterwards, global experts of global health promoting schools were invited to be international commissioners. All commissioners reached consensus on the certification processes and award winning schools. At Health Promoting School International Certification Presentation and Award Ceremony on December 10th, 2012, Director-General Shu-Ti Chiou and representatives of Ministry of Education presented the awards together to 4 golden level schools, 14 silver level schools, and 120 bronze level schools, which were selected by domestic and international commissioners. The awarding rate of each county and city is shown in the figure.

(3) To evaluate the effect of HPS program on health-related behaviors among school staff and students, HPA conducted a "Study on Health Behaviors Survey among Students and Teachers Before Health Promoting school Accreditation", which was conducted in conjunction with the 2012 Health Promoting School Certification. The experimental group was composed of 243 schools participating in the HPS certification. 103 schools made up the control group, based on the certification and participation status of each county and city. The target groups were the fourth, the eighth and eleventh grade students and school teachers, directors, and principals. The results showed that school involving in HPS certification had both good and bad performance in health behaviors. Compared to the health survey in 2009~2010, the health behaviors of students or teachers performed better than before. It showed that health promoting school was effective in recent years.

## Section 4 Healthy Workplaces

### Status Quo

After the introduction of five priority action areas in its Ottawa Charter of 1986, the World Health Organization unveiled a new initiative-Healthy Work Approach (HWA)- in the Jakarta Statement on Healthy Workplaces adopted at the 4th International Conference on Health Promotion in 1997. HWA is based upon the following four complementary principles: health promotion, occupational health and safety, human resource management, and sustainable (social and environmental) development. To create a healthy workplace, therefore, means not only to decrease occupational diseases but also to proactively promote the health of the working population.

In 1996, the Department of Health and the Council of Labor Affairs jointly promulgated a set of regulations on physical and health checkups for laborers at designated medical institutions with a view to enhancing their health. Since 2001 the Department of Health established six occupational hygiene and healthcare centers nationwide. Together with the medical and nursing facilities at factories, they formed a service network that provides diagnosis and treatment, counseling, and hygiene education and training. To further enhance workplace health, they helped every county and city set up at least one healthy factory.

In 2003, the HPA launched a program on tobacco hazards prevention at the workplace. With a commission from the HPA, three centers for providing assistance on tobacco hazards prevention at the workplace were established in different parts of the country. In collaboration with local public health agencies, they held workshops and seminars, produced propaganda materials, and extended on-the-spot guidance. In 2006, both health promotion and tobacco hazards prevention were launched. Three regional centers for promotion of healthy workplaces were thus established to provide counseling as well as hygiene education and training. In 2007, a voluntary healthy workplace certification system was initiated with a view to bringing about a healthy working environment free from smoking and enabling businesses to perform autonomous management on this front. As of 2012, a total of 9,186 entities had secured voluntary healthy workplace certification (4,983 tobacco hazards prevention labels, 2,796 health initiation labels and 1,407 health promotion labels). In addition, a total of 342 establishments were cited between 2006 and 2012 for their outstanding records as healthy workplaces.

In 2012, HPA has included health promotion certified workplaces into the evaluation indices of "Work plan of subsidizing local promotion of healthcare", in order to encourage the bureaus of health to work with workplaces, together to advocate employee health promotion, and create a friendly and healthy workplace.

## Policy Implementation and Results

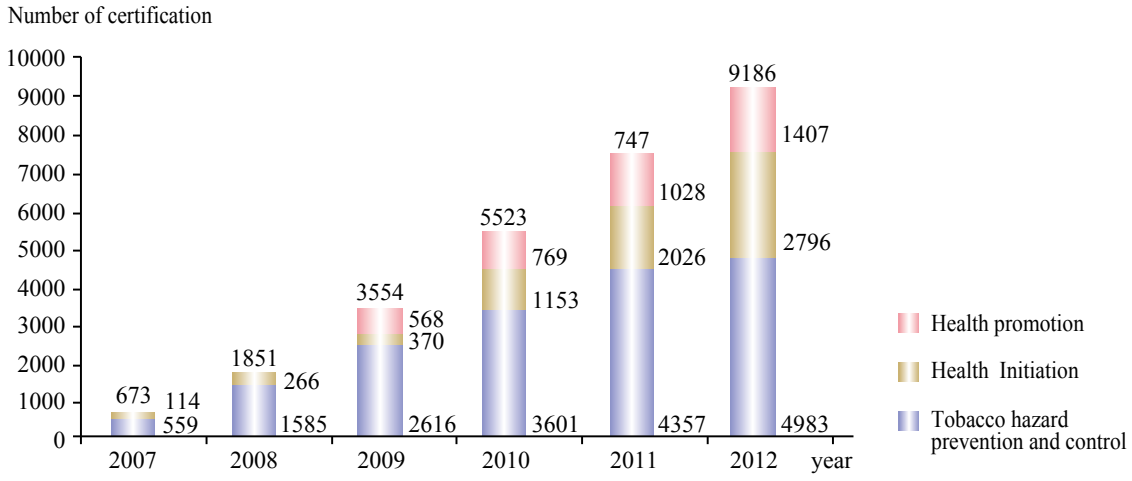
1. Advancing health promotion and tobacco hazards prevention at the workplace:

Since 2003, HPA has continued to establish healthy workplace, and to provide counseling, as well as hygiene education, and training. In 2007, a healthy workplace certification system was intiated. The system introducer a new criterion of certification in accordance with the newly revised Tobacco Hazard Prevention Act, that is, all indoor workplace with 3 or more employees would be henceforth off-limits to smoking.Mean while, the HPA makes it a point to commend establishments that have registered outstanding records in keeping smoking out of their workplace and in health promotion.

(1) In 2012, teams of specialists were called in to provide 207 workplaces and 4 occupational or industrial unions with on-site guidance on health promotion and tobacco hazards prevention.

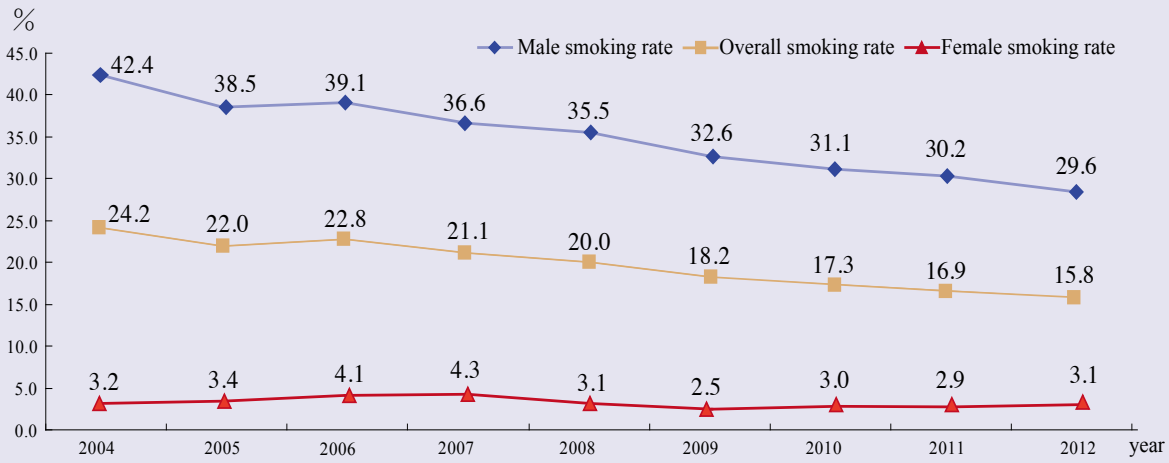
(2) In 2012, a total of 1,775 businesses passed healthy workplace certification. Certifications granted over the years are shown in Figure 4-3. In addition to giving recognition to 39 excellent healthy workplaces, the HPA produced a special compilation on healthy workplace, "Healthy Workplace Information" website was updated regularly to provide the latest information and various promotional materials that are free to download. The latest tallies put the cumulative number of visitors at more than 570,000.

**Figure 4-3 The Number of Workplaces with Healthy Workplace Certification, 2007-2012**



2. A nationwide survey on workplace health show that the workplace smoking rate was 16.9% in 2012, down by 1.1% from 2011. The workplaces smoking rate in 2004~2012 are show in figure 4-4.

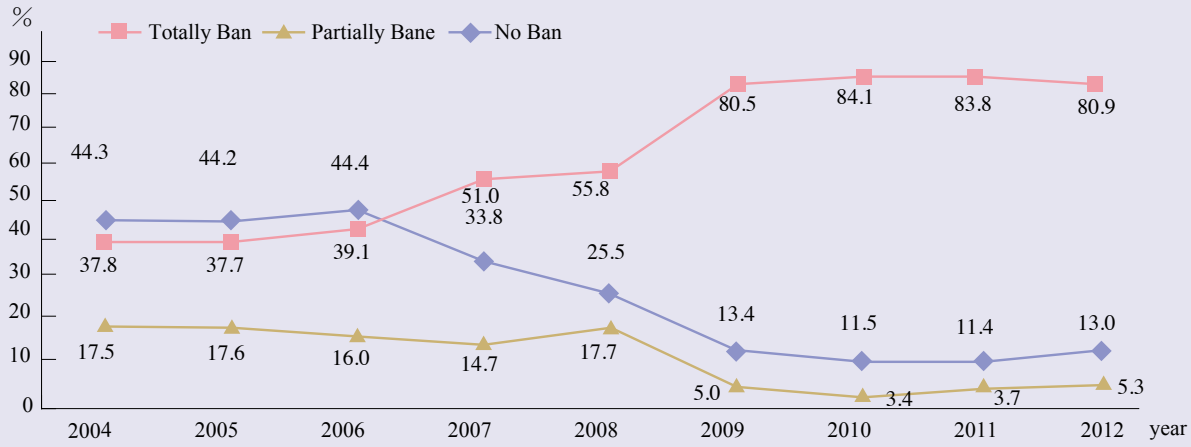
## Figure 4-4 Smoking Rates in Workplaces, 2004~2012




Source: 2012 nationwide survey on health promotion and Tabacco Hazards Prevention at the workplaces

3. In 2012, the percentage of indoor workplaces that enforced a total ban on smoking came in at 80.9% (a 2.7% drop from 2011). The trend in the evolution of smoking ban policies for 2004~2012 is shown in Figure 4-5.

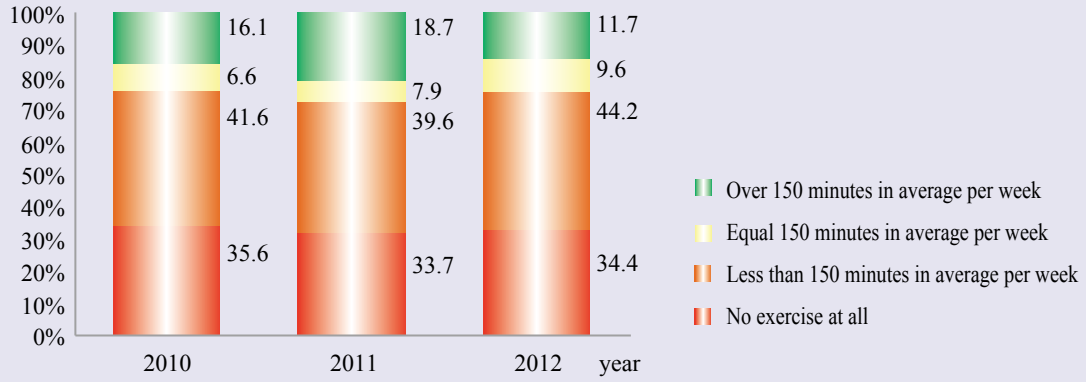
## Figure 4-5 Trends of Smoking Ban Policies in Workplaces, 2004-2012




Sources: 2012 nationwide survey on health promotion and Tabacco Hazards Prevention at the workplaces

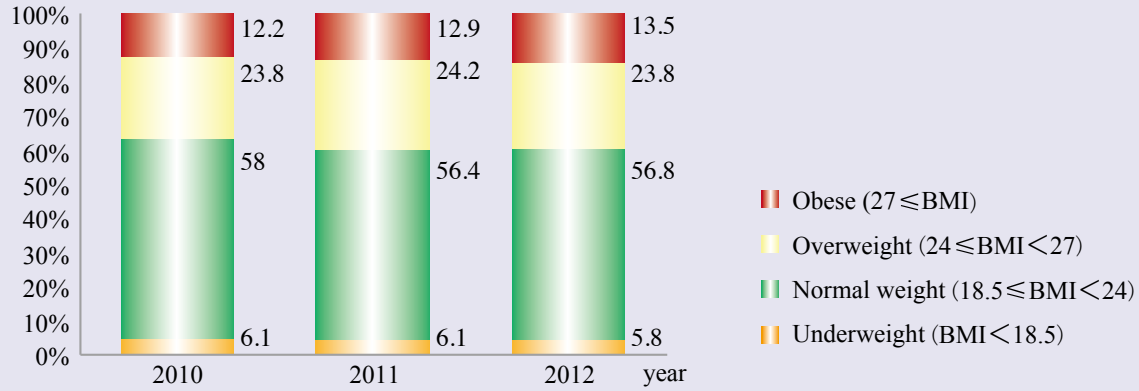
4. According to the 2012 nationwide survey on health promotion and Tabacco Hazards Prevention at the workplaces", it shows that in 2012, 34.4% of people did not exercise at all, which was 0.7% higher compared to 2011. 11.7% exercised more than 150 minutes per weeks, which was 7% lower than that of 2011. (Figure 4-6). In addition, as for the physical condition part, in 2012 56.8% of the people had weight in normal range, which was 0.4% higher than that of 2011. However for the obesity part, the number has risen slightly. (Figure 4-7). It shows that regarding healthy weight management in workplace still needs to be continued and effective healthy weight management plan still needs to be promoted.

## Figure 4-6 Exercise Rate of Workplace Employees in the Past Month, 2010-2012




Source: The 2012 nationwide survey on health promotion and Tabacco Hazards Prevention at the workplaces

## Figure 4-7 Physical Condition of Workplace Employees, 2010-2012




Source: The 2012 nationwide survey on health promotion and Tabacco Hazards Prevention at the workplaces

## Section 5 Health Promoting Hospitals

### Status Quo

### 1. International

In the Ottawa Charter for Health Promotion of 1986, the World Health Organization (WHO) identified five priority action areas for health promotion: build healthy public policy, create supportive environments, strengthen community actions, develop personal skills, and reorient health services. In particular, "reorient health services" has been taken as an important basis for the development of health promoting hospitals. By definition, a health promoting hospital is one that incorporates clearly defined concepts, values and principles of health promotion into the culture and daily operations of hospitals. In turn, all hospital employees and their families, patients and families, and community residents will thus be engaged in health promotion.

In 1988, WHO started its Health Promoting Hospitals initiative in Europe, with the first pilot project set up at the Rudolfstiftung Hospital in Vienna, Austria. Intended as a model for reorienting health services, it was also to help advance health promotion in the local community and facilitate reform at large. It was followed in 1990 by the establishment of the International Network of Health Promoting Hospitals. In 1991, the Budapest Declaration on Health Promoting Hospitals was launched as a policy document, with 17 suggestions and goals for hospitals participating in the Health Promoting Hospitals initiative. In 1997, the Vienna Recommendations on Health Promoting Hospitals further introduced six fundamental principles and four strategies for implementation.

In 2006, the International Network of Health Promoting Hospitals published the "Implementing health promotion in hospitals: Manual and self-assessment forms." The manual lists five standards, 24 sub-standards and 40 measurable elements, as well as 18 indicators for health promotion. Not only for the reference of hospitals in assessing the quality of their health promoting structure, system, process and results, the manual is also meant to serve as a basis for hospitals to plan, implement and improve health promoting efforts.

Till of the end of 2012, over 900 hospitals representing national or regional networks in 40 countries across Europe, America, Asia, Africa, and Oceania have joined the International Network of Health Promoting Hospitals and Health Services.

### 2. Domestic

In 2002, Taipei City took the lead to lay down a set of criteria for assessment of healthy hospitals and made it part of the city's overall evaluation of public and private hospitals. Meanwhile, the HPA commissioned a pilot study on creation of health promoting hospitals using a certain medical center as an example. Alongside the project on promoting workplace health in hospitals, it also collaborated with them to advance community health and undertake health promotion projects at their premises, such as offering joint care for diabetes and outpatient services for smoking cessation and promoting mother-baby friendly. Taipei Municipal Wan Fang Hospital, which started to work toward a healthy hospital since 2002, was the first hospital in Asia to become a member of the International Network of Health Promoting Hospitals in 2005.

Also in 2005, the HPA included Health Promoting Hospitals in its science and technology research project. In 2006, it commissioned the local academic community to offer assistance to four hospitals, which went on to secure certifications from the International Network of Health Promoting Hospitals.

In 2006, Director-General Shu-Ti Chiou, then an assistant professor at the National Yang-Ming University, applied to the International Network of Health Promoting Hospitals for the establishment of a Taiwan network. Upon signing a cooperative agreement with the HPH Secretariat, the Taiwan Network of Health Promoting Hospitals was established

and became the first network member in Asia. The Taiwan network enjoys the same rights and obligations, including those in voting, as those granted to other member nations. It was also authorized to promote and handle membership admissions of local hospitals to the International Network. In 2007, the Taiwan Society of Health Promoting Hospitals was established. Its purpose is to help with the promotion, education, guidance, research, and cooperation of network coordinator in the health promoting hospitals in Taiwan.

## Policy Implementation and Results

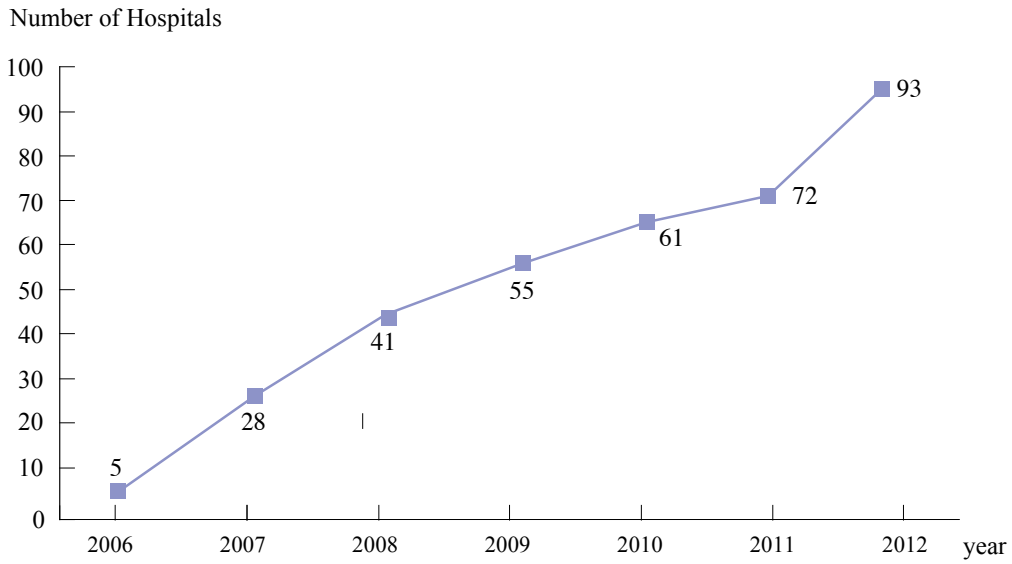
### 1. Health Promoting Hospitals

#### (1) Guidance and Growth of Health Promoting Hospitals

In order to reinforce the partnership between local health bureaus and healthcare institutes, and to integrate health promotion with resources of preventive care services, HPA implements subsidization policy to encourage local health bureaus to integrate medical institutes within their jurisdictions to jointly promote health promoting hospitals and healthcare institutes. The policy also aims to actively provide health promoting services for the health benefits of patients, family members, employees, and community people, and attempts to reduce medical healthcare expenditures. In 2012, HPA subsidized 21 local health bureaus and 125 health care institutions to implement the project on "Assisting Healthcare Institution Conducting Health Promotion Initiatives." The required issues were Energy Conservation/Carbon Reduction and Healthy Weight Loss; optional issues include healthy ageing, Age-Friendly healthcare, and workplace health promotion. By the end of 2012, 14 healthcare institutions have passed the certification to become members of the International HPH Network.

To advance the knowledge of health promoting service of local health bureaus and healthcare institutions in counties and cities, in 2012 HPA organized a total of 5 health promoting hospital workshops in Northern, Central, Southern and Eastern Taiwan. Participants from 21 local health bureaus, 166 hospitals, and 493 medical management and healthcare personnel attended the workshops. At the end of 2012, 93 hospitals from Taiwan became members of the WHO International HPH Network, and Taiwan became the biggest HPH Network in the world.

**Figure 4-8 The Number of Hospitals in Taiwan as Members of WHO HPH International Network**



Taiwan organized the 20th International HPH Conference, and set the record for the most countries enrolled, attendees registered and papers published.

## Figure 4-9 The Number of Members from Each Country in the WHO HPH International Network


Source: International Network of Health Promoting Hospitals and Health Services http://www.hphnet.org/index.php/members/nrnetworks; Edited by HPA

### (2) Participate in the Advanced HPH Recognition Project

To assess the performance of hospitals in implementing health promotion work, the WHO International HPH Network proposed an advanced recognition project, with the aim to use existing HPH self-evaluation tools and standards to assess the effectiveness of clinical health promotion in hospitals. The project conducts evaluation of medical records, patient and staff surveys, quality plans and organizational data in a clinical trial research format. The International HPH Network planned to recruit HPH volunteers from 8 countries, with Taiwan being one of them. As of 2012, there were 21 hospitals from Taiwan participating in this advanced recognition project.

In April, 2012, Director-General Shu-Ti Chiou became the new chair of International Health Promoting Hospital Network of WHO. She also signed her first official document - the Memorandum of Understanding between the International HPH Network and the ENSH Global Network for Tobacco Free Health Care Services in her term.

Buddhist Dalin Tzu Chi Hospital won the first "Outstanding Fulfilment of WHO HPH Standards International HPH Award" of International HPH network.

Buddhist Taipei Tzu Chi Hospital and Health Promoting Administration won the first place and second place awards for the best conference poster, voted respectively by conference attendees.

In November 2012, Director-General Shu-Ti Chiou held the Governance Board meeting of the International HPH Network in Copenhagen, Denmark. The photo was taken with the representatives of WHO and members of Governance Board.

### (3) The 20th International HPH Conference

From April 11th to 13th, 2012, the 20th International HPH Conference was jointly organized by the WHO Collaborating Centre for Health promotion in Hospitals and Health Care, the WHO Collaborating Centre for Evidence-Based Health Promotion in Hospitals & Health Services, and the Health Promotion Administration. This was the first time the conference was being held outside of the European regions. 1,357 people from 45 countries participated in the conference. Mr. Siew Wan-Chang, Vice President of Taiwan, spoke during the opening of the conference. The event featured 5 main plenaries and invited international experts for speeches. There were 744 papers submitted during the conference (146 international papers and 598 domestic papers).

### (4) Proactively Engaging in Cross-border Exchange

1. Participation in the operation of the International Network of Health Promoting Hospital and Health Services

   As coordinator of the Taiwan Network of Health Promoting Hospitals and Health Services, HPA's Director-General Shu-Ti Chiou was admitted to the HPH Governance Board as an observer in 2008. In addition to facilitating the development of health promoting hospitals in Taiwan and Asia, she is an avid participant in proceedings of both the HPH General Assembly and Governance Board. On top of her role in several HPH journals, she is also a member of several working groups and task forces: Standards for Health Promoting Hospitals, HP for Staff and a Healthy Workplace, and Tobacco Free United. In 2009, Director-General Chiou helped Taiwan to secure the right to host the 20th Internaltional Conference on HPH in 2012. The conference was conducted outside of Europe for the first time. In April 2010, the Director-General Chiou was elected Vice Chair of the HPH Governance Board during the 18th International Conference on Health Promoting Hospitals and Health Services held in Manchester, U.K. In 2012, She was voted the new chair of international HPH network for a term of 2 years.

2. International HPH knowledge exchange

   Director-General Chiou of HPA was invited to attend the WHO-HPH Winter School in Bangkok on February 20th to 23rd, 2012. Director-General Chiou shared experiences of HPH implementation in Taiwan with the audience. On September 11th, 2012, Director-General Chiou was invited to attend the Annual Meeting of the Association of State and Territorial Health Officials (ASTHO). As the representative of the WHO International HPH Network and Taiwan HPH Network, Director-General Chiou shared the with US state health officials the achievements and results of Taiwan's HPH initiatives, community and clinical health promotion by government sectors and healthcare institutions.

## 2. Promoting Low-Carbon Hospitals

### (1) Hospital Guidance and Promotion

In 2012, HPA conducted three "Environment-friendly Hospital Workshops" in the Northern, Central, and Southern parts of Taiwan, communicating knowledge and insights on energy saving and carbon reduction measures to hospitals. A total of 73 hospitals and 84 people participated. Furthermore, HPA subsidized local health bureau of each county and city to assist healthcare institutions to conduct health-promotion initiatives, energy conservation and carbon reduction was listed as a required issue topic. A total of 125 healthcare institutions participated in the project.

### (2) Publication of Manual and Evaluation Tool

In 2010, HPA published the "Green hospital, Green life, Green Planet- Experiences Sharing on Green Hospitals", which provides reference for hospitals to implement and promote environmental-friendly operation. In 2012, HPA developed a "Self-Assessment Forms for Environment-friendly Hospital Initiative", drawing upon the 10 dimensions of Health Care Without Harm's publication of "Global Green and Healthy Hospital Agenda", and modify it to accommodate Taiwan's healthcare industry. It contains 8 dimensions (Leadership, Chemicals, Waste, Energy, Water, Transportation, Food, and Buildings), consisting a total of 84 action items. In 2012, the self-assessment form was sent to 164 low carbon hospitals in Taiwan for self-evaluation. A total of 150 hospitals took the survey, with a 91% response rate. Initial analysis revealed that Taiwanese hospitals generally performed better in the dimensions of Leadership, Waste, and Water; dimensions that needed improvement were Transportation and Food.

### (3) Task Force on HPH and Environment

In 2010, during the 18th International Conference on HPH and Health services, the Taiwan Network proposed and received approval from the General Assembly and Governance Board to establish the "Taskforce on HPH and Environment", with Director-General Shu-Ti Chiou as the leader of this taskforce. Combining the strengths of the WHO, Health Care Without Harm (HCWH), the HPH Network and Taiwan, the Task Force hopes to transform healthcare departments from being high resource consumers to protectors of environment. At the end of 2012, a total of 153 domestic and international healthcare institutions joined the task force, which includes 144 domestic hospitals, 6 international hospitals, and 3 healthcare institutions.

### (4) International Exchange

1. In April, 2012, during the 20th International Conference on Health Promoting Hospitals and Health Services, HPA organized a "Symposium on HPH and Environment", which discussed the scientific, policy and business dimensions of environment-friendly healthcare practices. The 20th HPH conference featured 9 posters, 9 parallel presentations, one plenary speech, 15 pre-conference presentations, and 6 symposium presentations related to environment-friendly hospitals. The 4th Meeting of the Task Force on HPH and Environment was also held during the conference.
2. A Pre-conference on HPH and Environment, co-organized by the Task Force on HPH and Environment and Health Care Without Harm, was held on April 11th, 2012. The Southeast Asian Launch Ceremony of HCWH's Global Green and Healthy Hospitals Network (GGHHN) also took place; healthcare representatives from 13 nations (Singapore, Malaysia, Thailand, Nigeria, Canada, Sweden, Italy, England, United States, Korea, Philippines, and Taiwan), including 21 hospital representatives from Taiwan, pledged to raise attention to environmentally sustainable healthcare institutions, and promotion of community environment health. The pre-conference featured 15 presentations and received approximately 200 participants. After the event, the TF itself joined GGHHN as a funding member; domestic hospitals such as Dalin Tzu Chi Hospital, Cheng Kong University Hospital and Taichung Tzu Chi Hospital also joined the network.
3. On September 28th, 2012, Director-General Shu-Ti Chiou of HPA was invited to attend the CleanMed 2012 Europe conference, held in Malmo, Sweden, where she spoke at the closing plenary. CleanMed Europe is the premier European conference on sustainable healthcare, which discussed the impacts of climate and environment on local, regional and global healthcare. Director-General Chiou was invited to speak on "The Experience of Taiwan's Hospitals in Reducing Their Ecological Footprint," sharing the experiences and achievements of the Task Force on promoting international environment-friendly hospital initiatives.

# Promoting Your Health

## Chapter 5
## Healthy Aging

# Chapter 5 | Healthy Aging |

Aging should be a positive experience. The WHO therefore advocates "Active Aging," encouraging seniors to heed not only their physical and mental health but also social, economic and cultural affairs while seeking spiritual growth. The goal is to maintain a dynamic lifestyle.

Taiwan has become an aging society since 1993 when more than 7% of the population was aged 65 or over, with the number rose to 11% in 2012. Given a persistently low birth rate and the aging of postwar baby boomers, 14% of Taiwan's population is expected to be 65 years of age or older in 2018. This would qualify Taiwan as what is generally known as an aged society. If current trends hold, Taiwan will become a super-aged society in 2025 when people 65 years or older account for an estimated 20% of the population. Adding to this challenge, the population of Taiwan appears to be aging faster than any other developed country.

Accelerated growth of the senior population, along with a steady rise in the middle-aged population, makes the health of these groups even more important to society. Health promotion and disease prevention are imperative, as is developing a friendly environment that can help to provide seniors with proper health care. Besides reducing the diseases commonly seen in the elderly and middle-aged populations, it is essential to create a friendly environment capable of maximizing health. These living conditions can help to control or decrease the risks and adverse effects of diseases while postponing and compressing their disabled life expectancy, and improving their quality of life.

According to the 2012 statistics of cause of death of the Taiwanese people (Figure 5-1), malignant tumor, heart disease, cerebrovascular disease, diabetes, hypertensive disease, nephritis, nephritic syndrome and nephrosis, are all problems that are faced by the aging processes of the Taiwanese people. It causes approximately 60% of the total death. The government needs to take this matter seriously. After health screening, they can discover the diseases early, prevent important chronic diseases, actively create a healthy supportive environment, in order to assist healthy aging of citizens.

## Table 5-1 Taiwan's 10 Leading Causes of Death in 2012

| Rank | Cause of Death | Deaths | Crude Death Rate (see Note 1) | Standardized Death Rate (see Note 2) |
|---|---|---|---|---|
| 1 | Malignant neoplasms | 43,665 | 187.6 | 131.3 |
| 2 | Heart disease (hypertensive diseases excluded) | 17,121 | 73.6 | 47.9 |
| 3 | Cerebrovascular disease | 11,061 | 47.5 | 30.8 |
| 4 | Pneumonia | 9,314 | 40.0 | 24.4 |
| 5 | Diabetes mellitus | 9,281 | 39.9 | 26.5 |
| 6 | Accidental injury | 6,873 | 29.5 | 23.8 |
| 7 | Chronic lower respiratory tract disease | 6,326 | 27.2 | 16.4 |
| 8 | Hypertensive disease | 4,986 | 21.4 | 13.3 |
| 9 | Chronic liver disease and cirrhosis | 4,975 | 21.4 | 15.6 |
| 10 | Nephritis, nephritic syndrome and nephrosis | 4,327 | 18.6 | 12.1 |

Note 1: Deaths per 100,000.

Note 2: Calculated on the basis of the standard world population defined by the WHO in 2000.

Source: Statistics of the cause death of Ministry of Health and Welfare

# Section 1 Health Policies for Middle-Aged and Elderly Citizens

## Status Quo

Average life expectancy in Taiwan was 79.5 years in 2012, which was 76.4 years for males and 82.8 years for females. Longer lives present new challenges, as the 2009 National Health Interview Survey demonstrated that more than 80% (86.2%) of seniors reported having been diagnosed with at least one chronic disease, including more females than males (see Table 5-2). Studies showed that the most common chronic diseases among seniors were hypertension, diabetes mellitus, etc., while women were vulnerable to osteoporosis. To ensure quality of life for senior citizens, health policies regarding elevating self-perceived health and disease management for middle-aged and elderly citizens are needed.

## Target Indicators

1. In 2012, the rate of elderly people who have exercised in the past week was 71.8%.
2. In 2012, the rate of elderly people who have exercised regularly was 53.4%.
   (Every week they exercised at least 30 minutes three times)
3. Raised the percentage of women aged 45-69 undergoing mammograms for breast cancer within the past two years to 31.9% in 2012.
4. Raised the percentage of people aged 50-69 undergoing fecal occult blood tests within the past two years to 32.5% in 2012.

### Table 5-2 The Percentage of Seniors Aged 65 or Above with at least One Chronic Disease

| Subject | 1 chronic disease | 2 chronic disease | 3 chronic disease |
|---|---|---|---|
| Total | 86.2% | 66.1% | 46.0% |
| Male | 83.7% | 60.6% | 39.2% |
| Female | 88.5% | 71.2% | 52.4% |

Source:
1. 2009 National Health Interview Survey.
2. 17 chronic diseases include: hypertension, diabetes, heart disease, stroke, lung or respiratory disease (bronchitis, emphysema, pneumonia, lung disease, and asthma), arthritis or rheumatism, gastric ulcer or stomach illness, liver or gallbladder disorders, hip fractures, cataracts, kidney disease, gout, spinal bone spurs, osteoporosis, cancers, hyperlipidemia, and anemia.

## Policy Implementation and Results

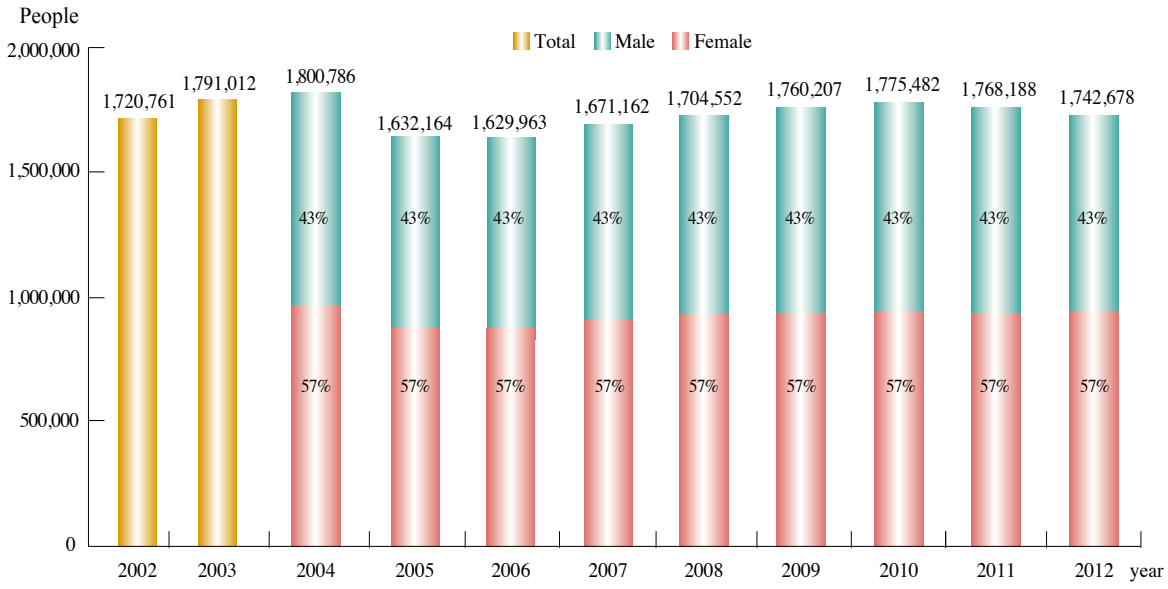
To promote early detection and treatment of chronic diseases, the government provides preventive health care and integrated screening services to adults. Meanwhile the HPA incorporates healthy aging policies into other initiatives, such as healthy cities, safe communities, health promoting communities, and the Community Care Sites. It emphasizes health promoting topics that address the specific needs of seniors, such as healthy diet, exercise, fall prevention, medication safety, prevention of chronic diseases, health screening and blood pressure measurement. Other steps taken to build comprehensive, age-friendly health environments and services include the promotion of age-friendly health care and age-friendly cities.

A summary of Achievements:

### 1. Preventive Healthcare for Adults

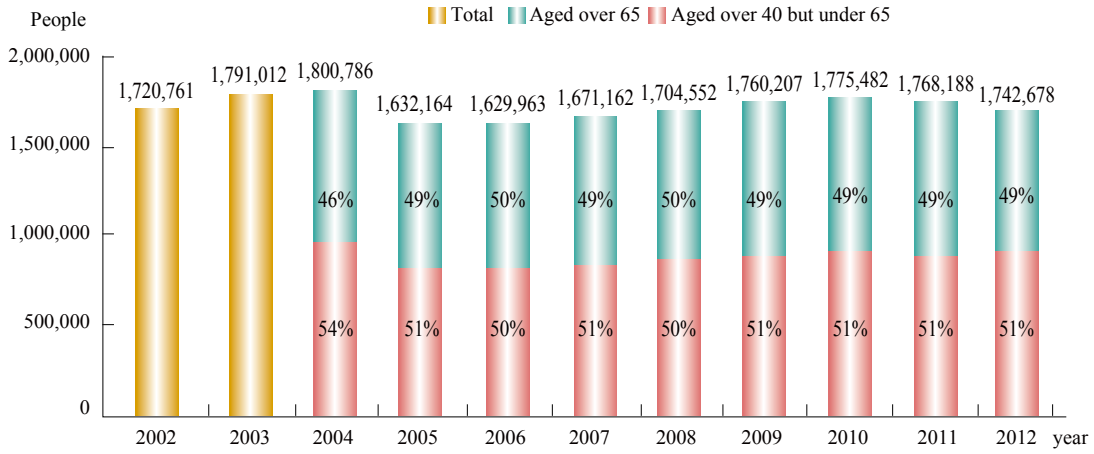
Preventive healthcare service for adults include physical examinations, blood and urine tests, and health consultations. These are provided free of charge to people aged over 40 but under 65 every three years and to those aged 65 or over every year. In 2012, 1.74 million people took advantage of these services (including 850,000 people aged 65 or over), which led to a utilization rate of 32.1% (see Figures 5-1 & 5-2). Among subjects screened during in 2012, the percentages of people with newly detected abnormalities in blood pressure, blood sugar and blood cholesterol were 19.9%, 8.0% and 11.9% respectively (A newly detected abnormality is defined as one detected who previously had not been diagnosed with the condition before).

**Figure 5-1 Use of Preventive Healthcare Services for Adults, by Gender**




Sources: National Health Insurance Administration

## Figure 5-2 Use of Preventive Healthcare Services for Adults by Age




Sources: National Health Insurance Administration

### 2. Integrated Screening

To provide comprehensive, on-site screenings in communities, the HPA has encouraged counties and cities to consolidate their medical resources since 2002. This included integrating screenings already used in adult preventive health care services and cancer screenings. As of 2012, 20 counties and cities carried out these changes, and 2.534 million people benefited from the integrated services between 2002 and 2012.

### 3. Health Promotion for the Elderly

#### (1) Integrating Community Resources to Promote Senior Health

By adopting the WHO Ottawa and Bangkok Charters, the HPA advanced senior health promotion, with 8 topics of execution strategies are implemented. Through the health department, community medical institutions, we integrate healthy cities, safe communities, health promoting communities, community care sites and aged learning centers. According to the characteristics and need of community elderly, we conducted health promotion activities. Significant progress was achieved in 2012 when 367 health stations and 458 medical institutions partnered with 1,473 Community Care Sites to hold health promotion activities, increasing the partnership rate to over 80%.

In 2012, Hualien Tzu Chi Hospital executed the plan of “establishment of clinical and community integrated network of elderly fall prevention”. They established the integrated elderly fall prevention care groups, made elderly fall prevention work manuals, and provided fall prevention care for high risk groups of people who are likely to fall in the hospital. They also established the fall prevention information system website, integrate community care sites, to build two-way communication and referral channels, in order to implement fall prevention intervention.

### (2) Health 101 Move – National Contest for Elderly Health Promotion

To raise social participation among seniors, in 2012 the HPA cooperated with NGO organizations to encourage elderly groups to attend competition, and promote Grandpas and Grandmas to practice, get together, and through the opportunities of practice, they can learn and get help from each other, and collectively strive for the team honors. There were 1,905 teams with 74,605 seniors who participated in related health promotion contests. This takes up approximately 3% of the elderly population, and exceeds the goal of 50,000 people.

### (3) Enhancing Preventive Health Care Services for the Elderly

We promoted the elderly health promotion plan, and conducted chronic disease prevention and elderly health promotion. In 2012, approximately 854,000 people who were 65 years or older received adult preventive healthcare services, among people aged 50-69 approximately, 1,012,000 of them underwent fecal occult blood testing, approximately 510,000 women underwent mammograms, 269 people are 65 years or older took advantage of smoking cessation helpline services, and 4,574 used smoking cessation outpatient services seniors.

### (4) Creating Age-Friendly Cities

In response to the rapid aging of the global population, in 2007 the WHO published "Global Age-Friendly Cities: A Guide." Eight areas of city living were identified as worthy of special emphasis in creating a friendly environment to the elderly. The HPA chose Chiayi as the pilot city in 2010. It also established a set of checklist for cities that take into account eight areas pinpointed by the WHO: outdoor spaces and buildings; transportation; housing; social participation; respect and social inclusion; civic participation and employment; communication and information; and community support and health services. The tools are used to examine the age-friendliness of a city's structure, environment, services and policies. The HPA is also committed to helping county and governments partner with civic groups and academic institutions in hoping to maximize the health of seniors. It added 8 cities and counties to the effort in 2011, including Taipei City, New Taipei City, Taoyuan County, Hsinchu City, Nantou County, Tainan City, Kaohsiung City, and Taitung County. On September 28th, the HPA led experts and academics from Chiayi City and Taoyuan County to the 1st International Conference on Age-Friendly Cities held in Dublin, Ireland. The delegation signed the Dublin Declaration to support age-friendly cities. By the end of 2011, 20 cities and counties in Taiwan likewise signed this declaration.


In 2012, 20 counties and cities actively integrate age friendliness to all policies, and develop plans with local uniqueness, including senior health care mobile bus, senior friendly stations, traffic bright spots (Friendly traffic environment for elderly people), aged comics and records, age-friendly restaurants, and community health grocery stores. In August, the HPA conducted the "2012 Asia-Pacific Conference on Age-Friendly Cities and Age-Friendly Economy" It was the first conference that discusses the topics of age-friendly cities in APEC. We invited experts from America, England, Canada, Japan, Ireland, and AGE Platform Europe to share age-friendly promotional practices, and involved in interactions..

### (5) Age-friendly Healthcare

1. Age-friendly Healthcare Institution Certification: Based on the three age-friendly principles from WHO's "Towards

Age-Friendly Primary Health Care" and Five Standards for Health-Promoting-Hospitals (HPH), HPA created "Taiwan's Framework of Age-friendly Hospitals and Health Services," a self-evaluation form encompassing 11 sub-standards and 60 items of the four major dimensions: Management Policies, Communication and Services, Care Process, and Physical Environment. This self-evaluation form constitutes a base of reference for healthcare institutions intending on promoting age-friendly healthcare initiatives within their organizations. Up to the end of 2012, 38 hospitals in Taiwan have obtained the certification. In addition, HPA subsidized local health bureaus to assist healthcare institutions in conducting health-promotion initiatives, and 40 institutions have selected to implement "age-friendly healthcare." Finally, HPA organized the "2012 Age-friendly Health Care Promotion Achievement Conference" to present 28 Age-Friendly hospitals with their certificates, and to present awards for winners of the 2nd Age-Friendly Healthcare Model Institution, Composition and Slogan competitions. The 2012 Age-Friendly Healthcare Model Institution was awarded to the Changhua Christian Hospital. A total of 268 people attended this event.

2. International exchange: On April 11th, 2012, during General Assembly of the 20th International Conference of Health Promoting Hospitals and Health Services, HPA proposed and established the Working Group on HPH and Age-Friendly Health Care, with Director-General Shu-Ti Chiou as the Chair of the working group. The working group was tasked with promotion of age-friendly healthcare, development of an internationally applicable age-friendly healthcare framework, marketing and dissemination of age-friendly healthcare, and capacity building of age-friendly healthcare professionals.

## Section 2 Prevention and Control of Major Chronic Diseases

### Status Quo

According to a survey "Taiwan Survey on Hypertension, Hyperglycemia and Hyperlipidemia (TwSHHH)" conducted by the HPA in 2007, nearly 40% of the nations aged 20 or above suffered from hypertension, hyperglycemia or hyperlipidemia (the 3Hs). They accounted for 7.29 million people by 2012. Of Taiwan's top 10 leading causes of death, many are related to the 3Hs, including heart disease (No. 2), cerebrovascular disease (No. 3), diabetes mellitus (No. 5), hypertensive disease (No. 8), and nephritis, nephritic syndrome and nephrosis (No. 10). Combined, they accounted for 46,776 deaths, exceeding the 43,665 deaths caused by cancers. Moreover, year-on-year increases were registered in the number of deaths attributed to heart disease (608 persons or 3.7%), hypertensive disease (355 persons or 7.7%), cerebrovascular disease (238 persons or 2.2%), diabetes (200 people or 2.2%), and nephritis, nephritic syndrome and nephrosis reduced by (41 persons or 0.9%)

People tend to become increasingly vulnerable to the 3Hs, nephritic disease and metabolic syndrome as they age. Women over 50 are more susceptible to the 3Hs than males. And people with the 3Hs stand a greater risk of developing cardiovascular disease and nephritic disease or even dying (see Figures 5-3, 5-4 & 5-5).

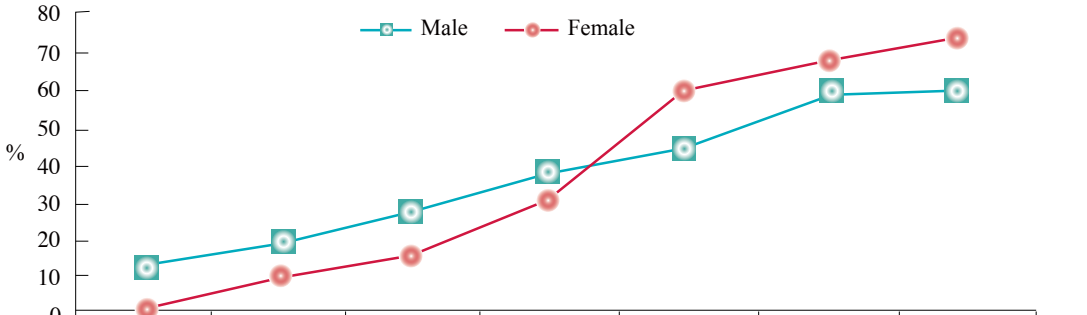
When it comes to prevention and control of chronic diseases, the HPA gives priority to metabolic syndrome, diabetes mellitus, cardiovascular disease and kidney disease. Chronic diseases are a significant risk factor of premature death, despite not normally posing an immediate threat. On top of the complexity and diversity of their origins, chronic diseases develop gradually and may happen in any given phase of life. When chronic diseases assert themselves, the patient eventually must cope with physiological restrictions or barriers. Quality of life deteriorates over time. To improve the situation, the HPA sets the following goals for prevention and control of chronic diseases.

1) Promote and uphold the health of the middle-aged and elderly populations.

2) Prevent and postpone the incidence of chronic diseases.

3) Enhance quality of life for patients, families and caregivers.

## Figure 5-3 Prevalence of Hypertension by Gender and Age in 2007

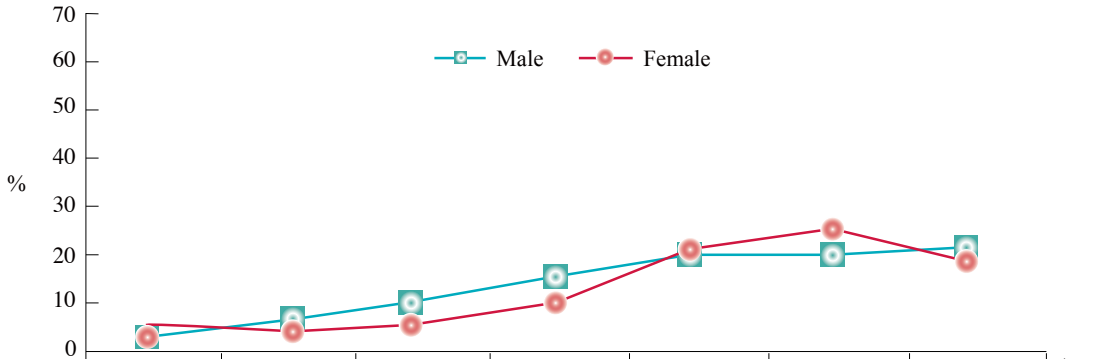



| | 20～29 | 30～39 | 40～49 | 50～59 | 60～69 | 70～79 | ≧80 |
|---|---|---|---|---|---|---|---|
| Male | 6.8 | 20.3 | 25 | 38 | 46.6 | 59.5 | 55.6 |
| Female | 0.8 | 4.9 | 14.1 | 32.1 | 58.7 | 64.3 | 66.7 |

Age

Notes: Hypertension is defined as having systolic blood pressure ≥ 140mmHg, diastolic blood pressure ≥ 90mmHg, or use of high blood pressure medication.
Sources: 2007 Taiwan Survey on Hypertension, Hyperglycemia and Hyperlipidemia

## Figure 5-4 Prevalence of Hyperglycemia by Gender and Age in 2007

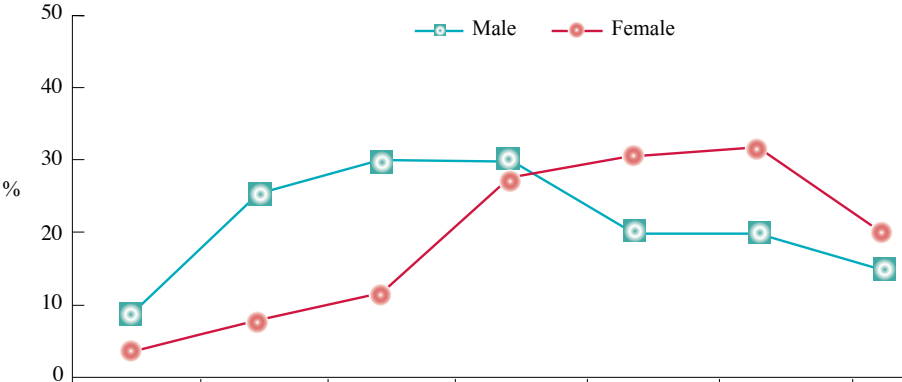



| | 20～29 | 30～39 | 40～49 | 50～59 | 60～69 | 70～79 | ≧80 |
|---|---|---|---|---|---|---|---|
| Male | 0.3 | 3.2 | 8.6 | 15.4 | 19.3 | 19.3 | 20.3 |
| Female | 0.3 | 1.7 | 3.2 | 13.4 | 20.7 | 23.9 | 19.1 |

Age

Notes: Hyperglycemia is defined as blood glucose test value ≥ 126mg/dL after 8 or more hours of an empty stomach, or use of hypoglycemic agents.
Sources: 2007 Taiwan Survey on Hypertension, Hyperglycemia and Hyperlipidemia

## Figure 5-5 Prevalence of Hyperlipidemia by Gender and Age in 2007




| | 20～29 | 30～39 | 40～49 | 50～59 | 60～69 | 70～79 | ≧80 | Age |
|---|---|---|---|---|---|---|---|---|
| Male | 8.8 | 25.4 | 29.7 | 30.3 | 20.1 | 20.2 | 15.1 | |
| Female | 3.8 | 7.6 | 11.4 | 27.2 | 31 | 31.7 | 20.3 | |

Notes: Hyperlipidemia is defined as serum cholesterol ≥ 240 mg/dL after 8 or more hours of an empty stomach, serum triglycerides ≥ 200 mg/dL, or use of lipid lowering drugs.
Sources: 2007 Taiwan Survey on Hypertension, Hyperglycemia and Hyperlipidemia

### Target Indicators

1. Raising adult awareness of ideal waist circumference to above 60% in 2012.
2. Raising adult awareness of normal blood sugar levels to above 45% in 2012.
3. Raising adult awareness of abnormal blood pressure reading to above 55% in 2012.
4. Raising adult awareness of prevention and control of chronic kidney disease to above 62% in 2012.

### Policy Implementation and Results

#### 1. Raising Health Awareness Among the Public

The HPA made a variety of health education materials and promotional items available to medical professionals and the general public including leaflets, posters, self-care manuals, cardboard cutouts and DVDs on metabolic syndrome, diabetes mellitus, coronary artery disease, hypertension and chronic kidney disease.

#### 2. Diverse Promotion Channels

In observance of special days designated for such chronic diseases as diabetes mellitus, hypertension, heart disease, stroke, kidney disease and asthma, the HPA cooperates with local health departments, civic groups and community organizations to hold press conferences and other publicity events. It also promotes causes through schools, communities, the internet, magazines, radio, TV, vehicle ads and convenience stores. Major events in include:

1. 2012 World Diabetes Day: The HPA advocated diabetes education and prevention with the slogan “Diabetes: Protect our Future.” It called on the public to emphasize the importance of diabetes prevention and collaborated with the Diabetes Association of the ROC, the Taiwanese Association of Diabetes Educators, Formosan Diabetes

Care Foundation and the Taiwan Association of Persons with Diabetes in holding a series of internationally synchronized events. These included seminars, lighting, photography contests, fairs and patient support groups' activity. The events totaled over 6,000 participants.

2. In response to the year's promotional theme : "Healthy Lifestyle- Healthy Blood Pressure" from the 2012 World Hypertension Day, HPA reminded the people to maintain healthy lifestyles, and provide screening services regarding hypertension, and cooperated with Taiwan Society of Cardiology and Taiwan Heart Foundation, on May 19th and June 2nd, to conduct the "Active life, live smart!" aerobic activities in Taipei and Tainan. Approximately 1,000 people participated.
3. 2012 World Heart Day: To advocate the year's promotional theme of "One World, One Home, One Heart," the Taiwan Society of Cardiology and the Taiwan Heart Foundation held an event in front of Shinkong Mitsukoshi on September 29th, when HPA joined as co-hosts. Approximately 800 participants joined the activity.
4. 2012 World Kidney Day: The HPA held a chronic kidney disease prevention awareness event in March. 7 cities and counties from across Taiwan held 9 kidney care events with a total of 8,206 participants. Combined with 8 cities and counties, which held 8 kidney prevention awareness lectures. Tainan City Health Office held 37 awareness lectures with a total of 5,922 participants, and 5 chronic kidney disease care benchmark learning demonstrations with a total of 1,780 participants.

## 2. Enhancing Health Promotion, Health Behavior and Self-Management among High-Risk Groups

(1) To make blood pressure measuring services convenient and accessible to the general public, local health bureaus integrated community resources at their disposal to establish 1,989 additional blood pressure measurement stations, in addition to hospitals and clinics, at a variety of locations such as administration agencies, community care sites, activity centers, drugstores, malls and workplaces. In addition, the HPA counseled cities and counties in promoting metabolic syndrome and diabetes prevention, added waistline measurements at blood pressure stations, and promoted metabolic syndrome prevention in 554 communities.

(2) The HPA provided additional training sessions on prevention of chronic disease to the faculties of senior and junior high schools as well as elementary schools. In 2012, 524 people from schools attended, including 63 administrators and 461 school nurses and nutritionists. Accumulated attendance between 2007 and 2012 reached 3,919.

(3) To enhance care access for groups at high risk of diabetes, the HPA promoted 490 diabetes patient support groups and held healthy diet, weight control, and blood sugar monitoring events. In 2012, 12,133 people from high-risk groups participated. Among them, 5,516 completed self-monitoring with the following results: 7.2% showed improvement in staple food intake, 53.4% exercised more than 30 minutes each day (an increase of 8.5%), and 19% lost 2 or more kilograms. Health promotions focused on high risk of diabetes at 186 Diabetes Health Promotion Institutions were also a success. Participants reported their improvement rate in a variety of items: blood glucose (47.2%), blood pressure (55.7%), and cholesterol (48.6%) readings. Another 52.3% lowered their waist circumference, 52.8% lost 2 kilograms or more and 55.8% exercised at least 30 minutes each day.

(4) In 2012, we cooperated with the health bureaus to conduct advocacy events of 3Hs and chronic kidney diseases. A total of 2,881 events were conducted, and over 120,000 people who were 65 years or older participated. In addition, we also printed the chronic kidney disease health management manuals and kidney healthcare fliers for the use of health departments and other medical institutions for health education purposes. We also advocated at television, broadcast, media, community, and campus, in order to promote the prevention work of chronic kidney diseases.

### 3. Empowering Awareness and Self-Management of Illnesses

(1) There were 186 diabetes health promoting institutions in 2012 (an increase of 12 from 2011). They provided internships to 954 diabetes health education staff and handled 225,638 cases applicable to the National Health Insurance Coverage for Improving Diabetes Treatment (an increase of 12,225 from 2011). To enhance autonomy and sustainable management of diabetes patient groups, the HPA trained 110 health bureau (station) staffs, group operators, officials and 46 group counselors while counseling 46 groups. Among the 35,162 patients (increased by 224 compared to 2011) in these groups nationwide, 15,950 people were evaluated with the following results: 4.2% strengthened self-monitoring of blood glucose levels; 6.9% showed improvements in food consumption levels; 60.8% (a 7% increase) exercised daily for at least 30 minutes; 15.1% reduced their weight by 2 kilograms or more, and another 3.3% reduced their HbA1c (glycated hemoglobin) readings to 7% or under. We conducted the selection of good diabetes support groups: A total of 40 groups garnered awards, 2 competition events were conducted. We publicly commemorated award winners in weight loss competition: 30 groups, 185 individuals, and 440 AABCDEFG exemplar diabetic patients, and 36 diabetic improvement patients.

(2) Health officials established a cross-departmental, interdisciplinary model of specialized care to deter the development of chronic kidney disease (CKD) and assist patients preparing for dialysis. In 2004, the HPA entrusted the Taiwan Society of Nephrology with the advancement of health promotion institutions focusing on kidney ailments, and 131 of these institutions with 88,366 follow-up patients, accepted 28,396 new patients in 2012. Among patients undergoing dialysis, 2,152 (61.1%) already had a surgically created arteriovenous fistula in place. And 1,530 (43.4%) dialysis first-timers arrived as outpatients rather than as inpatients or for emergency treatment. These were significant improvements.

(3) In 2005, the HPA installed a case management and information system for chronic kidney disease to help medical institutions register and retrieve data related to diagnosis, treatment and referrals. Later it integrated the system with other CKD databases. By the end of 2012, 202 hospitals used the system to register 71,446 cases.

(4) Managing risk factors for coronary artery disease goes a long way toward reducing the rate of incidence and the risk of recurrence, giving patients a better quality of life. As such, the HPA entrusted Kaohsiung Medical University Chung-Ho Memorial Hospital to develop and evaluate a model of health promoting shared-care for heart disease patients. The hospital's shared-care team for heart disease together with other specialists revised the HPA's manual on self-care of coronary artery disease and developed a universal health promoting shared-care model for heart disease patients. Put into force at Chung-Ho Hospital in 2011, the model is scheduled to be introduced to other medical institutions in 2012-2013.

### 4. Strengthening Disease Prevention and Chronic Disease Research

Taiwan faces serious problems related to dialysis. Research of methods to prevent disease is urgent. Therefore, in 2006, the Department of Health instructed the HPA to coordinate kidney disease research projects among relevant bureaus and offices (including the Food and Drug Administration, Medical Affairs Office, NHI group, Committee on Chinese Medicine and Pharmacy, and Bureau of National Health Insurance). Together, these agencies planned and promoted the development of chronic kidney disease prevention research. Also in 2008, the HPA commissioned local academic institutions to conduct technology research projects in four additional areas: epidemiology, diagnostic techniques, therapeutic care, and health insurance.

Implementation of the four research projects above was completed in 2011. Researchers compiled results and provided them to Department of Health agencies together with policy recommendations. The agencies then used the results to direct prevention strategies and work standards. Administrative planning modeled on this empirical evidence

includes the Bureau of Health Insurance's "Medical Benefits Improvement Plan for Early- Stage Chronic Kidney Disease," which was launched in 2011. Results also contributed to the development of an improved eGFR formula for domestic cases, which researchers used to set CKD staging criteria for Taiwanese citizens. Scientists will compile data in a large-scale database so it can be used for verification purposes. The Medical Affairs Office used research results to examine the domestic organ procurement system. It planned to provide kidney and liver donors with free health examinations for life, amend the principles for organ allocation, and increase the rate of kidney transplants. Also the National Health Research Institutes will use the integrated kidney disease database to conduct data analysis and other research.

Department agencies also considered results of these four research projects and used them as the basis for a five-year plan to improve care given to chronic kidney disease patients. The cross-unit plan was promoted in 2012, which includes four goals: 1. Reduce dialysis use, 2. Increase the number of kidney transplantation, 3. Increase the five-year survival rate of kidney disease patients, and 4. Increase the implementation rate of peritoneal dialysis. Agencies set implementation strategies that they will conduct based on the duties of each unit.

## Section 3 Cancer Prevention and Control

In accordance with the Cancer Prevention Act of 2003, the HPA periodically convenes meetings of the Central Cancer Prevention and Control Conference and the Cancer Prevention and Control Policy Consultation Commission. These meetings help officials achieve horizontal and vertical coordination and communication. For the Five-Year National Program on Cancer Prevention and Control (2005 to 2009), the HPA won a 2010 Taiwan Sustainable Development Award for Excellence in Project Execution from the Executive Yuan's National Council for Sustainable Development. Echoing President Ma Ying-Jeou's campaign pledge to reduce the cancer mortality rate, in 2009 the HPA introduced the 2nd National Cancer Control Programme - Cancer Screening (2010-2013). Its primary strategy was to expand the provision of cancer screening services.

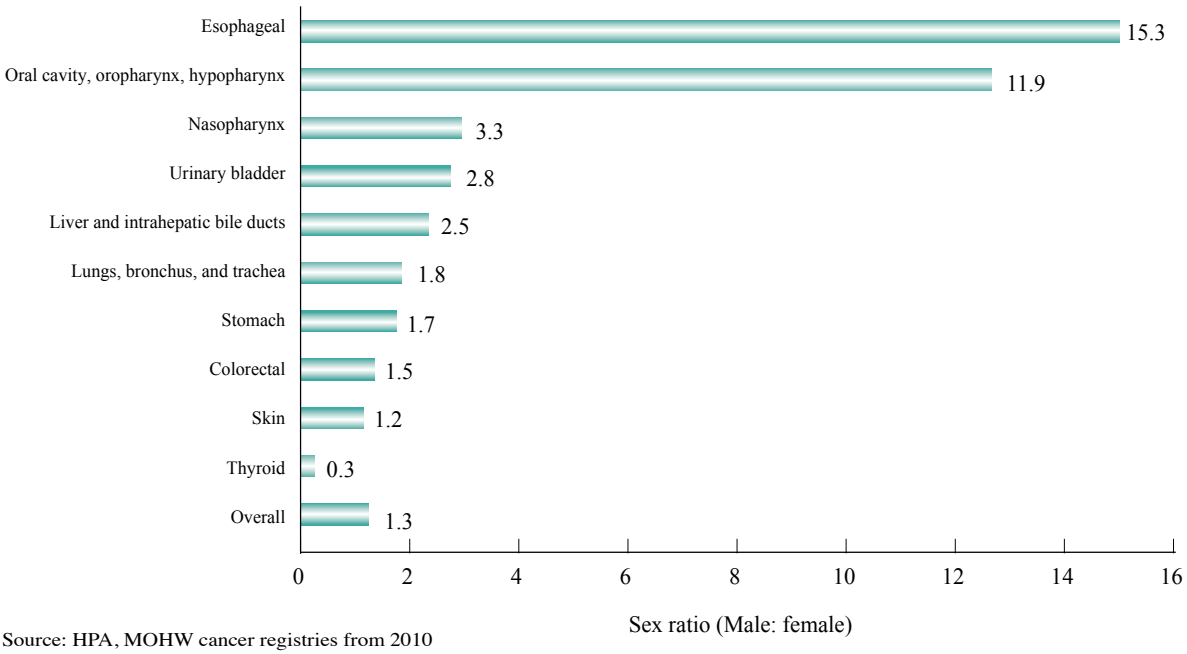
### Status Quo

In an administrative order issued in 1979, the Department of Health requested hospitals with 50 beds or more to submit summarized reports on epidemiological details of all newly detected cancers as well as their diagnosis and treatment processes. The objective was to establish a nationwide cancer registration system. In 2003, the Cancer Prevention Act went into effect. Article 11 of the statute stipulates that "to establish a database for cancer prevention and control, medical institutions charged with cancer prevention and control should report data concerning diagnosis and treatment of newly detected cancers and their stages to academic and research institutions entrusted by the relevant central authority."

### Cancer Incidence

According to cancer registry data, 90,649 people (50,892 males and 39,757 females) were newly diagnosed with cancers in 2010. The standardized incidence rate was 296.7 per 100,000 (340.7 for males and 256.2 for females). The median age was 62 (64 for males and 60 for females). Based on standardized incidence statistics, men were 1.3 times more likely than women to develop cancer. In particular, men were more than 11 times more vulnerable to esophageal and oral cancer, a phenomenon attributable to their higher tendency to smoke cigarettes and chew betel quid (see Figure 5-6).

## Figure 5-6 Sex Ratios in Age-Standardized Incidence Rate of Major Cancers in 2010




Source: HPA, MOHW cancer registries from 2010

In 2010, the 10 leading cancers by standardized incidence rate were: 1. female breast cancer, 2. colorectal cancer, 3. liver cancer, 4. lung cancer, 5. prostate cancer, 6. oral cancer, 7. stomach cancer, 8. uterine cancer, 9. cervical cancer and 10. skin cancer (for more data on cancer incidence rates see Tables 5-3, 5-4 & 5-5).

## Table 5-3 Incidence Rate of 10 Leading Cancers in 2010

| Rank | Primary Site | Number of Cases (Persons) | Age-Standardized Incidence Rate (per 100,000) |
|---|---|---|---|
| 1 | Female breast | 9,655 | 63.2 |
| 2 | Colorectal | 14,040 | 45.3 |
| 3 | Liver and intrahepatic bile ducts | 11,023 | 36.1 |
| 4 | Lungs, bronchus, and trachea | 10,615 | 33.6 |
| 5 | Prostate | 4,392 | 28.8 |
| 6 | Oral cavity, oropharynx, hypopharynx | 6,560 | 21.7 |
| 7 | Stomach | 3,854 | 12.0 |
| 8 | Corpus uteri | 1,737 | 11.3 |
| 9 | Cervix | 1,680 | 10.8 |
| 10 | Skin | 2,978 | 9.3 |
| | Overall | 90,649 | 296.7 |

Notes: 1.Ranking is based on age-standardized incidence rates.
2. Age-standardized rates were calculated using the WHO's world population age-structure in 2000.

Source: HPA, MOHW cancer registries from 2010

1. Female Breast 2. Colorectal 3. Liver and intrahepatic bile ducts 4. Lungs, bronchus, and trachea 5. Prostate 6. Oral cavity, oropharynx, hypopharynx 7. Stomach 8. Cervix 9. Corpus uteri 10. Skin Overall

## Table 5-4 Incidence Rate of 10 Leading Cancers among Men in 2010

| Rank | Primary site | Number of Cases (Persons) | Age-Standardized Incidence Rate (per 100,000) |
|---|---|---|---|
| 1 | Colorectal | 8,143 | 54.4 |
| 2 | Liver and intrahepatic bile ducts | 7,751 | 52.3 |
| 3 | Lungs, bronchus, and trachea | 6,697 | 43.7 |
| 4 | Oral cavity, oropharynx, hypopharynx | 6,028 | 40.6 |
| 5 | Prostate | 4,392 | 28.8 |
| 6 | Stomach | 2,415 | 15.4 |
| 7 | Esophageal | 2,091 | 13.8 |
| 8 | Skin | 1,575 | 10.2 |
| 9 | Urinary bladder | 1,427 | 9.2 |
| 10 | Nasopharyngeal | 1,194 | 8.2 |
| | Overall | 50,892 | 340.7 |

Source: HPA, MOHW cancer registries from 2010

## Table 5-5 Incidence Rate of 10 Leading Cancers among Women in 2010

| Rank | Primary site | Number of Cases (Persons) | Age-Standardized Incidence Rate (per 100,000) |
|---|---|---|---|
| 1 | Female Breast | 9,655 | 63.2 |
| 2 | Colorectal | 5,897 | 36.8 |
| 3 | Lungs, bronchus, and trachea | 3,918 | 24.3 |
| 4 | Liver and intrahepatic bile ducts | 3,272 | 20.5 |
| 5 | Thyroid | 1,838 | 12.9 |
| 6 | Corpus uteri | 1,737 | 11.3 |
| 7 | Cervix | 1,680 | 10.8 |
| 8 | Stomach | 1,439 | 8.9 |
| 9 | Ovary, fallopian tubes, or uterine broad ligament | 1,245 | 8.5 |
| 10 | Skin | 1,403 | 8.4 |
| | Overall | 39,757 | 256.2 |

Source: HPA, MOHW cancer registries from 2010

## Cancer Mortality

Ministry of Health and Welfare mortality statistics showed that 43,665 people died of cancer in 2012 (including 27,270 males and 16,395 females), accounting for 28.4 percent of all deaths. The age-standardized mortality rate was 131.3 per 100,000 people (170.4 for males and 95.1 for females). The top 10 cancers causing deaths of 2012 were: 1. lung cancer, 2, liver cancer, 3. colorectal cancer, 4. female breast cancer, 5. oral cancer, 6. stomach cancer, 7. prostate cancer, 8. pancreatic cancer, 9. esophageal cancer, and 10. cervical cancer (for more data on cancer mortality rates see Tables 5-6, 5-7 & 5-8).

### Table 5-6 Mortality Rate of 10 Leading Cancers in 2012

| Order | Primary site | Individuals | Age-standardized Mortality rate (Per 100,000 people) |
|---|---|---|---|
| 1 | Cancers of trachea, bronchia and lung | 8,587 | 25.4 |
| 2 | Liver cancer | 8,116 | 24.7 |
| 3 | Colorectal cancer | 5,131 | 14.9 |
| 4 | Breast cancer | 1,912 | 11.6 |
| 5 | Oral cancer | 2,566 | 8.1 |
| 6 | Stomach cancer | 2,386 | 6.9 |
| 7 | Prostate cancer | 1,187 | 6.7 |
| 8 | Pancreatic cancer | 1,629 | 4.9 |
| 9 | Esophageal cancer | 1,581 | 4.9 |
| 10 | Cervical cancer | 669 | 3.9 |
| | Others | 9,901 | 30.3 |
| | Overall | 43,665 | 131.3 |

Note: 1. Positions based on crude mortality rates.
2.Age-standardized rates were calculated using the world standard population from 2000.
Source: Office of Statistics, Department of Health, Causes of Death.

## Table 5-7 Mortality Rate of 10 Leading Cancers among Men in 2012

| Order | Primary site | Individuals | Age-standardized Mortality rate (Per 100,000 people) |
|---|---|---|---|
| 1 | Cancers of trachea, bronchia and lung | 5,628 | 34.7 |
| 2 | Liver cancer | 5,596 | 35.8 |
| 3 | Colorectal cancer | 2,956 | 18.1 |
| 4 | Oral cancer | 2,359 | 15.3 |
| 5 | Stomach cancer | 1,502 | 9.0 |
| 6 | Esophageal cancer | 1,477 | 9.4 |
| 7 | Prostate cancer | 1,187 | 6.7 |
| 8 | Pancreatic cancer | 935 | 5.8 |
| 9 | Non-Hodgkin's lymphoma | 605 | 3.7 |
| 10 | Leukemia | 580 | 3.9 |
| | Others | 4,445 | 28.1 |
| | Overall | 27,270 | 170.4 |

Sources: Office of Statistics, Ministry of Health and Welfare, Causes of Death.

## Table 5-8 Mortality Rate of 10 Leading Cancers among Women in 2012

| Order | Primary site | Individuals | Age-standardized Mortality rate (Per 100,000 people) |
|---|---|---|---|
| 1 | Cancers of trachea, bronchia and lung | 2,959 | 17.0 |
| 2 | Liver cancer | 2,520 | 14.4 |
| 3 | Colorectal cancer | 2,175 | 12.1 |
| 4 | Breast cancer | 1,912 | 11.6 |
| 5 | Stomach cancer | 884 | 5.0 |
| 6 | Pancreatic cancer | 694 | 4.0 |
| 7 | Cervical cancer | 669 | 3.9 |
| 8 | Ovarian cancer | 528 | 3.2 |
| 9 | Non-Hodgkin's lymphoma | 410 | 2.4 |
| 10 | Leukemia | 364 | 2.4 |
| | Others | 3,280 | 19.3 |
| | Overall | 16,395 | 95.1 |

Source: Office of Statistics, Ministry of Health and Welfare, Causes of Death.

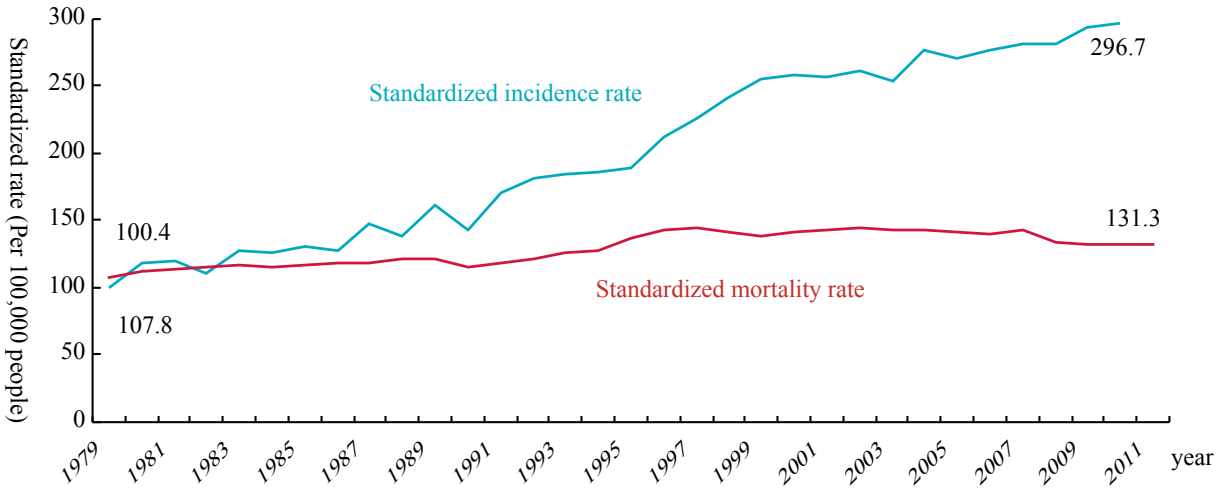
### 3. Increase/Decrease in Annual Cancer Incidence and Mortality

Ministry of Health and Welfare statistics on causes of death showed that cancer has been the leading cause of death in Taiwan since 1982. Calculated based on the WHO's world population age-structure in 2000, the age standardized cancer mortality rate in Taiwan rose from 118 per 100,000 in 1982 to highest of 144.3 in 1997.

Over the next decade it hovered between 138 and 144, and by 2012 it was 131.3. The age standardized incidence rate of cancer during the same period rose from 111 per 100,000 in 1982 to 296.7 per 100,000 in 2010 (see Figure 5-7).

Based on 10-year analysis of the standardized cancer incidence rate from 2001 to 2010, cancers among men increased by an average of 17.5%. Prostate cancer (61.8%) rose the most while stomach cancer (20.9%) fell the most. Cancers among women increased by an average of 16.1%, with corpus uteri cancer (82.3%) rising the most and cervical cancer (49.7%) falling the most (see Figures 5-8, 5-9).

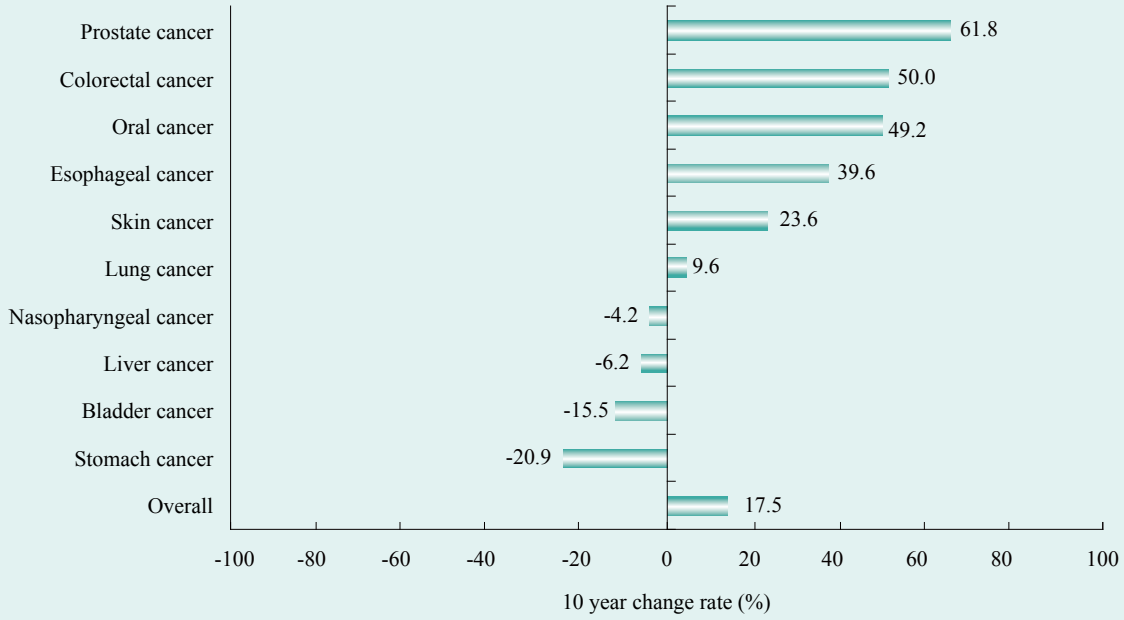
**Figure 5-7 Trends of Standardized Cancer Incidence and Mortality Rates**



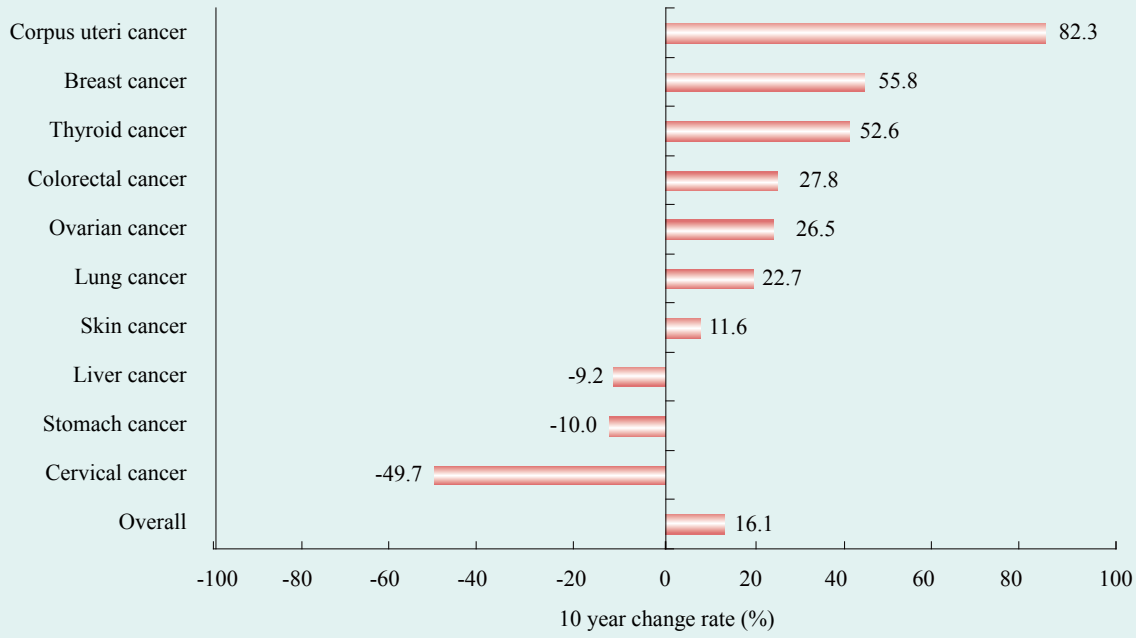

Note: Cancer occurrence rate and mortality rate

Sources: 2010 registered cancer data and statistics of the cause of death from the Department of Statistics Age standarized rate: Calculated by the standard world population in 2000

## Figure 5-8 10-Year Difference in Age-Standardized Incidence Rates of 10 Leading Cancer among Men 2001-2010




## Figure 5-9 10-Year Difference in Age-Standardized Incidence Rates of 10 Leading Cancer among Women, 2001-2010



## Target Indicators

1. Achieve cervical cancer screening rate of 64% among women aged 30-69 within the past three years.
2. Achieve mammogram screening rate of 31% among women aged 45-69 within the past two years.
3. Achieve colorectal cancer screening rate of 33% among people aged 50-69 within the past two years.
4. Achieve oral cancer screening rate of 43% among betel quid chewers and smokers aged 30 or over within the past two years.

## Policy Implementation and Results

### 1. HPV Prevention and Control

Studies have confirmed that cervical cancer is caused by infection of human-papilloma virus (HPV). In Taiwan, government approval was given in 2006 and 2008 for two HPV vaccines, Gardasil and Cervarix. They were perceived as effective in preventing the infection of HPV type 16 and 18, thus reducing cervical cancer incidence and mortality rates. To extend subsidies for HPV vaccination to junior high school female students from low income and middele-low income households, mountainous areas and offshore islands, the HPA undertook the following measures in 2012:

(1) Educating the Public About HPV Vaccines and Cervical Cancer Prevention and Control

1. The HPA raised awareness of cervical cancer prevention and control as well as HPV vaccines by means of TV and radio broadcasts, newspapers and magazines.
2. The HPA used local health departments and centers to distribute two booklets: “Intimate Notes for Women” and “Staying Away From HPV,” and the DVD “Cervical Cancer-Tips About Sex” that explains the relationship between cervical cancer and HPV, introduces HPV vaccines, and talks about ways to prevent cervical cancer.

(2) Training Specialized Personnel

The HPA undertook an educational program on HPV vaccination, which was attended by 295 nurses from schools and public health centers in remote areas and offshore islands. It also posted training materials on the HPA website for download by specialized personnel in the field.

(3) In 2012, the HPA created a plan to subsidize HPV vaccinations for teenage girls from low-income and middele-low income households, remote areas and offshore islands. It also mailed brochures on the vaccinations along with letters of consent to low-income and middele-low income households with junior high school female students. In 2012, the rate of people who agreed to receive 3 types of vaccine was 95.8%, which was higher than 88.3% in 2011.

### 2. Promoting Screening for Leading Types of Cancers

Cervical cancer, breast cancer, colorectal cancer, and oral cancer account for about a third of all cancer cases combined. Evidence shows that widespread screening greatly reduces the incidence and mortality rate. In particular, Pap smear can reduce the incidence and mortality rate of cervical cancer by 60-90%; mammogramphy reduce breast cancer mortality rate by 20-30%; fecal occult blood tests reduce the colorectal cancer mortality rate by 20-30%; and oral mucosa tests reduce oral cancer mortality rate for men aged 35 or over who smoke and drink by 40%.

In 1995, 1999, 2002 and 2004, the government began to offer Pap smear to women aged 30 or over. This was followed by the introduction of oral cancer screening among people aged 18 or over who smoke or chew betel quid, mammography screening among women aged 50-69, and fecal occult blood test among people aged 50-69. From July

2002 to June 2004, doctors conducted mammography screenings in two stages: high-risk women were identified by means of questionnaires before they underwent mammograms. The government has incorporated these screening into preventive health care services for women aged 50-69 since July 2004, and it expanded the scope to include women aged 45-49 in November 2009. It went a step further in January 2010 by adding women aged 40-44 who have relatives within second degree of kinship who suffered from breast cancer. Also in 2010, the government incorporated screenings for colorectal cancer and oral cancer into preventive health care services. Screenings for oral cancer were made available to people aged 30 or over who smoke or chew betel quid.

In 2012 the HPA promoted four cancer screenings with the following strategies and achievements:

### (1) A Soft Approach and Diverse Publicity

In order to reinforce public knowledge of cancer screening provided by the government, we actively cooperated with health departments and offices, medical institutions, and civil organizations, to broaden the services of cancer screening and advocacy events, utilize diverse media channels to promote cancer screening cancers, in order to advocate the concepts of regular screening for people. For example, in 2011, actor Ma Ru Long and his wife shot 4 cancer prevention advocacy documentaries “Life-saving engineering” to remind people to take the threats of cancer seriously. In addition, in 2012, they shot the woman cancer screening advocacy radio broadcast of cervical cancer “Family version” for 30 seconds, and breast cancer “Colleague version” for 30 seconds. Through the relaxing conversation of family members and collegues, the audio clips remind people to receive screening and when the results are positive, the importance of follow-up checkups.

The HPA conducted a telephone survey of people aged 30-69 in 2010. It suggested that 71%, 81%, 89% and 98% of the populace were aware of the effectiveness of screening in prevention of oral cancer, colorectal cancer, breast cancer and cervical cancer, respectively. However, there was still fewer people knew about free cancer screenings provided by the government to specific population segments. The survey showed that 72% of respondents knew about free annual Pap smears offered to women aged 30 or over. But only 53%, 43% and 33% were aware of the criteria regarding government subsidies for mammograms, fecal occult blood tests, and oral mucosa tests, respectively (see Figure 5-10).

### (2) Subsidizing Hospitals for Making Screening for Cancer Part of Their Culture

In 2012, the HPA subsidized more than 200 hospitals that register 5,000 or more outpatients aged 30 or over, so they could undertake a special project to enhance quality of cancer care. Hospitals were required to establish an outpatient screening reminder system and a one-stop referral system for positive tests. In addition to helping local health departments conduct community screenings, they also introduced on-site educational programs and classes on quitting betel quid. The HPA further contributed by following the WHO's "Health Promoting Hospital" model in assisting local hospitals in promoting cancer screenings. In a departure from prior emphasis on treatment over prevention, hospitals were encouraged to overhaul their organizational culture and workflow. These hospitals accounted for about 92% of all outpatient services. In 2012 they conducted 2.71 million screenings for the four cancers, The screenings represented 55.9% of all such services rendered nationwide (Cervical cancer 1 time, breast cancer 1.1 times, oral cancer 1.1 times, and colorectal cancer 1.3 times. The number was 1.1 times more than the screening rate during the same period in 2010 The HPA will continue to subsidize hospitals in 2013.

### (3) Screening Results for Main Cancers

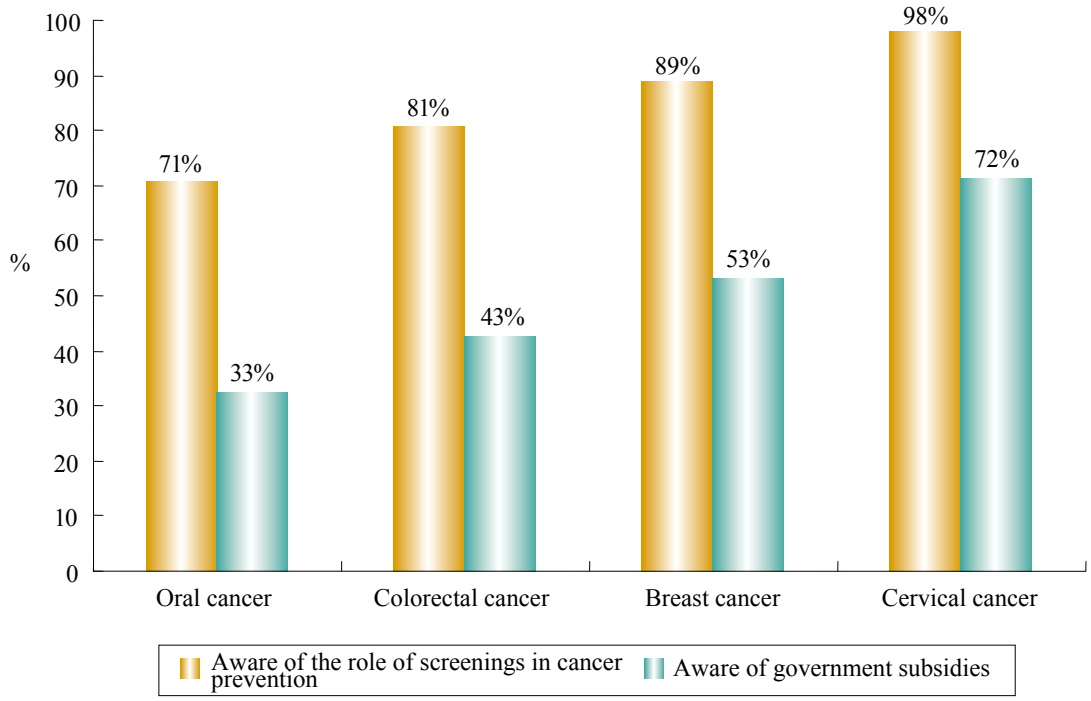
In 2012, 4.91 million screenings were carried out for cervical cancer, breast cancer, colorectal cancer, and oral cancer. Of the total, 10,000 cases of cancer and 36,000 cases of pre-cancer were detected; more than 46,000 lives were thus saved. Details are listed below (Table 5-9).

(1) Cervical Cancer

In 2012, 2.135 million Pap smear were given to females aged 30 or over, pushing the percentage of women aged 30-69 who had undergone screening for cervical cancer within the past three years to 60.8% (a HPA telephone survey suggested it was 70%). A total of 4,045 individuals were found to have cervical cancer.

In 1995, the Department of Health began to provide women aged 30 or above with annual Pap smears. The standardized cervical cancer mortality rate fell by 65% between 1995 and 2012, from 11 to 3.9 persons per 100,000. The standardized cervical cancer incidence rate also decreased by 52%, from 25 per 100,000 in 1995 to 10.8 per 100,000 in 2000. The rate was reduced by 57%.

**Table 5-10 Public Awareness of Cancer Screening and Government Subsidies**




Source: 2010 cancer screening service promotion and evaluation plan

(2) Breast cancer

In November 2009, we started expanding mammography screening program every two years for 45~69 years old women. In 2012, 670,000 mammography were conducted on females aged 45-69. The screening rate was 32.5%. About 3,300 cases of breast cancer were detected in 2012. In addition, in order to upgrade the accessibility of breast cancer screening, in 2010 we subsidized to mobile mammography or mammography equipments for countries and cities. Some counties and cities or medical institutions also purchased mobile mammography or mammography equipments.

(3) Colorectal Cancer

In 2010 screening for colorectal cancer was incorporated into preventive health care services for the first time. Hospitals contracted under the National Health Insurance program can provide people aged 50-69 a fecal occult blood test every two years. The screening rate for 2011 and 2012 was 33.7%. The test was conducted 1,030,000 times in 2012. About 23,775 of polypus and 2,001 of colorectal cancer were detected.

(4) Oral Cancer

In 2010, screening for oral cancer was incorporated into preventive health care services for the first time. Hospitals contracted under the National Health Insurance program could provide people aged 30 or over who smoke or chew betel quid one oral mucosa test every two years. To provide the public with more convenient screening services, local health departments were also authorized to provide training on oral mucosa tests to otolaryngologists. The screenings were conducted 982,000 times in 2012. The percentage of people aged 30 or over who smoked or chewed betel quid and had taken such tests within the past two years rose from 28% in 2009 to 52% in 2012. In 2012, these tests detected oral protentially malignant disorders in 3,445 patients and oral cancer in 1,232 patients.

## Figure 5-9 Screening Results in 2012

| Items | Subjects | Screening policies | 2012 screening results |
|---|---|---|---|
| Cervical cancer | Women aged 30 or over | • At least 1 Pap smear every 3 years<br>• Screening for HPV | 60.8% of women aged 30-69 had at least 1 Pap smear within the past 3 years |
| Breast Cancer | 1.Women aged 45-69<br>2.Women aged 40-44 who have relatives within second degree of kinship who suffered from breast cancer | 1 mammogram every 2 years | 32.5% of women aged 45-69 had at least 1 mammogram within the past 2 years |
| Oral cancer | People aged 30 or over who chew betel quid or smoke | 1 oral mucosa test every 2 years | 52.5% of people aged 30 or over who chew betel quid or smoke were screened for oral cancer within the past 2 years |
| Colorectal cancer | People aged 50-69 | 1 fecal occult blood test every 2 years | 33.7% of people aged 50-69 had fecal occult blood tests within the past 2 years |

(5) Improving Quality of Cancer Screening Services

To enhance cancer screening services, the HPA entrusted the Taiwan Society of Pathology to certify institutions that offer cervical pathological diagnoses. By December 2012, it had certified 113 institutions. Similarly the HPA commissioned the Radiological Society ROC to certify mammography institutions. By December 2012, it had certified 20 institutions, and it conducted 160 follow-up inspections in 2012. For institutions conducting fecal occult blood tests, the HPA entrusted the Taiwan Society of Laboratory Medicine, which had certified 121 entities by December 2012. It also completed two external quality control tests and extended on-site assistance to institutions that failed to meet standards. The HPA commissioned the Taiwan Dental Association and the Cancer Prevention and Education Foundation to provide training on oral mucosa tests. In 2012, They taught 514 dentists (363 people in the beginners class, 151 in the intermediate class), 424 ENT doctors (44 people in the beginners class, 380 people in the intermediate class. We have also authorized counties and cities to conduct oral mucus educational training for non-dental and non-ENT doctors. A total of 710 doctors were trained in 2012, and started conducting oral cancer screening services.

## 3. Quality of Cancer Care

### (1) Accreditation of Cancer Care Quality

In accordance with the Cancer Prevention Act, in 2005 the HPA introduced a set of guidelines to improve the quality of cancer care. These were incorporated into the HPA's subsidy program for hospitals. In 2012, 54 hospitals received grants for related programs. Subsidies were extended mainly to items not covered by National Health Insurance but crucial to the quality of cancer care, including cancer registries, case management and one-stop services for cancer patients.

Survival of cancer patients hinges on the quality of treatment and care they get. For this reason, in 2005 the HPA commissioned the National Health Research Institutes to devise an accreditation system for cancer care quality at hospitals. On October 4th, 2007, the HPA unveiled a list of criteria for grading and certification of cancer diagnosis and treatment as well as a clearly defined set of procedures. The accreditation system is applicable to hospitals that register 500 or more newly detected cases of cancer with a view to upgrading their quality of cancer diagnosis and treatment and providing patients with a safe and effective environment. This certification's purpose is to help hospitals to establish cancer care structures, cancer treatment modes. For example, establishment of cancer committee to plan and supervise relative cancer operations within the hospital, establish cancer registry team of interdisciplinary cancer care, clinical treatment guidance, and stipulation of standard operating procedures of care.

In order to upgrade the quality of domestic cancer treatment, in 2010, we conducted certification standard revision, and completed trial evaluations for 8 hospitals. The second version of the certification standard has included the radiation treatment quality, image diagnosis quality, tumor case management, re-education of medical staff, in order to comprehensively provide environment of patient safety and effective quality. In 2012, a total of 37 hospitals applied for certification. 26 of them have passed, and 9 of them have the conditions to pass. At the end of 2012, a total of 48 hospitals passed the certification. The results of the certification are necessary qualifications for applying for evaluation of medical access device. The results are posted on the website, for people to refer to. (Figure 5-11).

### (2) Enhancing Diagnosis and Treatment of Cancers

Pathology and imaging reports are crucial to cancer diagnosis and treatment. Therefore, in 2007 and 2010, the HPA set mandatory items to be included in pathology and imaging (computer tomography and magnetic resonance imaging) reports meant for cancer diagnosis and treatment. To date, 17 items are mandatory for pathology reports and 12 for imaging protocol. Also, the growing popularity of target therapy for cancers has brought greater attention to the quality of molecular pathological tests that precede treatment. For this reason, in 2010 the HPA started to devise ways to improve quality of molecular pathology. It began to hold seminars focused exclusively on molecular pathology and it launched a pilot program to proficiency testing. Also since 2012 the HPA has commissioned the Oncology Nursing Society of Taiwan to develop cancer care quality indicators and practice guidelines, and conducted 2 expert and hospital agreement meetings. In addition, we continued to revise 4 clinical practice guidelines (Cancer pain, neutropenia, central venous catheter, and oral mucositis).

## 4. Cancer Patients and Palliative Care

### (1) Services for Cancer Patients

Advanced medical technologies have made it possible for cancer patients to survive longer. This creates a greater need for integrated, continuous and multifaceted care services. To help cancer patients cope with physical, mental and social strains, the HPA has run a cancer patient service program since 2003.

In 2012, we have subsidized 6 NGO groups to conduct direct service plans of cancer patient, provided direct care services for cancer patients, and allow cancer patients and family members to receive complete cancer support care. The services include: health education on the phone, counseling services, inpatient and outpatient visits, psychological counseling, new patient learning camp, group work, physical, mental, and spiritual journeys of patients, volunteer training, and provision of health education information regarding cancer.

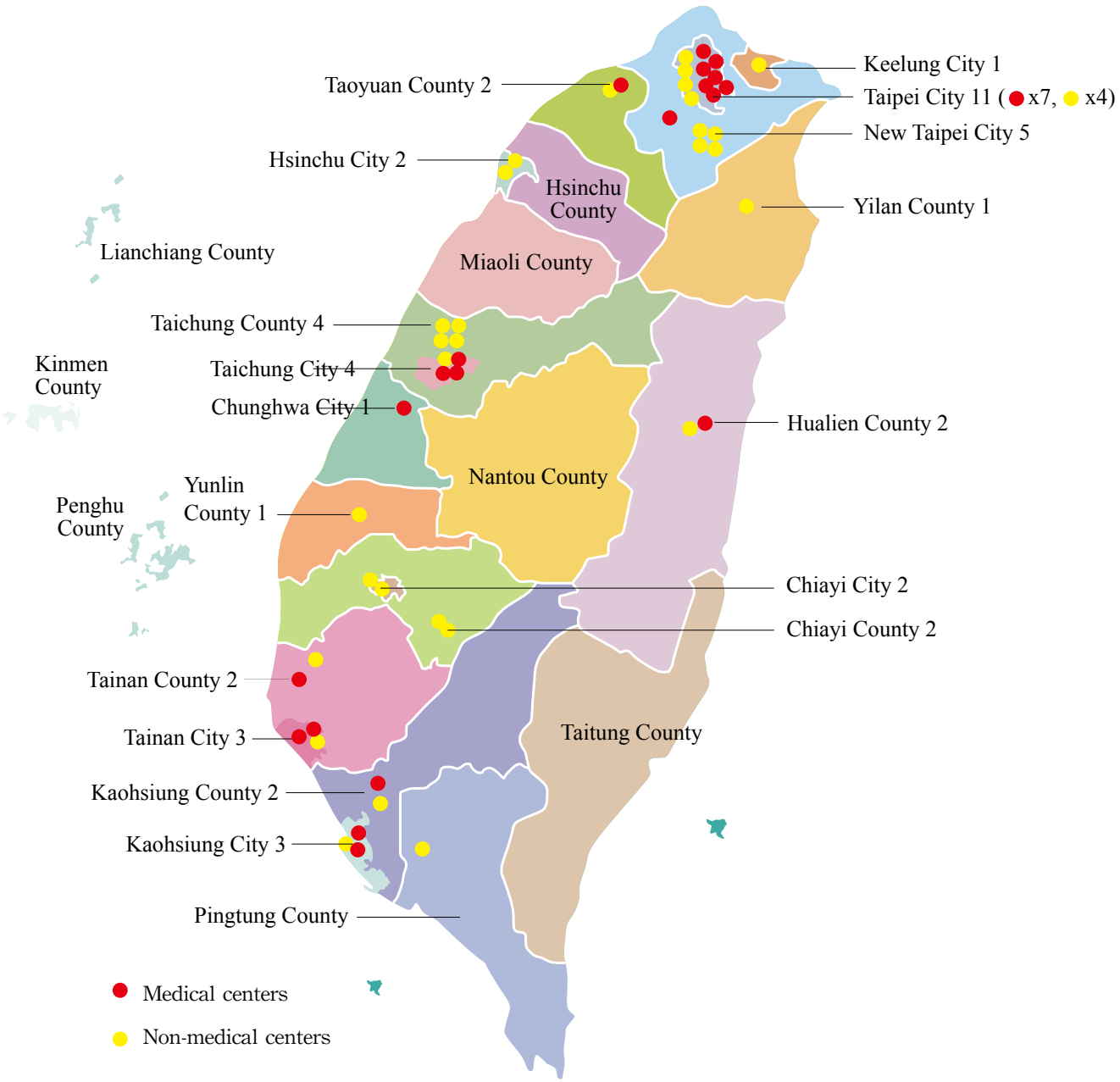
To build a comprehensive service network aimed specifically at cancer patients, the HPA extended its subsidies to hospitals with ≥450 newly detected cases of cancer a year. Using these subsidies, 54 such hospitals established one-stop window for cancer resources. With resources inside and outside the hospital fully integrated, veteran nurse practitioners, social workers and psychiatrists are dispatched so cancer patients and their families can quickly enjoy the resources and services they need.

Against the impact of what must be a tremendous shock, patients and families can thus regain their sense of reality and start treatment as soon as possible. These experts also ease communication between patients/families and hospital medical teams, and they help the patients return to a normal life soon after treatment. The HPA also commissioned the Hope Foundation for Cancer Care to train personnel tasked with one-stop cancer services as well as volunteers. In addition, it holds regional awareness conferences to understand the needs and obstacles of hospitals and provide them with expert suggestions.

### (2) Hospice and Palliative Care

The Department of Health began promoting hospice and palliative care in 1996. Alongside a 2000 pilot program to incorporate hospice care into National Health Insurance, Taiwan became the first country in Asia with legislation on natural death when it adopted the Hospice and Palliative Care Act. In 2004 the HPA teamed up with the Taiwan Hospice Organization to provide share-care to cancer patients outside hospice wards at eight hospitals on a trial basis. Hospitals subsidized to conduct these services increased to 34 in 2005. As of the end of 2012, 69 hospitals were offering shared-care, 50 were providing inpatient service, and 77 offered home care services. In 2012 about 20,000 cancer patients benefited from hospice and palliative care, a significant increase from previous years. Analysis of official death records

## Figure 5-11 Hospitals Certified for Quality of Cancer Diagnosis and Treatment in 2012



and national health insurance claims reveals that the percentage of cancer patients who availed themselves of hospice care (including inpatient service, home care services, and shared-care) in the year before their death rose to 47.5% in 2011 from 7% in 2000.

The Quality of Death: Ranking End-of-life Care Across the World" is a study conducted by the Economist Intelligence Unit and the Singapore Lien Foundation. Following interviews with doctors, experts and service staffs in 40 countries, Taiwan ranked 14th for end-of-life care services. It was top in Asia.

To further enhance the quality of hospice and palliative care, the HPA entrusted academic societies to offer guidance on provision of shared-care services and training for cancer prevention staff. A total of 287 attending physicians involved with cancer diagnosis and treatment joined 17 three-hour workshops.

Another 141 doctors, nurses, social workers and other specialists attended seven other sessions,114 works attended 4 truth-telling traning sessions. The HPA also provided subsidies to NGOs for helping with hospice care publicity by holding 182 seminars in schools, hospitals and nursing homes.

# Promoting Your Health

## Chapter 6
## Special topics

# Chapter 6 I Special topics I

In "The World Health Report 1998—Life in the 21st Century: A Vision for All," the WHO underscores health equity and treats gender, race and poverty on the same footing. A growing number of studies have also shown that health behaviors related to prevention of risk factors and diseases should involve different strategies and courses of action as are appropriate to people's gender, race, income, along with mental and physical disabilities, if any. Example: Given their specific health needs and inequality in socioeconomic status, various segments of the population often have unique health problems. Women, for instance, often have to worry about breast cancer, cervical cancer, osteoporosis and incontinence, as well as the need for hormone replacement therapy. High on the list of health concerns confronting disadvantaged groups are the reproductive health of foreign spouses and oral health of people with physical or mental disabilities as well as the care for rare diseases, including oil disease. To achieve health equity, it is vital to adopt a variety of strategies, plans, measures and interventions in accordance with the principles of health promotion, health protection and disease prevention.

## Section 1 Women's Health

### Status Quo

Taiwan has become an aging society. In 2012 female life expectancy was 82.8 years, In 2012, women aged 50 or over accounted for 32.6% of the entire population, and the average menopausal age was 49.3±3.8 years. In the Nutrition and Health Survey conducted by the Department of Health from 2004 to 2008, 241 people aged 50 or over were found with osteoporosis. Of them, 12.6% were women suffering from lumbar osteoporosis and 12.1% women suffering from femoral neck osteoporosis. The corresponding percentages for men were 4.3% and 10.7%, respectively.

Moreover, severity among women increased with age. The 2009 National Health Interview Survey also found that prevalence rates of osteoporosis and incontinence tended to increase with age. Of women aged 50 or over, roughly a fourth suffered from osteoporosis. The percentage was even higher among women 65 or over, at 32.7%. Among women 55 or over, 23.9% were troubled by incontinence. Women particularly at risk were those who were over 45 years old, had a body mass index (BMI) greater than 27 or less than 18.5, had given birth to four children, or had been diagnosed with hypertension, diabetes or stroke. Therefore, it is important to provide middle-aged and elderly women with accurate health information to help them establish a positive attitude toward life and healthy behaviors.

Through relative media advocacy and seminar, women's knowledge toward menopause is reinforced. We have also established national toll-free menopausal healthcare counseling hotline, and provide one on one individual professional counseling and health education channels. We have provided at least 350 consultations each month.

### Policy Implementation and Results

1. The HPA is committed to helping women through the changes that come with menopause. Its contributions include: (1) Establishing a toll-free hotline (0800-00-5107) to serve postmenopausal women: In 2012, the helpline provided counseling services to nearly 4,000 people, with the majority (36.5%) called for sleeping problems, and then physical, vaginal dryness, and nutritional problems. (2) Holding menopause counselor training sessions: At three sessions 44 counselors were taught how to serve on the hotline and hold menopause events at service sites. (3) Conducting menopause camps: Sixteen camps were joined by an average of 45-50 people each. (4) Printing posters and other materials, conducting radio and TV broadcasts, to promote menopause education.
2. Efforts to preserve bone health, build bone strength and prevent osteoporosis should begin at childhood and adolescence. Besides publicizing these ideas at chronic disease camps on school campuses, the HPA uses the internet, newspapers and magazines. In observance of World Osteoporosis Day, the HPA issued news releases encouraging people to bolster bone health through weight-bearing exercise and strength training, consuming a balanced diet, and preventing falls. It also provided a one-minute, osteoporosis risk self-assessment. To enhance public knowledge of menopause and osteoporosis

and improve self-treatment, the HPA compiled preventive health and education materials. In order to provide medical staff with tools for the prevention, diagnosis, and treatment of osteoporosis so patients can receive the best care, the HPA partnered with the National Health Research Institutes, Taiwan Osteoporosis Association, Taiwan Evidence-Based Medicine Association, and other experts and academics. Together they used evidence-based medicine to compile a set of clinical guidelines on osteoporosis treatment, and were printed for the use of medical staff. In the meantime, in 2012, we also subsidized Taiwan Osteoporosis Association to conduct educational promotion plan for medical professionals for clinical guidelines on osteoporosis treatment. 9 courses were held, with 1 network course, and 2,028 people participated.

## Section 2 Health of Disadvantaged Groups

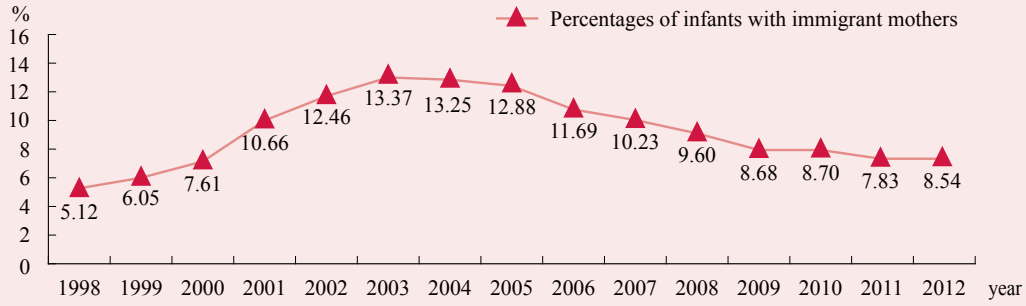
### Reproductive Health Care for New Immigrants Spouses

#### Status Quo

In 2012, Taiwan posted 143,384 marriage registries. Of the newlyweds, 122,784 persons (85.63%) were native-born; 12,713 (8.87%) were from Mainland China, Hong Kong, or Macau; and 7,887 (5.5%) were foreign-born. By the end of 2012, there were an estimated 473,000 foreign and mainland Chinese spouses.

Foreign spouses accounted for 153,000, or 32.52%, of the total while mainland Chinese, Hong Kong, and Macau spouses accounted for 319,000, or 67.48%. Couples with a foreign or Chinese-born spouse contributed 7.54% of Taiwan's total births (see Figure 6-1). Of all the spouses who held valid alien registration at the end of 2012, Vietnamese accounted for the largest percentage at 56.78%. They were followed by Indonesians at 17.99% and Thais at 5.42%.

**Figure 6-1 Percentage of Newborn with Immigrant Mothers, 1998-2012**




Sources: Department of Statistics, Ministry of the Interior

#### Target Indicators

To have reproductive health guidance and consultations reach 95% or more of new immigrant spouses.

#### Policy Implementation and Results

Taiwan has witnessed a steady, increasingly diverse inflow of immigrants in recent years. The majority of these immigrants are spouses of ROC nationals from cross-border marriages. In 2003, the HPA implemented the "Foreign and Mainland Chinese Spouses Childbirth Health Management Program" to not only uphold their reproductive health, but also help them to adapt to a new life in Taiwan. The following goals were set:

(1) To create a sound environment conducive to reproductive health.

(2) To prevent congenital defects and premature births.

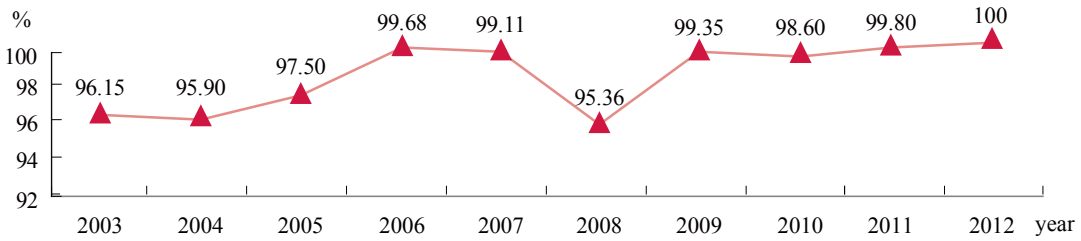
(3) To promote and safeguard the health of foreign spouses and their children.

A summary of achievements from efforts to promote the reproductive health of foreign spouses is as follows:

## 1. Implementation of Reproductive Health Care and Health Education

In collaboration with local health departments and centers, the HPA created reproductive health care cards designed specifically for foreign and mainland Chinese spouses as well as their children (see Figure 6-2). It also offered services and guidance on family planning, prenatal and postnatal care, reproductive health care, and inoculations. High-risk or abnormal cases were given referrals for treatment. In 2012, 5,856 new health cards were issued. Of these, 1,712 were given to foreign spouses (100% of foreign newlyweds registered during the year) and 4,144 were given to mainland Chinese spouses (100% of mainland Chinese newlyweds registered during the year).

**Figure 6-2 The Percentage of Health Care Management for Immigrant Spouses, 2003-2012**




Sources: Department of Statistics, Ministry of the Interior

## 2. Training Interpreters and Offering Interpretation Services

To help foreign spouses cope with language barriers when receiving medical treatment, in 2004 the HPA launched a program to train volunteers in assisting with foreign spouse childbirth health services. Foreign spouses who have lived in Taiwan long-term were trained to serve as interpreters for health officials who visit the households of newly admitted foreign spouses. Interpretation services were also often called for when pediatric outpatient services or instructions for reproductive health care were being rendered. By the end of 2012, the Ministry of the Interior's

Fund had subsidized 210 health departments in 17 counties and cities for Caring for and Helping Foreign Spouses. These appropriations helped provide interpretation services for reproductive health care.

## 3. Subsidizing Prenatal Care Examinations for Those Not Covered by Health Insurance

Since 2005 the HPA has drawn on appropriations from the Ministry of the Interior's Fund for Caring for and Helping Foreign Spouses to subsidize prenatal examinations for foreign mothers not yet covered by National Health Insurance. In 2012, subsidies worth NT$6.93 million were provided for 11,880 prenatal exams.

## 4. Producing Health Education Materials in Multiple Languages

To help foreign spouses overcome language barriers, the HPA developed reproductive health learning materials in multiple languages. Publications in 2010 included "Health Handbook for Expectant Mothers" and "Health Handbook for Child Health" in Vietnamese, Khmer, Thai, Indonesian and English languages.

A series of films on reproductive health care and a parenting handbook are also available in the five languages listed above for use by foreign parents and medical specialists. In 2012 the HPA commissioned new translations of its "Maternal Health Handbook" and "Child Health Handbook" into five languages for the use of foreign spouses and their family members.

## Prevention and Treatment of Rare Diseases

### Status Quo

In 2000 Taiwan launched a reporting mechanism for rare diseases that by the end of 2012, 4,089 cases were reported. Rare disease patients face a unique set of challenges: their numbers are few and the market for their drugs is small. These factors make pharmaceutical companies reluctant to develop, manufacture, import or sell what are generally known as orphan drugs. Rare disease patients therefore often find it difficult to secure the treatments they need.

### Target Indicators

The objective is to build a comprehensive treatment network aimed at rare diseases, thus helping patients to secure the care and subsidies they need.

### Policy Implementation and Results

To encourage early diagnosis and treatment of rare diseases and help patients get the drugs and nutritional supplements they need to stay alive, in year 2000 Taiwan promulgated the Rare Disease and Orphan Drug Act. Taiwan is the fifth nation in the world to introduce legislation specifically to protect rare disease patients (see Table 6-1).

**Table 6-1 Legislations for Protecting Rare Disease Patients by Country**

| Country | The U.S. | Japan | Astralia | EU | Taiwan |
|---|---|---|---|---|---|
| Year of Legislation | 1983 | 1993 | 1998 | 2000 | 2000 |
| Name of Legislation | US Orphan Drug Act modified the Federal Food, Drug and Cosmetic Act | Partial Amendments Law amended two previous Laws | Additions made to the Regulations to the Therapeutic Goods Act 1989 | Regulation (EC) No.141/ 2000 | Rare Disease and Orphan Drugs Act |
| Definition of Rare Disease Prevalence Rate | 75/100,000 | 40/100,000 | 11/10,000 | 20/100,000 | 1/10,000 |
| Legal Protection | 1. Drug R&D<br>2. R&D on medical equipment and foodstuffs meant for rare disease patients | 1. Drug R&D<br>2. R&D on medical equipment meant for rare disease patients | Drug R&D | Drug R&D | 1. Promotion of rare diseases prevention and treatment<br>2. Provision of drugs |

### 1. Making Treatment Available to Rare Disease Patients

(1) Protecting the Rights of Rare Disease Patients to Secure Medical Attention

Since September 2002, designated rare diseases have been included in a list of major injuries and illnesses entitled to special claims under the National Health Insurance program. This means patients can receive treatment without making a co-payment. Also the HPA is charged with appropriating funds in accordance with Article 33 of the Rare Disease and Orphan Drug Act. These funds subsidize the diagnosis and treatment of rare diseases along with orphan drugs not covered by National Health Insurance.

### (2) Building a Comprehensive Medical Network for Genetic and Rare Diseases

By December 2012 the committee had reviewed, certified and announced 193 rare diseases (an increase of nine from a year earlier). It also had listed 82 orphan drugs and 40 nutritional supplements, determined the conditions they were suited for, and reviewed applications for treatment subsidies.

## 2. Building a Comprehensive Medical Network for Genetic and Rare Diseases Establishing a Rare disease drugs and special nutrients distribution center

In 2012 subsidies of about NT$50 million, up by more than NT$8 million in 2011, were extended for the storage and supply of 33 nutritional supplements and 10 emergency drugs.

Regarding the uncovered medical subsidies of health insurance for rare diseases, in 2012, we subsidized a total of 1,840 people (We subsidized 172 patients with rate diseases who need household medical facilities to maintain life, nutritional counseling subsidies for 373 people with rare metabolic diseases, 31 people with domestic and international diagnosis, and 1,264 people who have rare diseases and need special nutritional food, and drugs. We also conducted 11 evaluation meetings for household medical facilities to maintain life, 10 professional agreement meetings, and 16 seminars for patients, groups, companies were conducted. A total of 69,293,905 dollars (Including commission fee) were subsidized. Through genetic birth inheritance services (Including prenatal inheritance diagnosis, newborn screening, genetic disease checkup and counseling, we provided medical services of genetic diseases and rare diseases at 11 medical centers.

## 3. Research, Education and Publicity to Prevent Rare Diseases

The HPA is committed to promoting prevention of rare diseases. It draws on media resources, produces leaflets and care handbooks, and holds campus seminars. Also it joins with the Taiwan Foundation for Rare Disorders and other NGOs to organize international conferences.

# Oral Care for People with Disabilities

## Status Quo

According to a 2004 nationwide survey, oral health of the disabled was mostly inferior to that of the general public. Common problems included a lack of medical restoration treatment, poor oral hygiene, deficient tooth cleaning, and lack of preventive health care intervention (see Table 6-2). Generally speaking, the oral health of Taiwanese children and adolescents with disabilities is inferior to that of their counterparts in Singapore. The gap with European countries, the United States and Japan is even greater. As a remedy, the Executive Yuan adopted the Five-Year Oral Health Program for People with Disabilities on May 26, 2008.

**Table 6-2 Oral Health between the Disabled and People Aged 18 or above**

| Subjects | DMFT index | permanent tooth decay rates | Filling rates |
|---|---|---|---|
| Disabled People Aged 18 or Above | 12.1 | 94.6 | 30 |
| People Aged 18 or Above as a Whole | 7.84 | 86.61 | 40.22 |

Source: Survey on Oral Health of People With Disabilities (2004)
Survey on Oral Health of Adults and Senior Citizens (2004)

### Target Indicator

Raise the percentage of institutionalized disabled people covered by preventive oral care services to 80% in 2012.

### Policy Implementation and Results

#### 1. Providing Preventive Oral Care Services to the Disabled

(1) In 2012 the HPA trained 367 counselors specializing in oral care for people with disabilities, 46 seed dentists, 189 volunteers and 2,032 workers at institutions that served people with disabilities. It also provided oral care services to 6,964 people with disabilities at their homes and 22 specialized institutions.

The objective was to develop long-term, localized services.

(2) At its "2012 6th Oral Care Campaign for People with Disabilities," the HPA offered oral care seminars, documentaries and creative teeth cleaning songs. It also hosted visits by Japanese academics and an oral heath seminar for long-term caregivers. At the seminar Taiwanese and Japanese long-term caregivers could share their experiences in providing oral care to the disabled.

## Health Care for Oil Disease Patients

### Status Quo

In April, 1979, some residents of Changhua and Taichung counties began to experience a skin ailment of unknown origins. It was later determined that these patients had been consuming rice bran oil contaminated with polychlorinated biphenyls, or PCBs. Their illness was called oil disease. Since 2004, the HPA has been providing oil disease patients with free health examinations and co-payment subsidies for outpatient and emergency services. It has also been assisting local health bureau in follow-up management of the patients, including home visits and health education. Because PCBs can be transmitted through the placenta or breast milk, in 2005 the HPA made children of female oil disease patients (born after 1979) eligible for the services listed above.

### Target Indicator

Establish a health care system for oil disease patients to secure medical care.

### Policy Implementation and Results

1. Regarding government's healthcare services for oil disease patients after the epidemic broke out in 1979. The main points are described as follow:

(1) Since April, 1979, former provincial government, department of health planned and conducted oil disease registrations, blood test, medical, and healthcare services. Each health bureau provided follow-up visits, health education, and medical referrals.

2. In March, 1995, the health national insurance was implemented. Oil disease was listed as a chronic disease. Each time a patient receives treatment, he or she can receive 30 days of medication. Each health bureaus can receive the deductible by sending former provincial health department the receipt which was come from commissioned hospitals.

3. Since March, 1997, when oil disease patients want to commissioned hospital clinics (Including emergency), they only had to be responsible for part of the fees. Former Taiwan Provincial Government entrusted National Health Insurance Administration for collections and payment transfer.

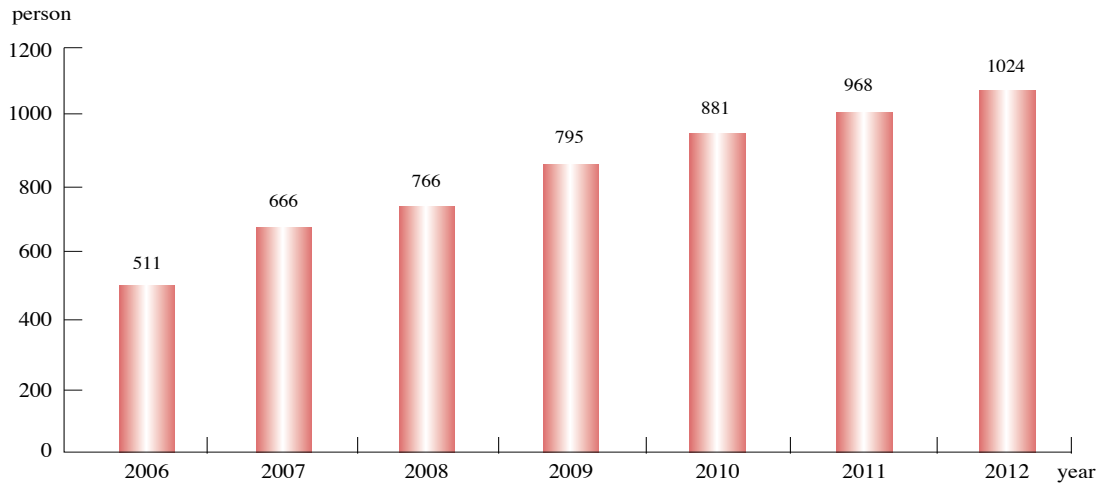
4. After Reinventing Taiwan Provincial Government, in July, 1999, Center for Disease Control, Department of Health started handling the transactions. The services include providing patients with regular checkups, follow-up visits, list management , and health education implementation. Each year, we managed, checked, and changed "oil disease patient treatment card" to replace the treatment manual printed by former provincial health department.
5. In January, 2004, HPA started handling transactions of healthcare services for oil disease patients.

HPA provided more complete healthcare services for oil disease patients. After the transfer of transactions, we continued providing oil disease patients with multiple healthcare services. The main points are as follows:

1. In August 2011, the notice of healthcare services key points for patients with PCB poisoning was pronounced. It is used as the basis for medical subsidies of oil disease patients. The contents are as follows:
   (1) Subjects include: All oil disease patients. At the end of 2012, the registered cases served for HPA were a total of 1,726 people, including 1,284 first generation oil disease cases and 442 second generation cases.
   (2) The contents of medical subsidies: All oil disease patients receive free regular health checkups, all oil disease patients have co-payment subsidies for outpatient clinic and emergency services, the first generation oil disease patients have co-payment subsidies for hospitalization.
2. Providing "oil disease patient treatment card" and annotated National Health Insurance Card : HPA has provided all oil disease patient with "oil disease patient treatment cards" as each patient's wish and annotated National Health Insurance Card since July 1st, 2010 as their wishes too. At the end of 2012, a total of 1,341 people (From a total of 1,726 oil disease patients) had issued their cards. Both of the patients with oil disease patient treatment cards and annotated NHI IC cards can gain clinical or emergency services without co-payments.
3. Each year the bureaus from each county and city arrange patients to go to hospitals for free health checkups. The contents of checkup include adult prevention healthcare, EKG, abdominal echo, fetoprotein, Hepatitis C Virus antibody test, Hepatitis B surface antigen, surface antibody checkup, categorization of white blood cells, serum biochemistry (alkaline phosphatase and gamma-glutamyl transferase), and blood occult immune analysis. In 2012, a total of 632 oil disease patients received free health checkup services. (The participation rate was 36.6%).
4. We started conducting special clinic services for oil diseases. In December 2009, Feng Yuan Hospital and Changhua Christian Hospital started holding "oil disease special clinic".

During 2004 to 2012, 1,024 people participated in at least 1 one or more health checkups (Approximately 59.3%). 237 people received health education advocacies and professional counselings from doctors. In 2012, we have subsidized partial treatment fees for 13,620 oil disease patients and hospitalization fee for 74 people.

**Figure 6-3 The Number of People with Oil Disease in at least One Health Checkup**



Promoting Your Health

# Chapter 7
# Health Promotion Infrastructure

# Chapter 7 | Health Promotion Infrastructure |

With the rapid advancement in media and web technologies, the acquisition and distribution of health information has been transformed from a passive to an active pursuit. To provide public health services geared toward health promotion, local health centers must serve the public while emphasizing quality, availability, accessibility, timeliness and cost efficiency. Only then can they meet public needs. They must regularly and systematically undertake health surveillance, constantly collect data on public health and risk factors, and make optimal use of health communication channels. These actions provide a foundation for health promotion strategies.

Taiwan is eager to share its accomplishments in health promotion with the international community. The HPA draws on various media, including the internet, to facilitate international communication and cooperation, thus making real its vision of a global village.

## Section 1 Public Health Centers-The Foundation of Public Health

### Status Quo

Taiwan has a comprehensive network of grassroots health care units. At the end of 2011, 22 cities and counties governed 371 public health centers that employed 4,324 people. Of these staff members, 84.1% were female and 15.9% male. Main responsibilities of public health centers include smoking prevention, women's and children's health, building healthy communities, outpatient services, administrative inspection, preventive immunization, monitoring and reporting, epidemic prevention, management of psychiatric patients, long-term care services, emergency medical services, and other fundamental medical and health care services.

### Policy Implementation and Results

#### 1. Achievements of Public Health Centers

(1) Provided 802,212 immunizations, or 21.8% of the nations.

(2) Provided preventive health care services to children 152,975 times, or 13.83% of the nations. Provided preventive health care services to adults 119,406 times, or 6.9% of the nations.

(3) Gave 161,195 pap smear examinations, or 7.6% of the nations.

(4) Offered smoking cessation clinics at 304 public health centers. They provided service 22,853 times, or 13.5% of the nations. The smoking cessation success rate was 31.4%.

(5) NHI medical clinic served a total of 2.967million cases, approximately 1.2% of cases in NHI authorized clinics.

(6) Issued 24,678 death certificates, or 16% of the nations.

#### 2. Education and Training of Public Health Center Staffs

The HPA developed 20 hours of digital teaching materials covering four major themes: Research and development of hospice care, safety community, and evidence-based health promotion strategies and legal knowledge of the health offices. These materials provide staffs of public health centers with varied, interactive ways to learn and improve their professional knowledge and service quality. The HPA also held five educational and training workshops for public health center staffs, topics such as obesity prevention and healthy aging were included. A total of 475 people attended.

### 3. Maintaining Clinical Treatment Systems at Local Health Centers

In conjunction with 20 city and county health departments, the HPA completed purchasing agreements to improve local health center medical care information systems. The agreements, which expanded functionality of clinical treatment procedures and provided system maintenance, covered 304 health centers and 2 chronic disease prevention centers. Required maintenance areas for normal operations include clinical medicine systems, management of chronic disease patient cases, screening record management, and report forms. System settings must also be updated regularly based on National Health Insurance reporting needs could report successfully every month to ensure local health center.

### 4. Hosting the 6th Annual Golden Center Award Competition

To enhance public health center service quality, increase efficiency of staff, and provide motivation, the HPA has hosted the Golden Center competition since 2006. By selecting public health centers which provide excellent health care, the HPA offers health centers across the nation with a benchmark to learn from as they refine work protocols and the service environment. The ceremony also increases morale among health center employees by recognizing their achievements. For 2012, the themes of the 6th Golden Center Award were senior health promotion and obesity environment improvement. In the category of senior health promotion, the outstanding award went to Taichung City Ho Ping District health office, the excellence award went to Yunlin County Er Lun health office, and Chiayi Country Da Lin health office, merit award went to Changhua East Region health office, Kaohsiung City Tien Liao District health office, and Yilan County Yuanshan Township office. For the obesity environment improvement, the outstanding award went to Taichiung City Hsin She District health office, the excellence award went to Yilan County Zuangwei District health office, and Taipei City Da Tong health service center. The merit award went to Taoyuan County Chungli health office, Changhua County Tien Wei health office, Yunlin County Hu Wei Township health office, and Kaohsiung City Yenchao District office.

## Section 2 Health Communication

### Status Quo

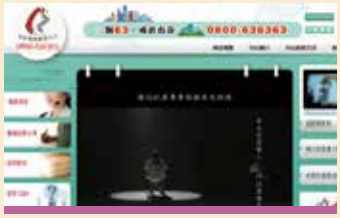
With the dramatic proliferation of the mass media, people can quickly secure health information through a variety of channels including TV, radio, newspapers, magazines, outdoor media and the internet. Boundaries of time and space no longer exist for health information as it is transmitted over the web and broadcast media.

There is a potential pitfall; however, it is easy for improper or incorrect information to spread quickly, thus undermining public health and safety.

Health communication is intended mainly to collect and share health information. It involves the dissemination of information on health promotion, disease prevention and other health-related topics. To extend its footprint of health online, the HPA provides the following websites:

| Website nameb | First page | Description |
|---|---|---|
| Health Promotion Administration, Ministry of Health and Welfare<br>(http://www.hpa.gov.tw/) |  | 1. The Administration of Health Promotion website is designed to:<br>(1) Explain duties of the HPA's various units, the services they offer, and contact information.<br>(2) Announce HPA news and activities.<br>(3) Provide information on health topics that cater to different segments of the population, such as parenting, infant hearing, oral care, vision care adolescent care, care for the middle-aged and elderly, cancer prevention, community health, tobacco hazards prevention, health education, preventive health care services, health surveys, and birth reporting.<br>(4) Accommodate different age audiences and browsing preferences by offering an English version and a children's version. The site is accessible in PDA format and RSS subscription is also provided.<br>2. The Department of Health cited the HPA website as an excellent health information website in 2005 and 2006.<br>3. Featuring prominently on the homepage are info and flash movies covering key topics of the year. Browsers can easily get related messages at a page.<br>4. The website includes special sections available to research and academic institutions, including Data for External Use, Health Surveys and Health Education. |
| The Website of the Hereditary Disease Counseling Service<br>(http://gene.hpa.gov.tw/) |  | 1. The website consolidates hereditary related knowledge and resources as a reference for medical Specialists and public health personnel. The objective is to help professionals secure the information they need to deliver fast, quality services when handling genetic disorders, including rare diseases.<br>2. The Department of Health cited the website as an excellent health information website in 2006. |

| Website nameb | First page | Description |
|---|---|---|
| Cancer registration and online interactive searching system (https://cris.hpa.gov.tw/) |  | It provides information for people, academic circles, and health related units to search for relative cancer occurrence and epidemiology, as the cancer prevention plan and evaluation for health administrative units and hospital jurisdiction planning. |
| Obesity prevention information Website (http://obesity.hpa.gov.tw/) |  | 1. Provides local health departments, public health centers, venues, and the public with a convenient online platform for health education.<br>2. Collects national weight loss information to administer weight management campaign. |
| Pregnant women care website (http://mammy.hpa.gov.tw/) |  | It provides cloud pregnant women care platform, which allows new mothers with more convenient pregnancy knowledge learning, pregnancy checkup management, maternal health records, and treatment helpers. Through maternal diary and integration of Facebook, self-management, records, and sharing, this allows pregnant mothers and family members to experience the most beautiful life processes and the happiness of welcoming newborns. |
| Adolescent website (Sexual Health e-learning) (http://www.young.gov.tw) |  | 1. The Website for Adolescents provides information related to sex education for adolescents.<br>2. Confidential online and webcam consultation services are available to adolescent visitors and premarital pregnant teens. It is suitable for the use of general adolescents. |
| Health 99 website (http://health99.hpa.gov.tw/) |  | 1. Currently the Health 99 Website has approximately 180,000 viewers each month. The total members are over 80,000. In 2005 and 2006, the website was named excellent health information website. 3,800 online teaching materials including flyers, manuals, posters, and multimedia were posted on the Health 99 Website, and people can browse online, download actual materials and request for delivery services. The sources of educational materials include the publications of Ministry of Health and Welfare and Health Promotion Administration. We also collected the publications of all the medical institutions, health offices, and civil groups, and provided the latest health news, knowledge, theme museum, and online self-screening. |

| Website nameb | First page | Description |
|---|---|---|
| | | 2. Health 99 Website will further plan and pioneer the subjects of health media. Currently there are 20,000 members on the Facebook Fanpage, and we will continue to operate and create interaction and exchange of net friend groups. We will also provide different customer-made services according to group disparity. Thematic network content and APP on mobile devices can increase interaction with people. |
| Website of Tobacco hazard prevention (http://tobacco.hpa.gov.tw) |  | 1. The Website for Tobacco Hazards Prevention is devoted to promoting tobacco hazards prevention and presenting achievements. It is intended as a one-stop platform for public health officials, instructors and the general public to search and download information.<br>2. It comprises the following sections: News, Tobacco Hazards, Tobacco Hazards Prevention Act, Tobacco Hazards Prevention Strategies, Cessation Services, Smoke-Free Taiwan, Previous Activities, Download, Smoking Behavior Surveys, Research Results, Activities Info, Local Tobacco Hazards Prevention, Smoking Cessation Handbook, etc. |
| Taiwan Smokers' Helpline service website (http://www.tsh.org.tw) |  | This website provides professional psychological consultation to help smokers quit smoking. We provide service introduction, new knowledge regarding smoke cessation, Q&A, newest information and activities. |
| Office for Somking Cessation Service (http://ttc.hpa.gov.tw/quit) |  | 1. This website provides relative information smoke cessation services.<br>2. Contracted medical institutions: Application procedures of smoke cessation services, operational know-how, and smoke cessation treatment training courses.<br>3 Public area: Provide smoke cessation methods for people who are willing to quit smoking, subsidized medicine, and relative smoke cessation information, in order to reach the goal of smoke cessation.<br>4. Service status: A list of contracted medical institutions that provide smoke cessation services and the services provided in each county and city. |

| Website nameb | First page | Description |
|---|---|---|
| Website for Disclosure of Ingredients in Tobacco Products<br>(http://tobacco-information.hpa.gov.tw) |  | According to Article 8 of the Tobacco Hazards Prevention Act, the tobacco manufacturers should regularly declare the ingredients, additives, emissions, and relative information, in order for people to understand the contents and materials in the tobacco products and information platform of relative hazards. |
| Health Indicator 123—Interactive Online Query System for Health Indicators<br>(https://olap.hpa.gov.tw/) |  | 1. The website provides the general public access to health data through searches of health indicators.<br>2. The data used for the query system is from national health surveys and birth reporting conducted and managed by the HPA. |
| Website for Healthy Workplace<br>(http://health.hpa.gov.tw/) |  | 1. The goal of establishment: The website uses healthy workplace as the theme. Through network messages, we advocate tobacco hazard prevention and control, health promotion methods, and workplace self-certification events with all the workplaces in Taiwan.<br>2. Network contents: Include “Healthy workplace certification gardens,” “workplace health and happiness,” “no smoking in workplaces,” “good things to come,” “resources download,” “online education,” and “relative network.” |
| Smoke cessation league APP |  | Through design of interactive APP by smokers and witnesses, we support you, me, him, and her to get away from tobacco hazard, and successfully quit smoking! |

| Website nameb | First page | Description |
|---|---|---|
| Weight management APP |  | 1. Healthy secrets: Provide healthy lunchboxes under the guidance of each county and city, improved zong zi for Dragon Boat Festival, and improved moon cakes for The Moon Festival.<br>2. Weight loss tool: Calculate personal BMI, and recommended calorie consumption.<br>3. Smart recipe: Provides 300~600 calorie recipe samples for the 3 meals.<br>4. National healthy exercise: Short documentary of 3 minutes of national healthy exercise. |
| Breastfeeding APP |  | We provide video education. Map search and locating system for all the mother baby-friendly medical institutions in Taiwan, supportive group search functions, status solutions, breastfeeding reminders, baby diaries and growth curves. |

Promoting
Your Health

## Section 3 Health Surveillance

### Status Quo

As the threat of non-communicable diseases grows, the World Health Organization (WHO) has suggested that every nation/country should establish surveillance systems for non-communicable disease (NCD). In light of the difference in resources of every nation/country, WHO proposed a stepwise strategy to build the NCD surveillance systems by considering mortality, morbidity, and prevalence of health risk factors. In Taiwan, the HPA has developed a comprehensive health surveillance system progressively, which encompasses population from different life-courses, to fulfill requirements of various health indicators necessary for policy implementation. Through routine, periodic health surveillance, the HPA collected national health data, which cannot be simply obtained through vital statistics or public reporting and registration systems, to strengthen the evidence-based health promotion policy-making and evaluate the efficacy of projects implemented.

### Policy Implementation and Results

In order to establish systematic national health surveillance system on non-communicable diseases, we use community-based face-to-face survey, telephone survey, and in-school student self-administered questionnaire survey as platform to collect data. Surveys on whole population as well as on specific population of different lifecourse were conducted continuously to collect, analyze, and disseminate health surveillance data. In 2012, the health survey quality management system has passed the ISO9001 certification. In the aspect of surveillance system, we have established birth reporting system, cancer and other major disease registration. In 2012, we initiated a pilot study of birth defects and injury surveillance project. We also planned to improve surveys on breast feeding, nutrition, oral health, and vision. Step by step, we have gradually completed health surveillance system on non-communicable diseases to reinforce the provision of empirical data for policy making and program evaluations.

Various surveys that the HPA has conducted over the years and is planning to undertake in coming years are listed in Table 7-1. The face-to-face interview surveys conducted in 2012 were “Taiwan Birth Cohort Study”, “Child and Adolescent Behaviors in Long-term Evolution”, and “Taiwan Longitudinal Study on Aging”—would be carried forward into 2013. Based on self-administered questionnaires, the HPA completed two surveys on the health and smoking behaviors of junior high school students in 2012. Meanwhile, telephone surveys on the smoking behaviors and behavioral risk factors among adults aged over 18 were completed as well.

### 1. Taiwan Birth Cohort Study (TBCS)

Recognizing the significance of children’s living condition during a period of rapid social change and the potential consequences throughout the life course, the Taiwan Birth Cohort Study (TBCS) was initiated in 2003 under the auspices of the HPA. The study has three main goals: (1) to record and assess health and developmental trajectories of children in Taiwan; (2) to examine the early origins of adult health; (3) to investigate the impact of social environment on children’s wellbeing.

To gain experience for planning and implementation of the large-scale birth cohort survey, a random small-scale sample that comprised children born in November and December, 2003 were selected. This pilot sample was surveyed at 6 months, 18 months, 3 years and 5.5 years old, as well as a telephone interview at 7 years of age as planned for the large-scale sample. A rich set of data were thus available to understand health profile of Taiwan children in 21st century. To keep following up health status on children development and ensure applicability of the questionnaire, the 5th pilot survey was conducted at 8 years of age with a response rate of 90.7%.

## Table 7-1 Overview of Important Health Surveys

| Series of surveys | ● cross-sectional survey → longitudinal survey | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| Community-Based Face-to-Face Interview Survey | | | | | | | | | | | | | | | |
| National Health Interview Survey | ● | | | ● | | | | ● | | | | ● | | | |
| Taiwan Longitudinal Study on Aging | | → | | | | → | | | | → | | | | → | |
| Taiwan Fertility and Family Survey | | ● | ● | | | | ● | | | | ● | | | | ● |
| Child and Adolescent Behaviors in Long-Term Evolution | | | | | | → | → | → | → | → | → | → | → | → | |
| Taiwan Birth Cohort Study | | | | → | → | → | → | | → | → | → | → | → | → | → |
| Student Self-administered Survey | | | | | | | | | | | | | | | |
| Global Youth Tobacco Survey of Junior High School Students | | | ● | | ● | | ● | | ● | ● | ● | ● | ● | ● | ● |
| Global Youth Tobacco Survey of Senior High School Students | | | | ● | | ● | | ● | | ● | ● | ● | ● | ● | ● |
| Taiwan Youth Health Survey of Junior High School Students | | | | | ● | | ● | | ● | | ● | | ● | | ● |
| Taiwan Youth Health Survey of Senior High School Students | | | | | | ● | | ● | | ● | | ● | | ● | |
| Telephone Interview Surveys | | | | | | | | | | | | | | | |
| Adult Smoking Behavior Survey | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Behavioral Risk Factor Surveillance System | | | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Surveys on Health Care Issues | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |

The protocol developed from pilot study can be applied to the large-scale survey; then further use the data collected from the large-scale survey for policy making and program evaluation.

## 2. Child and Adolescent Behaviors in Long-term Evolution

Based on the ecological model and the multilevel influences from personal, family, school and community facts on child and adolescent health and lifestyle, the " Child and Adolescent Behaviors in Long-term Evolution (CABLE)" study was initiated in 2001 by the National Health Research Institutes (NHRI). The results can provide information related to student's health for education and health authorities policy making. Subjects were selected in 2001 among the first and fourth graders who attended 18 public elementary schools in Taipei City and Hsinchu County. During 2001 to 2006, the NHRI team undertook the project by self-administered questionnaires collected from the subjects who were either elementary or junior high school students. In 2007, as the participants got older, they would disperse throughout Taiwan due to schooling or employment. In turn, the NHRI began collaborating with the HPA to combine the efforts of research and administrative units. Follow-up surveys and studies are thus made possible on the HPA's platform of community surveys. This collaboration has also facilitated the utilization of the research findings in policymaking. The 12th survey of the project was conducted during October 2012 and February 2013. Until the end of 2012, the project had accumulated longitudinal data for 11 years. These data have been further analyzed and interpreted for policy making and program evaluation.

## 3. Taiwan Fertility and Family Survey

For the reference of policy-making on population and health issues, national sampling surveys have been conducted every few years since 1965 to provide a database concerning the reproductive health related knowledge, attitude and practice of women of childbearing age. The 11th survey was conducted from July to December 2012. A total of 8,924 samples were interviewed (a response rate of 74.4%). This survey aims to enhance our understanding on current status and trends of the reproductive health related knowledge, attitude and practice of childbearing age population. To adopt the principle of gender mainstreaming, male samples were first recruited in this series of Family and Fertility Survey in 2012. This enabled the HPA to investigate marriage and childbearing related issues of the two genders. Main content of the survey included attitude of sharing household chores, smoking and exposure to secondhand smoke during pregnancy, views upon breastfeeding in public places and induced abortion. The results can be used for policy making or service planning.

## 4. Surveys on Health and Smoking Behaviors among Adolescents

Since 2004, the HPA has followed the protocol of the Global Youth Tobacco Survey, developed by the World Health Organization (WHO) and the United States Centers for Disease Control and Prevention (CDC), to monitor current situations and trends of changes associated with adolescent tobacco use. In 2006, the HPA further adopted the survey method of the CDC's Youth Risk Behavior Survey (YRBS), and the WHO Global School-base Student Health Survey (GSHS) to initiate the Taiwan Youth Health Survey (TYHS).To address health behaviors that lead to death, disease, disability, or social problems, these surveys focus on substance use of the adolescent such as smoking, drinking, and betel quid chewing, and a variety of other lifestyles and health-related behaviors. With experience on student's health survey and supports from the U.S. CDC, the HPA transited the TYHS to GSHS for better international comparison in 2012.

The aforementioned GYTS and GSHS surveys were conducted on junior or senior high school in every other year rotation. An anonymous self-administered questionnaire was completed by students of sampled classes. For better use on policy making reference, the GYTS was carried out on both junior and senior high school annually since 2011. We also cooperated with the US CDC for revision of survey protocol and questionnaire in 2012.

Two surveys had been completed on June 2012, 34,552 students completed the GYTS and the response rate is 91.62%, 6,801 students completed the GSHS and the response rate is 93.16%.

## 5. Surveys on Health and Smoking, and Drinking Behaviors among Adults

In 2004, HPA has launched the Telephone Survey on Adult Smoking Behavior (ASBS), which were taken a reference from the U.S. Behavioral Risk Factor Surveillance System (BRFSS), National Health Interview Survey (NHIS) and Global Adult Tobacco Survey (GATS). Since then, the HPA conducted the ASBS surveys from July to September annually. The range included the smoking behaviors of 18 years or older people from each county and city in Taiwan, the status of exposure second hand smoking, self-evaluated health conditions, and changing trend, in order to establish the adult smoking rate survey and statistical database.

In 2007, HPA referred to America's BRFSS telephone survey, and planned the monitoring survey of hazardous behaviors for people over 18 years old, in order to monitor important diseases and health hazard behavior rates, and the use of preventive healthcare services. The range includes chronic diseases (diabetes, metabolic diseases, high blood pressure, and kidney diseases), tobacco, betel nuts, cancer screening, and other health behaviors or lifestyles.

In addition, WHO reported that the attributable mortality caused by drinking ranked as number 8 in 2009. The attributable DALYs of drinking ranked as number 3. In 2010, at the 63th World Health Assembly, the global strategy of reducing harmful use of alcohol was passed. In order to understand Taiwanese people's drinking behaviors, opinions upon policies of alcohol, and the reference of policy planning and implementation. The first adult drinking behavior survey was conducted in 2012.

The ASBS and the BRFSS in 2012 had completed interview on 16,968 and 16,945 adults, with a response rate of 67.17% in ASBS and 62.96% in BRFSS respectively. The Adult Drinking Behavior Survey had completed telephone interview of 2,144 adults. The response rate was 79.40%.

## 6. Promotion of the "Online Health Indicators Data Query"

By adopting applicable information and internet technology, the HPA set up an online health indicators data query system in 2004. This data query website (https://olap.hpa.gov.tw/) serves as a platform at a reduced manpower requirement for descriptive analysis and provision of the health data generated from the birth reporting database to the general public, the media as well as health personnel.

Currently the data from 8 health surveys—National Health Interview Survey, Taiwan Youth Health Survey of Junior High School Students, Taiwan Youth Health Survey of Senior High School Students, Global Youth Tobacco Survey of Junior High School Students, Global Youth Tobacco Survey of Senior High School Students, Adult Smoking Behavior Survey, Behavioral Risk Factor Surveillance System, and Taiwan Longitudinal Study on Aging, and Birth Reporting Database— is querying accessible on the website. It provides services for queries into a total of 649 health indicators for the general public, and the number of visitors average over 10,000 each year.

In order to improve the website's accessibility and user-friendliness, it was first upgraded in 2007 to enhance capabilities of backend management, allow flexible inclusion of more inquiringly database or health indicators, and enable multi-year and geographic comparison. With expectation on better quality and utilization the online services, this website was upgraded again in 2009 by adding dual-language interfaces for data query, strengthening user-friendly design, as well as improving its function of geographic comparison.

The upgrade of the website in 2011 was to make it more useful and user-friendly by providing multiple paths for indicator selection, bilingual web pages and personalized services so as to further improve its service quality and frequency of use.

### 7. Applications of Survey and Research Data

The aim of the NCD surveillance is to provide the data for policy-making, program evaluation and strategy planning. To increase the utilization of these survey data, the HPA not only publishes the results by survey reports, but also conducts analyses and researches on specific topics. In 2012, a total of 45 papers were published.

In addition, we provided analytical results for the purposes of news release and for health education and advocacy. Furthermore, through online interactive data query website, we are able to provide descriptive statistics that generated from surveillance data.

In order to reach the goal of protecting privacy and adequate use of the data, Ministry of Health and Welfare established the collaboration center of health information application (CCHIA). Since 2012, we continued to provide a copy of the health survey data to the center for use application. Currently, data of a reporting database (the Birth Reporting Database) and 5 surveys (Taiwan Longitudinal Study on Aging, Taiwan Survey on the Prevalence of Hypertension, Hyperglycemia, and Hyperlipidemia, Global Youth Tobacco Survey of Junior High School Students, Global Youth Tobacco Survey of Senior High School Students, Adult Smoking Behavior Survey) are accessible at the collaboration center. It is hoped to enhance resource sharing and increase the overall utilization of the data.

## Section 4 International Cooperation

### Status Quo

Healthy citizens are vital to national prosperity. To enhance public health, policies are formed through international cooperation and interchange. In 2012 the HPA joined the 65th annual WHA Assembly, giving lectures and shared Taiwan's experience on topics such as prevention and control of non-communicable diseases, early and adolescent pregnancy, nutrition, and health problems, and social deciding factors to share Taiwan's experience. We also requested WHO to add an item of establishing multiple win financial mechanism in the prevention and control of non-communicable disease global strategies and actions. We shared the multiple benefits of tax in cigarettes.

### Policy Implementation and Results

The HPA takes an active role in international cooperation and interchange. It works with units such as the US CDC, Georgetown University, and Princeton University. The HAP also contributes to visits and training through Taiwan government and private organizations. Such hospitality was on display in 2011 when it welcomed Vietnam's General for Population and Family Planning, Ministry of Health, as part of the Taiwan-Vietnam Population, Family Planning, and Childcare Cooperation project. When hosting and participating in important international conferences, the HPA serves as Taiwan's voice. It shares Taiwan's health promotion experiences with various nations around the world, hosts international guests, holds international experience exchanges, and showcases Taiwan's accomplishments in health promotion. Key achievements include:

#### 1. Fertility and Growth

In response to the low fertility, increasing life expectancy and the consequence of change in population composition, we participated in the 2012 Annual Meeting of American Population Association on May 3rd-5th, 2012. A poster presentation using analytical results from the Taiwan's Birth Cohort Study was done. We also take advantage of the meeting to exchange idea with attendees from collaborative institutes. From May 25th to 27th, we sponsored

and co-organized the 24th Réseau Espérance de Vie en Santé (REVES) annual meeting. The theme of the meeting was "Inequalities in health by socio-economic status: Is it a universal fact?" A total of 35 papers on health expectancy related topics were presented by domestic and international participants for exchanging opinions, sharing experience, and learning from each other.

In order to promote baby friendly hospitals, on June 5th, subsidization experts participated in the Seventh meeting of BFHI coordinators." We learned effective measures in Baby Friendly Hospital Initiative (BFHI) and Baby Friendly Community Initiative (BFCI) promoted by developed countries, and shared our own experience. In addition from September 30th to October 1st, we visited the European headquarters for congenital defects, Wells prenatal screening center, and congenital defect information registration center, to learn the monitoring system promotion experience, system operation, and information system technology and operational standards sent by each center, for the reference of future establishment of congenital defect monitoring system for Taiwan.

## 2. Tobacco Hazards Prevention

(1) Eastern Asia country tobacco hazards prevention work plan: We subsidized TIMA to conduct multiple international work plans, upgrade international visibility, help with the legislation of Cambodia promoting tobacco hazard prevention and control, establish smoke-free work environment. We also worked together with Ulaanbaatar health office at the capital of Mongolia to promote smoke free work environment and plan of upgrading tobacco hazard awareness.

(2) We entrusted Juridical Person United Medical Foundation and UICC to establish tobacco hazard prevention and control GLOBALink's traditional Chinese platform. It provided tobacco hazard prevention and control workers in Taiwan and in the world to read Chinese. One aspect is that we can conveniently receive the newest channel of tobacco hazard information, and in the meantime we can regularly post the messages of domestic tobacco hazard related progresses and events to the GLOBALink English website, to share with the international society.

(3) On April 11$^{th}$, 2012, we conducted the Pre-Conference on Tobacco Free Health Care Services hosting the ENSH GOLD Forum 2012 at the Taipei International Conference Center. Approximately 320 people from 29 countries participated. The meeting included 6 global tobacco-free hospitals who received the awards. 5 of them came from Taiwan, and we became the country which achieved the most ENSH GOLD Forum Membership. In addition, there were 4 experts and 6 ENSH GOLD Forum Membership sharing their experiences, comprehensive seminars and plenary discussions from Austria, Scotland, Spain, and Germany. There were also 40 domestic tobacco-free hospitals who exhibited their achievement posters. At this time, in this meeting, the tobacco hazards control and prevention and medical healthcare policies were able to connect with the world. It made a significant contribution regarding pushing domestic preventive medicine and hospital health promotion results to the international stage.

(4) Director Chiou Wen-Da of Ministry of Health and Welfare went to Brussels, Belgium to visit DG SANCO institution and General Director Paula Testori Coggio, to discuss the plans of cooperation and sign the authorization of Taiwan to use the 37 tobacco health warning images developed by the EU. It was the first official agreement of Taiwan and EU in the health related field.

(5) We conducted the implementation of medical staff participation in the tobacco hazards prevention and control seminar. In the meeting, we invited Japan's WHO tobacco hazards prevention and control Dr. Yumiko Mochizuki-Kobayashi and urologist from Chile, Dr. Mario Fernandez to share their status tobacco cessation service promotion, and our scholars and experts who actually participated in tobacco cessation services to share their service experiences. They also focus on the tobacco cessation principles of FCTC to provide their opinions. They hoped to encourage medical staff to be more actively involved with the provision of tobacco cessation services, exhibit professional spirit, and encourage more smokers to quit smoking, in order to protect more smokers and non-smokers, and thus promote the health of people. A total of 276 people participated.

(6) In order to collected international comparative data and to increase Taiwan's capacity on adolescent health behavior survey and data analysis, the HPA has collaborated with US CDC on the Global Youth Tobacco Survey (GYTS) since 2004 and the Global School-based Student Health Survey (GSHS) since 2012. Technical support were provided by the US CDC on development of survey protocol, sampling, weighting, preliminary data analysis, completing of survey report and publication of journal papers.

## 3. Healthy Cities, Safe Communities and Schools

In 2012, AFHC conducted the 5th annual healthy city membership meeting and international seminar in Brisbane, Australia. Mayor Shu Ming-Tsai of Hsinchu City and Mayor Lee Chao Chin and colleagues participated. 13 oral theses were published, and 44 posters were exhibited. Tainan City healthy city promotional association, Miaoli City healthy city promotional association, Pingtung City healthy city promotional association, and Hsinchu City promotional association garnered the AFHC healthy city innovative development award.

In addition, HPA conducted 10th Anniversary of Taiwan Promotion of Safe Community Open Ceremony and achievement press conference. WHO CCCSP guests conducted the award ceremony on November 24th. On the 25th , we conducted the 2012 Taiwan Safe Community Development Seminar. We invited WHO CCCSP Prof. Leif SvanstrÖm to conduct special topic speeches. In addition, on November 27th, we conducted the "2012 health promotion school international certification expert meeting" to discuss this year's health promotion school international certification results and Taiwan's promotion of health promotion school policies, and in 2013, the achievements of IUHPE were announced.

## 4. Health Promoting Hospitals and Environmental Sustainability Development

(1) From February 20th to 23rd, 2012, Director-General Chiou Shu-Ti was invited to speak in the WHO-HPH Winter School in Bangkok, Thailand. During the seminar, she shared Taiwan's experience on implementing health promoting hospitals. Director General Chiou also invited attendees and participating healthcare institutions to come to Taiwan to participate in the 20th International Conference on Health Promoting Hospitals and Health Services.

(2) On September 11th, 2012, Director-General Chiou Shu-Ti was invited to participate in the annual meeting of Association of State and Territorial Health Officials (ASTHO), representing the WHO International HPH Network and the Taiwan HPH Network, and shared with the state health officials the promotion of international HPH initiatives, as well as the achievements of Taiwan's community and clinical health promotion activities under the tutelage of health departments and healthcare institutions.

(3) From April 11th to 13th, HPA and WHO Collaborating Centre for Health promotion in Hospitals and Health Care co-hosted the 20th International Conference on Health Promoting Hospitals and Health Services. This is the first time the event is being held outside of Europe. A total of 1,357 people from 45 countries registered and participated in the conference. Director-General Chiou Shu-Ti was elected as the new Chair of the WHO International Network of Health Promoting Hospitals & Health Services. She also signed a memorandum of understanding (MOU) between the International HPH Network and the ENSH-Global Network for Tobacco Free Healthcare Services.

(4) On April 12th 2012, HPA organized a Symposium on HPH and Environment during the 20th International Conference on Health Promoting Hospitals and Health Services. Topics discussed during the symposium included scientific, political and business dimensions of environment-friendly healthcare. Domestic and international experts and scholars during the symposium conducted experience exchange. In addition, the 4th Meeting of the Task Force on HPH and Environment was held after the symposium.

(5) On April 11th, 2012, the Task Force on HPH and Environment and HCWH organized the Pre-Conference on HPH and Environment and the Southeastern Asian Launching Ceremony of the Global Green and Healthy Hospitals Network. Hospital representatives from 13 countries all over the world (21 hospitals from Taiwan) participated in the declaration ceremony, reminding healthcare institutions to value environmental sustainability, and promote environmental health in communities.

(6) Director-General Shu-Ti Chiou was invited speak at the closing plenary of the CleanMed 2012 Europe, taking place on September 28th, 2012, in Malmo, Sweden. Dr. Chiou attended the conference as Chair of the WHO International HPH Network and Director-General of HPA. During the plenary, she spoke on the "The Experience of Taiwan's Hospitals in Reducing Their Ecological Footprint", sharing the experience and achievements of Task Force on HPH and Environment in encouraging healthcare services to implement energy conservation and sustainability development.

## 5. Healthy Aging

From August 28th to 29th, 2012, we conducted 2012 APEC, Asia-Pacific Conference on Age-friendly Cities and Age-friendly Economy. The seminar was the first seminar that discussed age-friendly city topics under the APEC structures. We invited experts from America, England, Canada, Japan, Ireland and from European aging platform to share age-friendly promotional practices, and conduct exchange with all circles domestically.

On April 11th, 2012, during the 20th International Conference on Health Promoting Hospitals and Health Services, the Working Group on HPH and Age-Friendly Health Care was proposed and passed by the General Assembly. HPA's Director-General Shu-Ti Chiou lead the working group to develop an internationally applicable age-friendly healthcare framework, media promotion age-friendly healthcare, and capacity building of age-friendly healthcare professionals.

## 6. Obesity Prevention and Prevention of Non-communicable Diseases

From July 10th to 11th, 2012, we conducted the 2012 Europe-Taiwan Health Dialogue. We invited European Health Forum Gastein (EHFG) founder, Dr. GüntherLeiner and newly selected Prof. Helmut Brand and 11 guests came to Taiwan to discuss, exchange, and interact with 200 domestic elites in the industrial, government, and academic circles. We also further discussed the topic of obesity prevention. On September 27th, 2012, The Economist Group conducted the Feeding the World: Asia's prospect of plenty. In the meeting, we discussed themes such as, trade, agriculture, health, and nutrition. Director-General Shu-Ti Chiou was invited to be a speaker at Health & nutrition discussion: Asia's double burden. She emphasized the burden caused by malnutrition and over-nutrition to Asian countries. From October 3rd to 6th, 2012, the 15th annual European Health Forum was conducted in Gastein City, Austria. Director-General Chiou Shu-Ti spoke on the topic of Whole society development against obesity: strategy or fantasy? She shared Taiwan's promotion on cancer prevention and obesity prevention.

## 7. Cancer prevention

From April 26th to 29th, 2012, HPA appointed officials to participate in the 6th annual meeting of Asian Pacific Organization for Cancer Prevention, APOCP in Malaysia. The theme was "clinical epidemiology and practical interventions-the future of cancer control in the Asian Pacific Region".

From September 13th to 14th, we conducted the "2012 Cross-strait Conference on Cancer Prevention and Control". We invited experts from China, Hong Kong, and Taiwan, public and private sectors, and civil groups to conduct policy and practical experience exchange and sharing. The themes include international and cross-strait cancer prevention, cancer epidemiology and database, the evidence of cancer screenings, the development of cancer screening system, civil propose and action. Approximately 300 people participated.

## 8. Participation in the European Health Forum Gastein

European Health Forum Gastein (EHFG) was the most important health policy seminar of EU, and was one of the most important health leading meetings as well. From October 3rd to 6th, 2012, HPA conducted parallel seminar at the 15th annual EHFG in Austria. The theme was Non-Communicable Diseases, NCDs. Director-General Shu-Ti Chiou spoke on the topics of "Whole Society Development Against Obesity: Strategy or Fantasy?" and "Health system response to

NCDs: (some) Organizational and Financial Innovations in Taiwan." She discussed with experts and scholars around the world about the legislation, tax system, and industrial role of the risk factors of non-communicable diseases. We also put our heads together in order to deal with challenges faced by the health system.

## 9. Hosting International Visitors

(1) On May 2nd, 2012, seven guests including Director and former director of US Health Department and professors of Duke University visited HPA. We introduced our operations including healthy aging, woman and child health, healthy community building, obesity prevention, cancer prevention, tobacco hazard prevention and control, preventive healthcare services, health promotion, and non-communicable monitoring. We also interacted with American health officials.

(2) On May 23rd, 2012 Professor Chen Tze-Lang from the Educational Media Department of Duke University led graduate students from Asia University and Duke University to visit Taiwan. We not only introduced the HPA operations to them but also exchanged experience with young students.

(3) On July 13th, 2012, we welcomed European Health Forum Gastein (EHFG) founder and chairman Dr. GüntherLeiner, newly selected chairman Professor Helmut Brand, and 9 other guests visited health promotion hospitals, age-friendly cities, and mobile medical services.

(4) On July 30th, 2012, American Consumer Product Safety Commissioner Mr. Matthew Howsare and company visited HPA. An introduction on the HPA operations and injury prevention, control, and monitoring were given to the CPSP visitors and idea were exchanged.

(5) From August 12th to 19th, Vietnam's Director of Inspection Department, General Office for Population and Family Planning, Ministry of Health, Le Viet Huong led a mission group of senior and mid-ranking officials for a field visit to Taiwan. To extend a 17-year bilateral cooperation on population, family planning and child health care.

(6) On August 17th, 2012 US FDA National Toxicology Research Center Deputy Director Dr. Magaret Ann Miller visited HPA. We not only introduced our operations to her but also engaged in discussion and exchange regarding tobacco hazard prevention and control and birth care.

(7) On September 14th, Dr. Dimity Doman of Australia Hearing Impaired Child Center visited HPA. We conducted experience interaction regarding newborn hearing screening promotion.

(8) On November 13th, 2012, a total of 3 guests visited HPA including medical technical staff Mr. Alex Gibson GoliGondwe from Malawi, Africa. We introduced and exchanged in respect of our operations, national cancer registration system, and chronic disease statistics.

(9) As part of the Ministry of Foreign Affair's (MOFA) effort in rally support for Taiwan to join the United Nations Framework Convention on Climate Change (UNFCCC), HPA received 18 visitors from top-circulating international media from 17 nations, including media workers from the environment related fields. Owing to Director General Chiou's participation in the UNFCCC COP 17 side events and speech during the press conference, MOFA arranged for the visitors to visit HPA and learn about Taiwan's effort in promoting environment-friendly hospitals. Dr. Chiou also answered questions regarding health promotion and environment-friendly healthcare from the media visitors.

(10) On December 11th, 2012, we conducted the "Age-friendly City Agreement Camp and Achievement Seminar". We invited Friends of International Federation on Ageing Chairman Dr. Hozumi to share Japan's promotional experience, and discuss the practical problems and two-way interactions of age-friendly cities.

(11) On December 24th, 2012, Mainland China Birth Planning Association Women and Children Health Inspection Group visited HPA, in order to understand Taiwan's achievements of women and children health and promotion of population policies.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Promoting Your Health

# Appendix
# HPA chronological Highlights in 2012

# Appendix | HPA Chronological Highlights in 2012 |

| Time | Content of annual events |
|---|---|
| January 17th | We conducted the achievement evaluation and ahievement seminar of "Healthy Centenary, Healthy Taiwan." A total of 272 units were commenmorated. A total of 500 people participated in the seminar. In 2011, a total of 720,000 people participated in the activity, and 1, 104 tons were lost collectively. |
| January 29th | We strictly prohibited non-medical gender selection and selective abortion. In 2011, the gender birth rate was lowered to 1.079, which was the lowest in 16 years since 1996. The gender rate was lowered to 1.134 after the third child, which was the lowest in 18 years. |
| January 31st | According to the stipulation of the Article 21 of Tobacco Hazards Prevention Act, we have started implementing second generation smoking cessation payment scheme, effective on March 1st, 2012. |
| February 24th | According to the stipulation of the Article 21 of Tobacco Hazards Prevention Act, which stipulated that aboriginines in the mountain areas and offshore islands, who accept tobacco cessation treatment from medical institutions, only have to be responsible for part of the tobacco cessation medication, effective on March 1st, 2012. |
| March 1st | Second generation smoking cessation payment scheme became effective: It is open to OPD hospitalization, and emergency room. The medication is provided following the rule of NHI (It is free for people live in remote areas and come from low income families.) Other than medication use, we also paid for health education of tobacco cessation and follow-up, and reinforced the quality performance of tobacco cessation and encouragement. |
| March 7th | We have announced the "newborn hearing screening subsidy service plan."The subjects of subsidization include babies who were born after Match 15th, 2012. Newborns who were citizens of Taiwan under age of 3 months were each subsidized 700 dollars. |
| March 21st | National Healthcare Meeting was conducted on March 21st and 22nd in Taichung City. A total of 250 people from HPA and Department of Health participated. In the meeting, we made the weight loss declaration of "Taiwan 2012, the more you move, the healthier you are!" we gave out the award of units with excellent evaluation in 2011, and focused on important work, and conducted practical sharing and discussion. |
| April 6th | The theme of World Health Day this year is "Ageing and health.". In accordance with the slogan of WHO, "Good health adds life to years" We held press conferences to invite sportsmen and university students to experience the life of aged seniors. It has drawn public attention to take action for building an age-friendly environment, encouraging seniors to exercise more, and participate in social activities. |
| April 11th | We conducted the "Pre-Conference on Tobacco Free Health Care Services Hosting the ENSH GOLD Forum 2012" Approximately 320 people from 29 countries participated. In the conference, we gave out the global tobacco-free hospital golden award. A total of 6 hospitals received the award, and 5 of them came from Taiwan. In addition, there were domestic experts and 6 ENSH GOLD Forum Membership sharing their experience, and 40 domestic tobacco-free hospitals exhibited their achievement posters. In the conference, domestic tobacco hazards control and prevention and medical healthcare policies were connected with the world, which promoted domestic prevention medicine and hospital health promotion achievements to the international stage. |
| April 11th-13th | The HPA co-hosted the 20th International Conference on Health Promoting Hospitals and Health Services with the WHO Collaborating Centre for Health Promotion in Hospitals and Health Care. A total of 1,370 people attended the conference. Director-General Shu-Ti Chiou was elected as the new chair of the WHO International Network of Health Promoting Hospitals & Health Services. |

| Time | Content of annual events |
|---|---|
| April 15th | We announced the "Group B Streptococcus screening subsidization service plan." We subsidized 500 dollars for pregnant women who accepted the screening. |
| May 24th | Director of Ministry of Health and Welfare, Chiou Wen Da paid a visit to went to DG SANCO in Bruxelles, Belgium, and discuss with chief Paula Testori Coggi about working together and sign authorization for Taiwan to use 37 developed tobacco health warning images of the EU. It was the first official agreement for Taiwan in the health-related areas with EU. |
| May 25th | Director-General Shu-Ti Chiou conducted a speech in this year's WHA Committee A. She shared 4 topics of Taiwan's health policies and prevention experience regarding prevention for noninfectious diseases, and participated in the technical briefings of ageing and health. In addition, she held bilateral talks with health ministers or senior officials of the U.S., the EU, Philippines and so on. |
| May 31st | We conducted work group meetings for Executive Yuan, Tobacco Hazard and Prevention. |
| June 10th | The 2012 "Quit and Win" started on March 25th. A total of 31,067 groups signed up which was a historic high. We conducted urine tests according to international standards, and reconfirmed the qualification for awards. On June 10th , under the testimony, we gave out the awards for the first winners. |
| June 21st | In 2009, we conducted the press conference to announce the 2009 cancer occurrence information. We advocated people to establish healthy lifestyle, regular screening. People who were test positive should come back for re-checkup, to receive early discovery and treatment. |
| July 10th-11th | We conducted the "2012 Taiwan-Europe Health Seminar." We invited the Founder and Chairman of Gastin European Health Seminar Dr. Gunther Leiner and 10 other guests to Taiwan. We discussed topics on cancer prevention, tobacco hazard control and prevention, healthy ageing, healthcare information, and obesity prevention. A total of 200 people participated. |
| July 22nd-23rd | From June 20th to 22nd, the Environmental Quality Protection Foundation, representing Ministry of Health and Welfare, participated in the 2012 United Nations Conference on Sustainable Development (UNCSD, Rio+20) in Rio de Janeiro, Brazil. On July 22nd and 23rd, at the post-conference briefing held at the Environmental Protection Agency, the EQPF reported that they have organized 2 side events during RIO+20 on June 16th and 18th. The EQPF handed out the "Introduction of Task Force on HPH and Environment" brochures during the side events, advocating Taiwan's achievements. The side event received international media attention and was covered by IISD Reporting Services. |
| August 1st | We announce the "Implementation of the second generation smoking cessation payment scheme",which included health education of tobacco cessation and individual management for contracted drug stores, effective on September 1st, 2012. |
| August 8th | We announced the revision of Articles 6, 9, and 10 of "Regulations Governing Reporting of Tobacco Product Information"in order to cooperate with organizational adjustment and upgrade tobacco declaration and inspection efficiency. We authorized competent central authority to entrust in professional agencies, effective on August 8th, 2012. |
| August 12th-19th | 13 middle and high level managers from General Office for Population & Family Planning, Ministry of Health, Vietnam came to Taiwan to share their experience regarding population and healthcare benefit policies. |

| Time | Content of annual events |
|---|---|
| August 28th | The conference "2012 APEC Asia-Pacific Conference on Age-friendly Cities and Age-friendly Economy" was the first Age-friendly Cities conference held under the APEC framework. This conference invited 7 international professionals, municipal administrators, speakers from non-government organizations to share the knowledge and experiences on age-friendly environments. A total of 20 cities/counties also showed their achievements of promoting Age-friendly City with posters. |
| September 1th | "Second generation smoking cessation payment scheme" implemented community pharmacy providing NRT medcine, cessation counseling and case management. |
| September 13th | We conducted the "Cross-strait Conference on Cancer Prevention and Control." We invited Dr. Tsung-Mei Cheng and Professor Zhao Ping from China, to share their opinions regarding international trends, epidemiology, screening system, and civil actions. |
| September 21st | We conducted the medical, human culture, and health speeches at the 2012 healthcare united academic seminar. We provided 6 special topic reports regarding age-friendly healthcare, collective diabetic care, cancer patient resources guidance services, children accident hazard prevention, newborn hearing screening, and sustained management. |
| September 8th-9th, 22nd-23th, and 29th | We conducted the "foster mother system citizen evaluation meeting."Through fully information, theories, and listening and the communication processes of opinions. The citizens made a concluding report regarding 3 topics of foster mother. |
| September 27th | Director-General Shu-Ti Chiou of HPA participated the "Feeding the World: Asia's prospect of plenty" in Hong Kong conducted by The Economists Group. She was the moderator of "Health & nutrition discussion: Asia's double burden" including the national healthy weight loss management plan of Taiwan. She shared the policy planning and achievements of non-infectious chronic diseases. |
| September 28th | Director-General Shu-Ti Chiou was invited to speak at the closing plenary of CleanMed 2012 Europe , held in Malmo, Sweden. During the plenary, she shared Taiwan hospitals' experience on energy conservation and carbon output reduction in hospitals of Taiwan. |
| October 7th | A special session on "Evidence Based Health Promotion policies" was organized at the 2012 Annual Meeting of Taiwan Public Health Association. Four topics for oral presentation were "The evidence-based smoking cessation and policy translation: the second generation smoking cessation program" , "The evidence-based cancer screening and policy translation: prostate cancer screening", "The review on evidence of obesity prevention and policy translation", and "The review on evidence of promoting exercise and policy recommendation" |
| October 11th-12th | We conducted the "implementation of medical staff participation of tobacco hazard prevention and control seminar."We invited 33 domestic and international medical professional scholars to discuss the relationship between smoking induced diseases and its influence on children and pregnant women. We shared tobacco hazard control promotion and tobacco cessation treatment service experience. A total of 276 people participated. |
| October 17th and 30th | We organized "Health 101 Move-National Contest for Elderly Health Promotion" national competition in the Northern and Southern Taiwan. There was a total of 1,905 teams nationwide with more than 74,000 senior participants which was about 3% of the elderly population. This number is beyond the goal of 50,000 people. |
| October 23th | We conducted the "2012 Framework Convention on Tobacco Control international seminar."We invited 7 domestic and international scholars from the Americas, Australia, and Poland. We emphasized the actual conditions of each country's processing of illegal tobacco trades, tobacco tax, and tax-free sales policies, trades, investments, tobacco product control, smoke-free tobacco products, electric cigarettes, smoke-free environment, and tobacco hazard prevention and control. We conducted experience sharing and academic discovery. A total of 90 people participated. |

| Time | Content of annual events |
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| October 28th | We cooperated with the advocacy theme “Diabetes Education and Prevention”on World Diabetes Day (November 14th). The press statement was released, and we conducted seminars, carnivals, lighting, and commemorative press conferences together with diabetes related associations. We reminded people of paying attention to diabetes prevention for reduction of its threat to health. Approximately 6,000 people and professional staff participated. |
| November 20th | Taiwan Cancer Foundation conducted the “Cross-strait chronic disease prevention and nutritional healthcare seminar.”We invited Deputy chief Kong Ling Chi and 8 other people from the China Department of Health, Bureau of Disease Prevention and Control. Director-General Shu-Ti Chiou conducted speech regarding “citizen health promotion-weight loss promotional achievement.”On November 21st, we conducted “Cross-straight community health and chronic disease prevention promotion and executing seminar.<br>HPA organized the 2012 “Age-Friendly Healthcare Promotion Achievement Conference” and issued certifications to 28 age-friendly healthcare institutions. Changhua Christian Hospital received the best practice award for the “2nd Annual Age-Friendly Healthcare Institution Best Practice Competition.” A total of 268 people from healthcare institutions and health bureaus participated in this event. |
| November 21st | In 2012, HPA entrusted in conducting the “Health Promotion School International Certification Plan.”We invited international certification committee members to conduct field visit to schools which are candidates for the golden quality awards. On November 27th, we invited representatives from Ministry of Education, domestic experts, and international certification members to discuss the certification procedures this year, and give recommendations for the future direction of promotion. |
| November 24th | We conducted the “10th anniversary of Taiwan promotion of safe community and achievement press conference.” We invited WHO community safety promotion center chairman to give out certification medals for Taipei Medical University, Taipei Medical University Hospital, and safety community of Alishan Township, Chiayi County. |
| December 7th | In order to upgrade people’s knowledge for the health hazard of tobacco product, we conducted the “tobacco product health hazard seminar.”The meeting includes: topic discussion and achievement seminar of tobacco hazard, healthy economy, and second generation tobacco cessation. Approximately 80 people participated. |
| December 11th | HPA held the “Age-friendly City Agreement Camp and Achievement Seminar”. The Minister Wen-Ta Chiu of Health and Welfare, Director-General Shu-Ti Chiou of Health Promotion Administration and a total of 22 representatives of cities/counties initiated the network of Age-Friendly Taiwan. |
| December 14th | We conducted “Tobacco-free hospital and second generation smoking cessation payment scheme commemorative ceremony for excellent medical institutions and practical exchange seminar.” We gave out awards to 110 tobacco -free hospitals. In the meantime, we gave out awards to more than 20 hospitals with excellent achievement in second generation smoking cessation treatment service, and arranged awarded medical institutions to share their experience and achievement. There were more than 100 medical institutions, and approximately 400 people participated. |
| December 19th | We conducted the 2012 community health building achievement seminar. We commenmorated 235 units with excellent achievement in healthy weight loss management, community health building, volunteers, health offices, and healthy workplaces. We shared the promotional experience. 631 people participated in the seminar. A total of 780,000 people participated in the acitivity, with a total of 1,137 tons were lost. |
| December 25th | We conducted the tobacco hazard prevention and control committee meeting at Executive Yuan, Ministry of Health and Welfare. |
| December 28th | We announce the tobacco service subsidization plan at medical institutions, and electronization of “tobacco cessation health education and individual management record chart.”Effective on January 1st, 2013. |

Promoting Your Health


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