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2019 Taiwan Health and Welfare Report

HEALTH・HAPPINESS・FAIRNESS・SUSTAINABILITY

Ministry of Health and Welfare, R.O.C. (Taiwan)

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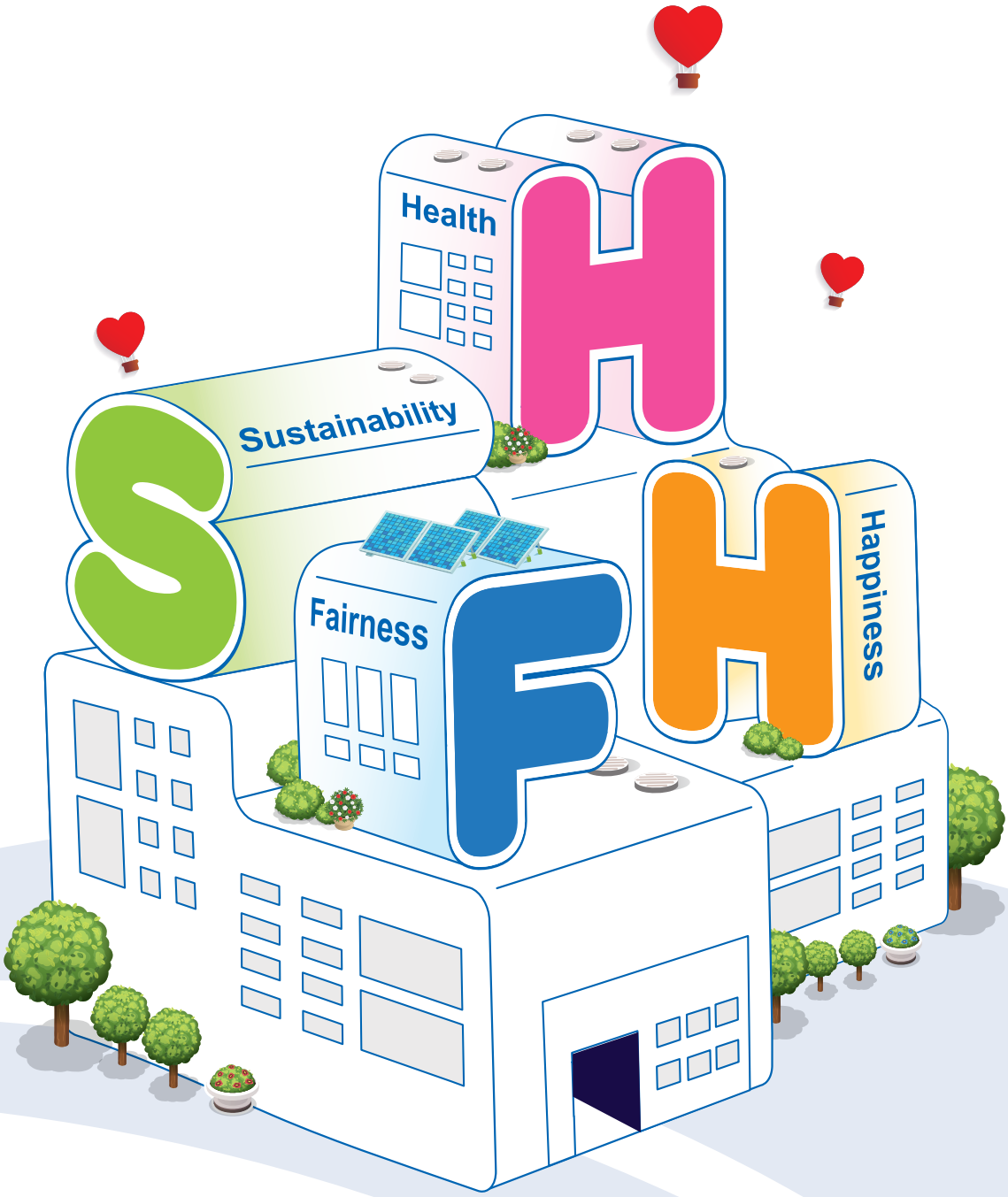

Ministry of Health and Welfare, R.O.C. (Taiwan)

Foreword

In the face of challenges from rapid changes that took place in 2018, the Ministry of Health and Welfare stayed true to its administrative philosophy of “promoting the health and well-being of all citizens” by improving health care quality and services, increasing long-term care capacity, and strengthening social welfare programs to better match resources with needs.

The United Nations 2030 Agenda for Sustainable Development includes Sustainable Development Goal 3: “Ensuring healthy lives and promoting well-being for all at all ages” by achieving universal health coverage. Taiwan has long pursued that goal by ever more effectively targeting health resources to provide fair and comprehensive services for all residents.

Seeking to improve health services for offshore islands and remote townships, the Ministry established new rules for medical diagnosis and treatment using telecommunications in May 2018. With more residents eligible for tele-medicine services, access is enhanced in mountainous areas and other remote regions. Tele-medicine also helps long-term care patients in such areas receive better follow-up and home care after discharge.

With the issue of population aging and its inevitable impacts looming, more long-term care resources are needed as soon as possible. Thus the Department of Long-Term Care was established in 2018, and a long-term care hotline service was launched a year earlier. Even with users paying for this service after the first five minutes of free consultation, daily volume has increased substantially.

As health professionals grew in number, the pool of skilled long-term care workers has also increased. In January 2018, the Long-term Care Benefit and Reimbursement System was changed to a service-based model for more convenient care that aligns better with client needs.

To protect patients’ dignity, the Ministry published management procedures for medical institutions offering advance care planning and advance decision in April 2018. The Patient Right to Autonomy Act promulgated in January 2019 is the first such law in Asia safeguarding patients’ right to a good death.

The Ministry and other agencies are jointly implementing a Social Safety Net Enhancement Project approved by the Executive Yuan in early 2018. Focusing on family-centered and community-based services, fragile and high-risk families and those in crisis can receive services; other programs target at-risk children and teenagers.

As a sufficient number of well-trained social workers is essential to successfully administer such policies, the Ministry seeks to improve their working conditions as well as collaborate with law enforcement and prosecutors to ensure social workers’ safety. Continuing and advanced professional education and examinations following training courses will help these front-line workers and those appointing them serve clients with best practices.

As Taiwan’s workforce, economic development and social stability all face major challenges from declining birthrates, we are seeking policy solutions to issues such as the high costs of raising children,

(See Table of Contents)
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parents struggling to balance work and family duties, and child care quality and access. Subsidies for such care have extended services to children under the age of 2 since 2018. Our policy to develop public and private services seeks to extend child care to all who need it.

Drug abuse and food safety issues are two other essential health policy areas. Our Ministry has established Drug Abuse Prevention Centers as well as Substance Treatment and Research Centers since 2018. These facilities assist clients in finding treatments and occupational training as well as offering job placement and other services.

Regarding food safety, our new Five-Ring Policy will gradually integrate source and production management,market inspections, vendor accountability and more complete supervision to ensure purity and freshness.

Challenges to public health will continue to arise, and we will meet each by seeking viewpoints from the people and all interested parties. By integrating local and central government resources, we can provide services that optimally address social needs. The Ministry of Health and Welfare will continue to build a public health policy environment that equally empowers all citizens to lead healthy, joyful, fair and sustainable lives.

Minister of Health and Welfare Shih-Chung Chen

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1 Organization and Policy

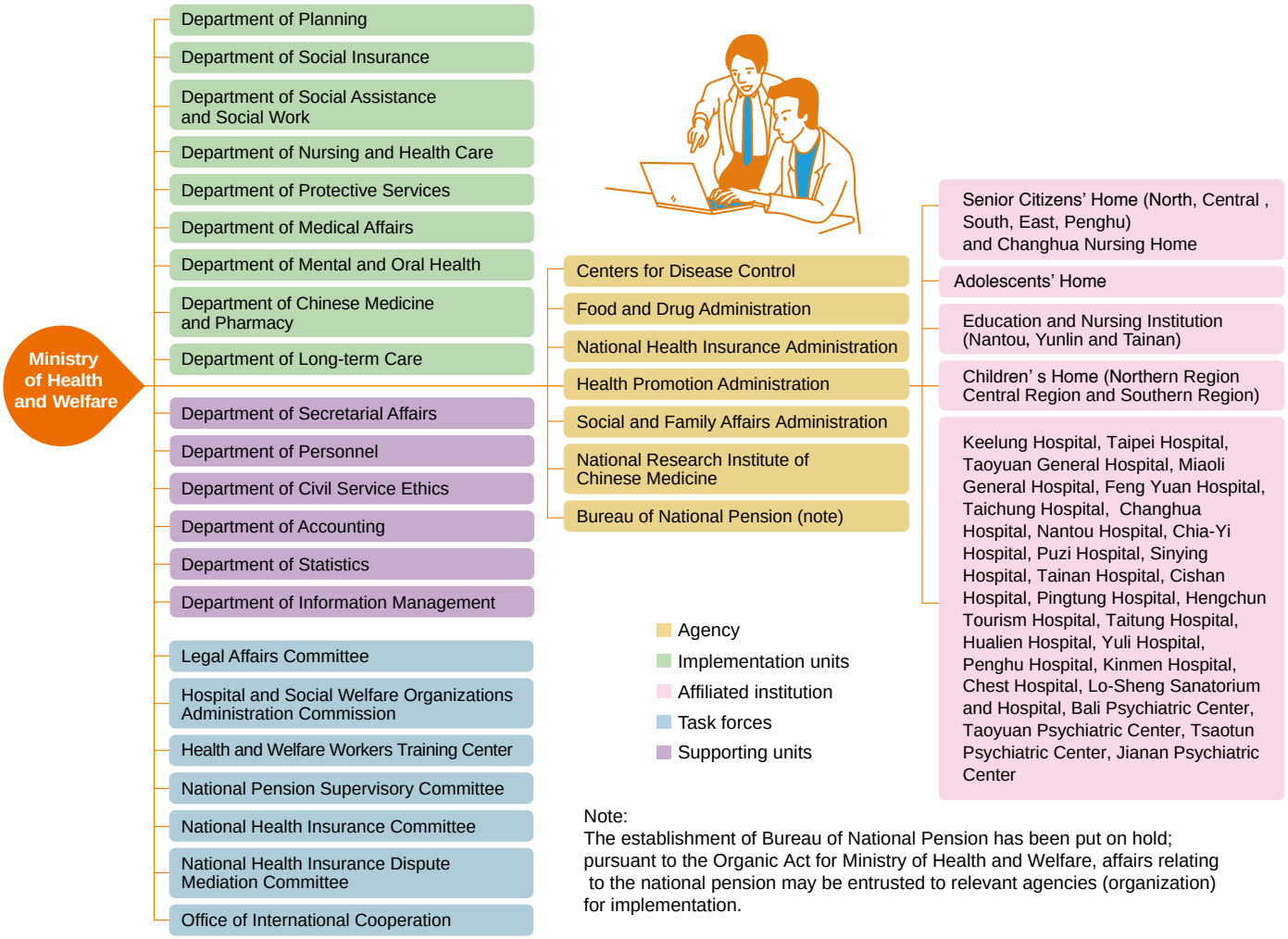
In accordance with the organizational restructuring of the Executive Yuan, the Ministry of Health and Welfare (hereinafter referred to as the "MOHW") was established in 2013, by integrating 21 divisions and task forces of the former Department of Health, five subordinate authorities, the Ministry of the Interior's Department of Social Affairs, Child Welfare Bureau, Domestic Violence and Sexual Assault Prevention Committee, National Pension Supervisory Committee, and the Ministry of Education's National Research Institute of Chinese Medicine. A human-centric health and welfare network was thus formed to improve the people's health and well-being.

Guided by our mission of "promoting the health and well-being for all citizens" and our vision of "becoming the most trusted government agency", the Ministry will adhere to global and innovative thinking with localized strategies to integrate social welfare and healthcare resources as we diligently plan administrative measures and integrated, consistent public policies so that we can deliver comprehensive, one-stop services that will enable all citizens to lead more joyful and healthier lives.

Chapter 1 Organizational Structure

The minister oversees ministry affairs and is aided by two deputy ministers, one vice minister, and one secretary-general. The MOHW consists of nine departments, six administrative departments, seven mission-oriented units, and six affiliated third-level agencies (institutes). It oversees 26 hospitals and 13 social welfare institutions, as shown in Figure 1-1.The MOHW is responsible for health promotion, disease control, food safety and drug management, medical care, social insurance, social welfare, social assistance, and protective services.

Figure 1-1 Organization of the Ministry of Health and Welfare (MOHW)



Note:
The establishment of Bureau of National Pension has been put on hold; pursuant to the Organic Act for Ministry of Health and Welfare, affairs relating to the national pension may be entrusted to relevant agencies (organization) for implementation.

Chapter 2 Expenditure

The Ministry's financial statement for 2018 came to 216.192598 billion NTD, with various expenses and their percentages shown in Figure 1-2.

Chapter 3 Administrative Goals

Section 1 Annual Objectives

The Ministry has prepared its administrative plans and objectives for 2018 as shown in Figure 1-3 in accordance with the Executive Yuan's administrative policies and approved budgets. The excerpt of key strategies is as follows:

1. Reinforcing the welfare delivery system and giving priority to care for vulnerable groups

(1) Protecting children and youths' welfare and rights; constructing diverse nursery models of consistent quality.

(2) Implementing "Convention on the Rights of Persons with Disabilities", and improving the service capacities and quality.

(3) Reinforcing the empowerment of women and constructing a friendly environment of empowerment.

(4) Integrating current networks for child/youth protection and high-risk family services to strengthen social safety network.

2. Setting up a high-quality long-term care system and preparing holistic long-term care service resources

(1) Improving long-term care quality and expanding upon diverse supply capacities.

(2) Building up comprehensive ABC tier resources to improve the accessibility of community care services.

(3) Promoting care for solitary seniors and integrated outpatient services; bolstering community care services for seniors with dementia.

3. Creating a mutual assistance society and improving the protective services system

(1) Safeguarding economic means for the disadvantaged minorities and promoting the "Savings Account for Future Education and Development of Children and Youth".

(2) Constructing a community mutual care network and expanding capacities for volunteer services.

(3) Constructing a vocational system for social work and fleshing out social worker human resources for local governments.

(4) Strengthening the three-level sexual violence preventive services system.

(5) Creating interconnected networks for children and youth protection and implementing early intervention to provide supportive services.

4. Expanding current systems of healthcare and safeguarding people's rights to seek medical assistance

(1) Constructing community-based healthcare network; promoting hospice care for patients in homes and communities.

(2) Fortifing current systems for emergency medical care and continuing to inject resources to medical services in remote areas.

(3) Promoting the legalization of working rights for physicians and improving the working environment for medical personnel; fortifing existing handling mechanisms for medical disputes.

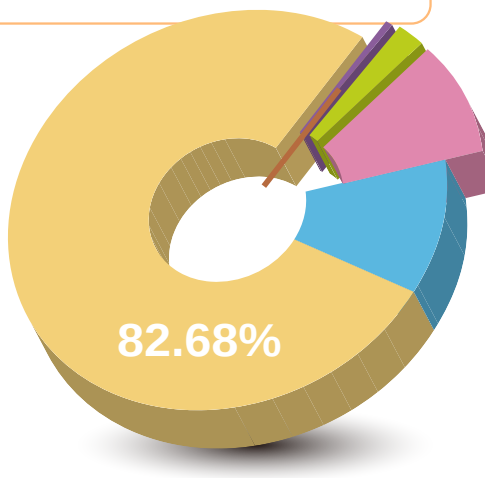
(4) Promoting premium nursing work environment to attract more nursing personnel return; strengthening nursing talent cultivation and institutional management.

(5) Constructing a healthcare environment for TCM and improving the quality of services provided by Chinese Traditional Folk Therapy personnel.

Figure 1-2 Distribution of 2018 Health and Welfare Final Accounts

Units:NT$1,000, %

Education	143,499	0.07%
Social Assistance	1,291,454	0.60%
Science	4,737,962	2.19%
Medical and Health Care	17,392,494	8.04%
Welfare Services	13,886,598	6.42%
Social Insurance	178,740,591	82.68%



(6) Strengthening talent cultivation and technological researches in health and welfare; promoting the development for biotechnology industries.

(7) Promoting international and cross-strait collaboration and exchanges in the areas of health and welfare.

5. Establishing a high-quality communicable disease prevention preparedness system and advancing toward a new era in epidemic disease prevention

(1) Constructing a comprehensive epidemic prevention system by strengthening capacities for infectious disease monitoring, early warning, risk control and prevention responses.

(2) Implementing relevant vaccination operations and ensuring adequate financial resources for vaccinations.

(3) Expanding upon existing screening and providing thorough care to achieve further reduction of TB and challenging the target of zero growth for AIDS.

(4) Expanding upon international epidemic prevention collaborations and promoting emerging epidemic network integrations to prevent the entry of infectious diseasesin to the country.

6. Constructing a safe environment for food and medicine to protect all citizens with food and medicine safety

(1) Implementing adequate food, medicine and cosmetics management to protect and uphold the reputation of MIT food and medicine.

(2) Strengthening multi-agency collaborations and incorporating big data analysis to bolster the existing networks of early warning for food and medicine safety.

(3) Promoting information transparency and ensuring consumers' rights to know.

(4) Strengthening TCM ingredient border management to improve TCM (material) quality and safety.

7. Constructing a healthy and supportive environment to facilitate holistic health promotion

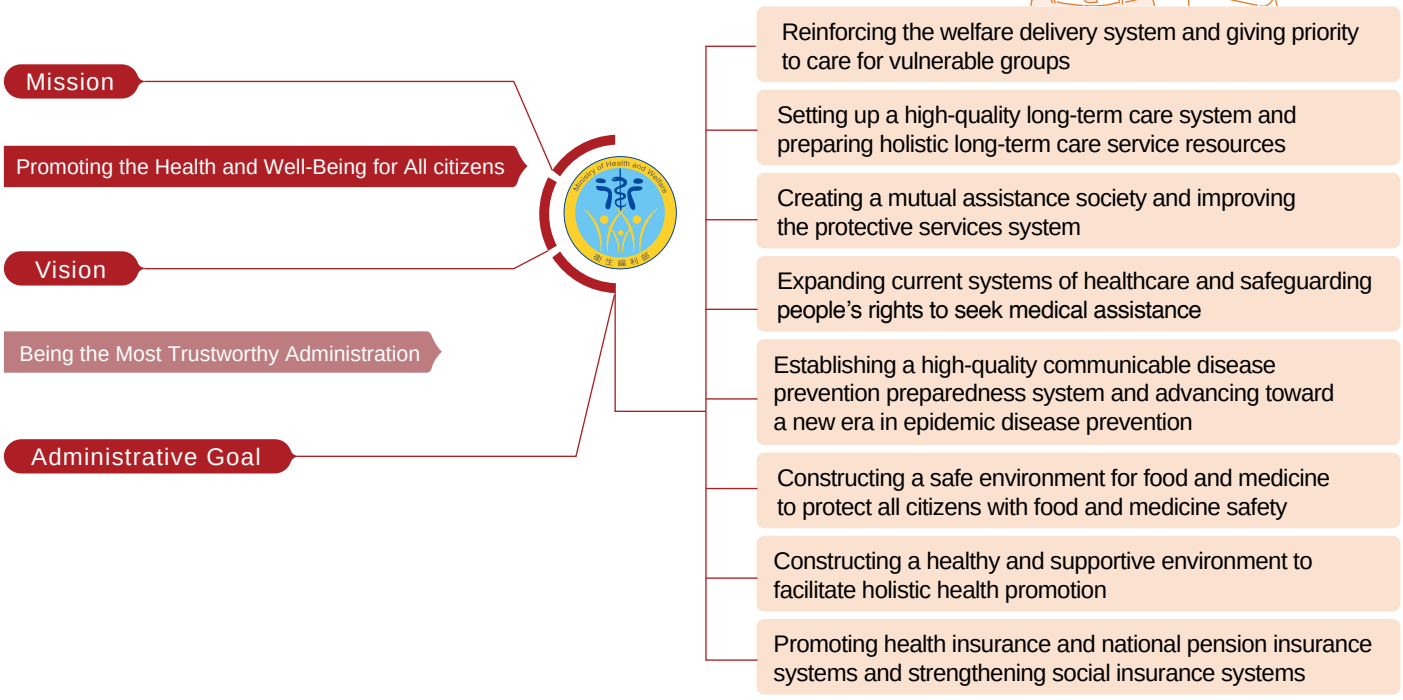
(1) Strengthening the prevention and management for chronic diseases; nurturing healthy lifestyles by creating a smoke and betel-nut free supportive environment.

(2) Improving the environment for maternal and child healthcare services, fostering better health for aboriginal people and new residents promoting aging-friendly city.

(3) Strengthening cancer prevention and promoting cancer navigation plans.

(4) Strengthening citizen health indicator monitoring; developing database for seniors and nutrition.

Figure 1-3 Administrative Goals of the MOHW, 2018



(5) Promoting eHealth and facilitating smart healthcare services.

(6) Promoting holistic mental health services and "New Generation Anti-drug Strategy".

(7) Fostering greater capacity for dental care services and educating children to cultivate proper habits for dental hygiene.

8. Promoting health insurance and national pension insurance systems and strengthening social insurance systems

(1) Accelerating national health insurance reform, optimizing classification for medical treatment services so as to create a sustainable system for healthcare.

(2) Promoting the National Pension System to provide economic security for the elderly.

Section 2 Promoting Gender Equality

In response to the international trend of higher awareness for gender equality, the Ministry has been working with the Gender Equality Committee of the Executive Yuan to actively promote relevant gender equality policies by actively incorporating gender perspectives in the formulation, planning and implementation process while adhering to the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW in short) in the hopes of facilitating gender equality in various aspects of health, medical care and social benefits.

In accordance with the official letter titled "Notes on the Editing, Review and Promotion of Gender Equality Promotion Plan for Ministries and Agencies under the Executive Yuan for 2019 through 2022" issued by the Secretary-General of the Executive Yuan, the Ministry has formulated its Gender Equality Promotion Plan for 2019 through 2022. This plan covers four major topics of gender equality as laid out by the Executive Yuan (including the promotion of three-in-one policy for public nursery, overcoming gender stereotypes and biases, strengthening public support for aging society and the promotion of gender equality in the decision-making process for public and private departments) and five ministry-level issues (including the promotion of gender equality in healthcare, construction of gender-friendly environment for medical assistance, improvement in the analysis and services for the needs of new resident victims of domestic violence, bolstering mental health and suicide prevention for LGBTI community, care and protection of rights for pregnant teenagers), with the integration of gender mainstreaming tools for the formulation and promotion of gender equality related policies and measures.

In an effort to facilitate greater public awareness for domestic violence, the Ministry implemented "Domestic Violence Prevention 20th Anniversary Events" and Domestic Violence Prevention 20th Anniversary Seminar" in 2018. For these events, we have created the "ZERO Panther Mascot" Facebook fan page as a channel for interaction and exchanges with the general public. In addition, we also collaborated with YouBike by organizing the Anti-Domestic Violence/ Child Abuse Cycling Day in the hopes of promoting the concepts of domestic violence prevention by integrating online communities with physical events. In light of the HeForShe Women Solidarity Movement for Gender Equality promoted by UN in recent years, the Ministry also hosted the Formosan Day of the Girl Child "Never underestimate the young power of SHE" event in 2018, featuring the "She Power Promotional Press Conference and Celebrity Gender Equality Consulting Room Seminar" to discuss issues of gender equality, physical autonomy and so forth so as to encourage women and girls to bravely speak up for their own rights and safeguard gender equality.

In the celebration of the Formosan Day of the Girl Child 2018, girls (SHE) and boys (HE) are cordially invited to celebrate this special event and advocate for gender equality! (Photograph provided by: Social and Family Affairs Administration)

Section 3 New Southbound Policy

President Tsai Ing-Wen launched the New Southbound Policy in 2016. The New Southbound Medical Cooperation and Industrial Chain Development program was chosen to be one of the five flagship projects in 2017.

2018 Milestones:

1. Initiated the "One Country, One Center Project" on June 1, 2018. Each Center, managed by 6 different Taiwanese hospitals, is responsible of coordinating six Asian countries: India, Indonesia, Philippines, Malaysia, Thailand and Vietnam. The project trained a total of 336 medical professionals and introduced 71 enterprises to the regions.
2. Taiwan Food and Drug Administration (TFDA) and the National Pharmaceutical Regulatory Agency (NPRA) of Maylaysia signed the Collaboration document over pharmaceutical regulations.
3. Initiated the Taiwan Medical and Healthcare Regional Partnership website, integrating and providing information about medical cooperation and industrial development in the New Southbound Policy partner countries.

4. The 2018 Taiwan Medical Travel Statistics reported approximately 414,000 international patients served. Among those, 157,000 patients were from the New Southbound Policy partner countries, roughly 38.08% of the entire international patients in Taiwan.
5. Assisted Taiwan manufacturers better understand relevant local regulations and permit applications for dental products in the New Southbound Policy partner countries. In 2018, one company successfully received permit for dental products issued by the Malaysian authority. Assisted Taiwan manufacturers promote dental products with professional dental value-added services.
6. Published the ***Guideline on Traditional Chinese Medicine (TCM) regulation in Malaysia and Singapore***. Organized and invited government officials and experts from India, Vietnam, Malaysia and Indonesia to attend the three TCM related international conferences/ workshops in Taiwan and to facilitate exchanges/ collaborations opportunities
7. The NPRA of Malaysia has accepted the export certification for traditional medicine and dietary supplements issued by TFDA. Currently, 8 businesses have received the certification and submitted registration applications to the NPRA.
8. Collaborated with representatives from Vietnam and Indonesia in the exchange and collaboration for TB and Dengue fever prevention. Activities include training workshops and disease prevention efforts. Set up the “New Southbound Health Center” to provide infectious disease prevention education, consultation, healthcare referrals and so forth.

New Southbound Medical Cooperation and Industrial Chain Development program press briefing at the MOHW on June 1, 2018

2018 New Southbound Indonesia-Taiwan Dengue Workshop - Ovitrap Deployment Tutorial on October 30, 2018

2018 Tuberculosis Control and Prevention Workshop under New Southbound Policy on June 11, 2018

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2

Health and Welfare Indicators

Rising incomes, improved living environment and nutrition, advances in medicine and health care, and greater health awareness have led to an gradual increase in Taiwan's life expectancy. As baby boomers become older, and the birth rate declines, one must pay greater attention to the health needs of an aging population. The changing demographics may affect not only national health expenditure (NHE) and resource distributions, but also the rate of economic growth. In this section, we address these topics by examining important health and welfare indicators, including population indicators, vital indicators, NHE, social welfare indicators, and international comparisons.

Chapter 1 Population Indicators

At the end of 2018, Taiwan had a registered population of 23.59 million, an increase of 0.75‰ from 2017. There were 11.71 million males, a decrease of 0.57‰, and 11.88 million females, an increase of 2.06‰. The sex ratio (the ratio of males to females in a population) was 98.62%.

At the end of 2018, there were 652 people per square kilometer, similar to the previous year. The densest city was Taipei, at 9,818 people. The least dense area was Taitung, at 62 people, followed by Hualien, at 71 people.

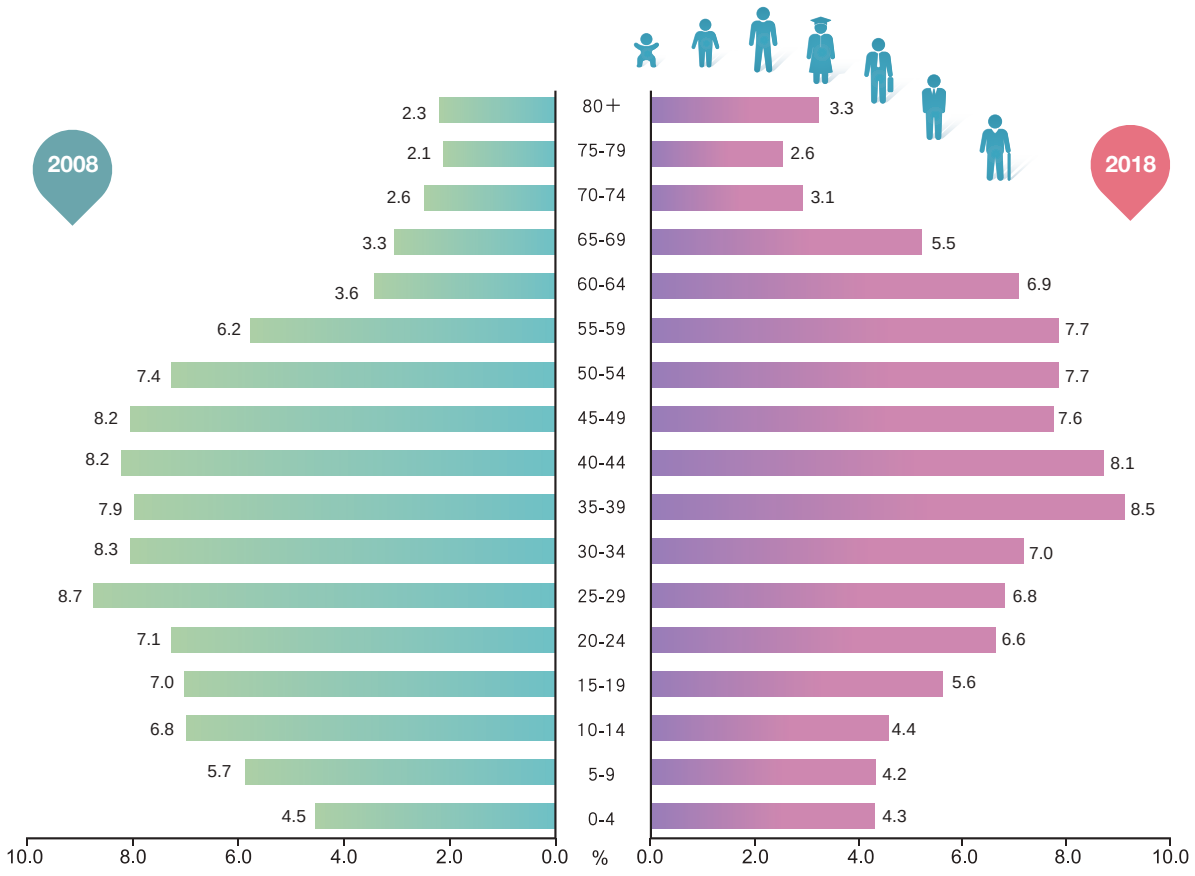
Section 1 Population Age Structure

The declining birth rate and the rising life expectancy at birth have reduced the proportion of young population, and conversely increased the proportion of the elderlies. Between 2008 and 2018, the proportion of the population aged 0-14 dropped from 16.95% to 12.92%, while the proportion of the population at 65 years old or over has exceeded 7.0% as of 1993. Today, Taiwan has already reached the stage of being an aging society as the proportion of elderly continues to rise and in 2018, the number has risen to 14.56% as shown in Figure 2-1.

Regarding gender differences, females accounted for a greater proportion of aging population than the males. In 2018, females accounted for higher proportion 15.67% of elderlies than males which accounted for 13.43%. On the other hand, females accounted for lower proportion 12.32% of young population than males which accounted for 13.53%. (Figure 2-2).

Figure 2-1 Population Age Structure

Source: Ministry of the Interior, R.O.C. (Taiwan)



The dependency ratio [(population aged 0-14 + population aged 65 and above)/population aged 15-64* 100] fell from 56.3% in 1981 to 37.9% in 2018. This was primarily due to the rapid decrease in the young-age dependency ratio [population aged 0-14/ population aged 15-64* 100] from 49.4% to 17.8%, and the steady increase in the old-age dependency ratio [population aged 65 and above/population aged 15-64* 100] from 6.9% to 20.1% (Figure 2-3)

Figure 2-2 2018 Population Age Structure, by Gender

Source: Ministry of the Interior, R.O.C. (Taiwan)

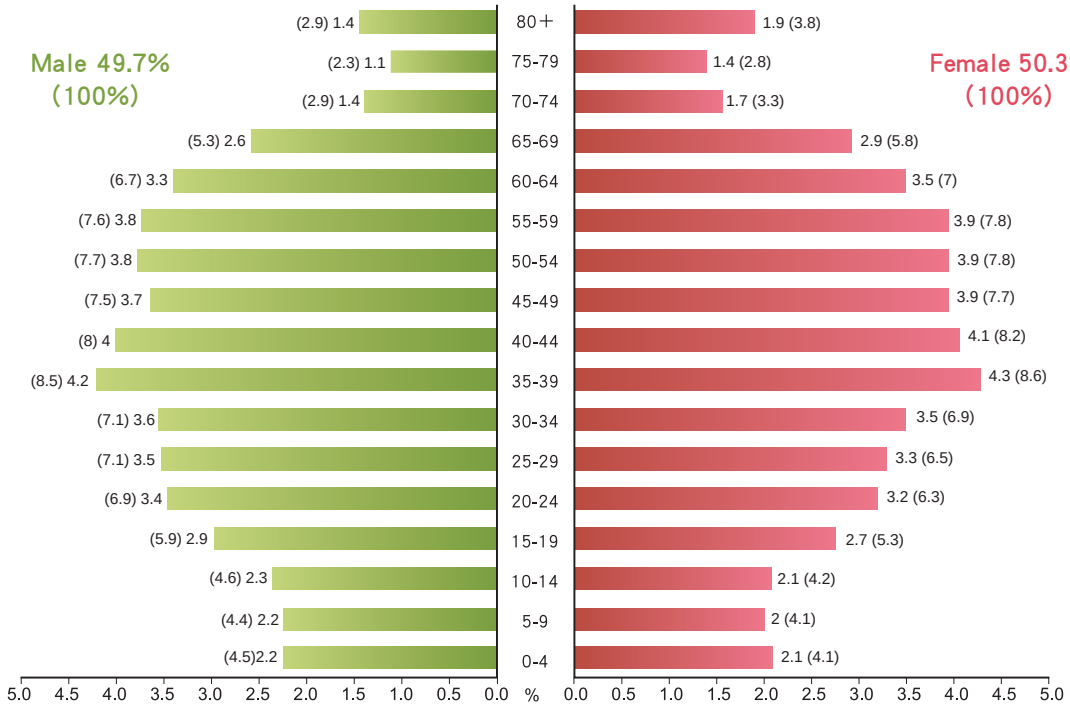
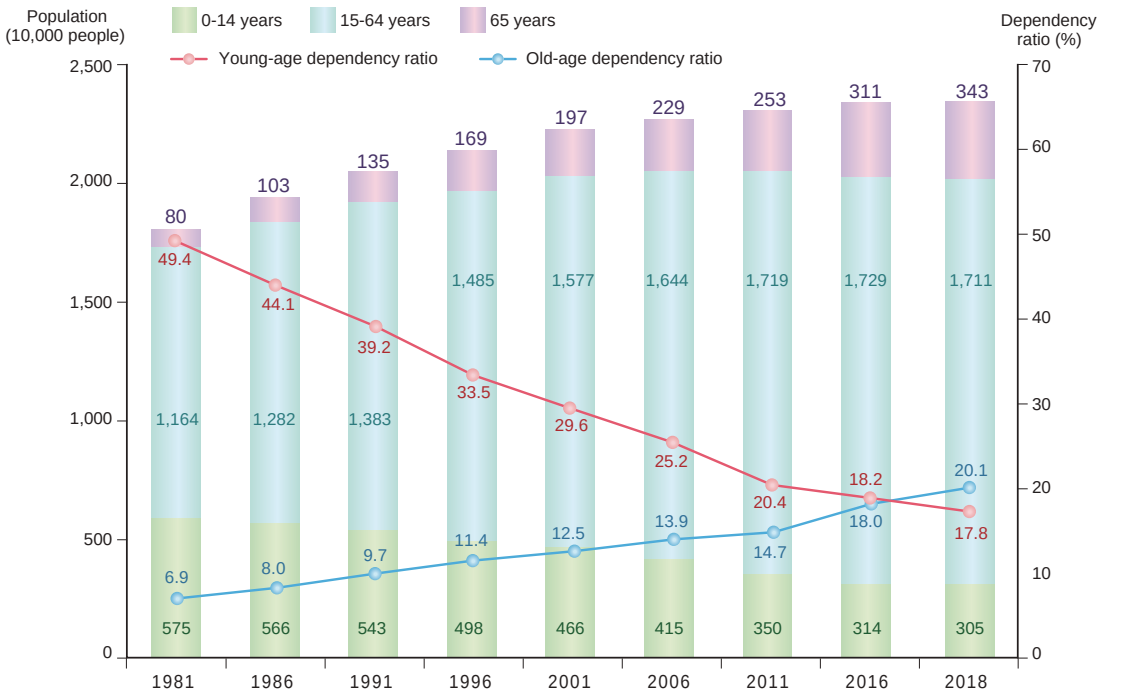


Figure 2-3 Population Age Structure and Dependency Ratio, by Year

Source: Ministry of the Interior, R.O.C. (Taiwan)

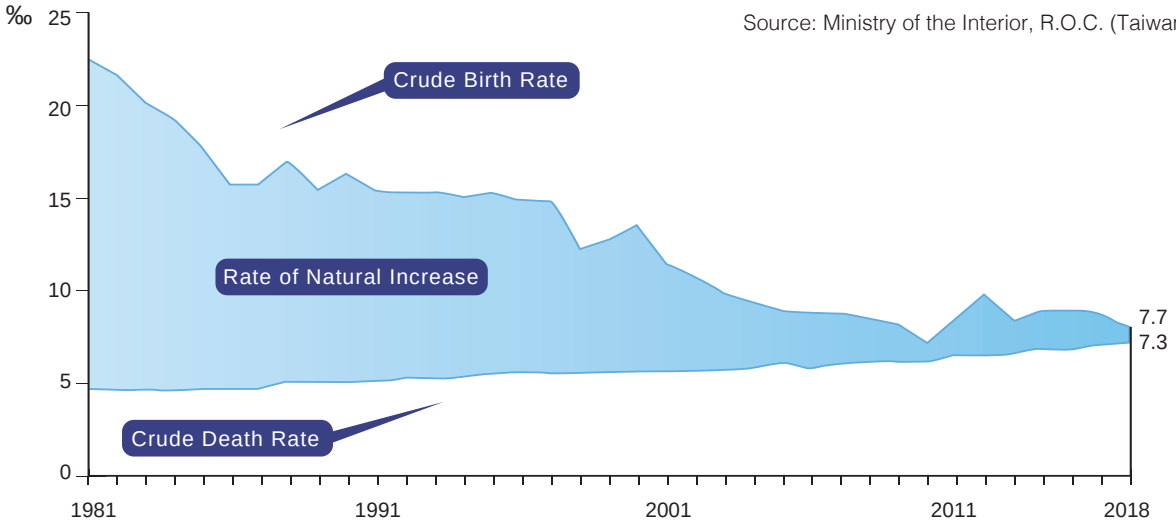


Section 2 Birth and Death

Taiwan's changing socioeconomic structure has led to a steady decline in the fertility rate. The crude birth rate (births/mid-year population* 1,000) fell from 20‰ in the early 1980s to below 10‰ in 2000s, and to 7.7‰ in 2018. The crude death rate (deaths/mid-year population* 1,000) rose from 5‰ in the 1980s to 7.3‰ in 2018, because the proportion of the elderly population was increasing. The overall impact has been a decline in the rate of natural increase (crude birth rate minus crude death rate), from over 10‰ in the 1980s to about 0.4‰ in 2018 (Figure 2-4).

Figure 2-4 Crude Birth Rate, Crude Death Rate, and Rate of Natural Increase, by Year

Source: Ministry of the Interior, R.O.C. (Taiwan)

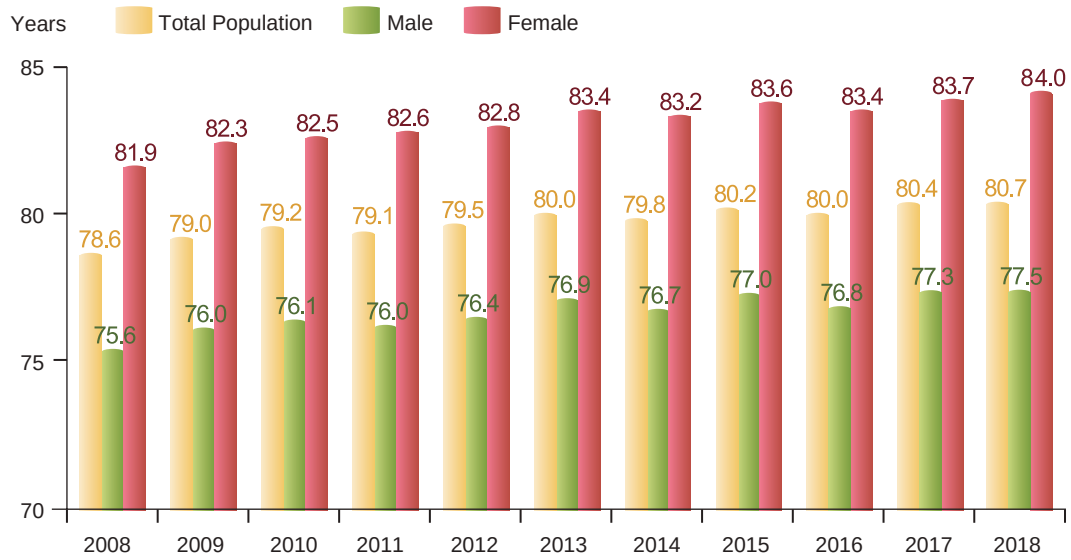


Section 3 Life Expectancy

Life expectancy at birth was 80.7 in 2018, representing an increase of 2.1 years over the past decade. Life expectancy at birth increased by 1.9 years to 77.5 for males, and by 2.1 years to 84.0 for females during the same period, showing that women live longer than men and the gap has been widening (Figure 2-5 and Table 2, Appendix 1).

Figure 2-5 Life Expectancy at Birth, by Year

Source: Ministry of the Interior, R.O.C. (Taiwan)



Chapter 2 Vital Indicators

Section 1 Ten Leading Causes of Death

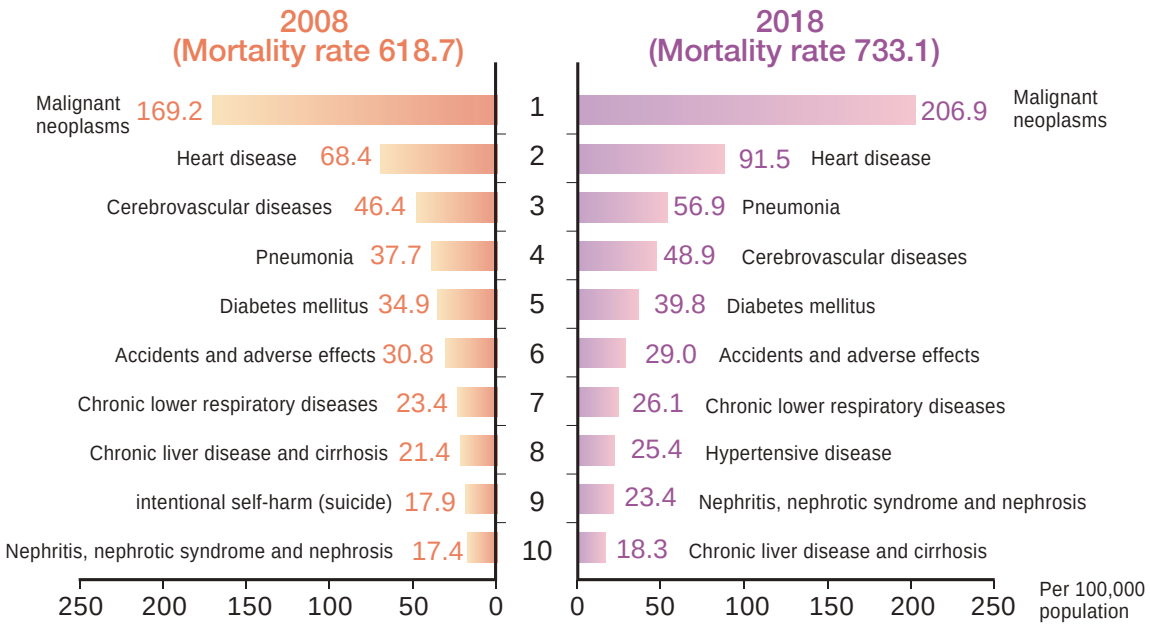
Economic transformation, better quality of life, and improved health care have led to changes in the leading causes of death. In 1952, acute and communicable diseases took the most lives in Taiwan; today, malignant neoplasms (cancer), accidents, and chronic diseases such as cardiovascular diseases represent the main causes.

In 2018, there were 172,859 deaths and the crude mortality rate was 733.1 per 100,000 population, an increase of 0.5% compared to 2017 and an increase of 18.5% compared to 2008. The standardized mortality rate [based on the WHO standard world population age structure for 2000] was 415.0 per 100,000 population, a decrease of 2.2% compared to 2017 and a decrease of 14.3% compared to 2008.

In 2018, the ten leading causes of death accounted for 77.2% of all deaths, and were primarily chronic diseases. In descending order by mortality rate they were (1) malignant neoplasms (cancer), (2) heart disease, (3) pneumonia, (4) cerebrovascular diseases, (5) diabetes mellitus, (6) accidents and adverse effects, (7) chronic lower respiratory diseases, (8) hypertensive diseases, (9) nephritis, nephrotic syndrome and nephrosis, and (10) chronic liver disease and cirrhosis. Compared to 2008, the leading causes of death that increased in ranking included pneumonia, hypertensive disease, nephritis, nephrotic syndrome and nephrosis; causes that fell in ranking included cerebrovascular diseases, intentional self-harm (suicide), chronic liver disease and cirrhosis as shown in Figure 2-6.

Figure 2-6 Changes in the Ten Leading Causes of Death

Source: Department of Statistics, MOHW, R.O.C. (Taiwan)



Section 2 Cancer Incidence and Causes of Cancer Death

1. Cancer Incidence

According to 2016 cancer registry data, the incidence rates of cancer for males and females were 485.1 and 414.4 per 100,000 population respectively. If adjustments were made based on the WHO constructed standard world population age structure from 2000, the age-standardized incidence rates for males and females became 330.0 and 269.1 people per 100,000 population, respectively (Table 2-1).

Table 2-1 Incidence of Ten Leading Cancers, 2016

Source: Ministry of Health and Welfare, R.O.C. (Taiwan)

Male				Female			
Rank	Cancer Site	No. of Cases	Age-Standardized Incidence Rate (Per 100,000 Population)	Rank	Cancer Site	No. of Cases	Age-Standardized Incidence Rate (Per 100,000 Population)
1	Colon	8,706	49.3	1	Female Breast	12,672	73.0
2	Liver and Intrahepatic Bile Ducts	7,680	44.0	2	Colon	6,668	34.1
3	Lungs, Bronchus, and Trachea	7,661	43.2	3	Lungs, Bronchus, and Trachea	5,827	29.9
4	Oral Cavity, Opharynx, and Hypopharynx	7,144	42.4	4	Thyroid	2,780	18.1
5	Prostate	5,359	30.1	5	Liver and Intrahepatic Bile Ducts	3,395	16.8
6	Esophagus	2,431	14.1	6	Uterus	2,462	14.0
7	Stomach	2,306	12.6	7	Ovary, Fallopian Tube, and Broad Ligament	1,507	9.2
8	Skin	1,982	10.9	8	Cervix	1,432	8.1
9	Bladder	1,600	8.8	9	Skin	1,645	7.8
10	Leukemia	1,252	8.5	10	Stomach	1,352	6.7
	Total	**56,854**	**330.0**		**Total**	**48,978**	**269.1**

Notes: 1. Cancer registry data excludes carcinoma in situ.
2. Ranked from highest to lowest by age-standardized incidence rate (per 100,000 population).
3. The age-standardized incidence rate is based on the standard world population age structure in 2000.
Formula: Σ (Age-Specific Incidence Rate x Standard Age-Specific Population)/Standard Total Population.

2. Causes of Cancer Death

In 2018, there were 48,784 deaths due to malignant neoplasms accounting for 28.2% of total deaths and a crude mortality rate of 206.9 per 100,000 population. This represented an increase of 1.4% compared to the previous year and an increase of 22.3% compared to 2008. The standardized cancer mortality rate in 2018 was 121.8 per 100,000 population, a decrease of 1.3% compared to 2017 and a decrease of 8.9% compared to 2008.

The ten leading causes of cancer death in 2018 were cancers of the (1) trachea, bronchus and lung; (2) liver and intrahepatic bile ducts; (3) colon, rectum and anus; (4) breast (female);(5) oral cavity; (6) prostate; (7) stomach; (8)pancreas; (9) oesophagus; (10) cervix and uterus (with exact cancer position not identified). Compared to 2008, cancers of the oral cavity, prostate, and pancreas rose in the rankings, while cancers of the stomach and uterus fell (Figure 2-7).

Section 3 Infant and Neonatal Mortality Rates

Other than a slight increase in 1995 due to a new birth reporting system, advances in public health have led to general declines in both the infant mortality rate (deaths before age one per 1,000 live births) and the neonatal mortality rate (deaths in the first four weeks of life per 1,000 live births). In 2018, the infant mortality rate declined to 4.2‰,compared to 8.9‰ in 1981. Over the same period, the neonatal mortality rate dropped from 3.1‰ to 2.6‰ (Figure 2-8).

Figure 2-7 Changes in the Ten Leading Causes of Cancer Death

Source: Department of Statistics, MOHW, R.O.C. (Taiwan)

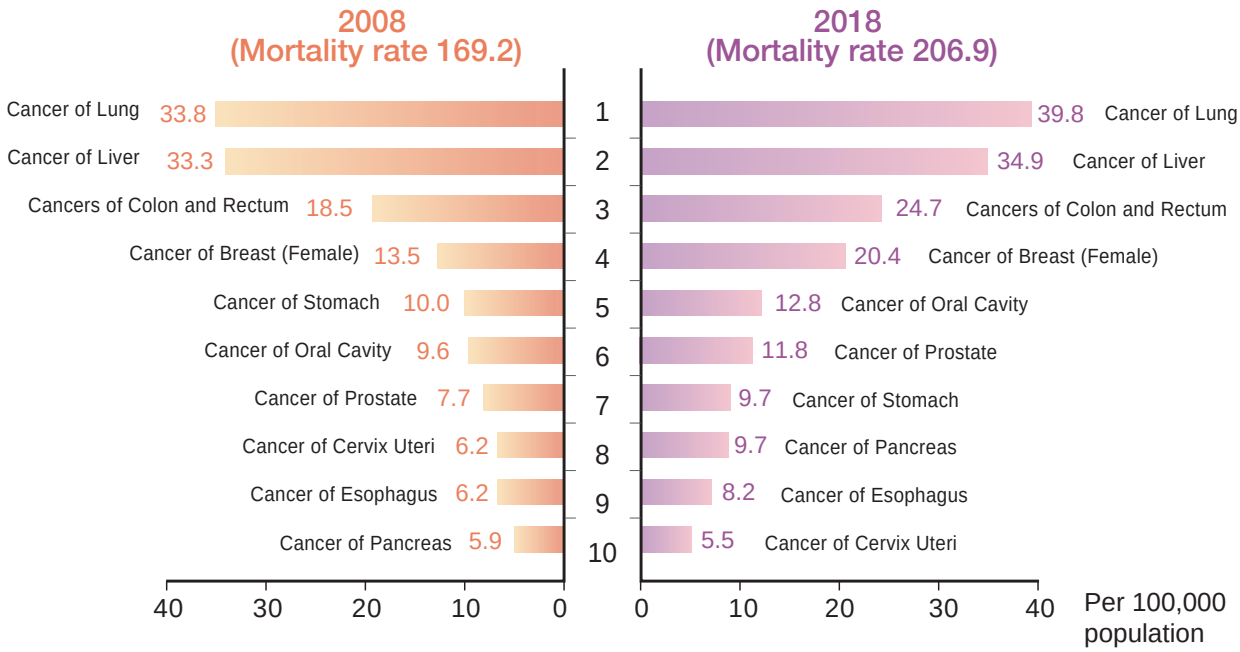
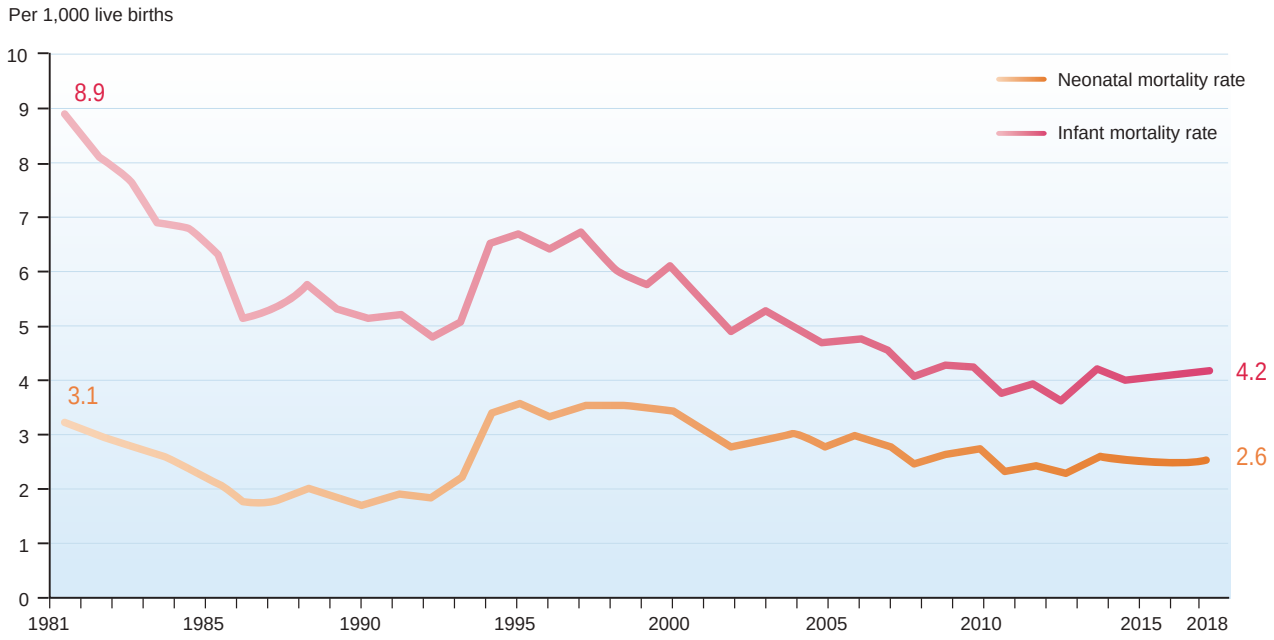


Figure 2-8 Infant and Neonatal Mortality Rates, by Year

Source: Department of Statistics, MOHW, R.O.C. (Taiwan)



Notes: The birth reporting system was launched on Mar. 1995.

Chapter 3 National Health Expenditure (NHE)

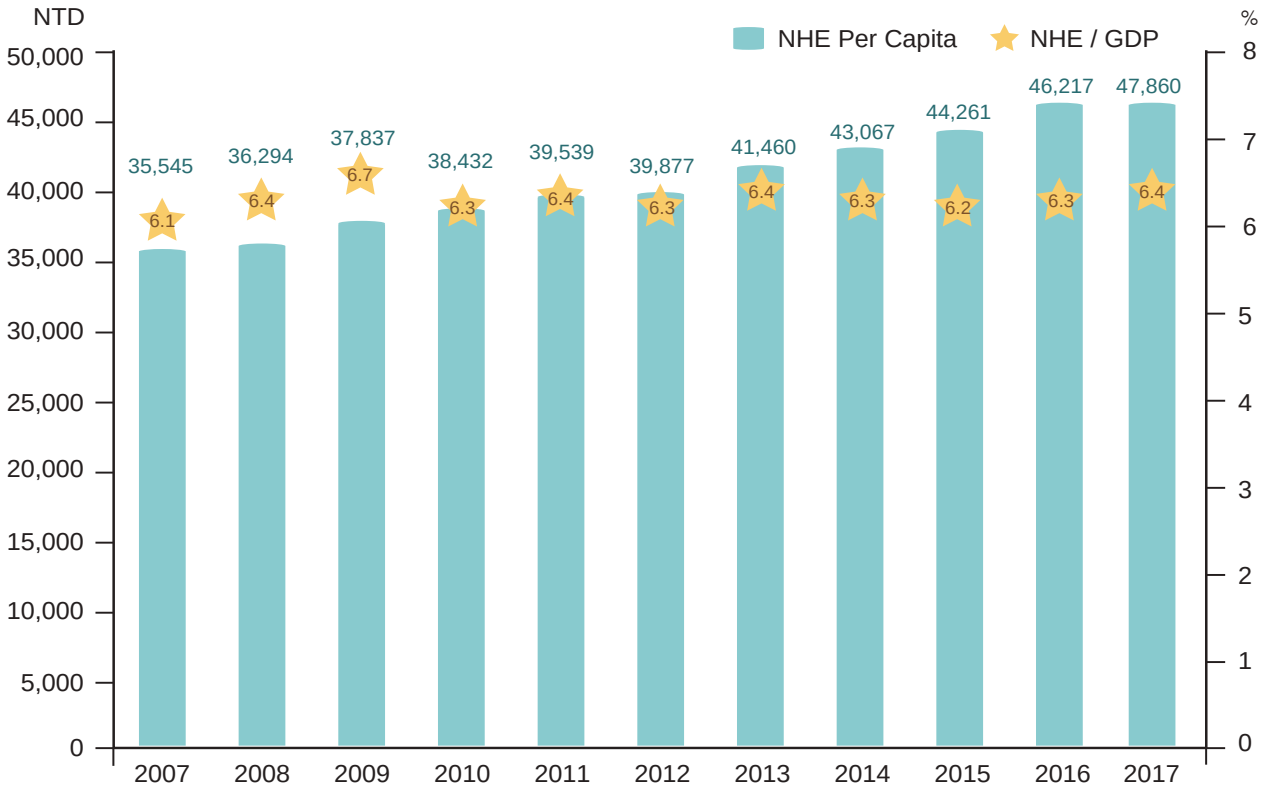
Good health care is a basic need in modern society and a major indicator of a country's advancement.

After steadily rising since 1991, NHE surpassed NT$1127.4 billion in 2017. The expansion of international medicine, development of biomedicine and technology, and a rapidly aging population are expected to contribute to continued increases in NHE.

NHE as a share of GDP increased from 6.1% in 2007 to 6.4% in 2017. Per capita NHE increased from NTD35,545 in 2007 to NTD47,860 in 2017, for an average annual increase of 3.0% (Figure 2-9).

Figure 2-9 NHE/ GDP Ratios and NHE Per Capita, by Year

Source: Department of Statistics, MOHW, R.O.C. (Taiwan)



Chapter 4 Social Welfare Indicators

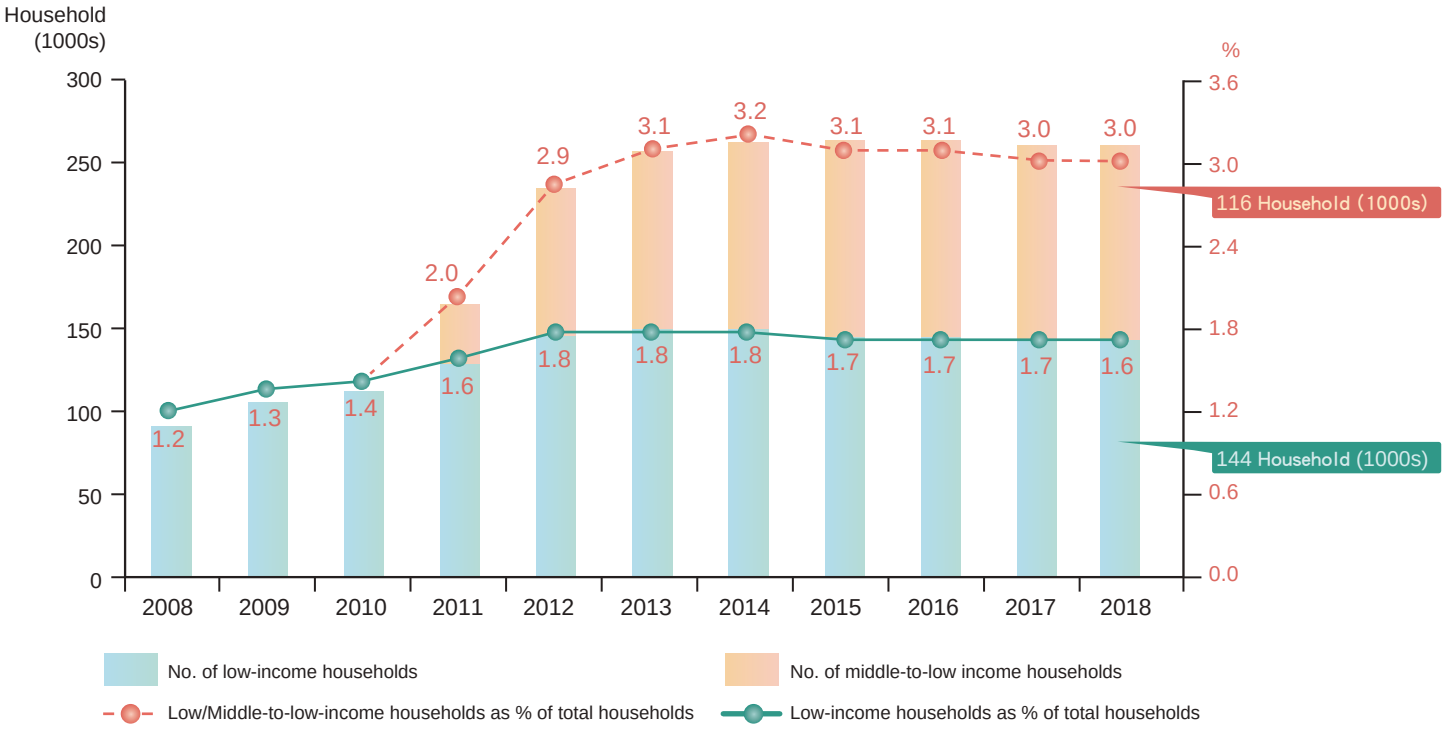
Section 1 Low-Income and Middle-to-Low-Income Households

The government offers various social assistance measures to guarantee a basic standard of care for the poor, the ill, and those in urgent need. In 2008 and 2011, the government increased basic living subsidies for low-income households and lowered the qualification threshold to expand care for more financially vulnerable people. At the end of 2018, there were 259,511 low-income and middle-to-low-income households (143,941 and 115,570 households, respectively), with a total of 649,994 members (311,526 and 338,468 respectively). They accounted for 3.0% of all households and 2.8% of the total population.

Among all members of low-income and middle-to-low-income households, there were 333,482 males and 316,512 females, for a male to female ratio of 1.05, compared to a national average of 0.99 (Figures 2-10, 2-11).

Figure 2-9 Low-Income and Middle-to-Low-Income Households,by Year

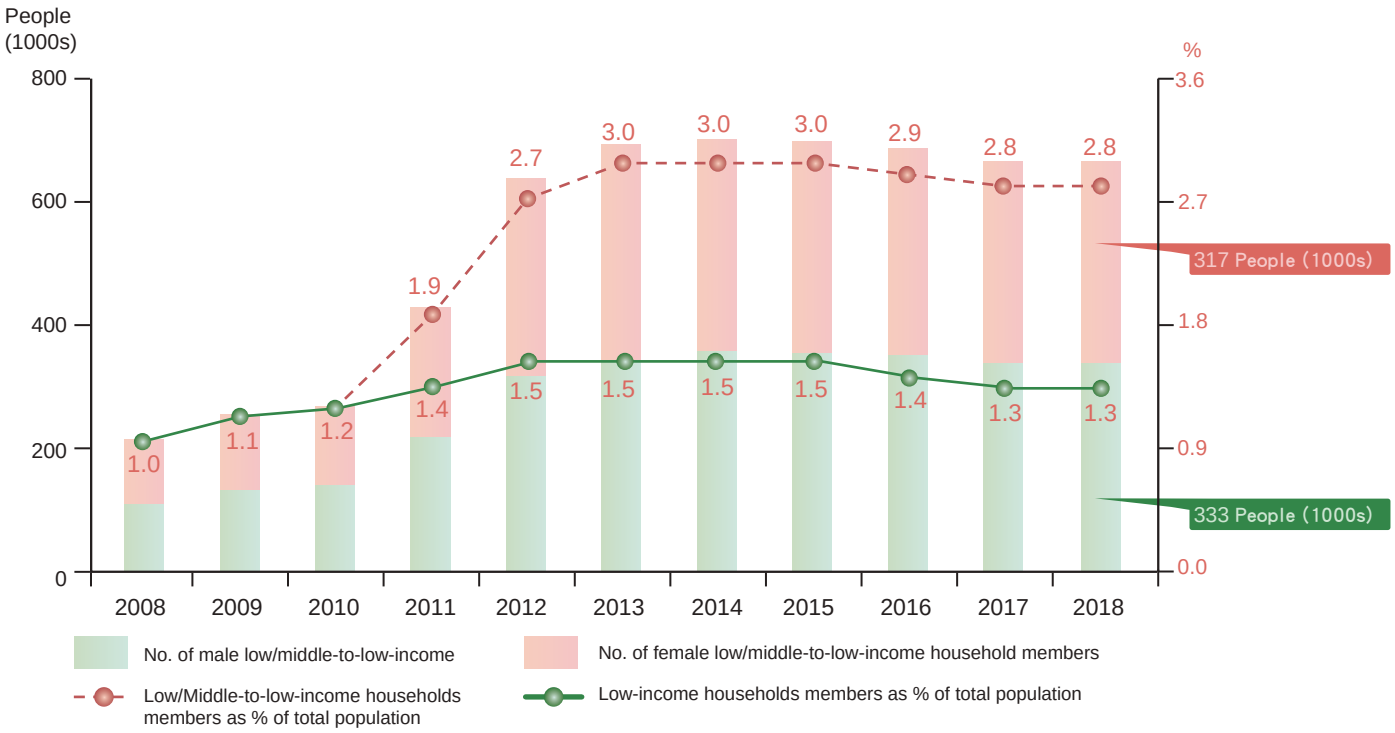
Source: Department of Statistics, MOHW, R.O.C. (Taiwan)



Notes: Since July 2011, middle-to-low-income households have qualified for basic living subsidies.The standard minimum cost of living was changed from 60% of average expenditures per person during the previous year to 60% of the median disposable income per person. Siblings are excluded from household calculations.

Figure 2-11 Low-Income and Middle-to-Low-Income Household Members, by Year

Source: Department of Statistics, MOHW, R.O.C. (Taiwan)



Notes: Since July 2011, middle-to-low-income households have qualified for basic living subsidies.The standard minimum cost of living was changed from 60% of average expenditures per person during the previous year to 60% of the median disposable income per person. Siblings are excluded from household calculations.

Section 2 Disabilities

At the end of 2018, 1,173,978 people were identified as disabled, accounting for 5.0% of the total population and consisting of 658,673 males (56.1%) and 515,305 females (43.9%).

From 2008 to 2018, the number of disabled persons increased by 133,393, or 12.8%, primarily attributed to an aging population and a higher risk of disability facing the elderlies. In terms of age, the percentage of disabled persons 0 - 17 years old fell by 17.9%. On the other hand, disabled persons aged 18 to 64, and 65 and older increased by 5.4%, and 29.6%, respectively (Table 2-2).

In terms of disability types, internal organ loss function and related disabilities, multiple disabilities and chronic mental health conditions had seen the most increase in incidence; in the most recent decade, the number of people suffering from these disabilities increased by 126,360. In contrast, the number of people with moving functional limitation decreased by 34,630.

Table 2-2 Annual Disability Statistics Compendium, by Gender and Age

Source: Department of Statistics, MOHW, R.O.C. (Taiwan)

Year (End)	Gender (Persons)			Age group (Persons)			As % of total population
	Total	Male	Female	0-17 Years	18-64 Years	65 Years & Above	
2008	1,040,585	599,664	440,921	63,509	597,090	379,986	4.5
2009	1,071,073	615,621	455,452	63,440	611,154	396,479	4.6
2010	1,076,293	616,675	459,618	62,705	619,809	393,779	4.7
2011	1,100,436	629,179	471,257	61,833	631,413	407,190	4.7
2012	1,117,518	636,287	481,231	62,051	644,023	411,444	4.8
2013	1,125,113	639,969	485,144	59,570	643,185	422,358	4.8
2014	1,141,677	648,807	492,870	58,737	646,992	435,948	4.9
2015	1,155,650	655,444	500,206	56,885	648,486	450,279	4.9
2016	1,170,199	662,800	507,399	55,702	645,588	468,909	5.0
2017	1,167,450	658,682	508,768	54,051	637,568	475,831	5.0
2018	1,173,978	658,673	515,305	52,119	629,460	492,399	5.0

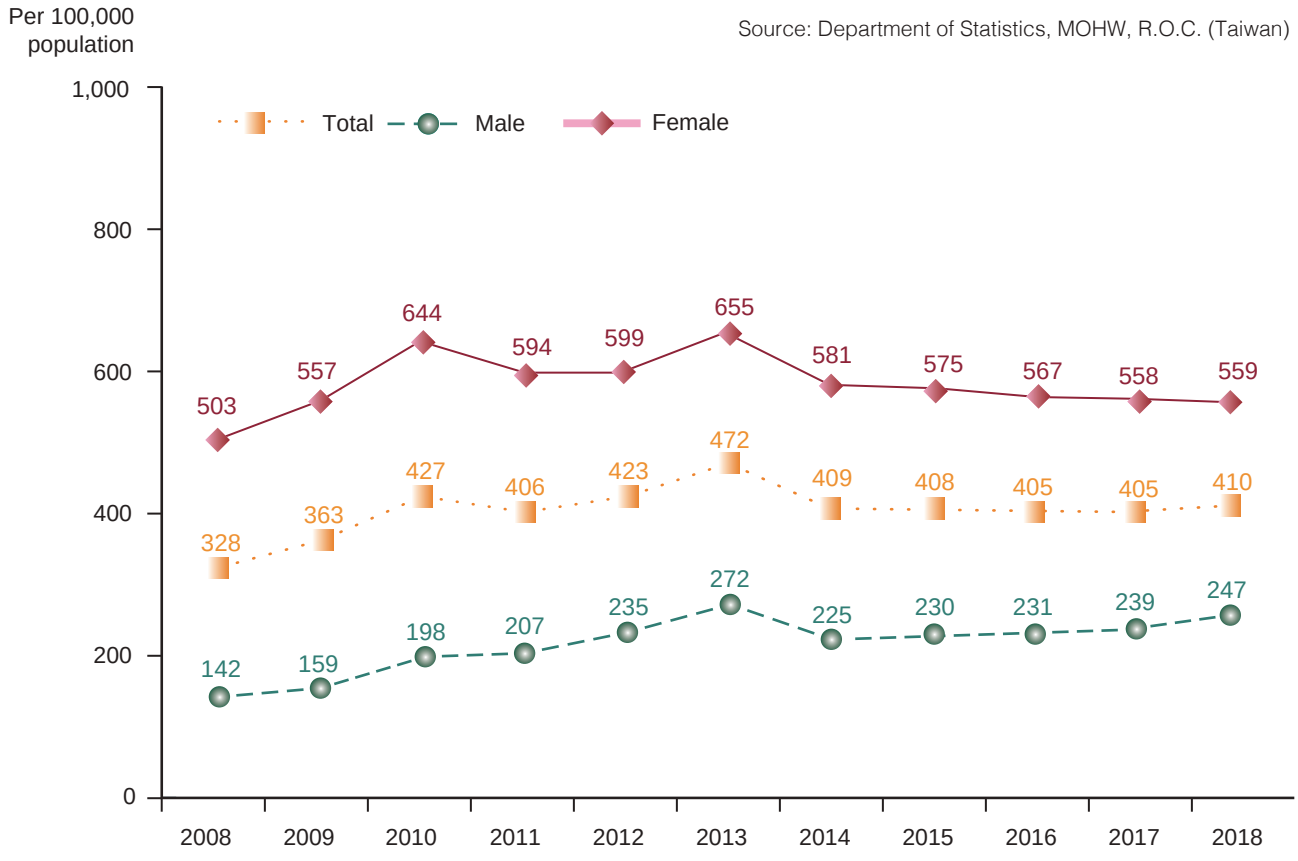
Section 3 Domestic Violence

In light of the government's stronger push to increase public awareness of domestic violence and promote primary prevention at the community level by strengthening the reporting network and support measures, the number of reported cases of victims in domestic violence increased from 75,000 in 2008 to 97,000 in 2018. In terms of victims per 100,000 population, there were 410 reported victims in 2018, consisting of 247 male victims and 559 female victims respectively. Female victims outnumbered male counterparts by a factor of 2.3 (Figure 2-12).

As for type of cases, there had been a total of 120,002 cases of domestic violence reported in 2018, with "spouse, former spouse, or cohabitating partner" being the type in majority at 54.2%, while "children and youths protection" came to 12.7%. (Figure 2-13).

Figure 2-12 Victims of Domestic Violence Rate, by Year

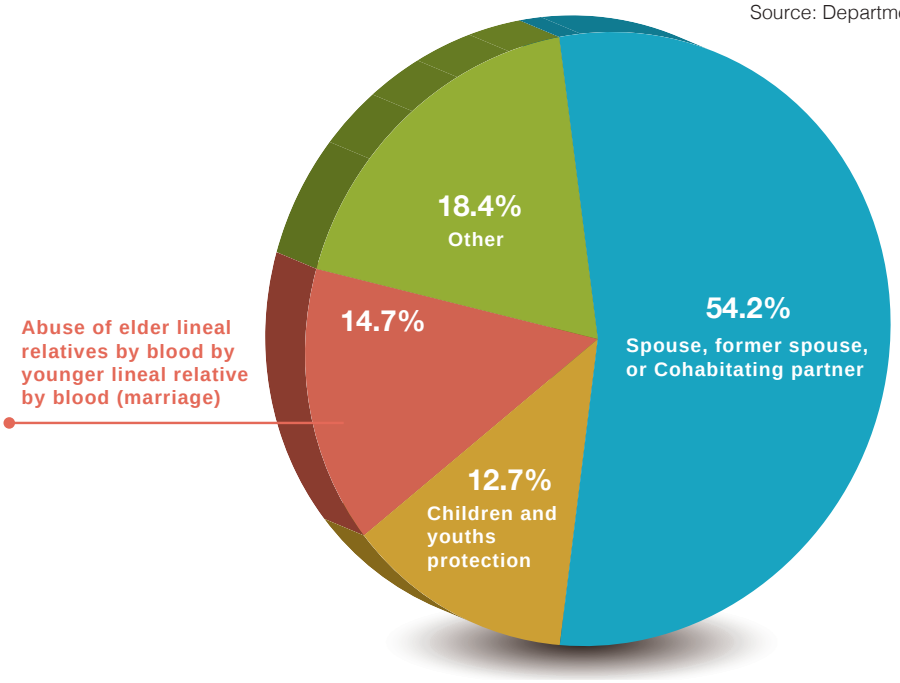
Source: Department of Statistics, MOHW, R.O.C. (Taiwan)



Notes: Victims of Domestic Violence Rate=Reported victims/mid-year population x 100,000.

Figure 2-13 Domestic Violence Reported Cases by Type, 2018

Source: Department of Statistics, MOHW



Section 4 Childcare subsidy

Beginning from August 2018, the Ministry officially expanded eligible targets for childcare subsidy for families with children under the age of 2 and along with the quasi-public nursery policy. This extended the eligibility of recipients to parents in unemployment and to relatives taking care of the children. Statistics revealed that the number of subsidy beneficiaries and amount of subsidy increased by 394,000 recipients and 6.44 billion NTD respectively. The number of childcare subsidy recipients with children under the age of 2 also increased to 96,000. As shown in Table. 2-3.

Table 2-3 Childcare subsidy

Source: Department of Statistics, MOHW, R.O.C. (Taiwan)

Year (End)	Total number of children under the age of 2 in Taiwan (in 10,000)	Total number of beneficiaries for the subsidy		Number of beneficiaries for the nursery subsidy for children under the age of 2 (i.e. by babysitter, community nursery centers, daycare centers) (in 10,000)
		Intended for families with children under the age of 2 (in 10,000)	Amount of subsidy (in 100 million NTD)	
2014	39.7	25.8	51.1	6.3
2015	41.6	25.6	50.5	7.8
2016	41.3	26.3	51.9	8.4
2017	39.4	25.8	50.7	9.0
2018	36.8	39.4	64.4	9.6

Notes: The number of beneficiaries for the subsidy for families with children under the age of 2 is the cumulative total of eligible applicants for the year, which included those whose children reached the age of 2 and changed their application for nursery care. This explains why the number of subsidy applicants for 2018 is greater than the number of applicants for the childcare subsidy intended for children below the age of 2.

Section 5 Economic Security of Children and Youths

Due to the low birth rate, the population of children and youths has been decreasing. At the end of 2018, the number of people aged younger than 18 years old was 3,779,000 which was 122,000 less than in 2017 and 1,090,000 less than in 2008, indicating a 22.4% decrease over the 10-year period. With regard to gender, the male and female young population decreased by 3.2% and 3.1%, respectively, since 2017 and by 22.6% and 22.2%, respectively, since 2008.

To improve economic security of children and youths, county and city governments provide living subsidies (livelihood assistance) to children from low-income families and livelihood assistance to children and youths from vulnerable families. At the end of 2018, living subsidies provided to children from low-income families and children and youths from vulnerable families amounted to NTD3.01 billion and NTD2.64 billion, respectively, which was 5.3% and 2.7% less than in 2017, respectively. The decrease is mainly due to the reduced population of children and youths (Figures 2-14, 2-15).

Figure 2-14 Population of Children and Youths under 18 Years Old

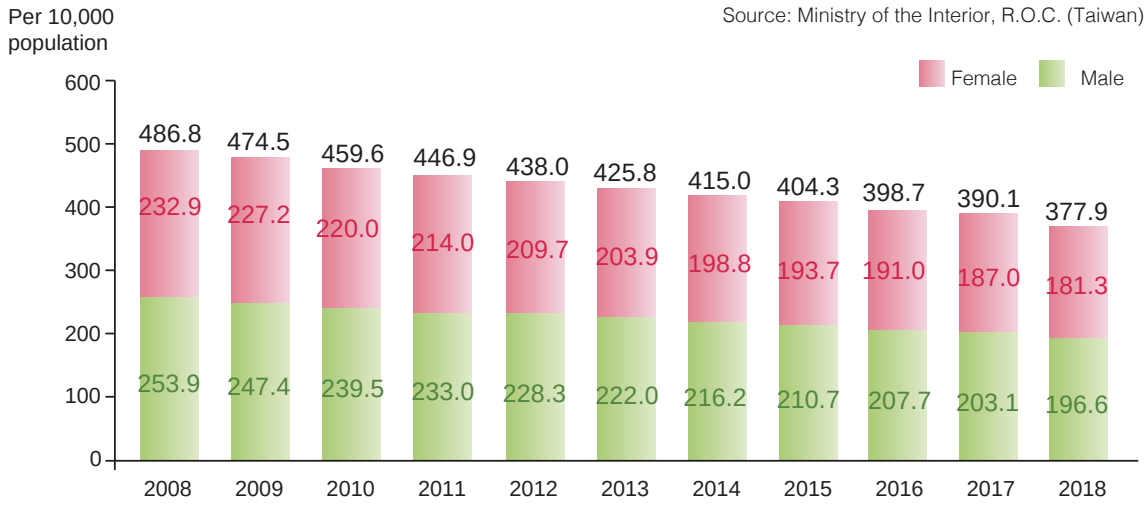
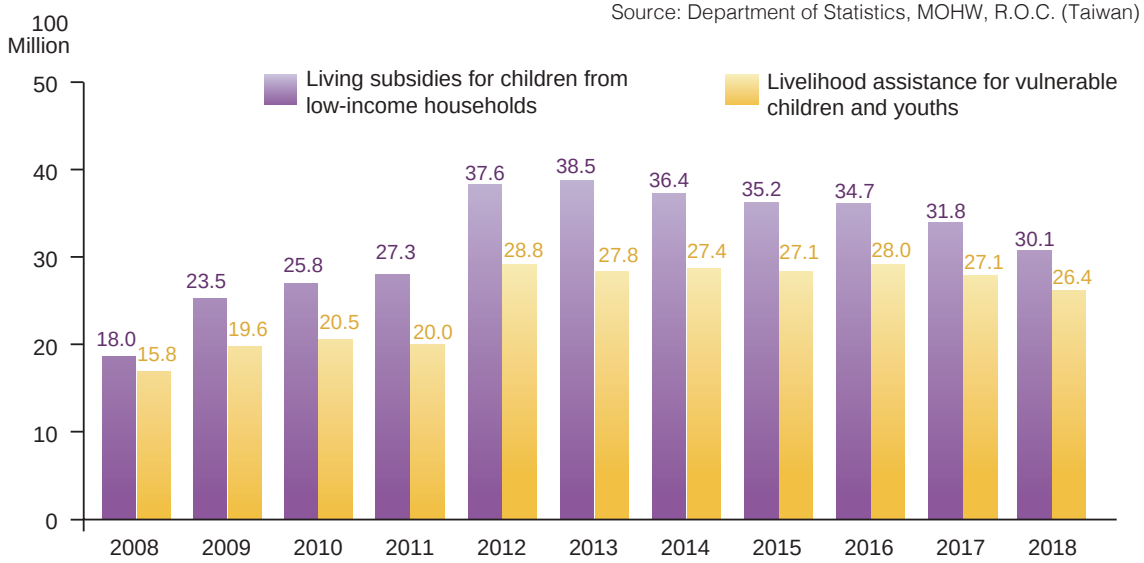


Figure 2-15 Amount of Living Subsidies (Livelihood Assistance) for Children and Youths



Notes: Since July 2011, middle-to-low-income households have qualified for basic living subsidies. The standard minimum cost of living was changed from 60% of average expenditures per person during the previous year to 60% of the median disposable income per person. Siblings are excluded from household calculations.

Chapter 5 International Comparisons

Section 1 Life Expectancy

In Taiwan, life expectancy at birth in 2017 was 80.4 years. If ranked among the Organization for Economic Cooperation and Development (OECD) member states, Taiwan would have been 26th. Taiwan's life expectancy was lower than the OECD median of 81.7 years. Male life expectancy at birth in OECD member states was highest in Switzerland at 81.6 years; in Taiwan, male life expectancy was 77.3 years. Female life expectancy at birth was highest in Japan at 87.3 years; in Taiwan, female life expectancy was 83.7 years (Table 2-4).

Section 2 Rate of Natural Increase

The rate of natural increase in Taiwan in 2018 was 0.4‰, ranking 22th among OECD member states and lower than the OECD median of 2‰. Due to the recent tendency toward late marriage and delayed childbearing, Taiwan's total fertility rate (the average number of live births for a woman over her lifetime) has been decreasing and reached 1.06 in 2018, which was lower than in OECD member states. This rate in all OECD member states, excluding Israel and Mexico, was lower than the replacement level of 2.1. For the same period, Taiwan's crude birth rate was 8‰ and the death rate was 7‰, ranking 35st and 26th among OECD member states, respectively and lower than the respective OECD medians of 11‰ and 9‰. Generally, demographic structures in OECD member states were trending toward low birth rates (Table 2-5).

Section 3 Dependency Ratio

In terms of dependency ratio among the OECD member countries, Japan and Israel ranked top at 66% in 2018, followed by France and Sweden at 60%. Taiwan's dependency ratio was at 37% and ranked last compared to other OECD member countries.

In 2018, the old-age dependency ratio (population aged 65 and above/population aged 15-64 × 100) in Taiwan was 19%. If ranked among OECD member states, Taiwan would have been 32nd. Taiwan's old-age dependency ratio was higher than that in Israel, Chile, Turkey, and Mexico. There was 1 elderly person per 5.3 young and mid-year population in Taiwan. The aging index (population aged 65 and above/population aged 0-14 × 100) of Taiwan was 106%. If ranked among OECD member states, Taiwan would have been 20nd. In comparison to OECD member states, the ratio of elderly people in Taiwan was not high, whereas its ratio of population aged 0-14 years old was slightly lower. As a result, the aging index of Taiwan was higher than that of approximately half of OECD member states (Table 2-6).

Table 2-4 Life Expectancy at Birth in Taiwan and OECD member states, 2017

Source: Ministry of the Interior, R.O.C. (Taiwan); OECD Health Data

Ranking	Country - Ranked by Life expectancy at birth	Total (years)	Male (years)	Female (years)
OECD Median		81.7	79.4	84.0
1	Japan	84.2	81.1	87.3
2	Switzerland	83.6	81.6	85.6
3	Spain	83.4	80.6	86.1
4	Italy	83.0	80.8	85.2
5	Iceland	82.7	81.1	84.3
5	Norway	82.7	81.0	84.3
5	Repulic of Korea	82.7	79.7	85.7
8	Israel	82.6	80.6	84.6
8	Australia	82.6	80.5	84.6
8	France	82.6	79.6	85.6
11	Sweden	82.5	80.8	84.1
12	Ireland	82.2	80.4	84.0
12	Luxembourg	82.2	79.9	84.4
14	Canada	82.0	79.9	84.0
15	New Zealand	81.9	80.2	83.6
16	Netherlands	81.8	80.2	83.4
17	Austria	81.7	79.4	84.0
17	Finland	81.7	78.9	84.5
19	Belgium	81.6	79.2	83.9
20	Portugal	81.5	78.4	84.6
21	Greece	81.4	78.8	83.9
22	United Kingdom	81.3	79.5	83.1
23	Denmark	81.2	79.2	83.1
24	Germany	81.1	78.7	83.4
24	Slovenia	81.1	78.2	84.0
26	**R.O.C. (Taiwan)**	**80.4**	**77.3**	**83.7**
27	Chile	80.2	77.4	83.1
28	Czech Republic	79.1	76.1	82.0
29	United States	78.6	76.1	81.1
30	Estonia	78.2	73.8	82.6
31	Turkey	78.1	75.3	80.8
32	Poland	77.9	73.9	81.8
33	Slovakia	77.3	73.8	80.7
34	Hungary	75.9	72.5	79.3
35	Mexico	75.4	72.9	77.9
36	Latvia	74.8	69.8	79.7

Table 2-5 Population Status of Taiwan and OECD Member States,2018

Source: Ministry of the Interior, R.O.C. (Taiwan); 2018 World Population Data Sheet, Population Reference Bureau

Ranking	Country – Ranked by rate of natural increase	Mid-year population (Millions)	Population (Millions)		Multiple ratio of population	Total fertility rate(Per Woman)	Crude birth rate (‰)	Crude death rate (‰)	Rate of natural increase (‰)
		2018	2030	2050	2050 vs 2018	2018	2018	2018	2018
Global		7,621	8,571	9,852	1.3	2.4	19	7	12
OECD Median		10.6	10.8	12.0	1.1	1.6	11	9	2.0
1	Israel	8.5	10.8	14.4	1.7	3.1	21	5	16.0
2	Mexico	130.8	147.5	164.3	1.3	2.2	19	6	13.0
3	Turkey	81.3	93.3	104.7	1.3	2.1	16	5	11.0
4	Chile	18.6	19.6	20.2	1.1	1.8	14	6	8.0
5	Ireland	4.9	5.5	6.8	1.4	1.9	13	6	7.0
6	Australia	24.1	30.1	37.6	1.6	1.7	13	7	6.0
7	Iceland	0.4	0.4	0.4	1.0	1.7	12	7	5.0
7	New Zealand	4.9	5.6	6.1	1.2	1.8	12	7	5.0
9	Canada	37.2	41.0	46.9	1.3	1.5	11	8	3.0
9	Luxembourg	0.6	0.7	0.8	1.3	1.4	10	7	3.0
9	Norway	5.3	5.9	6.7	1.3	1.6	11	8	3.0
9	United Kingdom	66.4	70.4	74.7	1.1	1.8	12	9	3.0
9	United States	328.0	254.7	289.6	0.9	1.8	12	9	3.0
14	Denmark	5.8	6.1	6.4	1.1	1.8	11	9	2.0
14	France	65.1	68.5	72.3	1.1	1.9	11	9	2.0
14	Sweden	10.2	11.2	12.0	1.2	1.8	11	9	2.0
14	Switzerland	8.5	9.5	10.3	1.2	1.5	10	8	2.0
18	Austria	8.8	9.3	9.7	1.1	1.5	10	9	1.0
18	Repulic of Korea	51.8	52.9	49.4	1.0	1.1	7	6	1.0
18	Netherlands	17.2	17.9	18.4	1.1	1.6	10	9	1.0
18	Slovakia	5.4	5.4	5.0	0.9	1.5	11	10	1.0
22	**R.O.C. (Taiwan)**	**23.6**	**24.0**	**22.7**	**1.0**	**1.1**	**8**	**7**	**0.4**
23	Belgium	11.4	12.0	12.7	1.1	1.6	10	10	0.0
23	Czech Republic	10.6	10.7	10.5	1.0	1.7	11	11	0.0
23	Poland	38.4	36.9	32.6	0.8	1.4	10	10	0.0
23	Slovenia	2.1	2.1	1.9	0.9	1.6	10	10	0.0
27	Finland	5.5	5.8	5.9	1.1	1.5	9	10	-1.0
27	Spain	46.7	45.9	44.3	0.9	1.3	8	9	-1.0
29	Estonia	1.3	1.2	1.1	0.8	1.6	10	12	-2.0
29	Germany	82.8	82.9	79.1	1.0	1.6	9	11	-2.0
29	Greece	10.6	10.8	10.0	0.9	1.3	9	11	-2.0
32	Italy	60.6	60.1	57.6	1.0	1.3	8	11	-3.0
32	Japan	126.5	119.1	101.8	0.8	1.4	8	11	-3.0
32	Portugal	10.3	10.0	9.2	0.9	1.4	8	11	-3.0
35	Latvia	1.9	1.7	1.5	0.8	1.7	11	15	-4.0
36	Hungary	9.8	9.6	9.2	0.9	1.5	9	14	-5.0

Notes: Rate of natural increase=Crude birth rate-Crude death rate

Table 2-6 Dependency Ratio in Taiwan and OECD Member States, 2018

Source: Ministry of the Interior, R.O.C. (Taiwan); 2018 World Population Data Sheet, Population Reference Bureau

Ranking	Country-ranked by dependency ratio	Population structure			Dependency ratio (%)	Young-age dependency ratio (%)	Old-age dependency ratio (%)	Aging index
		0-14 years (%)	15-64 years (%)	65 years and above (%)				
OECD Median		16	66	18	53	25	28	110
1	Japan	12	60	27	66	21	45	219
1	Israel	28	60	11	66	47	19	40
3	France	18	62	19	60	29	31	105
3	Sweden	18	63	20	60	28	32	112
5	Finland	16	63	21	59	26	33	129
6	Greece	14	64	22	56	23	34	149
6	United Kingdom	18	64	18	56	28	28	101
6	Italy	14	64	22	56	21	35	165
6	Denmark	17	64	19	56	26	30	114
10	Estonia	16	64	19	55	25	30	119
10	Latvia	16	65	20	55	24	31	128
10	Belgium	17	65	18	55	26	29	109
10	Portugal	14	65	21	54	22	33	151
13	Netherlands	16	65	18	53	25	28	114
13	Germany	13	65	21	53	20	32	158
13	Ireland	21	65	14	53	32	21	64
13	New Zealand	20	65	15	53	30	23	76
13	Norway	18	66	17	53	27	25	93
19	Czech Republic	16	66	19	52	24	29	121
19	Mexico	27	66	7	52	41	11	27
19	United States	19	66	15	52	29	23	81
19	Australia	19	66	15	52	29	23	81
19	Spain	15	66	19	52	23	29	126
24	Slovenia	15	66	19	51	23	29	127
24	Iceland	20	66	14	51	30	21	71
26	Hungary	15	67	19	50	22	28	128
27	Switzerland	15	67	18	49	22	27	121
27	Austria	14	67	19	49	21	28	129
29	Canada	16	67	17	48	24	24	103
30	Turkey	24	68	8	47	35	12	35
31	Poland	15	68	17	46	22	24	110
32	Chile	20	69	11	45	29	16	54
33	Luxembourg	16	70	14	44	23	20	88
33	Slovenia	15	70	15	44	22	22	97
35	Repulic of Korea	13	73	14	38	18	19	105
36	**R.O.C. (Taiwan)**	**13**	**76**	**15**	**37**	**18**	**19**	**106**

Notes: 1. Dependency ratio = (Population aged 0-14+ Population aged 65 and above) / Population aged 15-64X100
2. Young-age dependency ratio= (Population aged 0-14)/ Population aged 15-64X100
3. Old-age dependency ratio= (Population aged 65 and above) / Population aged 15-64X100
4. Aging index = (Population aged 65 and above) / Population aged 0-14X100

Section 4 Mortality Rates

According to the latest OECD data, in 2016, among developed countries Repulic of Korea had the lowest standardized mortality rate for malignant neoplasms at 165.2 deaths per 100,000 population, compared to a rate of 213.9 deaths in Taiwan. For transport accidents the United Kingdom was the lowest at 2.8 deaths per 100,000 population, compared to a rate of 14.0 deaths in Taiwan. The United Kingdom also had the lowest suicide rate, at 7.3 deaths per 100,000 population, compared to a rate of 15.3 deaths in Taiwan. Japan led in neonatal mortality rate, with 0.9 deaths per 1,000 live births, compared to a rate of 2.4 deaths in Taiwan. Since 2006, the suicide rates decreased in all countries apart from the United States, Canada, the United Kingdom, and Australia (Table 2-7).

Table 2-7 Standardized Mortality Rates of Major Countries

Source: Department of Statistics, MOHW, R.O.C. (Taiwan) OECD Health Data

	Malignant neoplasms (per 100,000 population)		Transport accidents (per 100,000 population)		Suicide (per 100,000 population)		Neonatal mortality (per 1,000 live births)	
	2006	2016	2006	2016	2006	2016	2006	2016
R.O.C. (Taiwan)	230.8	213.9	22.7	14.0	20.5	15.3	2.7	2.4
Japan	193.5	171.5	6.3	3.3	21.6	15.2	1.3	0.9
Repulic of Korea	204.1	165.2	19.9	10.1	26.2	24.6	2.5	1.6
United States	209.5	180.6	16.4	13.3	11.3	13.9	4.5	3.9
Canada	222.2	196.8	10.0	6.2	10.8	11.8	3.7	3.4
United Kingdom	236.2	216.4	5.8	2.8	6.7	7.3	3.5	2.8
Germany	213.5	200.3	6.4	4.0	10.7	10.2	2.6	2.4
France	219.1	197.7	7.8	4.7	16.5	13.1	2.3	2.6
Australia	211.1	185.0	8.9	6.1	10.5	11.9	3.2	2.3
New Zealand	224.3	210.2	11.5	8.4	12.7	11.5	2.7	2.8

Notes:1. If the data for a specific year are not available, the latest available data are used instead.
2. The standardized mortality rates for malignant neoplasms, transport accidents, and suicide were calculated based on the 2010 OECD standards for calculating population.

Section 5 Health Expenditure

In 2017, Taiwan's current health expenditure (CHE) per capita at purchasing power parity (PPP) basis was USD3,047, which was lower than the OECD median of USD3,683. If ranked among OECD member states, Taiwan would have been 22nd. GDP per capita on a PPP basis in Taiwan was USD49,948, which was higher than the OECD median of USD42,785 and ranked 12th when compared to OECD member states. CHE accounted for a 6.1% share of Taiwan's GDP, a relatively low amount that was 2.7 percentage points below the OECD median (8.8%) (Table 2-8).

In comparison to 2007, the share of CHE in GDP increased in most OECD member states of 2017, with the highest increase of 2.9 percentage points in Japan, followed by 2.8 percentage points in Sweden. A decrease was observed in nine countries, including Iceland and Greece. The share of CHE in Taiwan's GDP increased by 0.4 percentage points, which was lower than the OECD mean of 0.8 percentage point and higher than the increase in nine countries, including Hungary, Portugal, and Luxembourg (Figure 2-16).

Figure 2-16 CHE/GDP Proportion

Source: Department of Statistics, MOHW, R.O.C (Taiwan) ; OECD Health Data

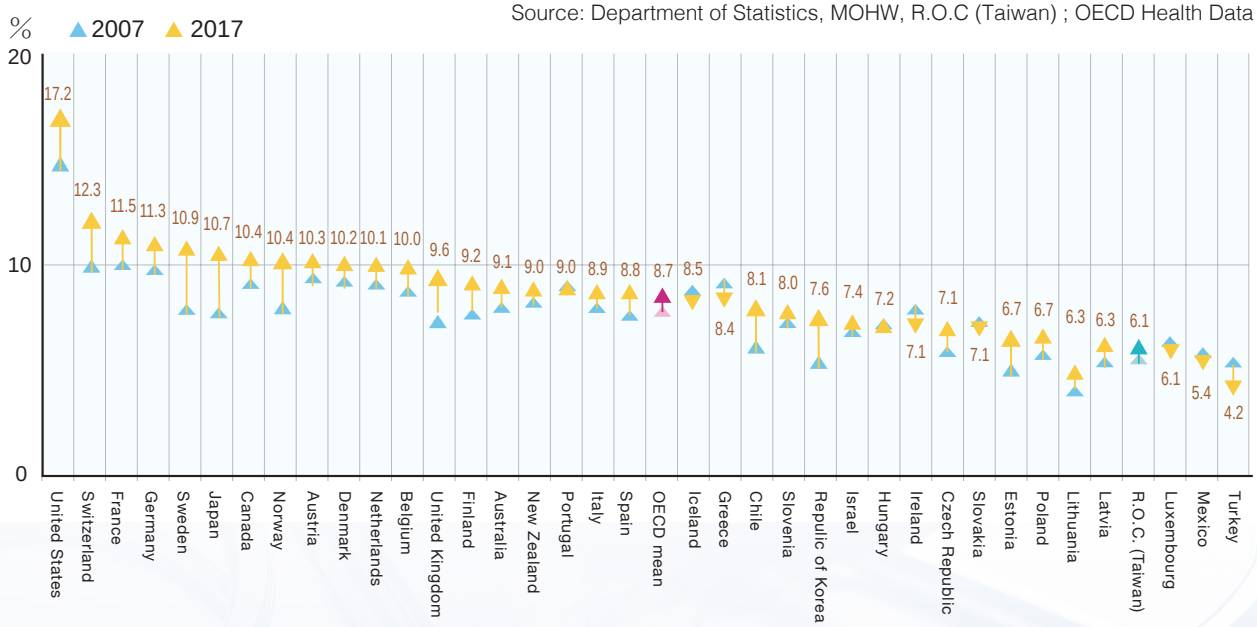


Table 2-8 Comparisons of CHE Per Capita and GDP Per Capita Between R.O.C. (Taiwan) and OECD Member States, 2017

Source: Department of Statistics, MOHW, Directorate General of Budget, Accounting and Statistics, R.O.C. (Taiwan)

Country	Order	CHE Per Capita (USD PPPs)	Order	GDP per capital (USD PPPs)	Order	CHE/GDP (%)
OECD Median		**3,683**		**42,785**		**8.8**
United States	1	10,209	5	59,532	1	17.2
Switzerland	2	8,009	3	65,332	2	12.3
Luxembourg	3	6,475	1	104,203	34	6.1
Norway	4	6,351	4	61,256	7	10.4
Germany	5	5,728	9	50,822	4	11.3
Sweden	6	5,511	11	50,483	5	10.9
Ireland	7	5,449	2	76,771	27	7.1
Austria	8	5,440	8	52,708	9	10.3
Netherlands	9	5,386	7	53,100	11	10.1
Denmark	10	5,183	10	50,724	10	10.2
France	11	4,902	19	42,785	3	11.5
Canada	12	4,826	15	46,360	7	10.4
Belgium	13	4,774	14	47,646	12	10.0
Japan	14	4,717	18	43,903	6	10.7
Iceland	15	4,581	6	53,982	20	8.5
Australia	16	4,543	13	49,744	15	9.1
United Kingdom	17	4,246	17	44,019	13	9.6
Finland	18	4,173	16	45,257	14	9.2
New Zealand	19	3,683	20	40,917	16	9.0
Italy	20	3,542	21	39,792	18	8.9
Spain	21	3,371	24	38,127	19	8.8
R.O.C. (Taiwan)	**22**	**3,047**	**12**	**49,948**	**34**	**6.1**
Korea	23	2,897	23	38,275	24	7.6
Portugal	24	2,888	27	32,145	16	9.0
Israel	25	2,834	22	38,435	25	7.4
Slovenia	26	2,775	26	34,816	23	8.0
Czech Republic	27	2,616	25	36,960	27	7.1
Greece	28	2,325	34	27,789	21	8.4
Slovakia	29	2,269	28	32,137	27	7.1
Estonia	30	2,125	30	31,634	30	6.7
Hungary	31	2,045	32	28,328	26	7.2
Poland	32	1,955	31	29,291	30	6.7
Chile	33	1,915	36	23,667	22	8.1
Latvia	34	1,722	35	27,475	32	6.3
Turkey	35	1,194	33	28,242	37	4.2
Mexico	36	1,034	37	19,140	36	5.4

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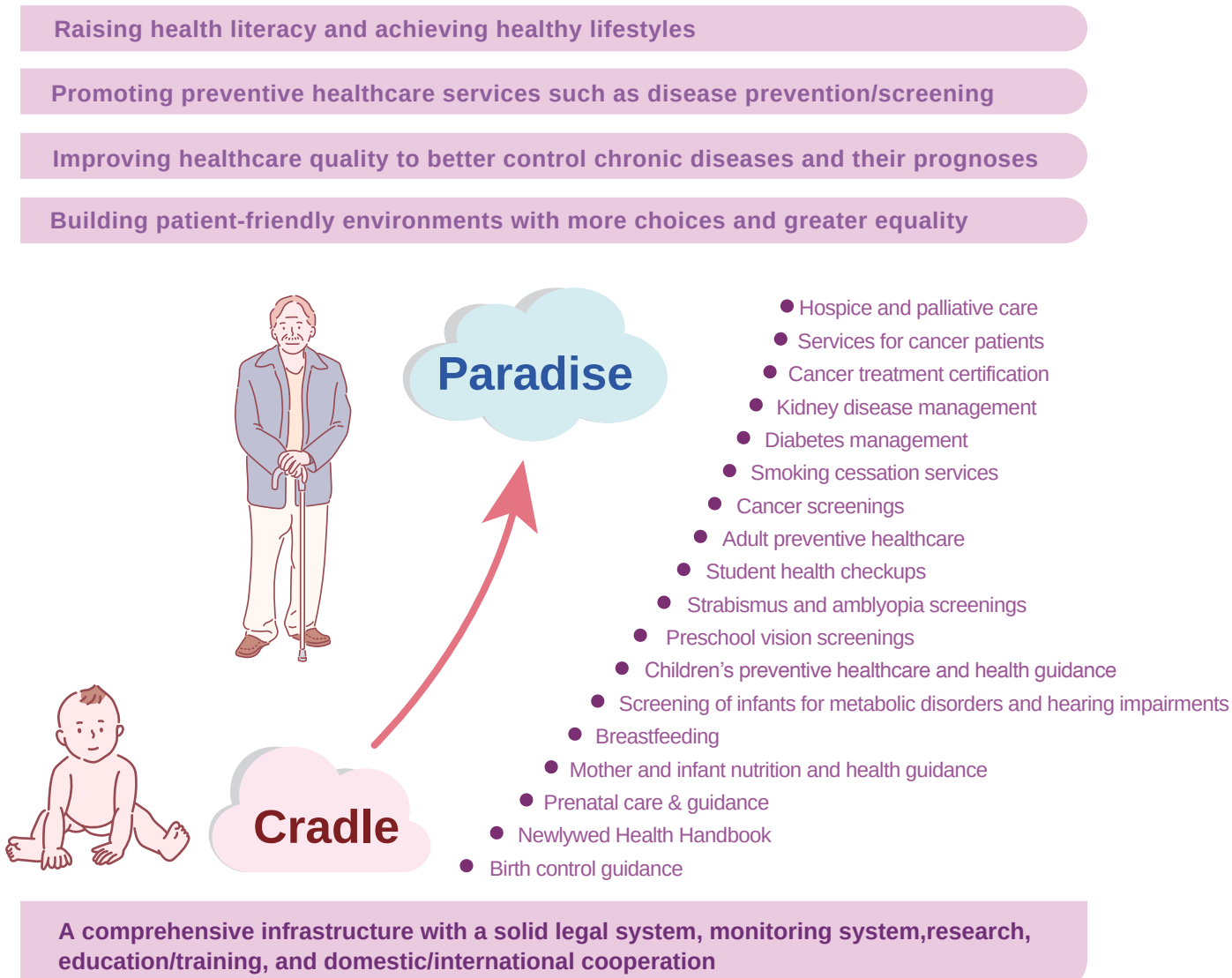
3 An Environment Conductive to Health

To realize "Health for All" advocated by the WHO, the MOHW has planned health promotion policies to benefit people at different stages of life (Figure 3-1). As outlined in the UN "Health in All Policies" initiative, health-promoting policies are systematically incorporated into cross-departmental decisions in order to effect synergies. Policy makers hope to improve health by considering all aspects of decisionmaking.

The UN's objective of sustainable development has become a common direction of administration in all countries. In coordination with the National Council for Sustainable Development, our ministry formulated sustainable development goals for Taiwan and established an environment conductive to health in pursue of a healthy sustainable society. Furthermore, in accordance with the 2012 World Health Assembly (WHA) "25 by 25" objective [to reduce preventable deaths due to noncommunicable diseases (cardiovascular diseases, cancer, diabetes, and chronic respiratory disease) by 25% by 2025], the MOHW incorporated the 9 global targets and 25 indicators contained in the objective into its policies. Taking a whole-of-government, a whole-of-society and a life course approach, policies are formulated to improve health at the individual, societal, national, and global levels.

Figure 3-1 A Cradle-to-Paradise, Community-Based Approach to Promote Health for All



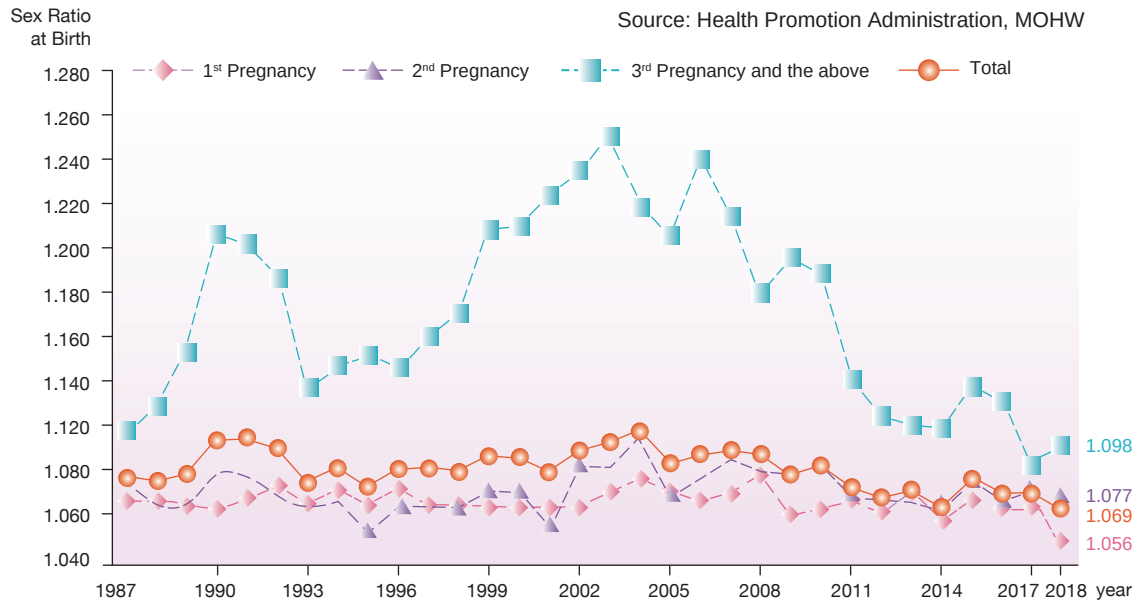
Chapter 1 Healthy Childbirth and Growth

In order to promote health among pediatric populations, the MOHW actively promote health among pregnant women, children, and adolescents.

Section 1 Maternal Health

1. Prenatal Care
   (1) The average utilization rate of the 10 prenatal examinations and one ultrasound examination offered to pregnant women was estimated to be 94.5% in 2018, there were 1,638,361 prenatal checks performed, and expectant mothers qualified for two prenatal health education guidance.
   (2) Subsidized Group B Streptococcus Screenings. In 2018, there were 158,572 GBS screenings,with a coverage rate of 87.2% and a positive rate of 20.66%.
   (3) Subsidized prenatal genetic testing is provided for high-risk pregnancies. In 2018, 1,387 abnormalities were found in 42,593 cases. Referral for further genetic counseling were provided.
2. A free hotline (0800-870-870), an app, and a website (http://mammy.hpa.gov.tw) were established to provide obstetric care information to expectant mothers. In 2018, there were 19,141 calls to the hotline, 2,116,388 visits to the website, and the app had 55,000 downloads.
3. In accordance with the "Public Breastfeeding Act,"a total of 2,235 public breastfeeding rooms had been established, and another 1,186 breastfeeding rooms had been established by the end of 2018.
4. In line with WHO policy on breastfeeding, the MOHW has promoted Baby-Friendly Medical Institution accreditation. In 2018, there were 162 hospitals accredited, with total coverage rate of all births reaching 74.6% of all births in Taiwan. The exclusive breastfeeding rate under 6 months of age was 46.2%, beating the world average of 36% and getting closer to the WHO global target of 50% by 2025.
5. The sex ratio naturally ranges between 1.04-1.06 (for new born male and female infants). The government has implemented care-related regulations to protect fetuses' right to life, eliminate gender discrimination and prevent relevant social issues caused by male-female imbalance. A task force was established to reduce the incidence of inappropriate abortions. The task force collaborated with local health departments, checked local SRB data and provided guidance to institutions offering birth and prenatal checkup services while continuing to promote relevant affairs and initiatives. As a result of the aforementioned efforts, the sex ratio in Taiwan has decreased from 1.090 in 2010 to 1.069 in 2018 (Figure. 3-20).

Figure 3-2 Sex Ratio of Live Births in Taiwan, by Year

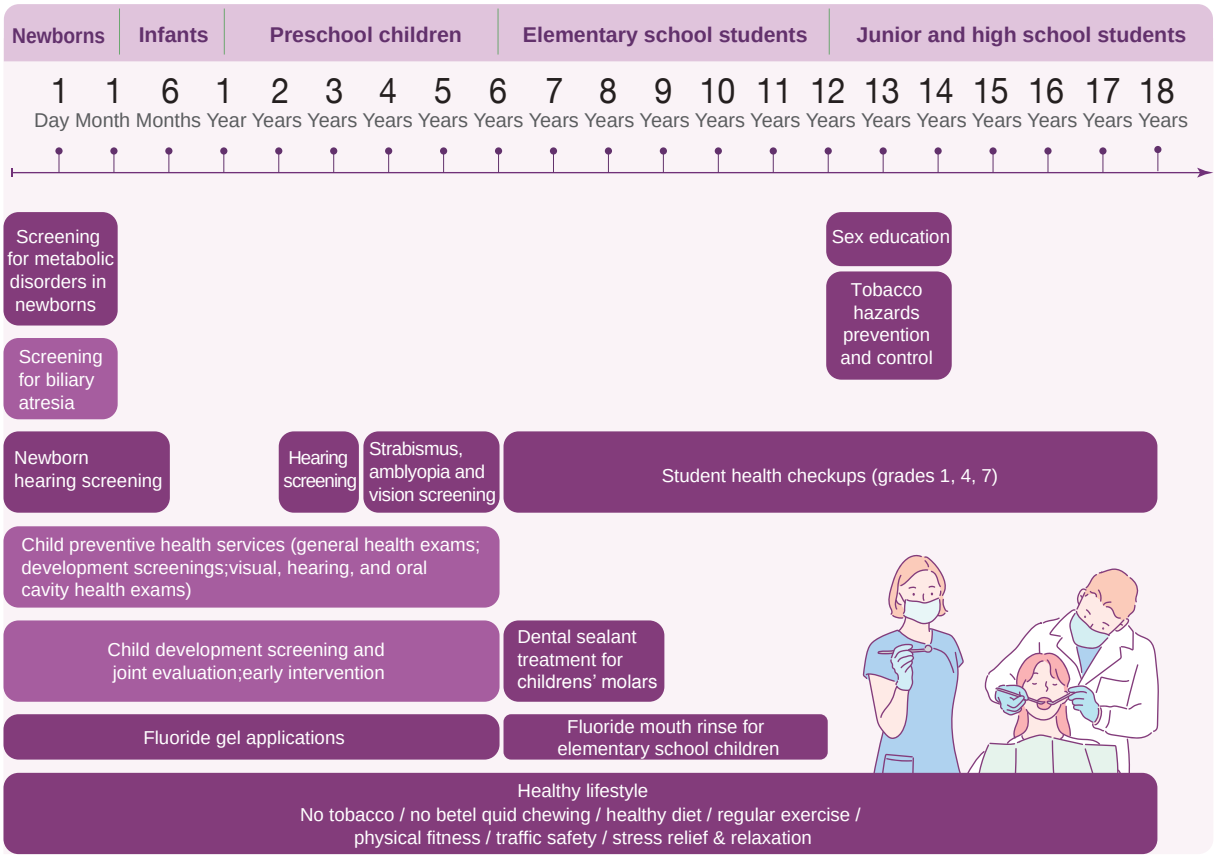


Section 2 Health for Infants, Children, and Adolescents

In addition to screenings for newborns, early assessment and intervention is provided to children suspected of developmental delays. Other measures include seven rounds of pediatric preventive healthcare and health education guidance; oral, visual and auditory health exams for children; and a program to promote sexual health among adolescents (Figure 3-3). Achievements include the following:

1. At 48 hours after birth, newborns in Taiwan are screened for 11 genetic metabolic disorders, with follow-up referrals, diagnosis, and treatment provided in all atypical cases. In 2018, there were 180,488 newborns screened, with a coverage rate of over 99%.
2. Fully subsidized newborn hearing screening is provided within the first three months of birth. In 2018, 176,345 (98.1%) newborns were screened. 744 cases were found to have hearing impairments, and were referred for follow-up care.
3. In 2018, 1.07 million preventive healthcare services was provided to children 7 years of age and below. By the end of December 2018, a total of 3,132 doctors participated in the child health education guidance program providing 923,448 services to parents with children 7 years of age and below.
4. Every city and county established one to five Child Development Assessment Center (s). In 2018, 51 centers in 22 cities and counties diagnosed and confirmed developmental delays in 16,246 children.
5. Continued to encourage strabismus, amblyopia, and vision screenings for preschool children 4 and 5 years of age. In 2018, the screening rate was 100%, with 99.59% of diagnosed abnormalities referred for treatment.
6. In 2018, a total of 10,434 people participated in 37 sexual health school lectures and parent education lectures. Also, 51,534 people visited the website which provides adolescents, parents and teachers with correct sexual health information and teaching materials.

Figure 3-3 Health Policies of Infants, Children, and Adolescents



Chapter 2 Unhealthy Habits

Major unhealthy habits include smoking/chewing betel quid, poor diet, sedentary life styles, and accidents. Tobaccos and betel quid are both group 1 carcinogens. The accidents is the one of 10 leading causes of death. It is therefore imperative that we continue to work toward rejecting tobaccos and betel quid, and to build a safe, healthy society.

Section 1 Nutrition and Obesity Control

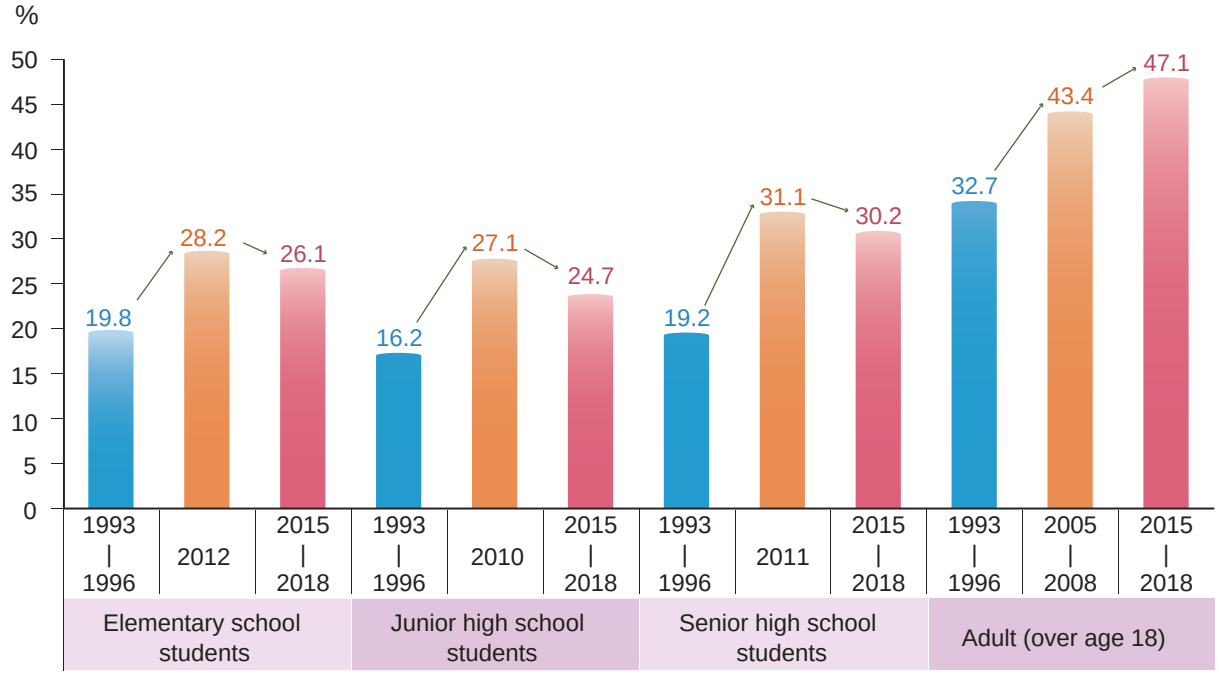
To promote active lifestyles, the MOHW educates people about calories and nutrition literacy, maintaining a healthy body weight, improving physical/mental and social health to prevent chronic diseases.

Key strategies and achievements in 2018 were as follows:

1. The MOHW has promoted "Nutrition and Healthy Diet Promotion Act" legislation to enhance people's nutrition and nutrition literacy and build a healthy eating supportive environment.
2. Push for all counties and cities to establish their "Community Nutrition Promotion Center", which will focus on the elderly residents in communities as the target group by connecting to the ABC model of community care system to provide services such as "nutritional status analyzation for local residents", "training courses for community medical personnel and volunteers", "community nutrition education", "healthy diet counseling" and so forth.
3. Publish new and updated versions of "Daily Dietary Guidelines", "Daily Food Guides" and recommended nutritional intake for people of different age groups. In addition, the Ministry has also published the illustration of "My Plate" as an example of a nutritionally balanced meal with visual representation of different macronutrients, complete with a mnemonic phrase and gesture to help the general public cultivate and maintain healthy dietary habits.

Figure 3-4 Overweight and Obese Rate in Taiwan

Source: The Nutrition and Health Survey in Taiwan, MOHW



Notes:
1. Overweight/obese indicators for elementary, junior high, and senior high school students were based on the MOHW's 2013 BMI recommendations.
2. Adults 18 years and older with a BMI ≥ 24 kg/m^2 were designated as overweight or obese.
3. Data from 2005-2008 have been obtained from adults over the age of 19.

4. Utilize "Taiwan's Obesity Prevention and Management Strategy" and "Evidence-based Guideline on Children and Adult Obesity Prevention and Management" in pilot programs by means of integrating into the certification standard for 15 health promoting hospitals in conjunction with existing campaigns on obesity prevention at different settings by the various health bureaus and offices.

5. The Nutrition and Health Survey in Taiwan (NAHSIT) included the following data on the prevalence of overweight and obesity (Figure 3-4):

   (1) The rate of overweight/obese elementary school students decreased from 28.2% in 2012 to 26.1% in 2015-2018; the rate among junior high school students decreased from 27.1% in 2010 to 24.7% in 2015-2018; and the rate among senior high school students decreased from 31.1% in 2011 to 30.2% in 2015-2018. These figures showed a general decrease in the overweight/obsesity prevalence among children and youths.

   (2) The rate of overweight/obese adults increased from 32.7% between 1993-1996 to 43.4% between 2005-2008 (increase rate of 10.7%). On the other hand, the report of 2015-2018 was 47.1% (increase rate of 3.7%), indicating the rise in overweight/obesity rate had slowed significantly.

6. According to the NAHSIT carried out between 2013-2016, assuming the daily caloric need of a normal adult to be 2000 calories, the survey found that the average citizens' daily food intake had strayed from what is recommended in the dietary guide (i.e. with more than 50% of the population having excessive protein intake from soy, fish and meat; more than 90% of the population having less than the recommended amount of fruits, vegetables and dairy products). This reflects the fact that there is still room for improvement before the general public reaches the ideal rate for compliance. In light of this, the Ministry will continue to monitor the nutrition status for the general public, establish relevant public policies, construct a supportive environment to encourage better nutritional intake, revise relevant nutritional standards and construct diverse channels to disseminate important nutritional information and knowledge to advocate for the importance of healthy diet and balanced nutritional intake so as to improve the general public's nutritional status and awareness.

Section 2 Tobaccos and Betel Quid

1. Tobacco Control

A decade has past since the enactment of the Tobacco Hazards Prevention Act, the adult smoking rate fell from 21.9% in 2008 to 13.0% in 2018 (Figure 3-5). Smoking rate of junior high school students fell from 7.8% in 2008 to 2.8% in 2018, a decline of 63.8%; smoking rate of senior high school and vocational school students fell from 14.8% in 2007 to 8.0% in 2018, indicating a decline of 45.7% (Figure 3-6). Taiwan is gradually moving toward the WHO's noncommunicable disease target by 2025 to achieve a 30% reduction in the prevalence of tobacco use. Moreover, the secondhand smoke exposure rate in public places where prohibit smoking fell from 23.7% in 2008 to 5.4% in 2018.

Taiwan implemented the Framework Convention on Tobacco Control and the MPOWER measures: Monitor; Protect; Offer; Warning; Enforce; Raise. Taiwan's achievements are as follows:

(1) Building a Tobacco-Free Environment through the "Tobacco Hazards Prevention Act".

A. In 2018, local health departments conducted more than 1,945 million inspections of over 680,000 businesses and recorded 7,469 violations totaling fines of 112.66 million NTD.

B. Since 2012, the MOHW has promoted tobacco-free sidewalks around campus. By December 2018, local communities announced that smoking was prohibited on sidewalks, the areas near campus entrances and parent pick-up/dropoff zones at approximately 2,867 senior high and lower level schools across 22 cities and counties. The rules covered 78.7% of campuses at the senior high, vocational school levels and lower level schools.

C. As of the end of 2018, 213 hospitals in Taiwan have received "International Certification for Tobacco Free Hospital". Not only becoming the first and the largest network of tobacco free hospitals in Asia-Pacific region, our network is also the largest in the world. Presently, 18 hospitals in Taiwan have received the prestigious International Gold Award, placing both Taiwan and Spain at the top of the list for having the most hospitals with this award.

(2) Comprehensive Smoking Cessation Programs.

A. Taiwan offers "Comprehensive Smoking Cessation Programs." They include secondgeneration cessation services, a smoking cessation helpline, "Quit and Win" campaign, cessation classes offered by local health departments, and pharmacist consultations. In 2018, smokers used these services 962,483 times. Second generation smoking cessation services were utilized 191,514 times(705,953

person-times), which helped over 51,000 smokers quit smoking. In the short-term, the reduction in the number of smokers would likely lower health expenditures by more than NT$270 million. Long-term economic benefits could surpass NT$21.2 billion.

B. In 2018, there were 80,723 calls made to the Toll-free Smokers' helpline (0800-636363).

(3) Effectiveness of smoking prevention in adolescents

A. The MOHW cooperates with local governments to regulate tobacco sellers. In 2018, over 350,000 inspections uncovered 440 cases of tobacco being sold to minors, leading to total fines exceeding NT$4.21 million. Another 370,000 inspections uncovered 2,294 cases of minors smoking, with smoking cessation classes completed in 1,833 of these cases.

B. The administrative penalty for violating the "Tobacco Hazards Prevention Act" article 13 "not selling tobacco to minors" has been included into the performance evaluation of local health department and the effectiveness assessment of the Youth protection Projects since 2014.

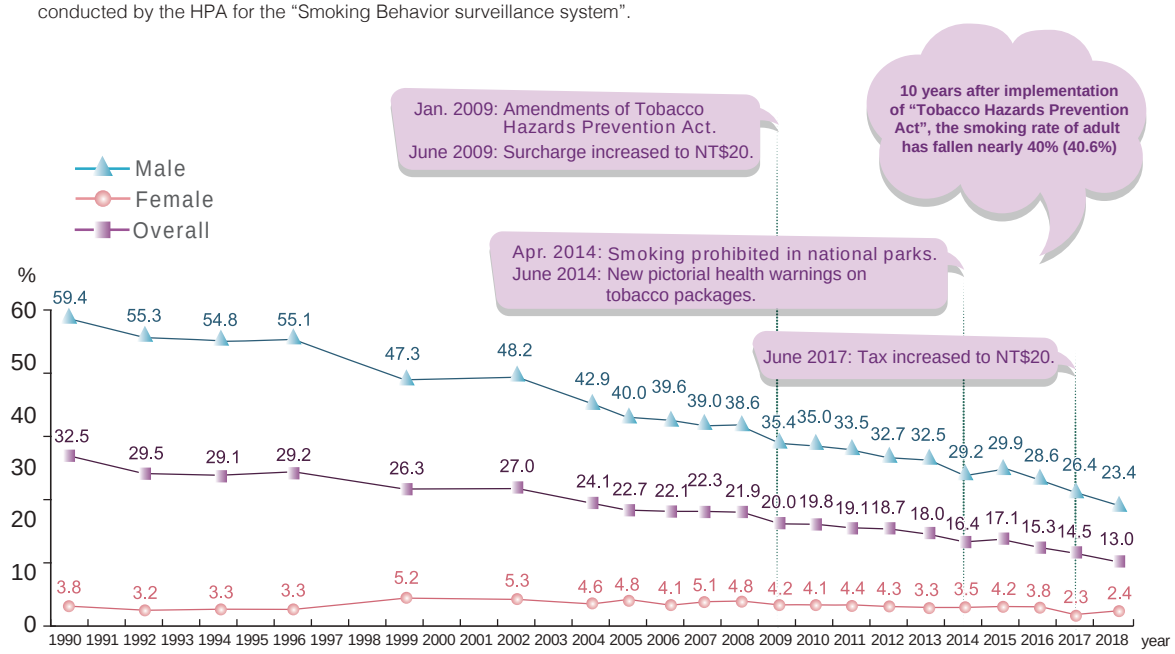
According to 2018 inspection results, 42.7% of tobacco sellers didn't refuse to sell tobacco to minors. Among these targeted shops, the violation rate of convenience store is 28.0%; the violation rates in betel nut stands and traditional grocery stores are 59.7% and 47.4%. Compared to 2017, the violation rate came to 31.8% and this translated to an increase of 10%. The Ministry has asked municipal governments to step up with relevant supervisions and inspections as there is still room for improvement.

3. An interactive experience technology was created for the purpose of tobacco education in Taiwan. The Ministry along with Ministry of Education and local Departments of Health collaborated in the organization of the "Island Trotting Around Taiwan" as the featured event for special festive celebrations. The event reaches out to students of elementary, junior high, senior high and vocational high schools in an effort to call on everyone to say no to the hazards of 3rd-hand smoke.

Figure 3-5 Smoking Rates of Adults over 18 Years Old in Taiwan, by Year

Source: Health Promotion Administration, Ministry of Health and Welfare, R.O.C. (Taiwan)

1. Data from 1990 to 1996 were derived from household interviews conducted by the Taiwan Tobacco & Liquor Corporation.
2. Data for 1999 carried out by Professor Lee-Lan Yen.
3. Data for 2002 was based upon health-related information collected using household interviews conducted by the HPA for the "2002 National Survey on Knowledge, Attitude, and Practice of Health Promotion for the Taiwan Region".
4. Data from 2004 to 2018 was based upon smoking-related information of the general public collected via telephone interviews conducted by the HPA for the "Smoking Behavior surveillance system".

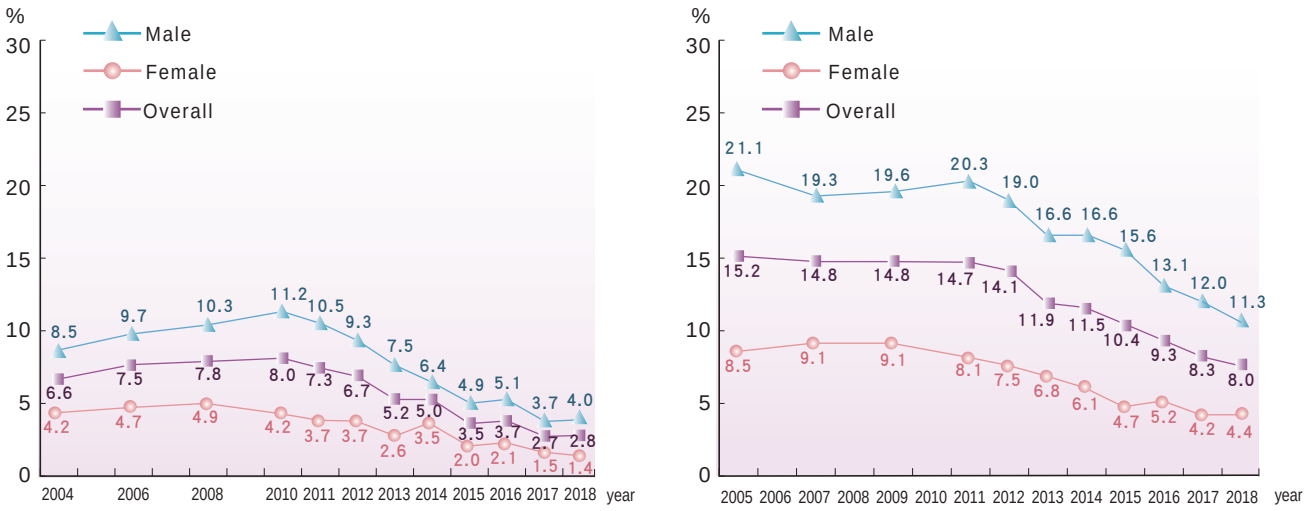


Notes:

1. From 1999 to 2018, the definition for smokers refer to anyone who had smoked more than 100 sticks (5 packs) of cigarettes, and had smoked in the last 30 days.
2. Annual averages from 2004 to 2018 were based upon the Taiwan region household census of 2000 carried out by the Directorate-General of Budget, Accounting, and Statistics (DGBAS). Weight adjustments were carried out according to gender, age, education background, and characteristics of the area of residence.

Figure 3-6 Taiwan Adolescent Smoking Rate over the past years

Source: HPA's 2004-2018 Global Youth Tobacco Survey



Notes: An adolescent smoker was defined as someone who had attempted to smoke in the last 30 days.

2. Betel Quid Hazards Prevention Program

(1) The MOHW worked with various agencies, and NGOs to build betel quid-free environments. In 2018, cessation services were provided to more than 7,000 people, helping approximately 3,000 of them quit.

(2) Oral cancer screenings are offered to betel quid chewers and smokers aged 30 and older, and to indigenous people aged 18 and older who chew betel quid. Over the same time period, the percentage of betel quid users among males over the age of 18 fell by more than half, from 17.2% to 6.2%.

(3) In order to determine whether the total area used for growing betel quid continues to decline as desired, the MOHW monitored the conversion of abandoned betel quid farms into other crops. In 2014-2017, subsidies were provided to assist converting 720 hectares of land.

Section 3 Healthy Environments

In accordance with the WHO's 1997 Jakarta Declaration, our ministry uses public and private resources to help cultivate greater health awareness among the general public. It intends to build friendly, supportive environments to better societal health and wellbeing.

1. Healthy Cities, Communities, Schools, and Workplaces

(1) Healthy Cities and Communities

In 2018, community health building plans were implemented by organizations in 20 counties and cities and 100 communities (83 public health center and 17 community units). Established 100 Cross-Department promoting platforms. Inventory and utilization were conducted using community assets as the basis. "Age-Friendly Communities" were built in accordance with eight aspects of the WHO's guide "Age-Friendly Cities." In the "Age-friendly Environment Assessment" implemented by the Ministry, results revealed that between 2016 and 2018, Taiwan has made continual improvement in overall, physical and social environment performance; most of the municipalities have made improvements in the areas of "transportation", "residential environment", "citizen participation and employment" and "communication and information". In terms of 2018, improvements in outdoor space and architectures, respect and social inclusion, community support and healthcare services have been relatively slower.

(2) Health-Promoting Schools

A. Since 2002, the MOHW and Ministry of Education have jointly promoted health promoting school program. Until 2018, 4,030 schools from primary schools to universities had implemented health promoting school.

B. In 2018, the 4th Health Promoting School International Accreditation was held. Schools were evaluated in six major dimensions such as school health policy, school physical environment, school social environment, skill-based health curriculum, community relations and school health services along with specialty topics (i.e. healthy body composition, injuries from accident and etc.) The total of 24 assessment criteria for the accreditation involves six major criteria and 12 sub-items. 618 schools submitted applications and 374 schools received the accreditation (18 schools received the Gold Award; 85 schools received the Silver Award, 198 schools received the Bronze Award and 73 schools received honorable mention for their efforts in the promotion).

(3) Workplace Health Promotion

Since 2007, the MOHW has offered "healthy workplace certification". This accreditation includes three certifications of tobacco hazard prevention (suspended in 2015 in conjunction with the new implementation rules spelled out in the Tobacco Hazards Prevention Act), Health Initiation and Health Promotion. Taking the Health Promotion Badge as an example, all relevant assessments are performed based on WHO's healthy workplace model (consisting of four dimensions of physical work environment, psychosocial work environment, personal health resources and enterprise community involvement), SOP for health promotion work (leadership and strategic planning, resource and manpower utilization, establishment of health promotion items based on the needs of the workplace, formulation of annual plan, education and dissemination, procedure management, promotional outcome, improvement and so forth) along with various health promotion related activities, with 20,415 workplaces qualified by the end of 2018. In 2018, there were 32 workplaces awarded for excellence in health promotion and three individuals gained recognition for outstanding contributions.

2. Healthy Hospitals

(1) In 2017, the Health-Promoting Hospitals, promoted since 2006, integrated the concepts of age-frinedly, smoke-free and environment-friendly hospital concepts. The Ministry has worked to create a concise assessment standard by transforming the four accreditation items into modules for the establishment of the accreditation mechanism for "Healthy Hospitals". This frame-work is also the first time that health literacy, shared medical decision-making and patient-family engagement were incorporated along with the Patient Focused Method (PFM) for implementation. Ever since the accreditation mechanism for "Healthy Hospitals" was established, a total of 184 hospitals have been accredited as of the end of 2018.

(2) In 2018, subsidies were provided to 17 local health departments and 81 healthcare institutions (63 hospitals and 14 long-term care facilities) to implement the "Plan to Encourage Healthcare Institution Participation in Health-Promotion Work." The Ministry has also been promoting issues such as age-friendly care and healthy workplace, including helping 56 hospitals to adopt the Shared Decision-Making (SDM) model in an effort to expand the capacity for health promotional service.

(3) Promotion of Low Carbon Hospitals

In order to assist the healthcare and medical industries to alleviate their impact on the environment, the Ministry has advocated topics relating to "Healthy Promoting Hospitals and environmental friendliness" in Taiwan since 2010 so as to help medical institutions transform from themselves from polluters to protectors of the environment. In 2018, the Ministry called on 174 hospitals to respond and participate in actions to conserve energy and reduce carbon emission, by organizing three information sessions on climate smart hospitals, and helping 15 hospitals through onsite consultation. In addition, we also held a "Climate Smart Hospital Press Conference" to unveil our plans to promote low-carbon hospitals for the promotion of climate change adaptation policies and strategies for low-carbon diets, energy conservation and water conservation with onsite demonstrations and visits, presentation of power-saving measures in hospitals and low-carbon diets. In the future, the Ministry will plan and formulate advanced indicators and guidelines to guide hospitals to implement self-inspection and adaptation, in order to transform from low-carbon hospitals into environmental education centers.

3. Advocating Physical Activity

According to the WHO, walking is the most recommended and practical method of physical activity. Since 2002, the MOHW has promoted the "Walking 10,000 Steps per day for health" slogan. Key achievements in 2018 were as follows:

(1) The MOHW collaborated with the Sports Administration of the Ministry of Education by drafting together the "Blueprint of Collaboration between the Sports Administration and Health Promotion Administration" to prepare for WHO's "Global Action Plan on Physical Activity 2018-2030" by establishing four strategic objectives and 12 promotional strategies. These will serve as the basis for relevant collaborations with the Sports Administration in the future.

(2) The MOHW worked together with the Sports Administration of the Ministry of Education by jointly organizing the "Level up health by creating a sports city - physical exercises and health for all citizens" conference. The event started with a round-table conference featuring representatives from central and local governments and the event gathered approximately 300 participants from the government, academia and industries.

(3) Targeting medical and professional sports personnel, the MOHW hosted the "Community Preventive and Disability/Dementia Delaying Personnel Training", which involves 15 batches of basic training. A total of 1,472 participants completed the training. In addition, 2 batches of specialty trainings were held for 875 participants that finished the training. With these personnel who took part in these trainings as lecturers, we targeted frail, sub-health and healthy seniors as service recipients by subsidizing 14 municipalities to host 291 sessions of promotional programs, 508 sessions of outreach service trainings to serve more than 35,000 people. Initial analysis of data taken from the pre-/post-training tests for the participating seniors revealed that the 12-week intervention offers significant help to seniors in terms of maintaining and offering them social interactions, emotional functions while reducing the incidence of falls.

(4) According to a survey by the Sports Administration, Ministry of Education, the percentage of persons 13 years old and above who engaged in regular exercise rose from 20.2% in 2007 to 33.5% in 2018.

4. Prevention of Accidents and Injuries

(1) In conjunction with existing schedules for pediatric preventive healthcare, the Ministry has designed 7 rounds of 1-on-1 health education sessions offered by physicians for children under the age of 7. Contents of the session will cover the prevention of sudden infant death syndrome (SIDS) and injuries from accidents. In addition, self-assessment checklist for "Injury from Accident" along with relevant contents have been included in the Health Education Handbook for Children as a way to bolster the competence of parents/primary caretakers. The Ministry also advocates that parents choose illustration books featuring health related topics such as accident injury prevention for family reading time. By reading such stories to children and infants, they will be exposed to knowledge and information that will facilitate their health and self-protection at early stages in their lives. Not only that, both parents and their children will benefit from learning and improving their health related knowledge through the illustrated books.

(2) Through a variety of channels, the Ministry has been promoting "Fall Prevention Education for Seniors" as a movement to heighten people's awareness for protecting the elderly people from falls. Coupled with the frailty assessment conducted by hospitals and health departments, the Ministry strives to identify the high-risk groups for fall hazards, in order to take further intervention to reduce the incidence and risks of falls.

(3) In 2018, the aboriginal community health promotion pilot program was held in Guangfu Township in Hualien County and Haiduan Township in Taitung County. The program features an Asset Based Community Development (ABCD) model to implement an inventory on community safety and health resources with promotion of accident injury prevention (i.e. DUI, fall prevention, drowning prevention) and health risk factor prevention (i.e. tobacco, alcohol and betel nuts).

Chapter 3 Active Aging and Prevention of Noncommunicable Diseases

Taiwan has become an aged society by 2018. An aging population, a sedentary lifestyle and Western diets have increased the number of people suffering from chronic illness. To raise the quality of life of elderlies, the MOHW promotes health awareness among elderly persons, age-friendly cities, and the prevention of major chronic diseases and cancer.

Section 1 Health Promotion for Middle-Aged and Older People

1. To diagnose and treat diseases early, the Ministry offers free preventive health screenings for adults once every three years for people aged 40-64, and annually for people aged 65 and above. The screenings are available at 6,800 health institutions and via community screening services. In 2018, 1.9 million people have utilized the screening services.

2. In an effort to encourage seniors to increase their level of physical activity through day-to-day routines, the Ministry organized the "Active Life Counseling Project" that is based on typical daily activities for the elderly people and incorporating various function promoting activities that have been proven by domestic/foreign empirical evidence for the compilation of the "Active Life Handbook". In addition, the Ministry also developed community intervention models and

established evidence-based innovative solutions for the facilitation of health for seniors.

3. The Ministry has been promoting its "Dementia Friendly Community Program" with administrative areas of townships, boroughs, cities and districts as units of division to create living spheres that are centered on dementia patients and their family members. In 2018, the Ministry subsidized 4 municipalities to construct 4 dementia friendly communities. In addition, we have also been involved in the recruiting of dementia friendly guardian angels through our "Dementia Prevention and Promotional Project" for relevant recruitment and dementia-friendly marketing activities. In 2018, we have recruited 32,000 guardian angels for dementia patients, connected more than 1,800 dementia-friendly organizations and held 315 dementia-friendly marketing events. Also, our "Dementia Friendly Community Empowerment & Resource Integration Center Project" has led to the establishment of resource integration centers in 2018, with teaching materials compiled and prepared for 8 different target groups in 3 digital learning courses.
4. The MOHW sponsored team competitions to raise health awareness among seniors. In 2018, 34,000 people participated in the competitions within senior teams (representing villages and towns). Local health departments appointed 59 county and citylevel teams. The average age of the participants was 70 years, with their total age reaching 170,000 years. Over 500,000 seniors participated in the competitions over the period of eight years.
5. In 2013, all 22 cities and counties became agefriendly cities. Consequently, Taiwan achieved the highest coverage rate of age-friendly cities in the world. In order to encourage local governments to promote the concepts of healthy and age-friendly cities, the Ministry has implemented voting and selection as a way to promote issues and results of healthy and age-friendly city issues to highlight examples for other local governments to follow. Drawing on this foundation, there were 405 entries to the 2018 Healthy City and Age-Friendly City Awards; 58 of the entries won awards.
6. The Ministry has referred to the 22 indicators in EU's Active Aging Index in order to create the framework for our localized version of active aging index with 33 indicators. Comparing Taiwan's data (taken from 2017) with data from 28 EU nations (for 2014), Taiwan would have ranked 7th in the 2014 rankings, with 6th and 8th placement for male and female seniors respectively.
7. In 2014, the MOHW launched the Project for Universal Age-Friendly Healthcare Organizations. By the end of 2018, there were 608 healthcare institutions certified as age-friendly (including 200 hospitals, 330 health centers, one health clinic and 77 long-term care facilities).
8. In 2018, the Ministry prompted local departments of health to organize a total of 969 sessions of mental health promotion for the elderly, drawing a total of 52,234 participants. The Ministry also asked local departments of health to implement dementia screening and referral for seniors in high-risk groups by establishing the referral standards and provide post-screening follow-up services for seniors in high-risk groups. In 2018, a total of 181,452 seniors were screened, with 221 referred to receive psychiatric treatment, 751 were referred to receive psychological counseling and 746 were referred to other relevant resources.

Section 2 Control of Major Chronic Diseases

1. Control of Major Chronic Diseases

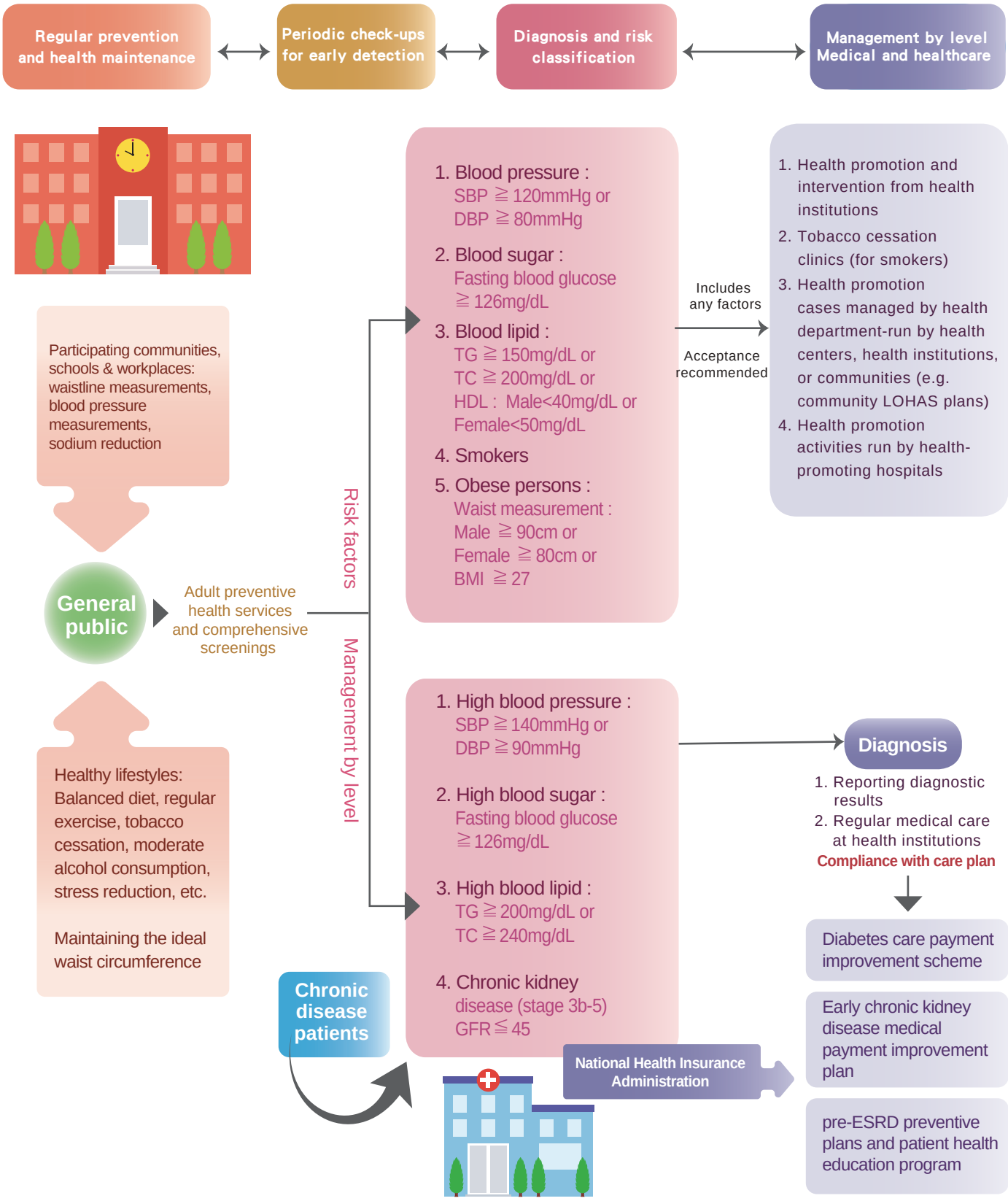
(1) Due to education for the general public on controlling metabolic syndrome, the rate of public recognition of ideal waist measurement rose from 28.7% in 2006 to 53.1% in 2018. Campaigns were held to increase the awareness and prevention of the "Three Highs" (high blood pressure, high blood sugar, high blood fat/lipids) and other chronic diseases. Also, the establishment of a chronic disease control framework (Figure 3-7) inspired cities and counties to work with local health institutions to provide integrated screenings.

(2) The MOHW promoted a diabetes shared care network comprising 255 diabetes health promotion institutions. It also established 540 diabetes support groups.

(3) Kidney disease prevention and education was promoted. 191 kidney disease health promotion institutions were established to provide better disease control through case management.

(4) In an effort to raise the general public's awareness for measuring their blood pressures and increase the convenience of the process, the Ministry has integrated relevant resources for blood pressure measurement available at municipal health departments (and health stations) and service locations, operated by organizations such as the Taiwan Pharmacist Association and Taiwan Millennium Health Foundation. A total of over 3,200 locations were established by the end of 2018 to construct a nation-wide community blood pressure measurement network. This will enable the general public to find their nearest blood pressure station or community pharmacy to take their readings. Coupled with the assistance and advice provided by community pharmacists, this solution will help citizens to achieve proper blood pressure management.

Figure 3-7 Chronic Disease Control Framework



2. Menopause Health

Established the toll-free "0800-00-5107 Menopause Health Consultation Hotline". In 2018, counseling services were provided to more than 6,402 individuals and held 84 menopause health care, including menopause growth camps, lectures/ consultations, and educational training, with a total of 5,165 participants attended. Due to the hormonal changes in menopause, menopausal women may experience weight gain, build up in body fat, increas risks of cardiovascular diseases, change in skin conditions, and bone loss. And as such, in the latest version of the "Nutrition for Menopause" leaflet and booklet published on October 26, 2018, we focused on the dissemination of ways to alleviate potential discomforts that one might encounter due to menopause, tips on preventing cardiovascular disease, bone density loss and suggestions on diet and lifestyles that would help one to slow down the process of skin aging.

Section 3 Cancer Prevention

The MOHW has been implementing the 3rd Phase National Cancer Prevention and Control Program. The program features three key points: lowering cancer risk, performing cancer screenings, and implementing the Cancer Navigation Plan.

1. Reducing Cancer Risk Factors

Four major risk factors are associated with cancer: smoking, insufficient physical activity, unhealthy eating habits, and excessive alcohol use. The MOHW has been encouraging people to quit smoking, to cut down on alcohol, and to stop chewing betel nuts. It urges everyone to maintain a healthy body weight, improve their eating habits, and adopt a healthy lifestyle.

2. Cancer Screening

(1) Since 2010, the MOHW has offered fully subsidized screenings for cancers of the cervix, oral cavity, colon, and breast. In 2018, 5.097 million screenings detected precancerous lesions in close to 51,000 patients and malignant tumors in over 10,000 patients. Table 3-1 outlines significant milestones in cancer screening, while Table 3-2 and Table 3-3 summarizes the cancer detection rates and five-year survival rates for four major types of cancer.

(2) In 2018, there were 217 health institutions that implemented the Plan to Enhance the Quality of Cancer Screenings, Diagnosis, and Treatment in Hospitals. A notification system in clinics alerted patients to the screenings and there was a single referral pathway for positive results.

(3) In order to ensure the quality of cancer screenings, officials conduct periodic reviews of health institutions that offer such screenings. In 2018, accreditations were given to 121 institutions that conduct cervical cancer screenings, 213 that conduct mammograms, and 158 that conduct fecal occult blood tests. Finally, the Plan to Improve the Quality of Oral Mucosa Exams trained doctor to screening patients for oral cancer.

Table 3-1 Screening Volume and Rate, Precancerous Lesions, Follow-up Rate for Positive Screenings, Cancer Cases, and Follow-up Rates for Positive Screenings for the Four Major Types of Cancer, 2018

Cancer Type	Screening Volume (Thousands)	Screening Rate (%)	Precancerous Lesions	Cancer Cases	Follow-up Rate for Positive Screenings (%)
Cervical Cancer	2,719	70	12,933 (including carcinoma in situ)	1,131	93.9
Breast Cancer	861	39.9	-	4,380	92.2
Colon Cancer	1,313	40.8	34,052	2,463	75.2
Oral Cavity Cancer	744		3,654	1,312	82.7
Total	5,097	-	50,639	9,286	86

Notes: Basis for Screening Rates

1. Cervical cancer: the rate of women aged 30-69 who have received a screening for cervical cancer within the past three years (telephone survey).
2. Breast cancer: the rate of women aged 45-69 who have received a screening for breast cancer within the past two years.
3. Colon cancer: the rate of people aged 50-69 who have received a screening for colon cancer within the past two years.
4. Precancerous lesions: A type of benign (non-malignant) morphological changes in the tissue, which are, however, characterized by a high risk of malignant transformation.
5 Follow-up rate for positive screenings: (the number of cases screened as positive that completed a follow-up)÷ (the number of cases screened as positive).

Table 3-2 Cancer Detection Rates for the Four Major Types of Cancer, 2018

Cancer Type	Cancer detection rate (Estimates based on 100% follow-up of positive cases)		
	Precancerous Lesions	Cancer	Total
Cervical Cancer	1/96	1/358	1/76
Breast Cancer	-	1/177	1/177
Colon Cancer	1/30	1/376	1/27
Oral Cavity Cancer	1/162	1/450	1/119

Notes: Basis for Detection Rates
1. Precancerous Lesion Detection Rate (Based on 100% follow up): defined as precancerous lesion cases/number ofscreenings
2. Cancer Detection Rate (based on 100% follow up): cancer cases/number of screenings
3. Overall Detection Rate (based on 100% Follow up): (precancerous lesions + cancer cases)/number of screenings
4. 1/Detection Rate = number of people who must be screened on average to detect one positive case

Table 3-3 Five-Year Survival Rates for Four Major Types of Cancer, 2018, by Stage

Source: Taiwan Cancer Registry database (includes carcinoma in situ)

Stage	Breast Cancer	Cervical Cance	Colon Cancer	Oral Cavity Cancer (including oropharynx and hypopharynx)
Stage 0	97.4	97.1	86.4	76.2
Stage 1	96.6	87.8	82.7	79.9
Stage 2	90.0	67.3	71.7	71.0
Stage 3	74.5	57.3	60.2	56.5
Stage 4	30.5	21.1	11.0	35.6

Notes:
1. Analyzed hospital-reported data on the five-year survival rate for four major types of cancer by stage, from 2012 to 2016 (patient tracking through 2017)
2. According to the screening data and five-year survival rates for patients diagnosed with stages 0 and 1 oral cavity cancer by the Agency, approximately 65% of the stage 0 cases have been classified under “precancerous lesions” in actual practice. Consequently, the number of stage 0 cases (246 entries) has significantly less compared to that of stage 1 cases (7,930 entries). This in turn has caused significant fluctuations in the data for survival rate.

3. Improving the Quality of Cancer Care

(1) Accreditation for cancer hospitals began in 2008. By the end of 2018, 58 hospitals had been certified; over 80% of all cancer patients in Taiwan were covered by the service.

(2) The MOHW subsidized and private organizations and hospitals to establish the cancer resource centers provide comprehensive support and care for cancer patients and their families.

(3) The MOHW commissioned 94 hospitals nationwide to conduct a cancer patient navigation program. Oncology nurse managers specializing in tumor cases actively contact patients to encourage them to receive treatment within three months. More than 90,000 newly diagnosed cancer patients participate in the program each year, and 90% of participants receive their first course of treatment within three months.

Chapter 4 Health Communication, Information, and Surveillance

Section 1 Health Communication

The media, professional associations and civic organizations are utilized to transmit accurate health information. It also involves the provision of websites and reference materials focused on specific healthrelated matters for the use of all citizens. Furthermore, the effective integration of cloud-based services has enhanced health literacy among Taiwan's inhabitants.

1. Health Communication

(1) To promote development and quality of health education materials, "Health Literacy and Communication Index" were established and developed with reference to domestic and international evaluation criteria applied to educational materials and included 21 indicators in 6 aspects.

(2) "Learning from the past and inheriting the finest — A new generation of improved health literacy" activity was held in July 2018 to select materials for dissemination of health information. 662 entries were received, among which 307 complied with the "Health Literacy and Communication Index" and had been uploaded to the Health 99 Education Resource website.

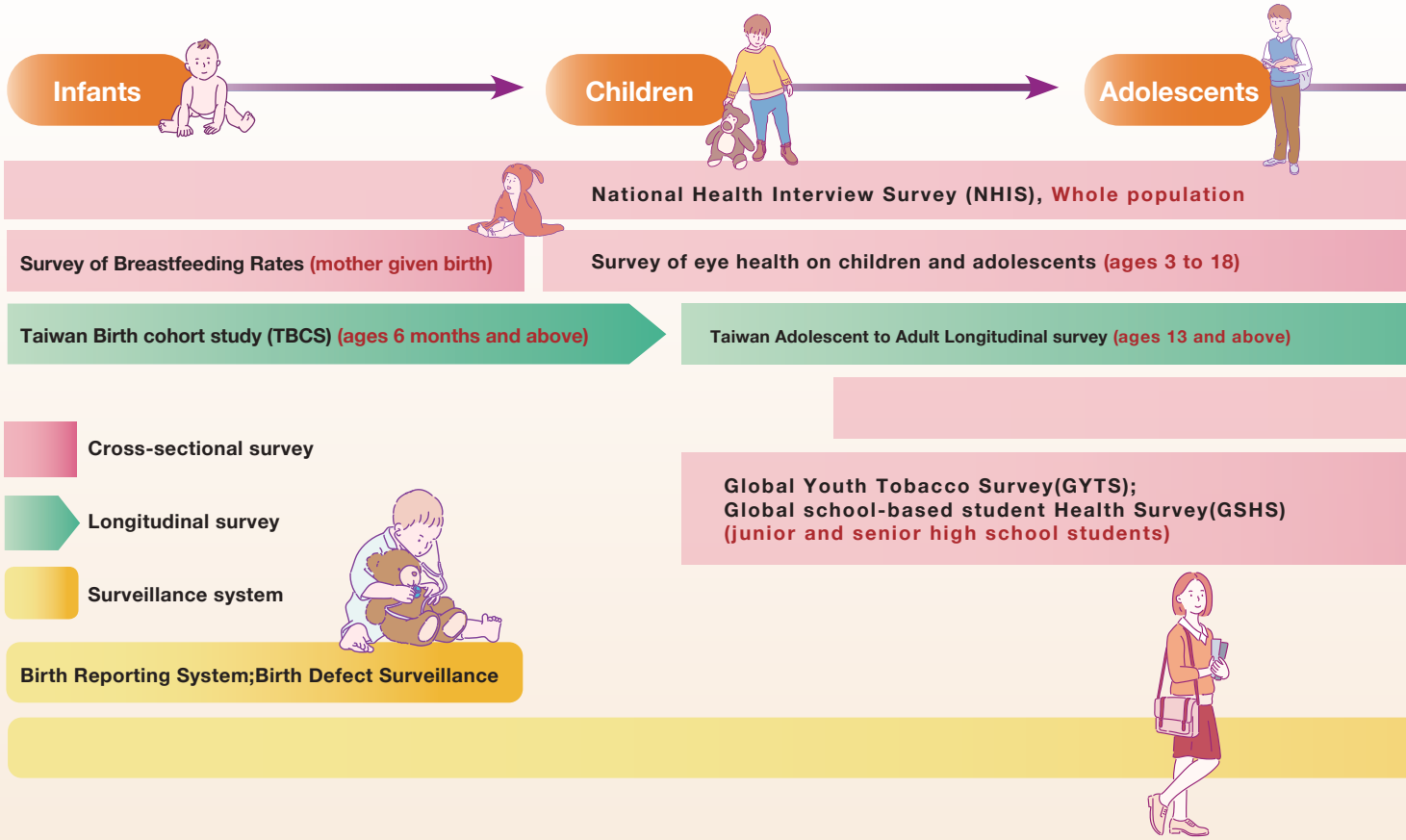
(3) The Health 99 website is visited 350,000 times on average each month. In total, 5,702 materials have been uploaded to the website, including leaflets, manuals, posters, and multimedia.

(4) We use social media such as Facebook and LINE@ to disseminate accurate health information, and take the initiative to promote health information and issues.

2. e-Health Promotion and Application Services

The MOHW continued to implement the "Wellness Cloud" project, a step-by-step establishment of a new

Figure 3-8 Major Health Surveillance and Surveys



health promotion and chronic disease selfmanagement in Taiwan:

(1) The website "Wellness Cloud-National PHR Platform" and its APP now enable login through Facebook and Google accounts. In addition, we have also launched the trial run of customer service bot on the "Wellness Cloud-National PHR Platform" website to offer smart AI customer experimental services.

(2) Field testing in 2018: The MOHW established one smart blood pressure measurement site for field testing. Users of the pilot setting reported a satisfaction rate over 87%.

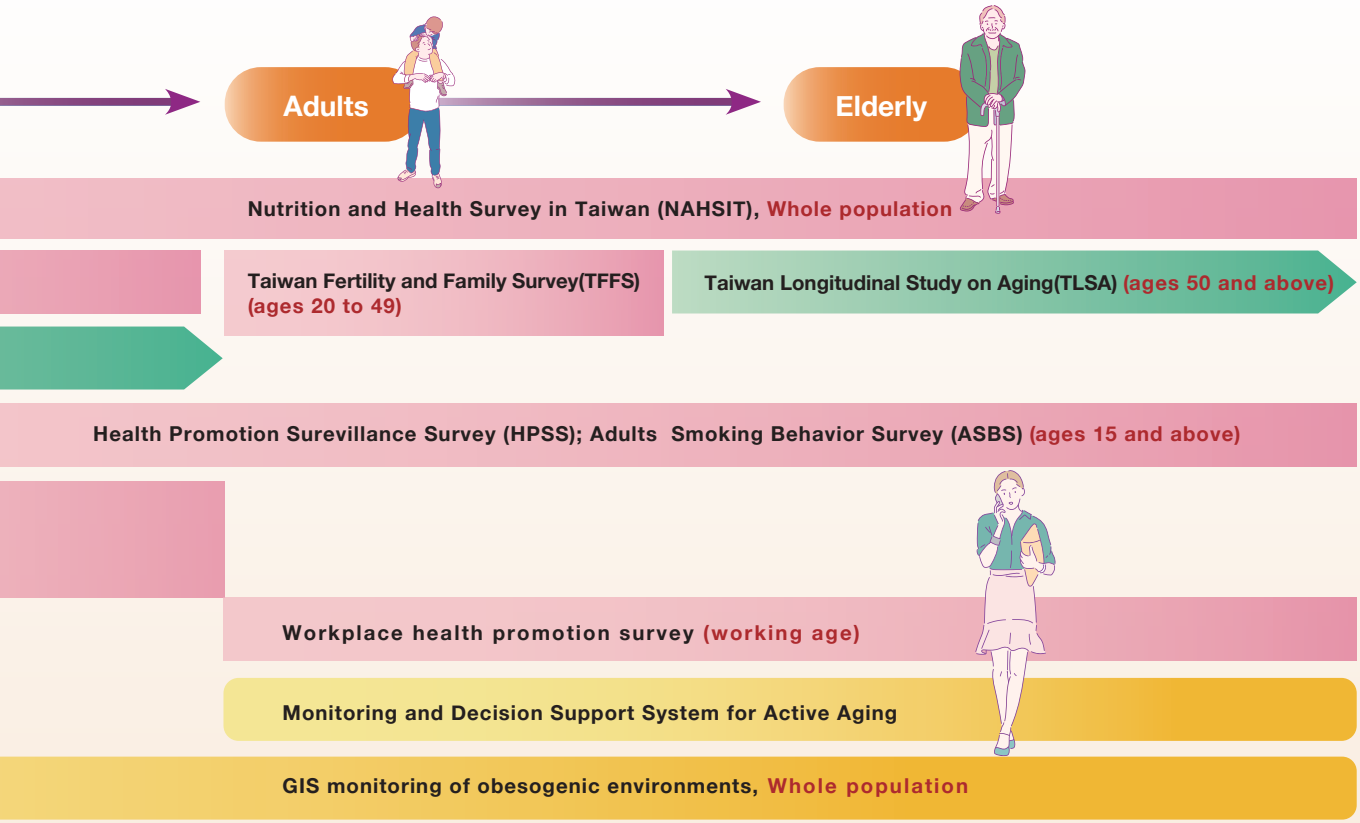
(3) In 2018, the "Wellness Cloud 2.0" platform was used 2.66 million times. Over 23,400 people became its registered members. Presently, more than 19,000 users have downloaded the APP, which received an average rating of 4.5 points (out of 5; the ratings have been calculated based on the average ratings from both IOS and Android APP platforms).

(4) The MOHW has continued to implement the government's data transparency policy; by the end of 2018, 227 sets of data became accessible.

Section 2 Health Surveillance

The MOHW conducts health surveillance and surveys to collect data that can be used to formulate policies:

1. The MOHW has established the noncommunicable disease surveillance system and continuously conducts health surveillance and surveys on the whole population and people of different age groups (Figure 3-8).
2. The MOHW makes efforts to improve framework and capacity of reporting, registration and monitoring system, and provides convenient and user-friendly online query for health indicators from the surveillance and survey data.
3. The MOHW convened and organized events including the "Forum on Active Aging and Health" and "Future of Our Nation-Children/Youth Health Status and Policy Forum" to disseminate relevant results from monitoring and researches as a way to draw attention from the public on relevant topics while facilitating the translation of research findings into policies and discussions on action strategies.



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4 Health Care

Following the enactment of the Medical Care Act in 1985, the government implemented a medical facilities network project, whereby Taiwan was divided into healthcare regions. Planning was undertaken for the equitable allocation of medical human resources and facilities to each region to ensure the quality of medical care in each region. The “8th Medical Network Plan” is implemented in 2017-2020 to develop an integrated, sustainable public health and medical service network that is rooted in the local community.

Chapter 1 Healthcare Systems

Section 1 Medical Care Resources

Aiming to promote balanced distribution of medical care resources, the Ministry of Health and Welfare (MOHW) has established a regional medical care system in accordance with the Medical Care Act and the Medical Care Network Project. Using regional guidance and the operation of related organizations,the MOHW assessed the health needs of each area,and implemented various projects to ensure the equitable allocation of healthcare resources between regions and to ensure the quality of care everywhere. The main results achieved in 2018 are shown below:

1. Current status of medical institutions: Table 4-1

Table 4-1 Status of Medical Institutions, 2018

Source: Department of Statistics, Ministry of Health and Welfare

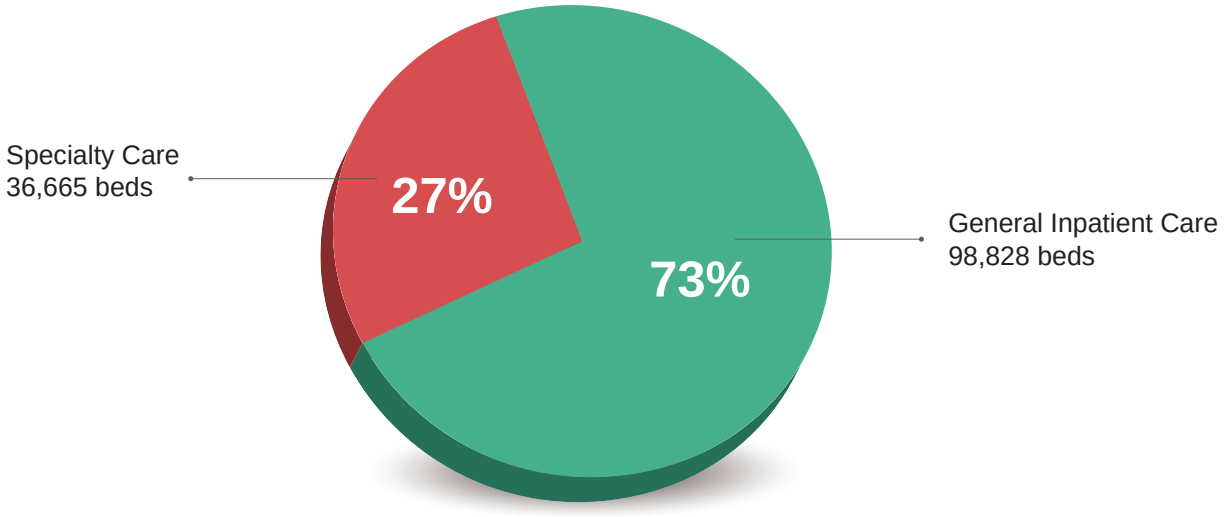
Type of Medical Institution		No. of Institutions
Medical Care Institutions	Hospital	483
	Clinics	22,333
Pharmacies		8048
Nursing Institutios	General Nursing Homes	542
	Psychiatric Nursing Homes	44
	Home Care Practices	618
	Post-Natal Nursing Institutions	267
Blood Donation Institutions	Blood Donation Centers	5
	Blood Donation Stations	13
Pathology Institutions		11
Other Medical Institutions	Midwifery Practices	23
	Medical Laboratories	376
	Medical Radiological Institutions	53
	Physical Therapy Practices	228
	Occupational Therapy Practices	76
	Denture Clinics	33
	Mental Counseling Clinics	80
	Psychotherapy Clinics	54
	Speech Therapy Centers	36
	Dental Technology Centers	901
	Hearing Centers	21
	Home Respiratory Care Practices	3
	Optometry Practices	28
	Nutrition Advisory Organizations	28

2. Current Status of Hospital Beds

There were 167,521 beds in medical care institutions (including general beds, special beds, and beds in clinics), with general beds for acute care, general beds for chronic care, beds for psychiatric acute care, and beds for psychiatric chronic care included among general beds in hospitals, TB and Hansen's Disease Care In descending order of availability, there are 74,195 beds for acute inpatient care; 3,349 beds for long-term care; 7,438 beds for psychiatric care; 13,676 beds for chronic psychiatric care, 2 beds for tuberculosis care and 168 beds for Hansen's Disease care. There were an average of 41.9 beds for every 10,000 people in Taiwan (Figure 4-1).

Figure 4-1 Status of Hospital Beds in Medical Care Institutions

Source: Department of Statistics, Ministry of Health and Welfare, R.O.C. (Taiwan)



Notes: Special beds includes intensive care beds, general beds for burn patients, intensive care beds for burn patients, infant sickbeds, emergency observation beds, hospice beds, chronic respiratory care beds, subacute respiratory care beds,acute TB beds, intensive care beds for psychiatric patients, isolation beds, positive pressure isolation room negative pressure isolation room, beds for bone marrow transplant patients, Sex offender compulsory treatment beds, Acute late care beds, integrated post-acute care hospital beds, surgery recovery beds, infant beds, hemodialysis beds, peritoneal dialysis beds, etc.

Section 2 Emergency Health Care and Rescue

The MOHW continued to reinforce development of the emergency health care and rescue network while extending integrated response mechanisms.

1. Table 4-2 depicts the number of hospitals designated to provide emergency care at the end of 2018.Taiwan currently has 52 medical sub-regions; each of which has at least one hospital designated for moderate grade emergencies or above.
2. The MOHW has been assisting districts with inadequate emergency care resources. These efforts focus on three areas: emergency care stations in places that receive many tourists; first-aid stations that are open at night, on weekends and on public holidays; and strengthening the emergency care capabilities of hospitals in districts with limited resources. In 2018, special incentives were offered in 18 locations to effect these objectives.
3. Incentives remain in place to encourage academic medical centers and hospitals designated for severe grade emergencies to provide emergency care on outlying islands and in underserved areas.27 medical centers have been participating in this program, providing a combined total of 111 acute and critical care doctors to assist in 26 outlying islands and underserved areas. This program has been instrumental in making needed medical resources more accessible to underserved communities.
4. As of the end of 2018, there were approximately 9,474 automated external defibrillators (AEDs) in Taiwan, equivalent to 40.2 AEDs for every 100,000 people. 5,288 locations have already been certified as "safe locations" (meaning that the location has an AED, and that at least 70% of employees there have completed CPR and AED training).

Table 4-2 Number of Hospitals Designated for Emergency Treatment in 2018, by Grade

Source: Department of Medical Affairs, MOHW

Emergency Treatment Grade	Severe	Moderate	Ordinary	Total
No. of Institutions	41	79	80	200

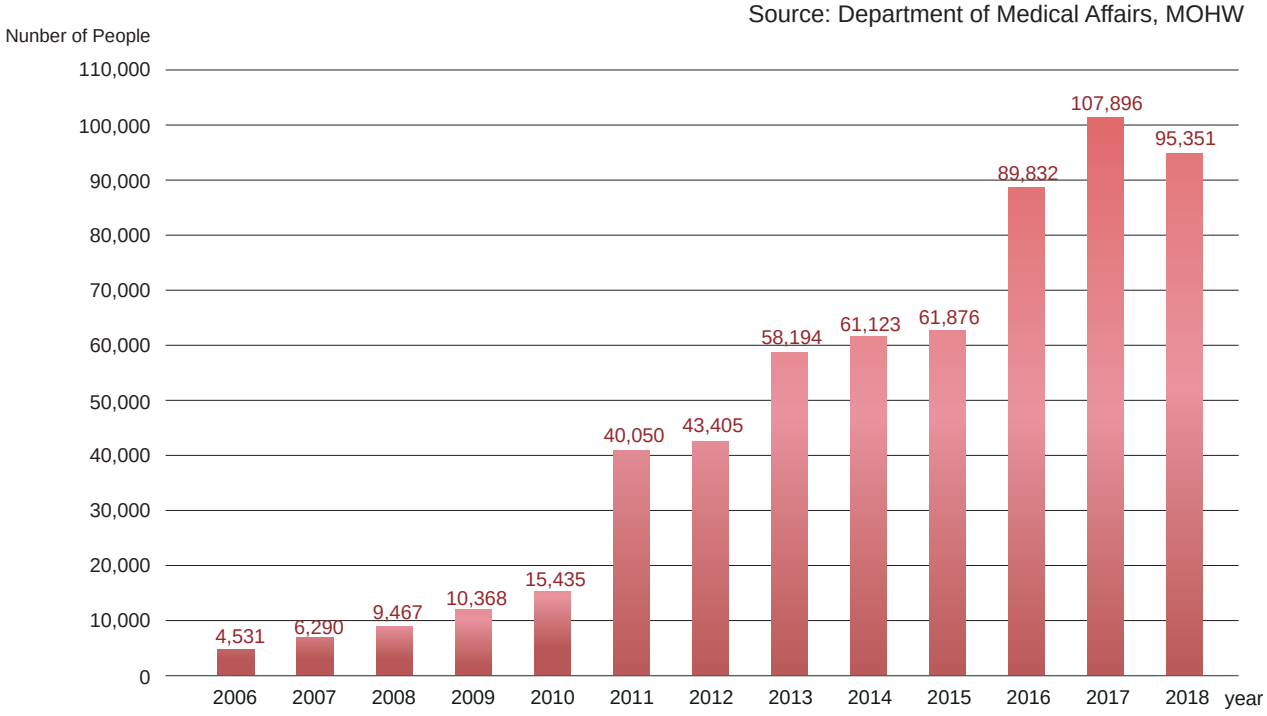
5. In 2018, the MOHW continued to raise the quality of emergency pediatric care. Under the plan, remote hospitals designated for moderate grade emergencies or above qualify for subsidies if they offer 24-hour pediatric emergency. The government desires to have at least one hospital in every city/county offering this vital service. By the end of 2018, 15 hospitals in 15 cities/counties were participating.

Section 3 Hospice and Palliative Care

1. Implementation of the Hospice Palliative Care Act on June 7, 2000 paved the way for doctors (patients' informed consent) to focus on eliminating suffering, and offering support to terminally ill patients, in lieu of curative- and rescue-oriented care.
2. Beginning in 2006, a special project has been urging medical care institutions and the general public to participate in hospice and palliative care, while encouraging NHI enrolled persons to record consent on their NHI IC cards. As of the end of 2018, a total of 584,328 people, accounting for 2.54% of the total population, documented their willingness to receive hospice and palliative care, along with their wishes concerning life-sustaining treatment. Each person's choice was recorded on his/her NHI IC card (Figure 4-2).
3. According to the Ministry's statistics, as of 2018, 75 Taiwanese hospitals provided hospice services to inpatients, 154 hospitals participated in a collaborative hospice care provision program, 118 institutions provided home hospice care, and 330 facilities were involved in community-based hospice care services. Medical teams provide an interconnected network of hospice and palliative care services for inpatient care, outpatient care and home care. The number of patients receiving hospice care has been gradually growing over the years and in 2018, approximately 15,000 patients received hospice care, with roughly 42,000 patients receiving collaborative hospice care. These figures reflect that the promotion of hospice and palliative care in the past has brought actual results.

Figure 4-2 Number of People Who Have Had Their Hospice and Palliative Care Wishes Recorded on Their NHI IC Cards

Source: Department of Medical Affairs, MOHW



Section 4 Oral Health Care

1. Better Dental Care for the Disabled

(1) The MOHW has been implementing "Dental Care Services for People with Special Requirements."In 2018, the "Coordinated Dental Care Plan for People with Special Requirements" was implemented with subsidies for seven model centers (National Taiwan University Hospital, Shuang Ho Hospital,Chung Shan Medical University Hospital, National Cheng Kung University Hospital, Kaohsiung Medical University Hospital, National Yang-Ming University Hospital, and Mennonite Christian Hospital) and 22 other hospitals. 28,317 patients received services under this Plan in 2018.

(2) 103 county and city hospitals throughout Taiwan have been designated as providing special dental outpatient services for the disabled in accordance with the provisions of the "Management of Specialist Outpatient Services for the Disabled" act.

2. Continuing to Provide Dental Health Services to Young Children

(1) The MOHW has continued to provide topical fluoride treatments for children. In 2018, topical fluoride treatment was provided to 1.24 million people, with 85.2% of children aged 3-6 receiving this service at least once that year.

(2) Starting from September 2014, the MOHW has been providing dental fillings of permanent molars for all first-grade and second-grade elementary school students. In 2018, 430,000 people benefited from this service.

(3) The MOHW has also continued to promote the administration of anti-plaque fluoride mouthwash for Taiwan's elementary school students. In 2018, a coverage rate of around 90% of 1.15 million children obtained this service.

3. The Ministry launched its "Denture Subsidies for Mid or Low-income Elders" on January 1 2009 and as of the end of 2018, a total of 61,426 senior citizens have benefitted from the subsidy.

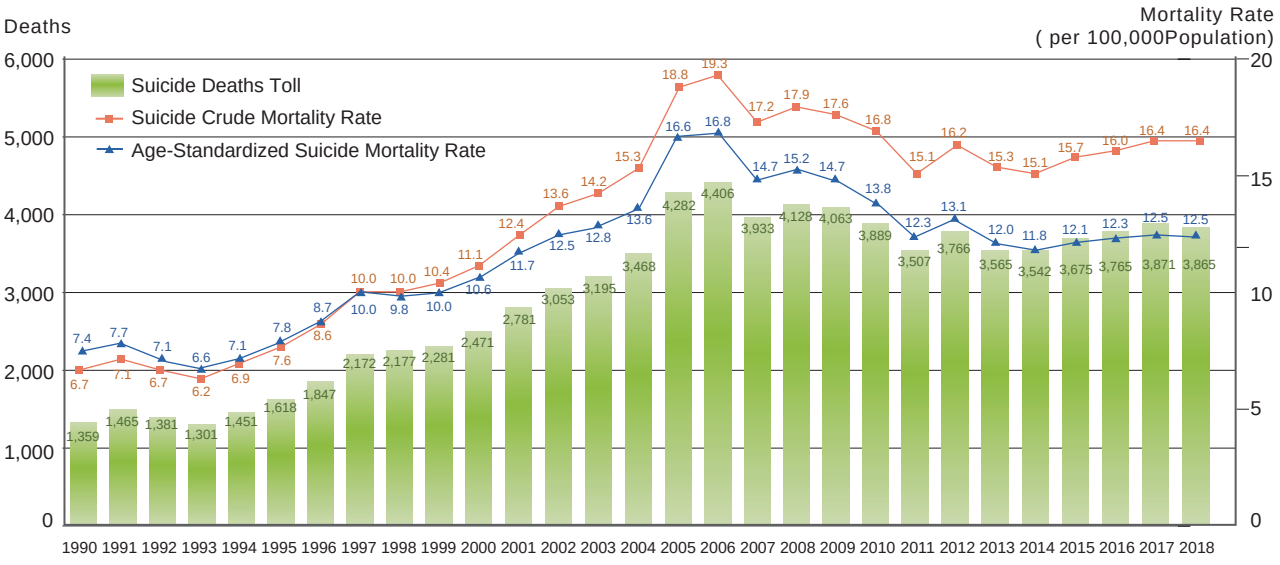
Chapter 2 Mental Health and Psychiatric Care

Section 1 Mental Health Promotion

1. The MOHW has been promoting mental health education resources for pregnant women. In 2018,185 guidance activities were held to promote mental health of women (including pregnant women).
2. To enhance the wellbeing and mental health for the public, the MOHW commissioned 22 county/city governments, department of health, to effect the "Mental Health Network Promotion Project" in 2018. Provided psychological counseling for 20,177 callers. October is the Mental Health Awareness Month in Taiwan and in 2018, the Department held 22 press conferences across the island, attracting a total of 6,722 participants.
3. The MOHW has set up a toll-free, 24-hour suicide prevention hotline (0800-788995). In 2018 it provided expert counseling to 78,108 people, assisted 12,912 potential suicide victims, and directly prevented 480 suicide attempts.

Figure 4-3 Taiwan's Suicide Deaths and Suicide Mortality Rate, 1990-2018

Source: Department of Mental and Oral Health, MOHW



4. The MOHW continued to implement reporting of all suicide-related cases, arranged outreach visits, helped people with risk of suicide. In 2018,Taiwan had 33,207 reported suicide attempts, and authorities made 215,267 outreach visits.
5. In 2018, there were 3,865 suicides in Taiwan,representing a standardized suicide rate of 12.5 people per 100,000 people (Figure 4-3). The longterm trend has been falling for the suicide rate, which peaked in 2006. Since then, the standardized suicide rate has fallen by 26%, and for nine years since 2010,suicide has not been one of the top ten leading causes of death in Taiwan. Taiwan nevertheless still has a medium high suicide rates compared to international peers. Henceforth, the MOHW will continue to strengthen the social safety net, to promote outreach visits, to provide suicide prevention gatekeepers, and other prevention strategies.
6. In 2018, the MOHW promoted the "Mental Health Promotion Plan for Aborigines," aiming to improve the cultural sensitivity of mental care experts working in remote villages, compile mental health educational materials suitable for aboriginal culture and provide psychological counseling services in accordance with the needs of aborigines.

Section 2 Psychiatric Health Services

1. The MOHW continued to utilize the seven regional psychiatric care networks. Within these networks, designated core hospitals promote mental health within the region, develop the regional psychiatric care network, improve service quality for regional mental health and arrange education/ training programs.
2. In 2018, Taiwan had 499 psychiatric care institutions. They possess 21,114 beds including 7,438 beds for emergency psychiatric patients and 13,676 beds for chronic psychiatric patients. These figures equate to approximately 8.95 beds for every 10,000 people. There were also 68 daytime psychiatric rehabilitation institutionscapable of serving 3,208 persons, 149 psychiatric rehabilitation institutions that offered accommodation (with 6,299 beds), psychiatric day care centers (capable of serving 6,241 persons),and 44 psychiatric nursing homes (with 4,104 beds).
3. The MOHW subsidized county and city governments to recruit 96 outreach community care visitors. In 2018, 801,374 outreach visits were made to 141,385 psychiatric patients.
4. Mandatory hospitalizations and mandatory community care for severe patients are carried out in accordance with the "Mental Health Act." In 2018, there were 690 applications (including 642 applications for mandatory hospitalization and 48 applications for mandatory community care). (Table 4-3)
5. In 2018, the MOHW carried out evaluation inspections of 13 psychiatric medical care institutions (including psychiatric teaching hospitals), 87 psychiatric rehabilitation institutions, and 21 psychiatric nursing homes. Furthermore, occasional follow-up guidance was conducted for 22 institutions. (Table 4-4)

Table 4-3 Statistics of Cases reviewed by the Mandatory Hospitalizations and Mandatory Community Care Committee between 2008 and 2018

Source: Department of Mental and Oral Health, MOHW

Date	Case review	Mandatory hospitalization			Mandatory community treatment		
		Mandatory hospitalization cases reviewed	Mandatory hospitalization cases approved	Mandatory hospitalization approval rate	Mandatory community treatment cases	Mandatory community treatment cases approved	Mandatory community treatment approval rate
2008 Jan-Dec	669	669	576	86.10%	--	--	--
2009 Jan-Dec	1679	1679	1555	92.61%	--	--	--
2010 Jan-Dec	1696	1670	1585	94.91%	26	26	100.00%
2011 Jan-Dec	1251	1211	1164	96.12%	40	39	97.50%
2012 Jan-Dec	1277	1221	1181	96.72%	56	52	92.86%
2013 Jan-Dec	835	772	735	95.21%	63	62	98.41%
2014 Jan-Dec	766	718	680	93.41%	48	40	83.33%
2015 Jan-Dec	747	677	634	93.65%	70	68	97.14%
2016 Jan-Dec	791	725	686	94.62%	66	64	96.97%
2017 Jan-Dec	876	818	752	91.93%	58	58	100.00%
2018 Jan-Dec	690	642	592	92.21%	48	46	95.83%

Table 4-4 The Number of Psychiatric Care Institutions in Taiwan in 2018, and Evaluation Results

Source: Department of Mental and Oral Health, MOHW

Psychiatric Care Institution Category		No. of Institutions	No. of beds/ registered (patiens) Total	2018 No. of Evaluated Institutions	Evaluation Results		
					Outstanding	Passed	Failed
Psychiatric hospitals	Non-teaching hospitals	35	21,114	12	0	12	0
	Teaching hospitals	10		1	–	1	0
General hospitals with a psychiatric care department		201		–			
Clinics with a psychiatric care department		298		–			
Psychiatric rehabilitation institutions	Daytime only	68	3,208	35	–	35	0
	With residential accommodation	149	6,299	52	–	50	2
Psychiatric nursing homes		44	4,104	21	–	20	1

Section 3 Control of Drug Addiction

1. Subsidized alternative therapy for drug addiction was introduced in 2006. As of the end of 2018, a total of 181 institutions throughout Taiwan were providing alternative therapy, with a cumulative total of 44,720 patients treated. In 2018, on average 8,182 patients received treatment daily. The number of new HIV cases among drug addicts per year has fallen from 2,425 in 2005 to 44 in 2018.
2. Taiwan had 169 designated drug addiction treatment institutions. The Department of Health and regional psychiatric care networks' core hospitals were responsible for providing continuing education and training to medical personnel, with 37 training activities arranged in 2018.
3. The MOHW continued to implement the "Subsidy Program for the Treatment of Non-Opiate Addicts"launched in July 2014. In 2018, 16 institutions were established and 2,069 people benefited from the program.
4. The MOHW's Tsaotun Psychiatric Center received funding to develop the "Community Treatment and Rehabilitation Model for Users of Schedule III and Schedule IV Drugs." In 2018, 55 drug users received treatment under this program, and 51 staffs completed the necessary training. The MOHW also subsidized twenty-three NGOs to carry out the "Drug Addict Psychological Counseling and Social Rehabilitation Work Plan." Under this program, 268 people obtained assistance in settlement; 7,113 people received transition counseling; 3,551 people received group counseling; 12,793 people received vocational skills training, employment counseling, and job matching services.
5. The MOHW incentivized to health institutions that provided drug and alcohol addiction treatment in correctional facilities. In 2018, four health institutions offered services at seven correctional facilities. They provided 244 addiction treatment clinics that served 2,558 patients, health education for 6,662 inmates, group therapy for 4,985 inmates, 967 prisoner release referrals, and 3,193 follow-ups.
6. The MOHW continued to implement the "Alcohol Addiction Treatment Plan." In 2018, subsidies were provided to help 2,171 people. Moreover, since September 2015, the MOHW has been implementing the "Pilot Project for the Establishment of a Treatment and Social Rehabilitation Service Model for Problem Drinkers and Alcohol Addicts." Between 2017 and 2018, the Ministry expanded the subsidies to eight institutions to create an inter-network mechanism of referral. 644 referrals were made and alcohol addition treatment was provided to 514 people.
7. In conjunction with the Next-Generation Anti-Drug Strategic Action Guidelines formulated by the Executive Yuan in 2018, the Ministry was chosen as the responsible authority to supervise all Drug Abuse Prevention Centers operated by local governments. In addition, the Ministry also sought to improve the quality of follow-up and counseling for communities involved in cases of drug use by subsidizing management manpower for 399 cases. In October 2018, The Ministry also subsidized Taipei City Hospital (Songde Branch), MOHW's Taoyuan Psychiatric Center, MOHW's Tsaotun Psychiatric Center and MOHW's Jianan Psychiatric Center to establish 4 Substance Treatment and Research Centers in the hopes of developing diverse treatment models and intervention solutions that are empirically proven to be effective.
8. Internet addiction prevention has been included in the "Integrated Mental Health Work Plan" for 2018 and the Ministry has requested all local departments of health to inventory and flesh out resources necessary to curb the trend of internet addiction within their jurisdiction while announcing websites of such resources for the general public to access.

Chapter 3 Medical Manpower

Section 1 Current Status of Medical Manpower

1. Taiwan has 15 laws and regulations governing the licensing requirements of medical personnel: the “Physicians Act,” the “Pharmacists Act,” the “Midwives Act,” the “Dietitian Act,” the “Nursing Personnel Act,” the “Physical Therapists Act,” the “Occupational Therapist Act,” the “Medical Technologists Act,” the “Medical Radiological Technologists Act,” the “Psychologists Act,” the “Respiratory Therapists Act,” the “Hearing Specialists Act,” the “Speech Therapists Act,” the “Dental Technicians Act,” and the “Optometric Personnel Act.”
2. As of 2018, Taiwan had 312,887 practicing health professionals including 69,069 physicians (both Western and traditional Chinese medicine doctors and dentists), 34,838 pharmacists, 9,698 medical technologists, 6,624 radiologic technologists, 167,803 registered nurses, 179 midwives, and 3,061 dietitians.
3. Current Status of Dentist Manpower

   The revised “Dentist Specialization and Examination Regulations” was promulgated on October 5 2018 and the revision added 7 new specializations to the current 3 for dentists, to a total of 10 specializations. As of the end of 2018, there are 1,066 certified dentists (628 orthodontists, oral and 369 maxillofacial surgeons, and 69 oral pathologists).

Section 2 Training Health Professionals

In order to ensure an excellent medical workforce, every year the MOHW conducts training programs, personnel development programs, and workplace training. The results are as follows:

1. Regarding the training of health professionals, 1,300 students matriculate at Taiwanese medical schools each year; as for other categories of healthcare practitioners (training programs must be approved by the Ministry of Education). Taiwan's planning of the physician workforce will focus on a balanced distribution of resources, and a periodic evaluation of its effectiveness.
2. According to Taiwan's “Diplomate Specialization and Examination Regulations,” there are 23 medical specialties. Through the end of 2018, 52,627 people received their medical licenses in Taiwan.
3. Post-graduate general medical training is offered to strengthen holistic care. In 2018, Taiwan approved 36 teaching hospitals and 91 collaborating hospitals to provide postgraduate year (PGY) training programs. 1,376 medical graduates received training under this scheme.
4. A system of postgraduate clinical training for dentists has been put in place to ensure quality oral health care. As of 2018, Taiwan certified 507 institutions (90 hospitals and 416 clinics) offer this training. 803 dentists received training under this project.
5. Taiwan has been providing the nurse practitioner training since since 2006 to enhance the quality of nursing. The number of applicants in the certification examination for nurse practitioners and those who have received the certification as of 2018 are shown in Table 4-5
6. To ensure that newly minted health practitioners can receive superior clinical training, in 2007 the MOHW launched the “Clinical Practitioner Training Program.” As of 2018, 2,035 individual training programs at 146 participating hospitals trained 28,548 health workers; 85.53% of medical workers received this training within two years of gaining a license.
7. To create an effective clinical training system for doctors of traditional Chinese medicine, the MOHW has launched the program for the Training of Responsible Physicians in Chinese Medical Care Institutions. In 2018, this scheme assisted 65 training hospitals in providing a two year physician training to 403 new Chinese medicine physicians. The Ministry also promulgated the “Chinese Medicine Specialist Physician Training Guidelines” as a way to reach a consensus on the specialist physician training of Chinese Medicine. The Chinese Medical Association of Acupuncture and the Society of Traditional Chinese Internal Medicine of Formosa R.O.C were selected to develop criteria for qualification, basis for training and certification standards for accreditation bodies and so forth. The Ministry subsidized five teaching hospitals to develop objective structure clinical examination in traditional Chinese medicine doctors for competence, and prepare for the oral exams of the specialist physician training of Chinese medicine in the future.

Table 4-5 **Number of applicants in nurse practitioner certification and those who have received the certification between 2006-2018**

Source: Department of Nursing and Health Care, MOHW

Group	Specialization	No. of people
Internal medicine	General medicine	3,610
	Pediatrics	205
	Psychiatrics	161
Surgery	General surgery	3,578
	Obstetrics and gynecology	131
Total		7,685

Section 3 Creating Employ-Friendly Work Environments

1. In an effort to safeguard physicians' rights and patient safety, the Ministry of Labor has announced on March 12 2019 that effective from September 1 2019, resident physicians hired by the medical, healthcare and care-giving industries shall be applicable to the Labor Standards Act. Due to considerations such as the degree of autonomy, diversity of work and responsibilities, complicated definition of work hours, high degree of professionalism and irreplaceability, physicians employed by public medical institutions have been excluded from this announcement on the grounds that their inclusion could impact doctor-patient relationships, patient safety and medical services at rural townships. The responsibility of promoting specific amendments to the Medical Care Act has been entrusted to MOHW to see that special clauses on the labor rights of physicians are added to the Act by incorporating aspects such as physicians' work contract, compensations for occupational illnesses/hazards and retirement benefits into the clauses. To mitigate the potential impact of applying the Labor Standards Law to physicians, the Ministry has been actively promoting a series of supporting measures, including the increase of medical care manpower in hospitals, increase in the number of clinical nurse specialists, adjusting the training program for specialist physicians, adopting measures to facilitate flexible human resource utilization and established specific levels of care and referrals on top of implementing the "Guidelines for Labor Rights Protection and Work Hours of Resident Physicians" in order to improve the work hours of resident physicians.
2. To reduce malpractice risks and to foster harmonious doctor-patient relationships, the MOHW has been implementing the "Plan for Encouraging Medical Facilities to Implement Birth-related Dispute Management Pilot Projects" since 2012. The MOHW has also promoted the enactment of a "The Childbirth Accident Emergency Relief Act." Their results are outlined below.

   (1) By the end of June 29,2017, 294 OB/ GYN clinics and hospitals participated in the "Plan for Encouraging Medical Facilities to Implement Birth-related Dispute Management Pilot Projects." 506 birth injury claims were received, of which 494 were processed; approved 427 applications for subsidy; around 417 families received compensation totaling NT$ 401.511 million. Consequently, the number of birth-related medical malpractice lawsuits has fallen 70%. This drastic reduction in malpractice risk in turn has helped to boost OB/GYN resident physician recruitment. During the past three years, 99.7% of OB/ GYN resident physician vacancies were successfully filled.

   (2) Ever since the promulgation of "The Childbirth Accident Emergency Relief Act" on June 30 2016, the Ministry has reviewed a total of 533 applications as of the end of 2018 and resolved 514 applications. A total of 260.7 million NTD in relief funding has been paid. Hospitals and clinics have established internal risk management mechanisms and implemented reporting of major birth injuries to enable the analysis of root cause of malpractice so that rectifications can be made accordingly.

   (3) Actively promoting alternative dispute resolution mechanisms:

   A. The MOHW has guided medical facilities to establish care groups, strengthen internal mechanisms, and implement timely explanations, communication and assistance to enhance the physician-patient relationship.

   B. The MOHW has worked to strengthen local government authorities' in alternative dispute resolution in medical malpractice. Taiwan aims to foster effective doctor-patient communication.

   C. The MOHW has been training forensic physicians to undertake medical appraisal. As of the end of 2018, the number of medical dispute appraisal cases commissioned by the judicial authorities fell by 37%, the number of dispute cases handled by local Public Health Bureaus fell by 21.5%, the average length of time to complete the appraisal process decreased by 29.4%, and the average time to resolve a dispute stood at 6 months.

3. In an effort to improve the workplace environment for nursing personnel, the Department has been actively promoting relevant reforms starting from 2012 to facilitate the retention and encourage nurses who left the professional field to return. The following outcomes have been achieved in 2018:

   (1) Increasing the number of nurses and reducing their turnover/vacancy rates:

   At of the end of 2018, 169,454 registered nurses worked in Taiwan, an increase of over 33,000 compared to before nursing reforms were enacted. The turnover rate fell from 13.14% in 2012 to 10.04% in 2018. The total vacancy rate fell from 7.2% in 2012 to 4.48% in 2018.

   (2) Reducing Workloads and Improving Nurse-Patient Ratios and Work Conditions

   A. In 2015, nurse-patient ratios were officially added to the criteria for hospital evaluations. The standard for evaluation is the "average whole-day nurse-patient ratio" for emergency and general beds in hospitals; the ratio for medical centers is ≦ 9, including ≦ 7 for daytime nurses; the ratio for regional hospitals is ≦ 12; the ratio for local hospitals is ≦ 15. Between 2015 and 2018, a total of 451 hospitals applied for evaluation and 449 hospitals have passed the evaluation.

   B. Tie-in of nurse-patient ratio to hospitalization insurance bonus: starting from 2018 onward, the bonus bracket has been expanded once more to 2-20% as a way to encourage hospitals to achieve the necessary threshold for nurse-patient ratio.

   C. Promotion for the legislation of nurse-patient ratio: In 2018, the Ministry has proposed the addition of "average whole-day nurse-patient ratio" article in the Establishment Standards for Medical Institutions. The proposal was discussed in formal conferences held on February 9 and October 19 2018, reaching a consensus with medical and nursing organizations.

   D. Ensuring compliance with the Labor Standards Act and establishing the nurse rostering guidelines and a simple cheat sheet:

   In conjunction with the promulgation of amendments to the Labor Standards Acts in March 2018, the Ministry has prepared the cheat sheet for nursing rostering guidelines along with more aggressive dissemination and communications for the Labor Standards Act. In addition, the Ministry has once again revised the "Nursing rostering under Labor Standards Act FAQ, guidance and examples of reasonable nursing rostering" handbook to strengthen nursing supervisors and nursing personnel's awareness for their labor rights.

   E. The "Nursing Workplace Dispute Reporting Platform" was launched on February 1 2018 as a channel for nursing personnel to report disputes in the workplace. By the end of 2018, a total of 150 reports were made. Among the reports, 113 (75%) were related to the Labor Standards Act, and the remaining 37 (25%) were made due to other disputes (i.e. argument over the use of resting area, reporting personnel without a practice license and so forth). The Ministry had reached out to local health and labor organizations to investigate the incidents as reported and violations were penalized accordingly (approximately 20% of the cases were penalized). It is the Ministry's wish to create a positive working environment for nursing personnel through information transparency and adequate supervision of their working environments.

   (3) Raising Salaries and Benefits

   Ministry of Labor surveys have shown that nurse salaries rose by approximately 16% since 2011.

Chapter 4 Health Care Quality

Section 1 Patient Safety and Quality of Medical Care

The MOHW has aimed to improve the quality of patient-centered services and establish a hospital evaluation/accreditation system, annual objectives for healthcare quality and patient safety, and a patient safety reporting system. Significant achievements in 2018 are as follows:

1. The MOHW drew up the "2018-2019 Taiwan Patient Safety Goals for Hospitals" (Table 4-6).
2. The Taiwan Patient Safety Reporting System (TPR) has been used to effect a patient safety culture. In 2018, 10,634 healthcare organizations participated in the TPR, and preliminary statistics indicate that around 78,391 cases were reported.
3. The Shared Medical Decision Making Platform has been established. As of the end of 2018, 71 decision support tools (including decision support tables, films, and other materials) were uploaded.260 hospitals participated in the promotion of shared medical decision making.
4. The Hospital Accreditation Standards include regulations about a safe hospital environment, safe equipment, patient orientation services, healthcare quality, drug safety, anesthesia and operations, and infection control. These measures are hopefully tantamount to creating a safe hospital environment.

Table 4-6 2018-2019 Taiwan Patient Safety Goals for Hospitals and Clinics

Source: Taiwan Patient Safety Net, Department of Medical Affairs, MOHW

No.	Taiwan Patient Safety Goals for Hospitals
1	Improving effective communication among healthcare workers
2	Implementing adverse event management
3	Improving surgical safety
4	Falls prevention and reducing patient harm resulting from falls
5	Improving medication safety
6	Implementing infection control
7	Enhancing the safety of medical catheters/ tubing use
8	Encouraging patients and families engagement in healthcare safety
No.	**Taiwan Patient Safety Goals for Clinics**
1	Improving effective communication
2	Improving medication safety
3	Improving surgical safety
4	Falls prevention
5	Implementing infection control

Section 2 Reforming the Hospital Accreditation System

The MOHW is reforming the hospital accreditation system with patient safety and quality of medical care as its core concerns. Taiwan intend to foster tangible reform, reduce the undue pressure that the accreditation process puts on hospitals, simplify/clarify the Hospital Accreditation Standards, and ensure that Taiwan keeps pace with current international standards in hospital accreditation.

1. As of 2018, accreditation had been granted 425 hospitals and 133 teaching hospitals (Tables 4-7 and 4-8).
2. The Ministry has been promoting the reform of existing hospital accreditation system in order to facilitate hospital quality monitoring and routine management. Critical issues of current affairs and aspects on creating a friendly environment for patients to receive medical care have been included in the articles, which have been increased from 122 to 125. In addition, the accreditation process is now performed electronically (hospital administrators can now apply/declare online) with continual monitoring of relevant indicators. This is also a way for the Ministry to respond to the growing concern from the general public on medical personnel's labor rights in recent years.
3. The Ministry has been conducting joint on-site survey of supervision for health and medical care operations. This includes the accreditation certification survey for agencies under MOHW and its affiliated organizations. In principle, only one accreditation/visit will be made to each hospital in a given year with the objective of integrating relevant items, simplifying articles and combining itineraries to simplify relevant accreditation/visit/certification. In addition, such visits would be carried out in specific weeks of accreditation/visit in accordance with the nature of the visit.

Table 4-7 2015-2018 Hospital Accreditation Results

Source: Department of Medical Affairs, MOHW

Accreditation Results	Hospital Accreditation - Qualified			
	Medical Centers	Regional Hospitals – Would-be Academic Medical Centers	Regional Hospitals	District Hospitals
No. of Institutions	19	3	76	327

Table 4-8 2015-2018 Hospital Accreditation Results

Source: Department of Medical Affairs, MOHW

Accreditation Results	Physicians and Medical Personnel Teaching Hospitals Accredited	Medical Personnel (Non-Physicians) Teaching Hospitals Accredited
No. of Institutions	113	20

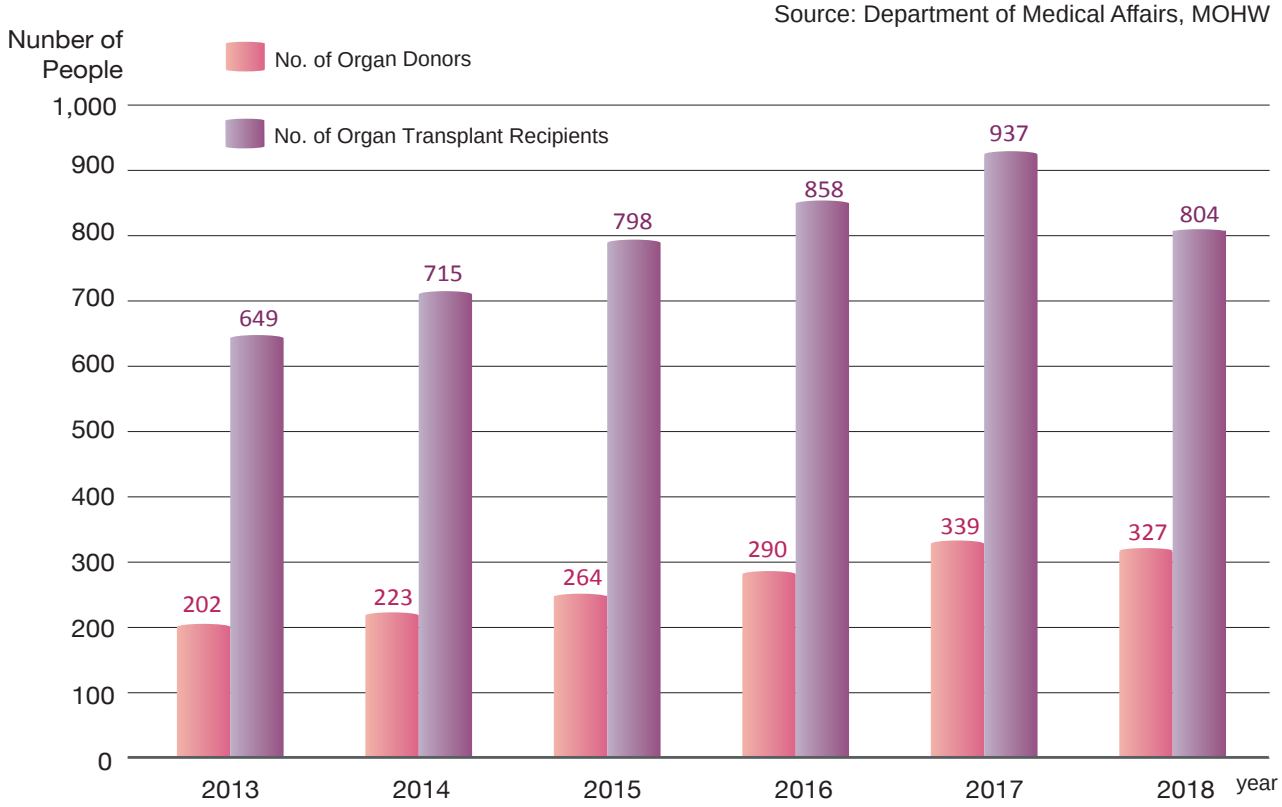
Section 3 Organ Donations and Transplantations

The world is facing a shortage of available organs for transplantation. As of the end of 2018, over 9,000 patients in Taiwan awaited organ transplantation; however, only about 800 patients annually are able to receive an organ transplant (Figure 4-4). The Ministry has continued to promote the measure to encourage people to sign the consent for organ donation. A total of 47,508 organ donation consents were obtained till the end of 2018, bringing the cumulative total to 413,255 entries over the past years.

To encourage organ donation, in 2002 the MOHW established the Taiwan Organ Repository and Sharing Center. This measure such has given Taiwan the second highest organ donation rate in Asia, and post-transplant survival rates comparable with those of developed countries — a testament to the quality of Taiwan's healthcare system. In 2017, the MOHW published the "Regulations for Implementing Approval and Administration of Human Organ Transplantation" as well as the "Regulations for Organization and Operational Management of the Ethics Review Board for Human Organ Transplantation," to improve the quality of organ donations and transplantations. Furthermore, the Ministry also published the "Guidelines for Donation of Organs after Cardiac Death" as a reference for medical institutions. It is a milestone in the development of organ donations in Taiwan.

Figure 4-4 Organ Transplant Donors and Recipients in Taiwan, 2013-2018

Source: Department of Medical Affairs, MOHW



Section 4 Promoting Electronic Medical Records (EMR) Adoption

The expansion of electronic medical record (EMR) standard was major construction project in 2018, that the relevant work was to establish and announce the "Guidelines governing proposals for addition of ERM exchange field and format, annulment of proposals and review". This documentation has been seconded via correspondence from Kaohsiung Medical University Chung-Ho Memorial Hospital, Kaohsiung Veterans General Hospital, Chang Gung Memorial Hospital, Linkou, Chi Mei Medical Center, China Medical University Hospital, Tri-Service General Hospital and Hualien Tzu Chi Hospital. The Ministry has thus far completed open consultation on the draft of EMR standards including operation record, pathology report, discharge summary, outpatient record, medical image and report and annulled the outpatient medication record. A total of 404 hospitals across Taiwan are connected to the EMR Exchange Center (EEC). In 2018, a total of 223,630,914 EMR indexes were uploaded and completed as many as 1,896,158 EMR exchanges were requested through the EEC.

Chapter 5 Healthcare in Remote Regions

Section 1 Health Care Tailored to Local Needs

To safeguard the health of people living on outlying islands and remote regions, the MOHW has taken the following measures:

1. The MOHW Penghu Hospital's Cardiovascular Care Center has been officially operating since December 4 2013. By December 2018, the Center had provided treatment to 730 people. The Center helps to improve the quality of treatment for patients with cardiovascular diseases and tailor care to local needs.
2. The MOHW Penghu Hospital's Chemotherapy Center was established in October 2015. By December 2018, the Center had completed treatment of 1,970 people to provide convenient, timely and appropriate treatment and care for cancer patients, relieve Penghu residents from the necessity to travel to Taiwan and increase localization and accessibility of medical care.
3. The Ministry acquired a unit of 1.5 Tesla Magnetic Resonance Imaging Scanner for both the Penghu and Taitung Hospital in order to assist physicians to provide more accurate diagnosis and decision within shorter period of time. By verifying the conditions sooner, we are able to improve the quality of medical care in Penghu by relieving local residents from having to commute and travel.
4. The MOHW Kinmen Hospital's Cardiovascular Care Center was established in October 2015 and by December 2018, the Center had provided treatment to 283 people. The Center has improved local emergency care capacities and reduced the frequency of emergency evacuation by the means of air transport. The Center offers first-line treatment for acute myocardial infarction and acute coronary syndrome, providing Kinmen residents with safe comprehensive medical care.
5. In an effort to improve the accessibility of services and meet various medical needs of people living in remote regions and regions with insufficient medical resources, the Plan for Strengthening Efficacy of Hospitals in Remote Regions and Regions with Insufficient Medical Resources was implemented since 2016. In 2018, the Ministry subsidized Fengbin Branch of Hua-Lien Hospital, Chenggong Branch of Taitung Hospital and Hengchun Tourism Hospital to hire more specialist physicians to offer relevant medical care services.
6. The "Telemedicine Video-conferencing and Consultation Project" implemented by the Ministry subsidized four health stations in Taitung, Kinmen, Lianjiang and Penghu to provide consultation by telemedicine. This makes the provision of health consultation and referral suggestions available for local residents and in turn improves the accessibility of medical services. (Department of Nursing and Health Care)
7. The Medical Human Resource Replenishment Plan for Remote Regions and Outlying Islands has been implemented in order to achieve the mission of public health service and fulfil the responsibility before remote regions and vulnerable groups by improving the efficacy of medical services in remote regions and ensuring provision of appropriate services. Drawing from the actual demand for specialists, physicians and other medical personnel have been asked to provide diagnosis and treatment services. In 2018, the 2,142 outpatient services were provided for 43,937 patients; 1,351 emergency medical services were provided for 2,467 patients.
8. In an effort to promote telemedicine treatment so as to effectively provide non-urgent but much needed outpatient services in remote areas, Chenggong Branch of Taitung Hospital has utilized cutting-edge ICT technologies to construct its "Telemedicine Outpatient System" by collaborating with Kaohsiung Chang Gung Memorial Hospital to engage specialist physicians to provide diagnosis and treatment. Hopefully this system will enable remote areas to benefit from diagnosis and treatment resources at medical center level so that relevant resources are put to optimal use. The branch has arranged for fixed telemedicine outpatient services by beginning with dermatology, otorhinolaryngology and ophthalmology; outpatient services for other specialization will be offered in the future. This will enable us to achieve local medical services whereby patients can stay put to save the residents from the hassle of traveling back and forth.

9. In an effort to construct a network of smart medicine and healthcare at aboriginal communities and offshore islands, the Ministry has constructed the Health Information System (HIS) at 72 health stations at aboriginal communities and offshore islands. In 2018, the total number of HIS outpatient services offered came to 10,887,145. Not only that, the Picture Archiving and Communication System (PACS) has also been constructed at 28 health stations so that the image files can be sent to Taoyuan Hospital for image reading to improve the efficacy and quality of medical services. In 2018, a total of 18,990 images were sent through PACS for reading.
10. Through the "Forward-Looking Infrastructure Project", the Ministry was able to increase the speed of broadband connection for all 403 health stations (rooms) at aboriginal communities and offshore islands along with mobile healthcare stations to reach 100M (or the highest possible speed available at the location). In addition, medical IT equipment at 64 health stations have been upgraded to improve the medical resources and image transfer quality and speed. As of the end of 2018, broadband connection speed upgrade were completed for 212 locations, with equipment upgrades performed at 32 health stations.
11. In an effort to improve the equipment and resources available at aboriginal communities and offshore island health stations(rooms), the Ministry has subsidized the replacement of 51 medical equipment, 64 IT equipment and the replacement of 23 medical transports. In addition, funding has also been provided for the (re) construction of 5 health stations (rooms), renovation of 2 health stations and repair of 8 health stations. (A total of 370 words have been deleted from items 6, 9-11 for the Department of Nursing and Health Care)
12. Since 2005, the Improvement Plan for Areas with Insufficient Resources has been implemented to enhance medical care services in areas with insufficient emergency care resources. Local medical institutions have cooperated and established three improvement models, namely, Nighttime and Holiday First-Aid Stations, Emergency Care Stations in Touristic Areas, and Improving Emergency Care Efficacy in Areas with Insufficient Emergency Care Resources. In 2018, rewards were provided for 18 locations (including Qingjing Farm, Sun Moon Lake, and Dawu and Chenggong townships in Taitung County). Emergency treatment services were provided to over 9,200 patients in areas with insufficient resources. The areas have benefited from 24-hour emergency treatment services. (3rd Section, Department of Medical Affairs)
13. Implementing the Plan for the Training of Medical Personnel for Aboriginal Communities and Offshore Islands

    (1) To ensure a more equitable allocation of medical resources in remote districts by actively cultivating local medical talents, since 1969 the MOHW has trained health workers through the "Plan for the Training of Medical Personnel for Aboriginal Communities and Offshore Islands":

    A. As of the end of 2018, 1024 health workers (including 549 doctors, 82 dentists, 263 nursing personnel and 130 other medical personnel) received training under this program. Approximately 70% of these personnel have chosen to remain in the aboriginal communities and offshore islands to serve upon the completion of their training.

    B. Expand the cultivation of local health workers: In light of factors such as the amendments to the Labor Standards Act, the Ministry's mid-long term health worker manpower objective, transition in the aboriginal community/remote township nursing elite program, aging population, the demand for long-term care manpower in the future and manpower shortage faced by five major specializations, the Ministry has adhered to "Revision of Aboriginal Community and Offshore Island Health Worker Cultivation Project - Stage IV (2017-2021)" by increasing the number of local health worker trainees by 356, bringing the total to 580.

    C. Promote cultivation through vocational schools: for disciplines such as general medicine, dentistry and nursing, the Ministry will gradually promote a system for cultivation through vocational schools to mitigate potential cultural shock and increase graduation and certification rate.

    D. Amend assignment service management guidelines: as a response to demands for local manpower, the Ministry has announced the amendment to the publicly funded nursing student training assignment and service management guidelines in the Aboriginal Community and Offshore Island Health Worker Cultivation Program on November 2, 2018 by adjusting the sequence of assignment application and actual assignment for graduating publicly funded nursing students. More specifically, their assignment would now prioritize the local health stations in the district of their registered address with improved management of these publicly funded students from the local governments.

    E. In accordance with the "Elite Nurses Program for Remote/Rural Regions" as approved by the Executive Yuan, the Ministry has trained a total of 195 publicly funded nursing students between 2015 and 2018. Upon the completion of their training, these students would be assigned to hospitals in various rural areas to serve for at least 4 years.

14. In an effort to strengthen local medical services in rural areas and encourage health workers to establish health institutions in aboriginal communities and offshore islands so that local residents would have easy access to medical services, the Ministry has offered subsidies for those intending to set up health institutions in aboriginal communities and offshore islands, up to no more than 500,000 NTD per institution in principle. In 2018, the Ministry has subsidized 7 new health institutions. (Department of Nursing and Health Care)

Section 2 Emergency Medical Evacuations

Taiwan desires to ensure that residents of outlying islands requiring emergency medical treatment can receive proper care. As such, the MOHW has followed the principles of "doctors move, patients stay put" and "seamless medical care." The agency has strengthened the provision of medical care to underserved regions with support from aeromedical services whenever necessary. Implementations are summarized as follows:

1. In an effort to effectively establish a review system for aeromedical evacuation and improve the quality of referral treatments, the Ministry has established the "Aeromedical Evacuation Review Mechanism" by enlisting qualified physicians to provide emergency medical consultations on an around the clock basis to evaluate the necessity of providing aeromedical evacuation. Prior to the establishment of the mechanism, the average number of aeromedical service provision per month was 43.18. With the mechanism in place, the number fell significantly to 20.8 per month, representing a decline of 51.82%.
2. The Ministry implemented the "Kinmen, Lianjiang and Penghu Offshore Island Aircraft on Local Standby Program" to outsource the deployment of private aircrafts on these three offshore islands for standby services. The aircrafts were deployed for service and operation on July 27 2018 in Kinmen and August 1 2018 in Lianjiang and Penghu.
3. In an effort to enhance medical personnel's competence in aeromedical evacuation, the local airlines and governments have organized aeromedical evacuation trainings, including overview of aerospace and operational physiology, risk management for aeromedical evacuation and so forth in conjunction with simulations and drills carried out in an aircraft.
4. As a follow-up to the multi-party electronic consultation platform that was designed by Government Zero Team in the 2018 Presidential Hackathon, the Ministry has constructed the "Aeromedical Evacuation Distance Consultation Platform" as a channel for different parties to provide relevant medical information to the Aeromedical Approval Center for assessments such as destination hospital, offshore-island physician decision-making for diagnosis and treatment, necessity for an aeromedical evacuation and so forth to alleviate the stress on frontline physicians by lowering the risks of unnecessary evacuations.
5. In an effort to lighten the financial burden on the general public seeking medical assistance, the Ministry has been offering subsidies in accordance to "Directions Governing Transportation Expense Subsidy for Offshore Island Residents Requiring Immediate Medical Attention due to Urgent or Serious Injuries/Illnesses" by covering half of the transportation expenses (by plane or boat) for patients who have to make the trip on their own. The subsidy is limited to four trips per year per patient and a patient may take up to 6 trips if deemed necessary by a physician. In 2018, a total of 16.33 million NTD has been paid in subsidy for 21,827 patients.

Section 3 Training and Retaining Staffs

In order to replenish grassroots personnel and human resources in remote regions, the training system for government-supported physicians has been implemented since 1975. During four decades, 6,557 government-supported physicians received training and were assigned to regions with insufficient human resources or difficulties in provision of specialized care services. The program was suspended in 2009 as the goal of balanced human resources was achieved and step-by-step tasks had been fulfilled.

In view of the increased demand for physicians in future, the MOHW resumed the Plan for Training of Government-Supported Physicians in Key Subjects in 2016, planning to train 500 government-supported physicians in 2016-2020. Through the means of "additional capacity", the Ministry has been training approximately 100 government-supported physicians per year. The training has been restricted to key specializations such as general medicine, surgery, obstetrics and gynecology, pediatrics, emergency medicine or other specializations with manpower shortage. Upon completing the training in full, these government-supported physicians are required to complete a service of 6 years in duration at hospitals on offshore islands, remote areas or rudimentary health stations. In conjunction with the support programs for medical centers to assist hospitals in remote regions, government-supported physicians may also choose to fulfill their obligations in different stages in order to retain their opportunities at returning to specific medical center for further education so that they can maintain their competence for the purpose of career planning. On top of that, the Ministry has also implemented incentive measures to encourage government-supported physicians to extend their services in remote areas in the form of salary adjustment or additional benefits in order to retain their services at hospitals or health stations in remote regions.

Chapter 6 Healthcare for Specially Targeted Groups

Section 1 Healthcare for Indigenous People

According to the Council of Indigenous People, as of December 2018, there were 565,561 indigenous people

in Taiwan, accounting for 2.4% of its total population. According to relevant statistics from the Ministry of Interior, the average life expectancy for indigenous people in 2017 came to 72.2 years, which was 8.2 years shorter compared to that for the entire population (at 80.4 years). To safeguard all citizens' rights to receive fair and equal healthcare, the Ministry has endeavored to improve the accessibility of health and medical care for people in aboriginal communities with the following promotional strategies:

1. Implementing the Plan for the Training of Medical Personnel for Aboriginal Communities and Offshore Islands

Since 1969, the Ministry has trained health workers through the "Plan for the Training of Medical Personnel for Aboriginal Communities and Offshore Islands". As of 2018, a total of 550 indigenous people (270 physicians and 280 other medical personnel) have received relevant medical training. Approximately 70% of these indigenous medical personnel have fulfilled their service obligations and chose to stay in their location of assignment to continue their services.

2. Increasing Investments into Medical Equipment and Improving Service Quality in Indigenous Communities

(1) In 2018, the Ministry has subsidized the replacement of 34 medical equipment, 32 workstations, the replacement of 18 medical transports and the (re)construction of 2 health stations (rooms) and renovation of 2 health stations and repair of 8 health stations in aboriginal communities.

(2) Through the "Forward-Looking Digital Infrastructure Project", the Ministry was able to increase the speed of broadband connection for all health stations (rooms) at aboriginal communities and mobile healthcare stations to reach 100M (or the highest possible speed available at the location). By the end of 2018, broadband connection speed upgrade were completed for 212 locations, with HIS/PACS equipment upgrades performed at 32 health stations to improve the quality and efficacy of medical image transfer.

(3) The Ministry subsidized transportation fees for indigenous people involved in referrals, major or urgent illnesses/diseases so that they can receive medical assistance or access relevant welfare resources as a way to lighten their financial burden. In 2018, a total of 13.63 million NTD was paid in subsidy for a total of 17,268 members of the indigenous population.

(4) The Ministry has established Tribal Health Promotion Center at various aboriginal communities so as to integrate local resources to bring health literacy into the communities and construct a model of local health service for local people. As of 2018, a total of 53 Tribal Health Promotion Centers have been established.

3. Improving Health Equality among Indigenous Communities

(1) 9 sessions of inter-departmental meetings on the discussion of care for aboriginal communities chaired by the Minister have been held, with the 10 Action Plan to Eradicate Health Disparity for Aboriginal Communities proposed in April 2018. The plan included specific aspects on the cultivation of local health workers, promotion of tribal health, improvement in medical resources in aboriginal communities and so forth and was officially launched for implementation in May 2018.

(2) The following three strategies have been proposed to eradiate health disparity for aboriginal communities:

A. Identifying targets through data - examining the 10 leading causes of death and 10 leading cancers for indigenous people, the Ministry found that liver/stomach/cancers of the digestive system and newborn/infant mortality rates were both higher than the national average.

B. Searching for talents locally - to cultivate and train health workers who are native speakers of the mother tongue to provide the healthcare and medical services.

C. Looking for solutions through culture - to incorporate and encourage positive and healthy changes in behavior by introducing elements of local cultural implications and promote horizontal integration of local resources.

Section 2 Healthcare for New Immigrants

According to the National Immigration Agency of the Ministry of the Interior, the number of foreign and Chinese spouses in Taiwan in 1987-2018 amounted to 543,807, of which 184,346 spouses had foreign nationality (20,497 male; 163,849 female) and 359,461 spouses came from Mainland China, Hong Kong, and Macao (24,881 male; 334,580 female). According to the Department of Household Registration of the Ministry of the Interior, in 2018, 135,322 Taiwanese couples (270,644 residents) registered marriage. With regard to spouse nationality, 250,081 spouses were Taiwanese, 20,563 spouses had foreign nationality (5,405 male; 15,158 female) and 8,088 spouses (1,416 male; 6,672 female) came from Mainland China (including Hong Kong and Macao). Our ministry has promoted the following policies to improve prenatal health of new immigrants and reduce life and treatment difficulties caused by language barriers:

1. Recent immigrants in Taiwan, who have not yet joined the NHI system, receive subsidies for 10 prenatal examinations, one Group B streptococcus screening,

one ultrasound screening, and two prenatal health education guidance. New immigrants and their children are provided with health management cards, which offer services and health guidance in the areas of family planning, breastfeeding, prenatal health, prenatal examinations, and prenatal nutrition. In 2018, the utilization rate for the health management card was 92.11%.

2. To protect the reproductive health of new immigrants who have not yet joined the NHI system, subsidies for prenatal examinations have been provided to foreign spouses of Taiwanese citizens, since 2011. In 2018, a total of 10,370 cases have been subsidized.
3. To reduce new immigrants' treatment difficulties caused by the language barriers, local health departments applied for the Training Program for Interpreters Among New Residents with the Ministry of the Interior's "New Resident Development Fund" in 2011. Local health departments have promoted training of interpreters among new immigrants who have lived in Taiwan for many years, so that they can assist the departments' personnel in visiting new immigrants and providing them with outpatient service and prenatal health guidance. In 2018, 17 counties and cities applied for the program.
4. To provide reproductive health information more effectively to people from diverse backgrounds, in 2017, the MOHW commissioned the publication of the "Children's Health Booklet" and "Maternal Health Booklet" in five languages: English, Vietnamese, Indonesian, Khmer, and Thai. Taiwan distributes the booklets to medical institutions, and their PDF versions are available for downloading from the publications section of the Health Promotion Administration website, so that new immigrants and their family members can be well informed.
5. Operation Consent Form, Anesthesia Consent Form and documents related to hospitalization are available in 8 languages including Simplified Chinese, English, Japanese, Vietnamese, Indonesian, Thai, Korean and Malay; other documents for hospital discharge procedure and emergency treatment procedures are available in 6 languages, including Simplified Chinese, English, Vietnamese, Indonesian, Thai and Korean.

Section 3 Healthcare for Rare Disease Patients

1. As of 2018, Taiwan has officially identified 220 rare diseases, along with 105 drugs for treating them and 103 nutritional supplements for use in relation to them. Rare diseases have also been included in the categories of major illnesses and injuries under National Health Insurance program, thereby increasing assistance for these unfortunate patients.
2. A logisties center for special nutrition foods and emergency orphan drugs for treating patients with rare diseases has been established; in 2018, the center supplied drugs and special nutrition foods to rare disease on 1,398 occasions. The MOHW also provides subsidies to cover rare disease related expenses not covered by the NHI. They include rare disease diagnosis, treatment, examinations (both in Taiwan and overseas), and home medical care equipment, subsidy for nutritional consultation fee for low-protein rice/noodle and rare metabolic diseases. In 2018, subsidies were provided on 1,532 occasions.
3. Taiwan has established 14 genetic counseling centersin medical centers, providing hereditary and rare diseases, medical services.
4. Strengthening Rare Disease Prevention Education: 12 advocacy activities were held for patients, patient groups, businesses, and healthcare institutions. Produced short promotional videos to be viewed by users on the Internet.
5. The Ministry has held open solicitation for entries for rare disease control subsidy programs in accordance with the Regulations governing the Incentives and Subsidies for Rare Disease Prevention and Treatment. A total of 8 programs were subsidized in 2018.
6. The Program for Rare Disease Care Services was implemented in accordance with Regulations Governing Healthcare Services for Rare Diseases and Rare Genetic Defects. This program involved specialists to conduct inform patients about the effects of related diseases, offered psychological support, maternity attentiveness and care counseling services for patients and their families. Through open solicitation, 9 institutions (operating under 8 medical centers) have been commissioned for this program, which served a total of 5,060 patients and their families in 2018.

Section 4 Groups with Special Health Needs

1. Healthcare for Patients Affected by Polychlorinated Biphenyl (PCB) Poisoning

(1) In 1979, while a food manufacturer in Taichung was processing rice bran oil, PCB that was

being used as a heat transfer fluid along with PCB heat denatured byproducts leaked into the edible oil via cracked plastic pipes. More than 2,000 victims in Taichung and Changhua consumed the contaminated oil. Subsequent investigation has shown, early symptoms of PCB poisoning include acne, skin hyperpigmentation, and excessive eye discharge.Problems that develop later include damages to the liver, the immune system, and the nervous system. In April 1979, the former Department of Health, under the then-Taiwan Provincial Government, registered Yu Cheng patients so they could get blood tests, and receive needed healthcare services. People responsible for the contamination disposed of their properties, and died in prison; therefore, the government and the general public stepped in to care for these victims.

(2) To protect the rights of patients affected by PCB contamination, the "Yu Cheng Patients Health Care Services Act" was promulgated by presidential order on February 4, 2015. Benefits include making both first-generation and secondgeneration Yu Cheng patients exempt from NHI copayments for outpatient (and emergency) services, making first-generation patients exempt from NHI co-payments for inpatient expenses, and entitling them to free annual health checkups at special clinics. The act expands the definition of first-generation victims to include all victims born in 1980 or earlier. It further guarantees the rights of victims, establishes a health care promotion group, and ensures a solatium payment for surviving family members of victims who died before implementation. On November 16, 2016, an amendment was made to revise articles 4 and 12 to ease criteria for confirming victims, expanded family members who qualify for the solatium payment to include surviving parents, and extended the deadline to collect payment until August 9, 2020.

(3) As of the end of 2018, there were a total of 1,888 registered Yu Cheng patients, including 1,257 firstgeneration patients and 631 second-generation patients. In 2018, there were a total of 20,750 instances of subsidies being provided to cover Yu Cheng patient outpatient (and emergency) service co-payments, and 105 instances of subsides being provided to cover inpatient copayments. There were also 681instances of free health checkups being provided to Yu Cheng patients, and 238 applications for the payment of solatiums to the family members of deceased Yu Cheng patients were approved.

2. Human Rights Protection and Care for Hansen's Disease Patients

(1) The MOHW has been implementing the Directly Observed Treatment Short-Course (DOTS) program to provide high-quality care for Hansen's disease patients.

(2) As of 2018, five hospitals have been providing the diagnosis and treatment of Hansen's disease: National Taiwan University Hospital, MacKay Memorial Hospital, Taichung Veterans General Hospital, National Cheng Kung University Hospital, and Lo-Sheng Sanitarium. Hansen's patients could thus seek treatment more conveniently.

3. Human Rights Protection and Care for HIV Patients

Taiwan imported Zidovudine (ZDV/AZT) drugs in 1988. In 1997, the country also offered highly active antiretroviral therapy (HAART) for free to patients. Highlights of the MOHW's efforts in 2018 are as follows:

(1) Human Rights Protection: following the promulgation of the "Regulations Governing the Protection of the Rights of HIV Patients" in 2007, a system was established for HIV patients to file complaints. In 2018, the MOHW assisted with the handling of eight complaints.

(2) Health and Care

A. In 2018, there were a total of 78 hospitals in Taiwan designated for the treatment of HIV/AIDS, along with 29 community pharmacies that provide relevant care services for those infected with AIDS. 88% of HIV patients received medication and 94% of HIV patients had an undetectable viral load.

B. Local health bureaus and centers have been tracking patients and urging them to seek regular treatment. Consultation and testing services are also provided to partners of HIV/AIDS patients.

C. In order to strengthen health self-management among HIV/AIDS patients, in 2018 the MOHW implemented the Plan for the Improving of Service Quality in Hospitals Designated for the Treatment of HIV/AIDS. Relevant health education and consultation services are provided to the patients.

D. In 2018, placement was offered in 891 cases, and case management services were provided to 345 patients. Subsidies are provided to NGOs that assist with HIV patient care as halfway shelters by offering treatment arrangements, emergency accommodation, and case management services.

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5 Long-Term Care Services

Taiwan's population structure is affected by low birth rate and an increase in life expectancy. The population aged 65 years and older has been growing rapidly. As of the end of March 2018, seniors aged 65 years and older accounted for 14.05% of Taiwan's population making it as aged society. This percentage is expected to reach 20.6% by 2026, which will make Taiwan a "super-aged" society with every fifth person being 65 years old or older. This has increased the urgency to establish a sound long-term care system, to develop human capital and institutional resources, and to ensure service quality. The MOHW's National Ten-year Long-Term Care Plan 2.0 (hereafter referred to as "Long-Term Care Plan 2.0") was ratified by Executive Yuan in November 2016 and implemented in January 2017. The plan aims to promote an Integrated Community Care Service Network to meet the long-term care needs of Taiwan's aging population.

Improving upon Long-Term Care 1.0, Long-Term Care Plan 2.0 has increased the number of care recipients and service items. The plan has been extended to prevent disability and delay its onset. It also has integrated home hospice care and home-based medical care. It also desires to achieve the ideal of "aging in place" to meet the growing demand for elders' services. As such, the plan has called for establishing a community-based care service system that would support diversified services in family-based, home-based, community-based and residential cares. The goals of the Long-Term Care Plan 2.0 are outlined in Table 5-1.

The Long-Term Care Plan 2.0 takes into account demographic factors regarding long-term care needs. Notably, the plan has increased the number of service categories from 4 to 8, enhanced the flexibility of existing Long-Term Care Plan 1.0 services, and expanded the number of service items from 8 to 17. Table 5-2 lists more detailed information.

Table 5-1 Goals of the Long-Term Care Plan 2.0

Source: Long-Term Care Plan 2.0 (approved edition)

Goals	To establish a quality, reasonably priced, universal long-term care service system to accomplish communitarian ideals; to provide citizens needing long-term care with basic services and opportunity to enjoy old age in a familiar environment, and to relieve burdens on their families.
	To achieve aging in place, provide diversified services: family-based, home-based, community-based and residential cares; to popularize the care service system and to establish community-based care to improve the quality of life for care recipients and their caregivers.
	To expand primary prevention efforts, to advocate preventive healthcare and active aging, to delay the onset of disabilities, to promote health and welfare of seniors and to improve their quality of life.
	To provide multi-purpose community-based support services, to streamline home-based hospice care, to relieve stress on family members and to ease burdens related to long-term care.

Table 5-2 Comparison of Target Service Groups and Service Items under Long-Term Care Plan 1.0 and Long-Term Care Plan 2.0

Source: Long-Term Care Plan 2.0 (approved edition)

	Long-Term Care Plan 1.0	Long-Term Care Plan 2.0
Target Service Recipients	1. Senior citizens aged over 65 with physical or mental incapacity 2. Mountain indigenous people aged over 55 with physical or mental incapacity 3. Citizens aged over 50 with mental or physical disability and physical or mental incapacity 4. Solitary elderlies aged over 65 who only require assistance with Instrumental Activities of Daily Living (IADLs)	In addition to the target service recipient categories covered by Long-Term Care Plan 1.0, the following 4 additional target groups have been added: 5. People with dementia (aged 50 and over) 6. Plain indigenous people with physical or mental incapacity(aged 55-64) 7. Citizens aged under 49 with mental or physical disability and physical or mental incapacity 8. Frail senior citizens aged over 65 who only require assistance with Instrumental Activities of Daily Living (IADLs)
Service Items	1. Care services (including home care, day care, and family care) 2. Transportation services 3. Nutritional food delivery services 4. The purchase and rental of the assisting instruments and the improvement of household barrierfree environments 5. Home nursing care 6. Home-based/community-based rehabilitation 7. Respite care services 8. Long-term care institution services	In addition to the service items covered by Long-Term Care Plan 1.0, the following additional service items (Items 9 – 17) have been added: 9. Dementia care services 10. Integrated services for communities in indigenous districts 11. Small-size multi-function services 12. Support service centers for family caregivers 13. Integrated community care service networks (with the establishment of community integrated service centers, combined service centers and LTC stations around the blocks) 14. Community-based preventive care 15. Programs to prevent or delay disability and dementia 16. Integration of discharge planning services 17. Integration of home-based medical care

Chapter 1 The Long-Term Care Service System

Section 1 The Long-Term Care Services Act

1. Revision of the Long-Term Care Services Act: A partial revision of the Long-Term Care Services Act was promulgated by the President on June 19, 2019. Focus of the amendments centers on the implementation of long-term care for the indigenous people with the revision of Articles 14 and 24 that relate to the plan of long-term care service at aboriginal communities, long-term care service network and promotion of relevant human resource development and the establishment of long-term care facilities in aboriginal communities, personnel development and so forth by placing the authority of establishment in the central government agency and the Council of the Indigenous Peoples. In addition, Article 34 has also been revised to include the clause that requires proprietors of long-term care facilities with institutional accommodation services to be covered for public liability, with relevant penalties outlined in Article 47 as a way to protect the rights of residents at these facilities. Furthermore, Article 39 has also been revised to state that the central authority shall be responsible for the classification of long-term care facilities by type and the establishment of specific items for the assessment of long-term care facilities such as personnel qualification, selection, employment, training and so forth in order to ensure the quality of long-term care and efficacy of the evaluation system.
2. Statutes authorized by the Long-Term Care Services Act: From the Long-Term Care Services Act, a corresponding statute with 8 sub-statutes have been established, including: (1) Institutional Long-Term Care Juridical Entities Act, (2) Implementation Rules for Long-Term Care Services Act, (3) Evaluation Procedure for Long-Term Care Institutions, (4) Procedure for Training Certification, Continuing Education and Registration for Long-Term Care Personnel, (5) Regulations Governing Long-Term Care Service Resource Development, (6) Establishment Standards of Long-Term Care Institutions, (7) Regulations Governing Long-Term Care Institution Establishment Standards and Management, (8) Review Procedure for the Lease of National Non-public Use Real Estate by Long-Term Care Institutions and (9) Regulations Governing Supplementary Training for Foreign Family Nurses. Pursuant to the Presidential Order issued on January 31 2018, 5 additional sub-statutes and 3 announcements have been established under the Institutional Long-Term Care Juridical Entities Act, including (1) Implementation Rules for Institutional Long-Term Care Juridical Entities Act, (2)Regulations for Procedures for Appointment and Removal of Public Auditor for Institutional Long-Term Care Foundations, (3) Regulations for Merger of Institutional Long-Term Care Juridical Entities, (4) Regulations for Appointment of New Directors of Institutional Long-Term Care Juridical Entities, (5) Regulations Governing the Preparation of Financial Reports by Institutional Long-Term Care Juridical Entities, (6) Establishment of Long-term Care Service Institutions for Institutional Long-term Care Juridical Entities by Location, Category, Number, and Scale Limit, (7) Necessary Assets of Establishment of Institutional Long-Term Care Juridical Entities and (8) Institutional long-term care juridical entities shall report the donations thereof to the competent authority for approval in advance if the amount of the donations equals or exceeds a certain amount as determined by the central competent authority or a certain percentage of the assets thereof.

Section 2 Care Management System

To facilitate the implementation of Long-Term Care Plan 2.0, and to coordinate the operation of different long-term services and resources, the Long-Term Care Management Centers in individual counties and cities will be recruiting care managers to provide an integrated “one-stop” contact window for applications, evaluations, care plans, and coordinating and delivering long-term care services. At the same time, subsidies are also given to local governments to set up long-term care management center branch offices in rural areas announced by the Ministry (i.e. indigenous communities, offshore islands and other areas with inadequate resources).

Distribution of Long-term Care Management Center (Branch)

In order to improve the availability of care managers at Long-Term Care Management Centers, the MOHW is implementing the following measures:

1. Qualification of appointment for Long-term Care Management Center personnel: The Ministry has launched the new long-term care payments and benefits standards in January 2018. And also adjusted the qualification requirements for appointment and wages in order to attract talents and raise the pay for care management personnel.

(1) Qualification requirements for appointment:

A. Care manager: In addition to the original qualification requirements (a) holder of degree in long-term care related universities or vocational schools with at least two years of experience in relevant work；(b) holder of masters degree in public health, with at least a year of experience in relevant work；(c) holder of specialist certificate with at least three years of experience in relevant work. New addition: candidates are required to have completed qualification training for senior social worker or elderly-care related departments with specific years of experience in relevant work in order to eligible for the position of care manager.

B. For rural areas, apart from the aforementioned qualification requirements, the duration of work experience required has been reduced by 1 year compared to normal areas; for administrative personnel, the requirements for appointment have been adjusted from undergraduate degree to senior high school diploma with two years of work experience compared to normal regions.

(2) Wage standard: the contracted salary for care managers and supervisors will be raise by 2 job grades.

A. Care manager: for care managers deployed in normal regions, their wage has been adjusted from 33,908 NTD - 45,534 NTD per month to 38,906 NTD - 50,878 NTD per month; for care managers in rural regions, their starting salary has been increased to 44,892 NTD. At the same time, in an effort to encourage existing care managers at long-term care management center branch offices in rural regions to remain in their position, they will receive a starting salary of 46,887 NTD if they become care managers under the new system through transfer.

B. Care supervisor: for care supervisors deployed in normal regions, their wage has been adjusted from 39,721 NTD - 51,346 NTD per month to 44,892 NTD - 56,863 NTD per month; for care supervisors in rural regions, their starting salary has been increased to 50,878 NTD.

2. Care management personnel deployment

(1) Normal regions: Standard of caseload for care manager is 200 service recipients for each care manager, and 1 care supervisor for every 7 care managers. An administrative assistant is assigned to every 10 care managers and supervisors.

(2) Rural regions: In 2018, each care manager is assigned to 100 service recipients, and 1 care supervisor for every 7 care managers. For every 3 branch offices, the Ministry has assigned one additional supervisor. In addition, an administrative assistant is also assigned at each branch office to help with relevant administrative affairs so as to strengthen the development of local resources in rural regions for care management personnel and connections while increasing the density of care management personnel allocation at Long-term Care Management Center Branch Offices in rural regions.

Through the establishment of Long-term Care Management Centers and Branch Offices and the replenishment and retention of care management personnel, the applications for long-term care services were 136,058 in 2018. Compared to the 79,275 applicants in 2017, the figure translates to a growth of 71.63%. In 2018, there were 241,549 personel who completed the assessment for long-term care, which is an 80.51% increased compared to the 133,815 personnel in 2017.

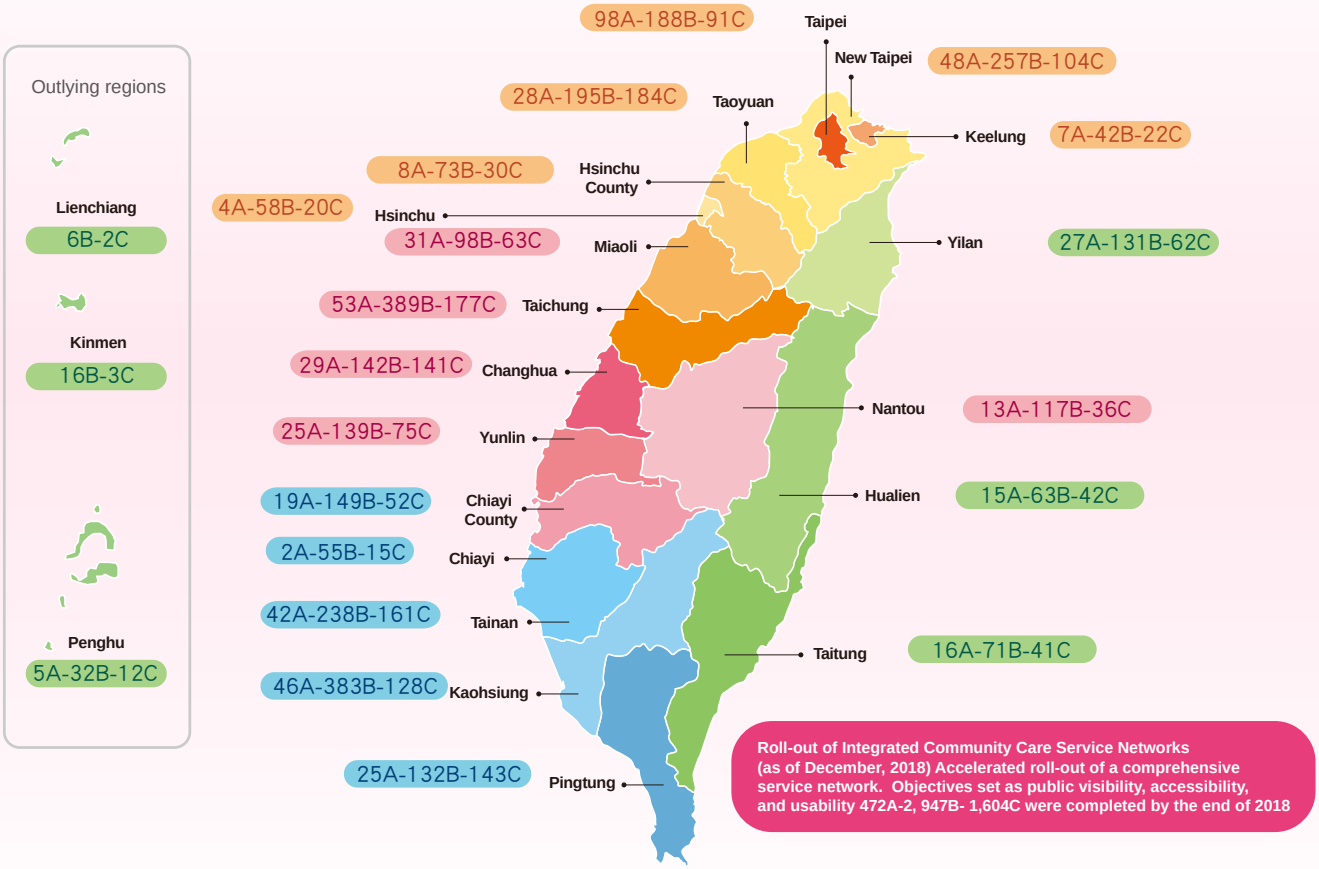
Section 3 Service System and Resource Development

1. Constructing the integrated community care service networks

While prioritizing the expansion of home care provision and making day-care more widely available, the MOHW has been working to integrate different services into community-based integrated care service networks. The basic principle involves the cultivation of community integrated service center (“A”), combined service center (“B”), and LTC stations around the blocks (“C”) throughout Taiwan; individual county and city governments are being encouraged to work with long-term care service providers, medical institutions, nursing homes and community organizations to realize this vision. Citizens needing long-term care services should contact the local long-term care management center. The necessary long-term care services are evaluated and connected by care managers or community integrated service center. The Ministry plans to establish 469 integrated service centers, 829 combined service centers and 2,529 LTC stations around the blocks in four years (between 2017-2020)(469A-829B-2,529C). As of the end of 2018, a total of 5,050 units have been established, comprising 472 integrated service centers, 2,974 combined service centers and 1,604 LTC stations around the blocks (472A-2,974B-1,604C), with the following deployment in various municipalities as shown in Figure. 5-1.

Figure 5-1 Integrated community care service networks in counties and cities of Taiwan

Source: Department of Long-Term Care



2. Development and Deployment of Service Resources:

(1) Improving Service Utilization of Long- Term Care: in 2018 long-term care services (listed in Table 5-3), with transportation service having the most significant growth at 542% compared to 2017. Secondly, in terms of purchase and rental of assisting instrument and improvement of household barrier-free environments and respite care, the number of service recipients have increased significantly compared to 2017. In addition, starting from 2017, the Ministry has been calculating the number of people served based on the Care Management Information System at the end of the year using recipients' personal ID. number as carriers to adjust and exclude the repeated counts. As a result, some statistics have shown significant differences.

(2) Hasten Resource Provisioning

A. Overall, transportation services stood out with the most growth out of all items of resources at 133% growth in 2018 compared to the previous year; respite services also grew in excess of 90% (Table 5-4).

B. As of the end of December 2018, the number of institutional care facilities for Taiwanese elderlies rose to 1,098, and the total number of beds available nationwide reached 62,724 (Table 5-5).

C. As of the end of December 2018, the number of Taiwan's nursing homes rose to 539, and the total number of beds available in nursing homes nationwide reached 43,241 (Table 5-6).

Table 5-3 Number of Persons Receiving Long-Term Care Services from 2009 to 2018

Source: Department of Long-Term Care

Item	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Home Care	22,017	27,800	33,188	37,985	40,677	43,331	45,173	47,134	79,137	117,911
Day Care (including day care centers for people with dementia)	618	785	1,213	1,483	1,832	2,344	3,002	3,663	7,029	11,622
Family care	11	35	62	110	131	146	200	210	390	681
The purchase and rental of the assisting instruments and the mprovement of household barrier-free environments (number of times)	4,184	6,112	6,845	6,240	6,817	6,773	7,016	9,663	8,008	20,841
Nutritional food delivery services	4,695	5,267	6,048	5,824	5,714	5,074	5,520	5,516	9,090	16,834
Transportation services	18,685	21,916	37,436	46,171	51,137	54,284	57,618	59,588	10,351	66,440
Home nursing care	5,249	9,443	15,194	18,707	21,249	23,933	23,975	22,359	9,970	49,234
Home-based/ community -based rehabilitation	5,523	9,511	15,439	15,317	21,209	25,583	25,090	27,237	12,013	
Respite care	6,351	9,267	12,296	18,598	32,629	33,356	37,346	46,339	21,270	49,053
Total number of people served (adjusted)						-	84,295	90,603	113,706	180,660

Notes:

1. Before 2016:
   (1) The figures for the purchase and rental of the assisting instruments and the improvement of household barrier-free environments and transportation services refer to the number of times served; for other items, the figures refer to the number of people served by the end of December.
   (2) Home nursing care, home-based/community-based rehabilitation, and respite services refer to the cumulative number of people served in a year.
   (3) For the purchase and rental of the assisting instruments and the improvement of household barrier-free environments, nutritional food delivery services, and long-term care institutions, the budgets were primarily handled by the respective municipal governments.
2. After 2017:
   (1) The dividing line is used to indicate that different methods and standards were used to calculate the number of people served.
   (2) For 2017, and with respect to home care, day care, family care, nutritional food delivery services, transportation services, home nursing care, home-based/community-based rehabilitation, and respite care, the number of people served refers to the number of people served by the end of the year based on the Care Management Information System, which adjusts the data to exclude repeated counts.
   (3) Total number of people served: Excluding the people served in the nutritional food delivery services and long-term care institutions.
   (4) For 2017, the numbers of people served in the nutritional food delivery services were 9,090, included 6,293 low-income or medium-and-low-income people.
   (5) Purchase and rental of the assisting instruments and the improvement of household barrier-free environments: data has been reported by municipal governments.
3. After 2018: (1) In conjunction with the implementation of the new long-term care payments and benefits standards in 2018, home nursing care and home-based rehabilitation have been integrated as professional services. (2) For home care, day care, family care, purchase and rental of the assisting instruments and the improvement of household barrier-free environments, nutritional food delivery services, transportation services, professional services, respite services, the number of people served is calculated based on the Care Management Information System at the end of the year using recipients' personal ID. number as carriers to adjust and exclude the repeated counts.

Table 5-4 Number of Institutions Providing Long-Term Care Services from 2009 to 2018

Source: Department of Long-Term Care

Item	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Home care	127	133	144	149	160	168	173	200	238	420
Day care (including day care centers for people with dementia)	39	66	78	90	120	150	178	205	259	355
Family care	16	23	16	17	20	22	21	25	85	104
Nutritional food delivery services	204	201	159	169	190	209	197	197	249	265
Transportation services	42	43	39	43	42	41	41	40	48	112
Home nursing care	495	489	451	478	483	486	493	518	505	1,255
Home-based/ communitybased rehabilitation	88	122	112	111	125	143	143	129	211	
Respite care	1,439	1,444	1,052	1,510	1,509	1,549	1,565	1,760	872	1,673

Note: Figures for home nursing care, home-based/community-based rehabilitation, and respite care before 2016 refer to the number of institutions established in Taiwan over the year; figure for 2017 indicates the number of contracted institutions in Taiwan. In conjunction with the implementation of the new long-term care payments and benefits standards in 2018, home nursing care and home-based rehabilitation have been integrated as professional services.

Table 5-5 Number of Senior Citizens' Social Welfare Organizations and Residents from 2009 to 2018

Source: Department of Statistics

Year	No. of institutions	Occupancy rate (%)					Actual number of residents (persons)	Occupancy rate (%)
		Long-term care beds	Nursing care beds	Beds for patients with dementia	Aged home beds	Total (Number of beds)		
2009	1,066	4,419	43,180	0	6,968	54,576	40,183	73.6%
2010	1,053	4,796	43,586	0	6,684	55,066	41,515	75.4%
2011	1,051	4,660	44,794	90	6,545	56,089	42,824	76.4%
2012	1,034	5,748	45,642	144	5,303	56,837	42,769	75.2%
2013	1,035	5,959	46,652	220	4,844	57,675	43,496	75.4%
2014	1,063	4,447	48,935	280	5,618	59,280	45,298	76.4%
2015	1,067	4,340	49,565	406	5,558	59,869	46,264	77.3%
2016	1,082	4,544	50,756	453	5,329	61,082	47,192	77.3%
2017	1,100	4,470	52,481	459	5,050	62,460	48,315	77.4%
2018	1,098	4,676	52,695	471	4,882	62,724	49,575	79.0%

Table 5-6 Number of Nursing Homes and Residents from 2009 to 2018

Source: Data for 2009–2012 is from the Department of Statistics; data for 2013 – 2018 is from the Department of Nursing and Health Care.

Year	Number of nursing homes	Number of beds	Actual number of residents (persons)	Occupancy rate (%)
2009	367	23,077	19,785	85.7%
2010	390	25,849	20,774	80.4%
2011	423	28,476	21,151	74.3%
2012	447	30,447	22,471	73.8%
2013	470	33,302	27,605	82.9%
2014	486	35,383	29,933	84.6%
2015	499	37,161	31,772	85.5%
2016	508	39,002	33,271	85.3%
2017	528	41,316	34,698	84.0%
2018	539	43,241	36,365	84.1%

3. Improving Long-Term Care Service Evaluation Tools and Informatization

The MOHW is improving upon Long-Term Care Plan 1.0 to build a better long-term care assessment tools and informatization for Long-Term Care Plan 2.0.

(1) Implementing the care management assessment scale: in line with the increasing number of service recipients and service items under Long-Term Care Plan 2.0, the MOHW implemented an updated care management assessment scale that could evaluate the long-term care needs of distinct demographic groups in April 2017; it could also rate the severity of long-term disability and the payment amount. The assessment scale covers six domains: (1) Activities of Daily Living (ADLs) and Instrumental Activities of Daily Living (IADLs); (2) Communication skills; (3) Special and complex care needs; (4) Short-term memory evaluation, emotional and behavioral states; (5) Home environment, family support and social support; (6) Care burden in primary caregivers.

(2) Device standardization: to ensure that assessment is standardized and consistent, the scale was embedded in mobile devices (tablet computers) to perform assessment. Based on the assessment results, devices automatically use compound factors to determine the level of clients' long-term care needs. This standardized procedure has enhanced the objectivity of care managers, who previously utilized their professional experience of care managers, which was highly susceptible to bias and confounding factors. As such, device standardization will help ameliorate consistency and efficiency. Hopefully, care recipients would receive appropriate care services resulting in a fairer resource distribution.

4. Care Services for People with Dementia

(1) Strengthening community-based service capacity for people with dementia: to ease access to care for people with dementia, and to reduce the burden on their families, Long- Term Care Plan 2.0 makes it possible for people with dementia aged 50 or over and their caregivers to obtain appropriate care close by, and to strengthen community-based service capacity for such clients. The MOHW has expanded the establishment of Support Center for People with Dementia and their Families (SPDF). Additionally, to meet the caregivers' needs at different stages of people with dementia, the MOHW has implemented an innovative project that involves the establishment of Integrated Dementia Care Center (IDCC) in counties and cities throughout Taiwan. In this way, the ministry

hopes to provide proper guidance/ assistance to caregivers, as well as information services, referrals and other supporting services. These centers will help to coordinate medical resources, and arrange the provision of relevant care services. In the end, the MOHW wishes to promote dementia health literacy, and contribute to a safer environment for people with dementia.

(2) Achievements: as of 2018, a total of 350 SPDFs were established; 14,494 people with dementia or high clinical suspicion of dementia (along with their families) benefitted from their services. SPDFs conducted cognitive promotion and dementia alleviation activities for 8,393 participants, hosted family care training for 5,880 participants, provided family support group services for 5,064 participants and performed safety evaluations with 4,613 participants. As of the end of December 2018, 73 Integrated Dementia Care Centers were established to care for a total of 29,532 people with dementia or suspected to have dementia. In addition, these centers also implemented community dementia literacy public education services for 120,691 participants and sponsored talent training sessions for professionals (attended by 33,414 participants).

5. Establishment of Long-Term Care Management Center Branch Offices in Indigenous Communities, Offshore Islands and Other Areas with Inadequate Resources

Recognizing the relative lack of long-term care resources in indigenous communities, offshore islands and other areas with inadequate resources, in 2010 the MOHW began to promote the establishment of Long-Term Care Management Center Branch Offices, so as to develop a localized, diversified comprehensive service model. As of the end of 2017, funding support had been provided for the establishment of 46 Branch Offices, of which 20 were located in indigenous communities.

In conjunction with the launch of Long-Term Care 2.0, the Ministry has encouraged municipal governments to establish Long-Term Care Management Center Branch Offices in indigenous communities, offshore islands and other regions of inadequate resources in 2018 to integrate social and welfare long-term care service resources through an integrated “one-stop” contact window for the assessment of supply/demand, coordination and delivery of long-term care services.

In order to construct an integrated care service delivery system for aboriginal tribes so as to strengthen tribal care functions and create a local environment that is aging-friendly, the Ministry has prioritized incentivizing long-term care service resources for the indigenous people. Starting from 2018, the Ministry has been assisting long-term care service locations in indigenous communities in their transition and established a total of 55 Long-Term Care Management Center Branch Offices for indigenous communities to stabilize manpower for local long-term care and facilitate a supportive environment for tribal caregivers. By establishing systems of resource connection, the Ministry will be able to raise the prevalence of long-term care services while actively cultivating local manpower for long-term care by incorporating diverse trainings featuring aboriginal cultures to facilitate diverse and balance development of long-term care resources. This will in turn ensure that aboriginal people can receive appropriate care.

6. Support services for family caregivers

(1) Principles of support services for family caregivers

In an effort to develop diverse support measures for family caregivers, improve their care service quality and lighten their workload, Article 13 of the Long-Term Care Services Act has identified family caregivers as service recipients entitled to the following services, including: 1. provision and referral of relevant information; 2. Long-term care knowledge and technical training; 3. Respite care services; 4. Emotional support and referral of group services; 5. Other services that help promote the capability of family caregivers and the life quality thereof. The application, assessment, provision and other matters of compliance in relation to the supportive services shall be determined by the central competent authority.

The Ministry has also published the principles of support services for family care givers on August 22, 2018. The contents of the announcement covered methods of implementation, service application, qualification requirements for service providers, work principles, auditing methods and so forth as a basis for municipal governments and service providers to refer to.

(2) Respite services for family caregivers

In order to help caregivers by alleviating stress, respite services currently available from the long-term care system include home respite, community respite and institutional respite and so forth. By assigning care service personnel to the homes of care receivers or arranging caregivers to providers of respite services, family caregivers will be able to briefly leave their role as primary caregivers and enjoy a moment of respite and space to alleviate the stress they have accumulated through caregiving. For family caregivers taking care of recipients at disability severity levels 2 - 6, the annual payment

quota for respite services is currently at 32,340 NTD (roughly equivalent to 14 days of respite service at an institutional service provider); for disability severity levels 7 - 8, the quota is 48,510 NTD (roughly equivalent to 21 days of respite service at an institutional service provider). The expenses are subsidized by the government and average households are required to cover 16% of the costs; 5% households of medium-and-low-income and completely waived for low-income households.

(3) Provision of support services and relevant information for family caregivers

In an effort to address the needs of long-term care and lighten the workload for caregivers, the Ministry has been working with professional organizations to setup consultation hotlines since 2008 to provide counseling services for caregivers as a channel for them to release their stress and negative emotions. In addition, the Ministry has also connected relevant community resources to provide support services as a way to heighten community residents' sensitivity to family caregivers.

Through the consultation and reporting hotline, the Ministry has connected various support service locations for family caregivers, nurtured local community groups to provide accessible support services to alleviate the psychological stress and emotional discomfort that family caregivers may be facing by providing them with 8 major support services, including case management, care technique instruction, care technique training, psychological counseling, support groups, and stress-relieving activities. As of the end of 2018, the Ministry has established 30 support service locations for family caregivers.

In an effort to expand the service capacities for domestic family caregivers and improvement accessibility and coverage of services, the Ministry held an open solicitation for entries in the "Family Caregiver Supportive Service Innovation Project" in June 2018 as a way to encourage municipal governments to develop their local services that are suited to local conditions in order to lighten the caseload for family caregivers while achieving the objectives of improving their service agreements and knowledge in relevant financial management. The trial project was held in 11 municipalities in 2018 and is scheduled for implementation on a larger scale in 2019.

(4) Extending respite services to foreign workers to render home care

Pursuant to the regulations on payments and benefits standards for long-term care 2.0, eligible care receivers hiring foreign workers to render home care may apply for relevant services such as professional services, transportation services, purchase and rental of the assisting instruments and the improvement of household barrier-free environments and bathing service delivery van visits. If their foreign workers are unable to provide their services for 30 days or longer for any reason, they may also apply for respite service subsidy. In addition, in order to prevent and delay potential disability or dementia caused by the aging process, care receivers may choose to participate in community prevention and delay of disability and dementia services. Similarly, seniors suffering from dementia or suspected to have dementia may also receive long-term care services from Integrated Dementia Care Centers and Support Centers for People with Dementia.

To alleviate caregiving strain arising from the temporary absence of foreign workers that last no more than 30 days while safeguarding the safety and care quality for the care receiver, the Ministry has made special exceptions to remove the 30-day window period for foreign workers if care receivers meet specific requirements since December 2018.

7. Programs to prevent or delay disability and dementia

The programs to prevent or delay disability and dementia are intended to target senior citizens across Taiwan while encouraging frail seniors and those suffering from light to medium disability (dementia) to take part in such programs. Through the involvement of healthcare and relevant professional organizations, the programs provide single or compound care solutions to be implemented at designated service locations for the program. As of December 31 2018, there are a total of 2,213 service locations, which have helped 35,562 people thus far.

8. Incentive program for long-term care 2.0 integration of discharge planning service friendly hospitals

In order to shorten the waiting time for patients with the need for long-term care service after their discharge from the hospital, the Ministry has established the "Incentive program for long-term care 2.0 integration of discharge planning service friendly hospitals" to integrate relevant tools of evaluation, personnel training, information system and evaluation processes so that patients can now have their long-term care need evaluation (which could only be conducted after the hospital receives the application upon their discharge) completed 3 days prior to their discharge and begin receiving their long-term care services as soon as within 7 days after their discharge. By the end of 2017, a total of 184 hospitals participated in this program.

Chapter 2 Workforce Development

Section 1 Care Worker Workforce

1. Improving pay levels: The Ministry has continued to promote the new payments and benefits standards for long-term care and according to the results of a commissioned survey, the average salary for a full-time home care personnel has reached 38,498 NTD per month; for part-time personnel, the average hourly rates is now at 223 NTD. In addition, the Ministry has also been working with local governments in the implementation of audits, supervision and appraisal of long-term care facilities in order to ensure that care personnel receive fair wages and treatment.
2. Diverse channels of training: In order to increase the human resources of care personnel, the Ministry has been working with relevant agencies and organizations to actively promote specific human resource development measures. According to the Care Personnel Training Implementation Plan published by the Ministry, any applicant over the age of 16 in good physical health with a passion for care services may enroll in training programs hosted by the Ministry of Labor, local governments, Council of Indigenous Peoples or Veteran Affairs Council; by completing no less than 90 hours of training on basic care techniques and passing the assessment, the applicant will receive his/her qualification as a care personnel. To eliminate the restrictions of physical space for training, the core courses for care personnel training have been made available as online courses starting from March 2018 in order to make the trainings more accessible. Alternatively, applicants may also sign up to take the National Technician Skills Test organized by the Ministry of Labor as a way to earn their certificate as a qualified care personnel. On top of that, the Ministry also encourages long-term care service facilities to apply for the "Train and Apply" Program (which is subsidized by the Ministry of Labor to help applicants become employed right after they complete their training. In terms of school education, Through the Ministry of Education's involvement MOHW has been actively encouraging universities to develop more practical curricular for long-term care and off-campus internships while continuing to assist senior and vocational high schools to develop long-term care curriculum so as to increase the supply of manpower and facilitate collaboration between industry and academia.

3. Attracting talent involvement and ensuring retention: In order to create a friendly environment, the Ministry has offered various incentives to attract talents to delve into the fields of long-term care services. Apart from offering better wages, the Ministry has already facilitated the inclusion of clauses in relevant regulations and policies by enabling care personnel reaching required service seniority to become eligible candidates for promotion as a home service supervisor, case manager at relevant units or even proprietors of long-term care institutions. This is to ensure paths of promotion and career advancement for relevant personnel and encourage them to start their own healthcare businesses. Meanwhile, the Ministry has also been using various promotional channels such as Facebook and microfilms to promote better understanding of care givers in the eyes of the general public and thereby promoting their professional image.
4. Results of relevant policies: By the Ministry's estimation, the demand for care personnel in 2018 came to roughly 35,000 and as of the end of December 2018, the actual number of native Taiwan citizens who involved themselves in the field of long-term care services came to 35,081 - an increase of 6,664 people (roughly 23%) compared to the 28,417 people at the end of 2017. Based on the Ministry's survey, among the newly employed care service personnel with less than a year of work seniority, a fifth of them have undergraduate degree or higher educational backgrounds. This reflects the fact that the trend of younger generation and people of higher levels of education seeking employment in care giving industry is gradually growing.

Section 2 Social Workers and Medical Professional Workforce

In an effort to boost the quantity and quality of professional long-term care workers while addressing the need for long-term care service personnel training, the Ministry has planned and promoted long-term care training courses of various categories that are consistent, continuous and complete. These courses are classified into three levels: Level I (basic courses), Level II (advanced courses) and Level III (integrated courses). In order to accomplish the training targets, the Ministry has officially launched a digital learning platform for professional long-term care workers in March 2017 for the promotional of Level I courses in the digital format. The platform provides trainees with convenient access to training courses and learning materials. To further boost the service capacities of professional long-term care service personnel, the Ministry has also subsidized healthcare and long-term related organizations to host professional and integrated training programs. With these measures in place, between 2010 and the end of 2018, the Ministry has trained a cumulative total of 93,000 health workers, social workers and care management personnel.

Chapter 3 Propaganda and Service Quality

Section 1 Propaganda

Long-Term Care Plan 2.0 aims to establish a high quality, affordable and universal long-term care service that will reduce the burden on family caregivers and enhance the quality of life for both care recipients and caregivers. To enhance the general public's understanding of, and support for, the Long-Term Care Plan 2.0 policy, the MOHW has undertaken the following propaganda activities:

1. Focus of communication: Starting from 2018 on ward, the long-term care payments and benefits standards promoted by the MOHW will integrate existing service items into four main categories of long-term care services, namely: Care and professional services; Transportation services, Purchase and rental of the assisting instruments and the improvement of household barrier-free environments and Respite services. In addition, the "Dementia Prevention and Care Policy and Action Plan 2.0" was also also announced in December 2017. And as such, the Ministry's communication strategies for this year will still focus on the promotion of the "1966 Long-term Care Hotline", with emphasis on the introduction of relevant payments, benefits and the services available for dementia care.
2. Promotional strategy: The "1966 Long-term Care Hotline", the payment and benefit standards for long-term care 2.0 and services available for dementia care have been chosen as the three major topics of communication to present key policies in a simple manner that is easy to understand. Relevant promotional materials will also be prepared for exposure through diverse media and channels by focusing on the media consumption behavior for the target audience.
3. Status of implementation:

   (1) Production of promotional materials: various promotional materials including TV commercials, teasers, microfilms, animation, radio broadcast, pamphlet, cheat sheets, leaflet, posters featuring contents on payments and benefits of long-term care services, focus of dementia service policies, preparation of the 1966 Long-term Care Hotline, dementia care services, reablement services, professional services, payment and benefits standards and so forth have been produced as shown in Figure. 5-2.

   A. Medium of choice - print media x new media marketing: for specific issues, ad planning has been implemented from the perspective that would pique the interests of the general public and be broadcasted through various print media and new media channels. In addition to planning suitable topics and contents in accordance with the

characteristics of the media carriers, promotional contents would also be projected through other new online media channels based on the general public's media preferences to achieve cross-media marketing. This would enable the Ministry to effectively disseminate correct information on long-term care services that the people truly need to help bolster the general public's understanding of various long-term care services, thereby better appreciating the options that makes care giving smarter and more effective.

B. TV, radio and outdoor media promotion: the Ministry has enlisted the help of outdoor media channels that people are more likely to be exposed to based on their consumption preferences for TV and radio media in order to achieve greater exposure of promotional materials.

C. Online media promotion: through diverse network media (i.e. news net, portal net, MOHW's FB page, Line@ and "Long-Term Care Area" website and so forth) by adopting a method of conversation that is closer to the vernacular of the general public to promote various communication materials and promotional videos on Long-Term Care 2.0 policies to draw the attention of the general public.

D. Media interview promotion: Through TV interviews, radio interviews and print media interviews, MOHW's supervisors have stepped forward to present and explain the contents of long-term care policies, status of implementation and clarify relevant concepts to strengthen the effectiveness of policy communication.

E. Physical channels: The Ministry has printed significant quantities of leaflets and posters on long-term care services along with short messages and requested 22 municipal governments to distribute these materials to their district medical institutions, health stations, long-term care management centers, village/borough chief offices, district offices, household registration offices, land offices and other venues where the general public would visit for official businesses in addition to posting relevant information on websites, public e-signages, chaser lights and so forth.

Figure 5-2 Promotional Materials for Long-Term Care in 2018

Source: Department of Long-Term Care

Website：https://1966.gov.tw/LTC/np-3639-201.html

(2) Implement promotional activities:

A. Dementia friendly public literacy event: The Ministry organized the "Friendly Community in Your Neighborhood - Let's Work Together to Care People with Dementia" online learning campaign between October and November of 2018. In addition to pushing for total media marketing on the subject, the campaign was designed to inspire the general public to take the initiative to be aware of the issue and take part in the activity to learn about existing resources for dementia care and cultivate dementia-friendly concepts. Not only that, the Ministry also collected big data through the Internet to compile a list of common misconceptions that people have on the symptoms of dementia.

B. Press conferences on key aspects of Long-Term Care 2.0: The Ministry held a number of press conferences on the key aspects of Long-Term Care Services and relevant policies as a way to disclose the Ministry's guideline in policy implementation and significant milestones. Examples of such events include the "10-year Long-Term Care Plan 2.0: Activating Long-Term Care for Happiness Taiwan!" held on July 24 2018 and the "Friendly Community in Your Neighborhood - Let's Work Together to Care People with Dementia" press conference to launch the online learning program held on October 16 2018.

(3) 1966 Long-Term Care Hotline: The Long-Term Care Hotline (1966) became operational on November 24, 2017. It functions as a quick and convenient way for the general public to apply for long-term care services and calls are taken by responsible care management personnel at the corresponding municipalities. Not only that, fees for the first 5 minutes of the call have been waived to encourage the general public to take advantage of this measure. By the end of 2018, the cumulative total of received came to 144,036, which translates to a daily average of 357 calls, with the average duration per call at 4.10 minutes. On weekdays, the daily average number of calls was 472 and on weekend, the number falls to 107 calls per day. The using of Long-Term Care Hotline as shown in Figure 5-3.

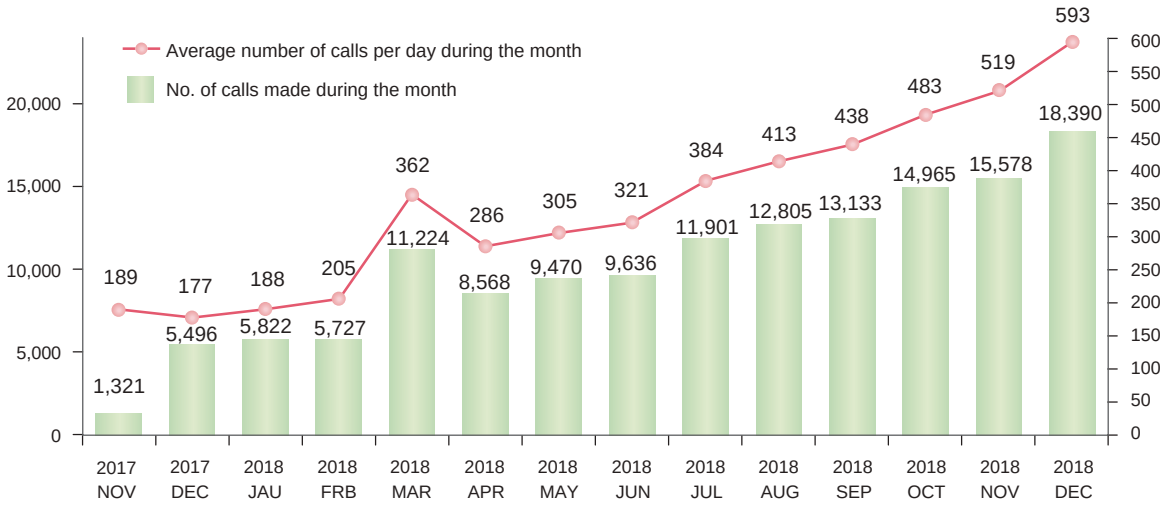
Launch press conference for "Friendly Neighborhood to Watch Over People with Dementia" online learning event

Section 2 Service Quality

1. Accreditation evaluations for senior citizens' social welfare organizations are performed once every 4 years. In 2016, 134 senior citizens' social welfare organizations underwent accreditation evaluation; these included institutions directly run by or supervised by the MOHW, as well as public institutions run by municipal, county or city governments, public institutions the operation of which has been outsourced to privatesector organizations, and non-profit senior welfare institutions. As regards the accreditation evaluation results, 16 institutions (11.9% of the total) were rated as Excellent, 75 (56%) were rated A, 35 (26.1%) were rated B, 7 (5.2%) were rated C, and 1 (0.8%) was rated D (Table 5-7).

Figure 5-3 The Using of Long-Term Care Hotline

Source:Department of Long-Term Care



2. In an effort to improve care quality available at nursing homes, the Ministry has been implementing nursing home accreditation in accordance with Nursing Personnel Act and Regulations for Accreditation of Nursing Institutions. As of December 2018, the number of standard nursing homes came to 539 and between 2015 and 2018, 536 nursing homes have reviewed for the accreditation; 487 institutions have passed the accreditation while 49 did not. In 2018, a total of 305 nursing homes underwent accreditation process, of which 260 were successful, and 45 were unsuccessful denoting an overall pass rate of 85.25%. Table 5-8 details the accreditation results.
3. To improve service quality of senior citizens' social welfare organizations and in accordance with the Regulations for Evaluating and Rewarding Enforcement for Senior Citizens' Social Welfare Organizations, institutions that received an A or higher grade were commended for their performance; institutions that received C or D grades were required to make the necessary rectifications within a given time before being re-evaluated again. Nursing homes that fail the evaluation as outlined in the Regulations Governing Accreditation of Nursing Homes would be required to make relevant rectifications within a given time as stipulated in Paragraph 2, Article 31 of the Nursing Personnel Act to maintain the quality standard for service provided by such institutions.

Source: Department of Long-Term Care

4. In order to appraise the efficacy of long-term care institutions so as to improve long-term care service quality and provide better long-term care options for the general public, both the Long-Term Care Services Act and Evaluation Procedure for Long-Term Care Institutions stipulated that the competent authority is responsible for appraising long-term care institutions, which can either pass or fail the appraisal. Pursuant to Paragraph 3 and subsequent paragraphs in Article 53 of the Long-Term Care Services Act, when a long-term care institution fails to pass appraisal, the institution

shall be ordered to remedy the failure.If the failure is not remedied by the deadline, a fine will be imposed; if the failure is not remedied by the deadline, cumulative penalties may be imposed. In serious cases, the business may be suspended for not less than one month and not more than one year. If the failure is still not remedied upon expiry of the suspension period, the permit for the establishment may be revoked. Depending on the types of long-term care institutions, the appraisal of institutions is classified into home services, community-based services and institutional services. The appraisal of home services and community based services shall be implemented by local competent authorities while institutional services, including integrated services, shall be appraised by the central competent authority. In response to the establishment of new long-term care service institutions and to integrate the different appraisal standards for different types of institutional services, the Ministry has commissioned the implementation of "Home services and Community-based Long-Term Care Institution Appraisal Standards and Pilot Program" and "Institutional Long-Term Service Care Facilities, Nursing Homes and Senior Citziens' Social Welfare Organization Appraisal Standards Integration and Pilot Program" in 2018 to formulate the templates of appraisal standards for home services and community-based long-term care institution as a working reference for municipal governments to ensure the consistency in long-term care service quality across Taiwan. With regards to institutional services, the Ministry has planned to implement appraisal of institutional services in 2020 after announcing the appraisal standards at the end of 2019.

Table 5-7 2016 Senior Citizens' Social Welfare Organization Accreditation Results

Source: Social and Family Affairs Administration

Level	The number of senior citizens' social welfare organizations	Percentage (%)	Passing rate (%)
Excellent	16	11.9	94.0
A	75	56.0	
B	35	26.1	
C	7	5.2	
D	1	0.8	
Total	134	100.0	

Note: Senior Citziens' Social Welfare Organizations are to be appraised once every 4 years and the next appraisal is due in 2020.

Table 5-8 2018 Nursing Home Accreditation Results

Source: Department of Nursing and Health Care

Level	The number of the nursing homes	Percentage (%)	Passing rate (%)
Passed	260	85.25	85.25
Failed	45	14.75	
Total	305	100	

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6 Communicable Disease Control

Managing communicable diseases requires disease surveillance, outbreak investigation, preparedness, research, and proper immunization. Additionally, relevant regulations must keep pace with global trends and changing health needs to construct a solid framework that can ensure the health and wellbeing of the people.

Chapter 1 Overview of the Communicable Disease Control System

In order to prevent the incidence and prevalence of communicable diseases, Taiwan has enacted the Communicable Disease Control Act and related regulations. The Act specifies the obligations and rights associated with the control of communicable diseases among government agencies, medical institutions, healthcare workers, and the general public. It also formalizes the roles of healthcare workers in dealing with an epidemic.

Section 1 Regulations and Framework for Communicable Disease Control

1. Laws and Regulations Governing Communicable Disease Prevention

The Communicable Disease Control Act and the HIV Infection Control and Patient Rights Protection Act serve as the two main regulations governing infectious disease prevention and control. Revised regulations in relation to communicable diseases issued in 2018 are shown in Table 6-1.

2. Administrative Framework for Communicable Disease Control

Taiwan Centers for Disease Control (Taiwan CDC), Ministry of Health and Welfare is responsible for the formulation and review of communicable disease control policy and supervises six regional control centers that provide local authorities with guidance regarding disease control and quarantine operations. Local authorities are responsible for formulating and implementing disease control plans.

3. Laboratory Testing Framework

Taiwan Centers for Disease Control is responsible for laboratory testing and research relating to communicable diseases in Taiwan and has established a comprehensive service network for the inspection of communicable diseases. Besides the 12 CDC laboratories, there are 268 certified institutions, 9 contracted laboratories for novel influenza A virus infections, 1 controlled high-risk pathogen and toxin testing, 8 contracted laboratories for enterovirus/ influenza testing and 8 contracted laboratories for tuberculosis testing. Meanwhile, the "Manual for Infections Specimen Collection" and the "Quality Management Plan of Infections Specimen Collection and Transportation" for local health bureaus have been formulated to ensure the quality and safety of specimen collection and transportation.

4. National Response Framework for Communicable Disease Control

The National Health Command Center, established in 2005, is responsible for compiling health-related

Table 6-1 List of Revised Regulations Issued in Relation to Communicable Diseases, 2018

Source: Taiwan Centers for Disease Control

Date of Amendment	Name of Regulation / Legal Order	Objective of Revision
June 13	Communicable Disease Control Act	To prevent public health nursing personnel from inadvertently violating the Pharmaceutical Affairs Act and the Pharmacist Act; in conjunction with the amendments of the Pharmaceutical Affairs Act on the lot release for biologics such as vaccines, corresponding amendments need to be made to facilitate the collection of vaccine injury compensation fund.
June 13	HIV Infection Control and Patient Rights Protection Act	Relevant restrictions on the donation and use of organs by those infected with HIV have been changed so that those infected with HIV meeting the clinical requirements and in good physical health may donate their organs to other HIV infected patients.
November 16	Regulations Governing Collection and Review of Vaccine Injury Compensation Fund	The statement of comment is now included to enhance the scope of litigant's participation and to safeguard people's rights; factors of discretion for the compensation have also been clearly defined to establish the scope of adverse effect and its correlation to the vaccination.
December 24	Regulations Governing Management of the Health Examination of Employed Aliens	Due to the shortage of vaccines around the world in recent years, a portion of aliens in Taiwan were unable to receive vaccination despite having tested negative for antibodies. Consequently, this has rendered them unable to apply for work permit and ARC in Taiwan. As such, rules of exception have been established accordingly.

information from central and local government agencies and other institutions. The collected information is then analyzed and converted into real-time data to support overall disease prevention and serve as a reference for the commander to make decisions. Taiwan has also established an International Health Regulation Focal Point (IHR Focal Point) to liaise with other countries to help coordinate responses to major outbreaks and public health emergencies of international concern.

Our national response framework for infectious disease outbreaks operates through a three-tiered hierarchy comprising of national, regional and local authorities that implement strategic efforts to prevent diseases from spreading. When an outbreak occurs, the health authorities at each level work to evaluate the nature of the disease, and then submit a report to the city or county magistrate (at the local level) and to the Executive Yuan (at the central government level), to determine whether the Central Epidemic Command Center (CECC) needs to be activated. If the CECC activation is deemed necessary, then a commander will be appointed to oversee the operations of the CECC. Taiwan is divided into six regional communicable disease medical networks and each is headed by a director and a deputy director. When the CECC is activated, the six regional communicable disease medical networks will help coordinate the allocation of medical resources and manage the outbreak in their region. The organization of the national response framework is shown in Figure 6-1.

Section 2 Disease Surveillance and Investigation Mechanisms

Disease surveillance aims to quickly detect the incidence of diseases and to establish a pattern of progression so policymakers can arrive at a sound decision. The number of notifiable disease cases in 2018 is shown in Appendix II. The status of disease surveillance and outbreak investigation is as follows:

1. Diversified Surveillance Systems for Communicable Diseases: the various communicable disease reporting and surveillance systems that have been established including the School-based Disease Surveillance System, Surveillance System for Populous Institutions, Real-time Outbreak and Disease Surveillance System, and automated reporting of infectious diseases from laboratories. Data is also collected from NHI databases and death records reported to MOHW. Varied media channels are used to gather and analyze information relating to domestic and international outbreak situations to better monitor outbreaks.

Figure 6-1 National Response Framework for Communicable Disease Control

Source: Taiwan Centers for Disease Control

Central	National Health Command Center (Established at Taiwan CDC) Command	1. A platform for prompt consolidation and analysis of epidemic information. 2. A diversified communication system for real-time information on the epidemic situation. 3. IHR Focal Point facilitates exchanges epidemic information. 4. Depending on the local and international epidemic situations, the Central Epidemic Command Center (three levels: department, ministry, and Executive Yuan) is activated to consolidate cross-departmental resources. As the epidemic subsides, command officials may recommend disbanding the command center to the Executive Yuan, which makes the final decision.
Regional	Taipei: Regional Center / Communicable Disease Control Network Northern: Regional Center / Communicable Disease Control Network Central: Regional Center / Communicable Disease Control Network Souther: Regional Center / Communicable Disease Control Network Kaohsiung and Pingtung: Regional Center / Communicable Disease Control Network Eastern: Regional Center / Communicable Disease Control Network	1. Taiwan CDC established six regional centers which oversee communicable disease control efforts conducted at the local government level. 2. Six Communicable Disease Control Medical Network (CDCMN) were established throughout the nation. Each has a head commander, deputy commanders, designated isolation hospitals, and response hospitals. When the Central Epidemic Command Center is activated, each CDCMN helps distribute medical resources in its jurisdiction, and isolate/treat patients if necessary.
Local	Upward Reporting of Epidemic Information Local health bureau	1. Conducting local communicable disease control efforts. 2. Local officials shall establish local epidemic command centers depending on the epidemic situation.

2. Integration of Disease Reporting Systems: In 2018, cross-ministerial exchange of data continued to integrate disease information from three organizations - the Council of Agriculture (Executive Yuan), the Ministry of Health and Welfare's Food and Drug Administration, National Health Insurance Administration, and Centers for Disease Control. The integration has enhanced the overall effectiveness of disease surveillance.

3. Investigation of Outbreaks: Authorities must examine a sudden unexplained rise in the incidence of a disease cluster. In 2018, the MOHW investigated 1,281 suspected disease clusters.

Chapter 2 Control of Major/ Emerging Communicable Diseases

Section 1 Tuberculosis

The MOHW has continued to introduce new diagnostic techniques and drugs, with the aim of shortening the tuberculosis diagnosis and treatment period and raising the coverage rate for latent tuberculosis infection treatments. Outcomes achieved in 2018 are as follows:

1. In 2018, the number of confirmed cases of tuberculosis was 9,179, with a national TB incidence rate of 39 cases per 100,000 population. Since 2005, the incidence rate has fallen by 47% (Figure 6-2), indicating that Taiwan has an effective TB control strategy.
2. More than 98% of bacteriologically positive TB patients have participated in the Directly Observed Treatment, Short-course (DOTS) program.
3. Implemented the “DR-TB Consortium”, patients in the 2016 cohort treated under a dedicated medical treatment and care system had a 24-month treatment success rate of 75%.
4. Improved contact investigation to an average of 13 contacts for each index TB case to lower the risks of further transmission.
5. A Latent TB Infection Treatment (LTBI) Program has been implemented in conjunction with the Directly Observed Preventive Therapy (DOPT) program. In 2018, the number of people undergoing LTBI testing was 68,481, 11,210 people tested positive in the screening and 80% had agreed to receive the treatment. In 2018, 9,423 people underwent LTBI treatment. Compared to 2017, the number of people under LTBI treatment increased by almost 1,000, effectively reducing the possibility of disease onset among high-risk groups.
6. For active case finding, the MOHW has been conducting a nationwide TB screening program for the target population and identified 364 TB cases in 2018.

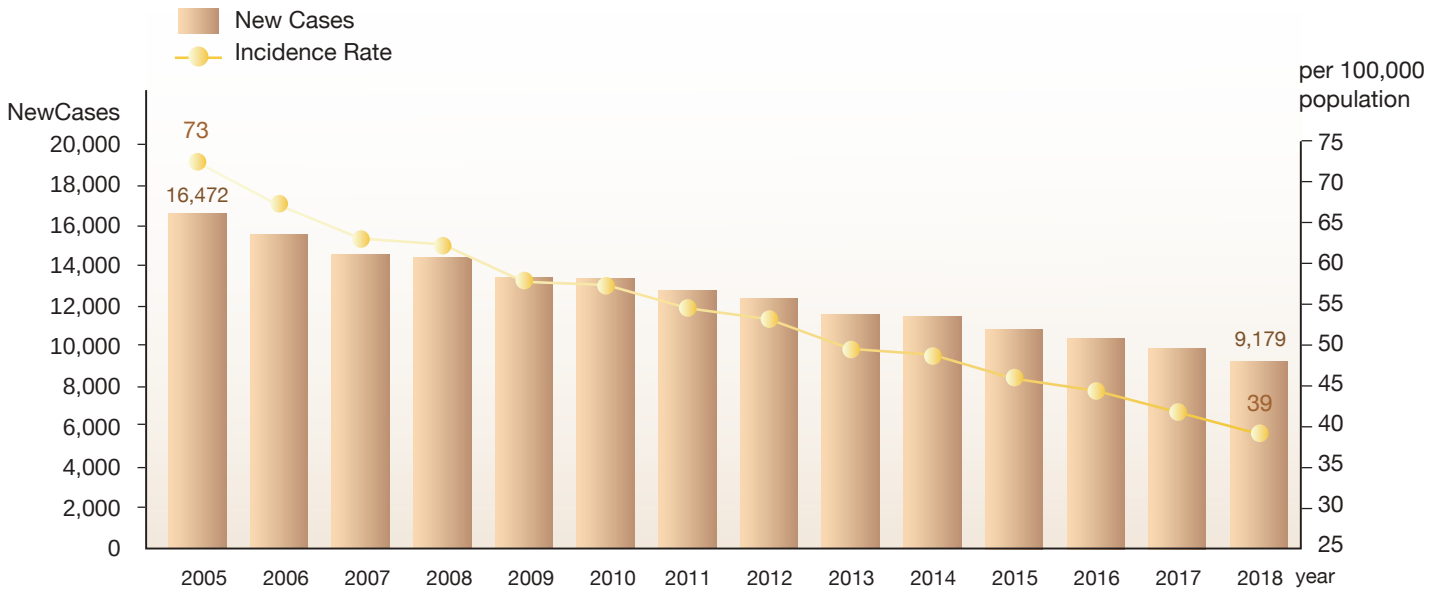
Section 2 Communicable Disease of the Enteric Tract

1. Enterovirus

There were 36 cases of severe enterovirus infections in 2018, including 8 deaths, who were all newborns.

Figure 6-2 Reported TB Cases, 2005 - 2018

Source: Taiwan Centers for Disease Control



Beginning in mid-May 2018, some communities reported outbreaks of echo 11 infection. This particular type of enterovirus has not only caused critical neonatal illnesses but also led to cluster infections in hospitals, post-partum facilities, and other neonatal care units. In order to control the epidemic of enterovirus and reduce its threat to newborns, the Ministry has set up a response taskforce at the height of the epidemic to work closely with local governments and the medical community to bolster health education for women in pregnancy and nursery personnel. In addition, surprise checks have also been implemented to supervise and ensure that medical institutions and post-partum care facilities would step up their infection control while improving the quality for critical care and ensuring unhindered referral mechanism to mitigate the potential impacts the disease may cause on the health of the general public and the society as a whole.

2. Acute Hepatitis A

There were 88 confirmed cases of Hepatitis A in 2018, including 33 imported cases and 55 indigenous cases. In order to prevent the disease from erupting into an epidemic outbreak, starting from 2018 onward, the Ministry has been providing 1 free dose of vaccine for those in contact with acute hepatitis A confirmed cases as post-exposure immunization. In addition, the Ministry has also continued to promote the "Pilot Program for Expanded Hepatitis A Free Vaccine Immunization", which helped to reduce the incidence rate of acute hepatitis A to 0.37 per 100,000 population in 2018. (As shown in Figure 6-3)

Section 3 Vector-borne Communicable Diseases

In 2018, there were 533 confirmed cases of dengue fever, including 350 imported cases and 183 indigenous cases. The male to female ratio for the confirmed cases was 1.27:1. The majority of the indigenous cases were mostly concentrated in Taichung City and New Taipei City, with the remaining 6 municipalities having only a few cases. The local governments were able to contain the disease from spreading further with no fatal cases, reflecting a successful outcome in terms of prevention and control. Figure 6-4 shows the Incidence of Dengue Fever by Year (indigenous cases), and Figure 6-5 illustrates the Incidence of Dengue Fever by Year (imported cases). New strategies for dengue prevention and control implemented are as follows:

1. With the number of imported cases growing gradually over the years, the MOHW has continued to conduct body temperature checks for passengers at ports of entry, as well as NS1 rapid screening and testing for suspected cases. Furthermore, the Ministry has also promoted the use of NS1 antigen rapid test kit in primary care clinics to reduce the incubation period.
2. Every month, the Ministers of the MOHW and the Environmental Protection Administration (EPA) attend the Executive Yuan Coordination Meeting Regarding the Prevention of Major Mosquito-borne Communicable Diseases. This meeting intends to strengthen communication between

Figure 6-3 Number and Incidence Rate of Confirmed Acute Hepatitis A Cases

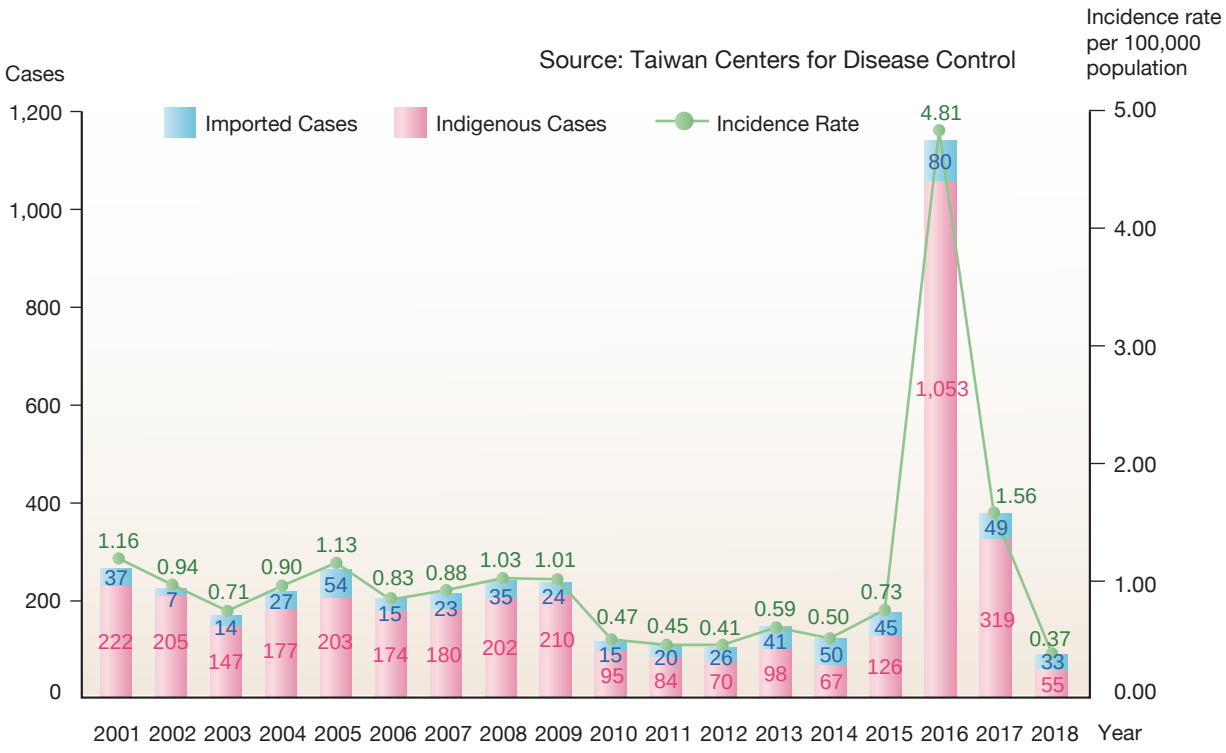


Figure 6-4 Incidence of Dengue Fever, by Year (Indigenous cases)

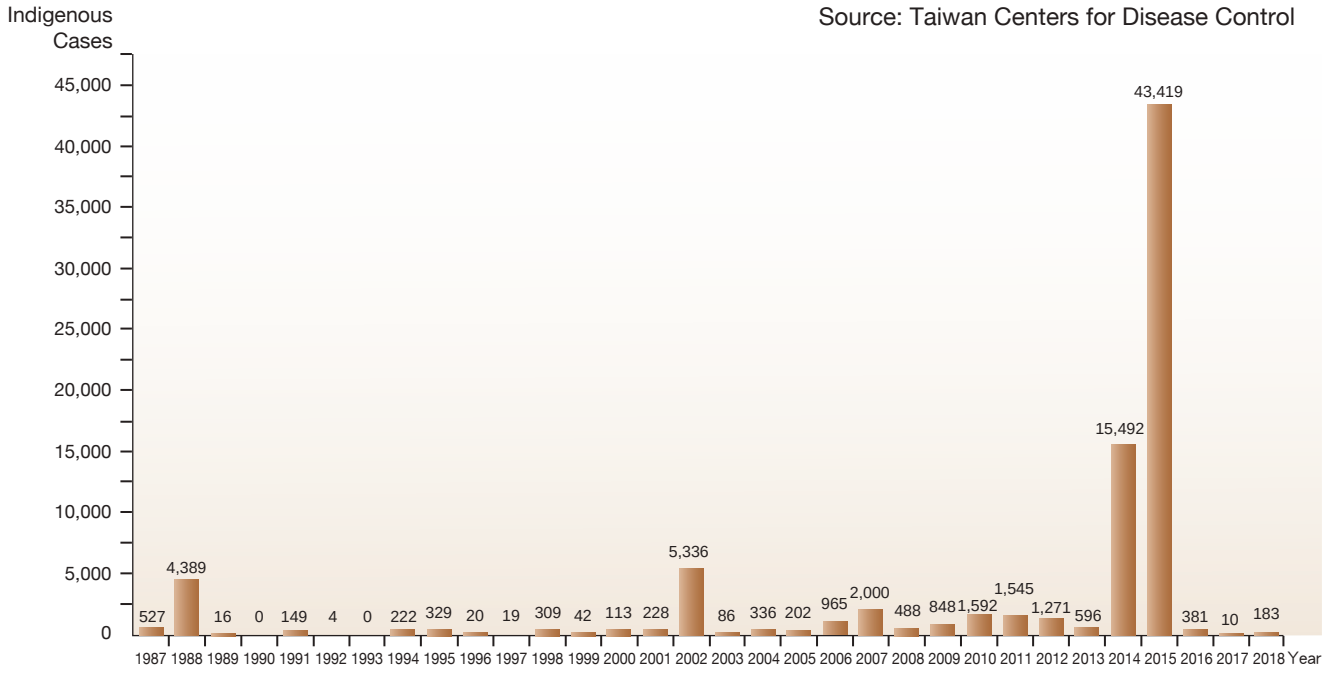
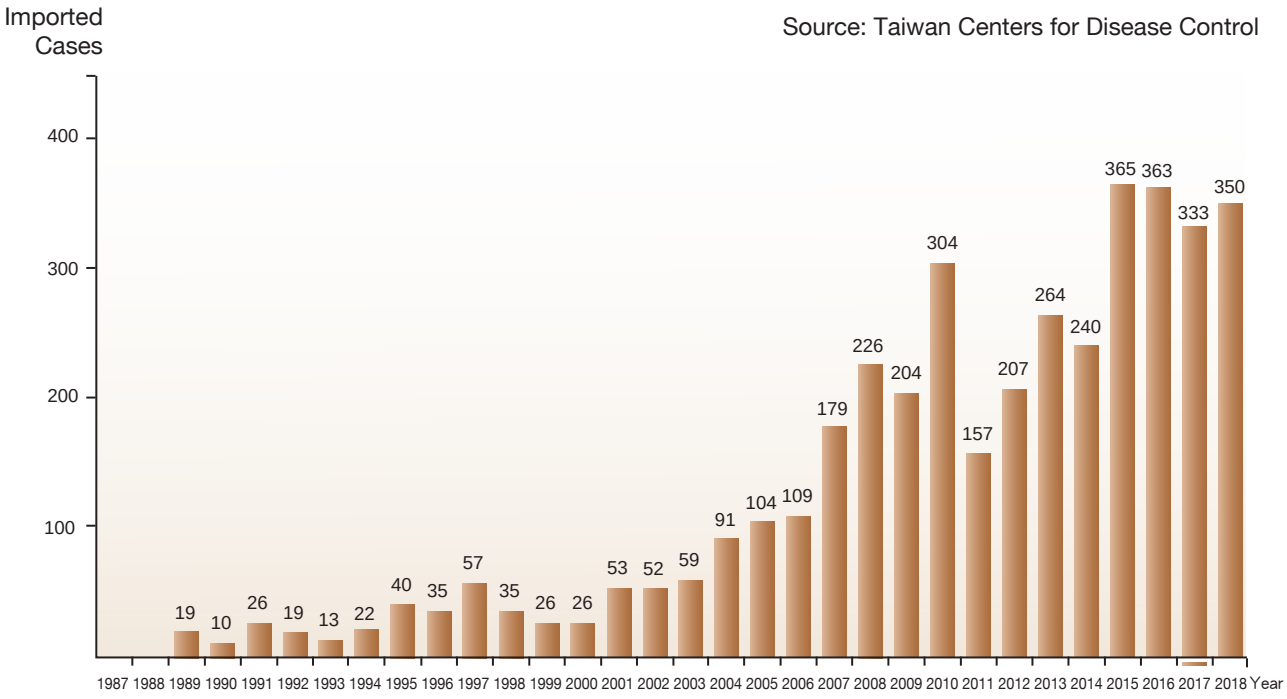


Figure 6-5 Incidence of Dengue Fever, by Year (Imported cases)



the central government and local government agencies concerning the prevention of vector-borne communicable diseases.

3. The National Mosquito-borne Diseases Control Research Center has continued to work with high-risk county and city governments to train professional workers and apply scientific evidence to carry out preventive efforts.

Section 4 Communicable Diseases Transmitted by Blood or Body Fluids

1. HIV infection

Between 1984 and the end of 2018, there were a cumulative total of 37,917 reported cases of HIV among Taiwanese nationals. Of those infected, 17,902 developed full-blown AIDS, which led to 6,466 deaths. In 2018, there were 1,992 new reported cases. Compared to 2017, there had been 2,511 new reported cases, which translates to a decline of 21%; the male-to-female ratio for those infected is 45.3:1. Among the newly infected, 96% of them had contracted the disease through unsafe sex, particularly unsafe homosexual sex. These constituted 86% of all contracted cases for the year. The outcome of disease prevention in 2018 is as follows:

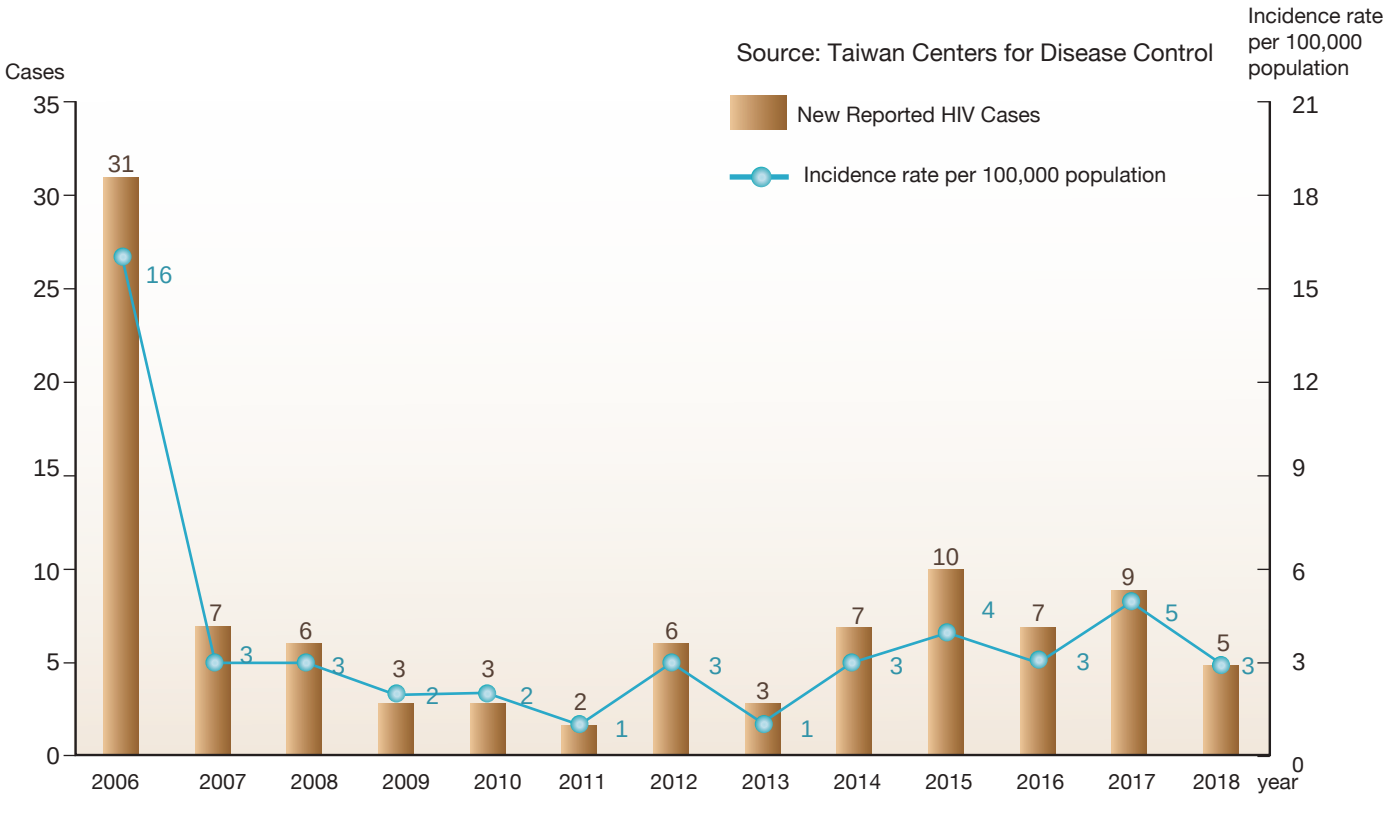
(1) Cooperated with NGOs and established five LGBT-friendly centers to provide men who have sex with men (MSM) group with consultations and testing services. Additionally, education and health services were also provided via social media. In 2018, 11,155 people received screening services.

(2) Continued to implement the "Harm Reduction Program". Newly reported cases of substance abuse had fallen from 72% in 2005 to 2% in 2018.

(3) For privacy concerns and convenience purposes, the Ministry has offered HIV screening consultation and referral services through its "Free HIV Anonymous Screening and Consultation Project". In 2018, the screening service was provided to 42,837 people, with a positive rate of 1.4%. In addition, the Ministry has referred to the experience of a John Hopkins University professor performing practical community work and starting from July 2018, the MOHW has been working with local health bureaus and private organizations to mobilize peers and mentors to promote the importance of safe sex and routine screening. 17,784 people received the screening service, with a positive rate of 0.7%.

(4) Starting from September 2018, the Ministry has been promoting the "HIV Screening and Pre-Exposure Prophylaxis (PrEP) Project for 2018-

Figure 6-6 New HIV Cases and Positive Incidence Rate under the Universal Screening Program for Pregnant Women, by Year



2019" by working with departments of health and 38 other institutions to provide holistic, integrated care services.

(5) To prevent vertical transmission of HIV, the MOHW implemented a universal HIV screening for pregnant women and provided ART for prevention. In 2018, 5 new cases were found through the screening of pregnant women, as shown in Figure 6-6.

2. Acute viral hepatitis B and C

The numbers of confirmed cases of acute viral hepatitis B and C in 2018 were 143 and 515, respectively. The continued screening of pregnant women for hepatitis B during prenatal care visits and the immunization of newborns against hepatitis B have caused the carrier rate in children at age 6 to approximately fall from 10.5% to 0.8%.

Section 5 Seasonal influenza

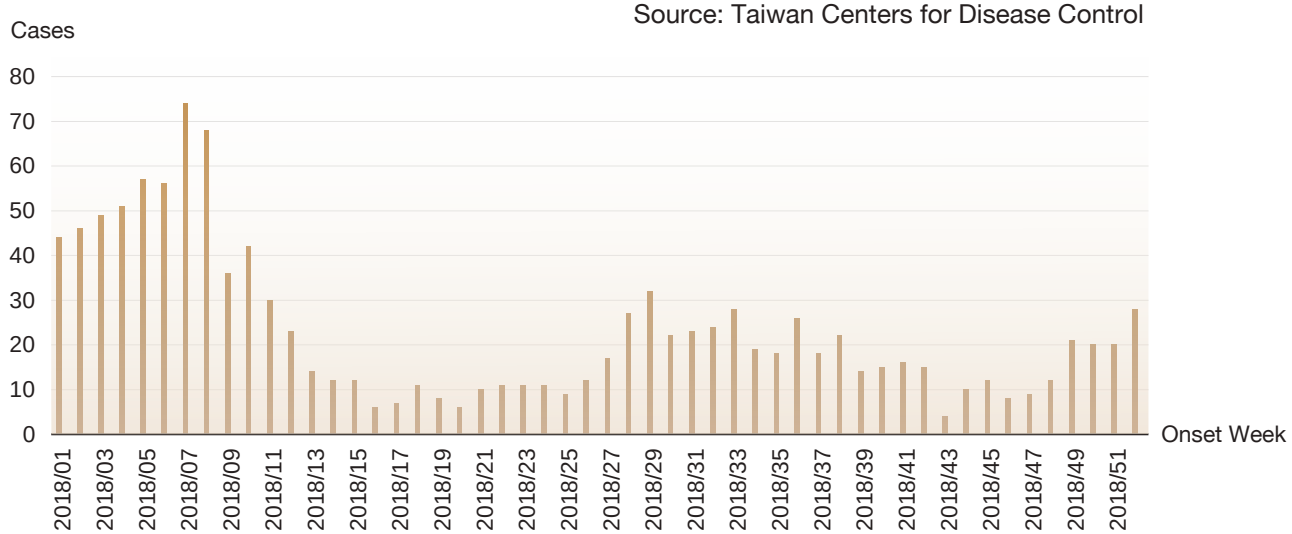
1. In 2018 there were 1,196 confirmed cases of influenza-related complications, resulting in 202 deaths and a fatality rate of 16.9%, as shown in Figure 6-7.
2. The MOHW launched the "Influenza Vaccine Immunization Program" in October 2018, targets nine groups, including children aged above 6 months and before entering elementary school. The Ministry also subsidized the immunization treatment fee for all the other eligible targets who did not receive the immunization collectively in schools. Due to the incidence of influenza vaccine supply quality anomaly in 2018, in order to ensure the safety of immunization for the general public, specific batches of the vaccine have been chosen with requests for replacement made to the supplier. As a result, the total number of immunizations administered for the year reduced slightly to 5.36 million doses.
3. In accordance with the "Strategic Plan for Influenza Peak Period," the MOHW implemented rigorous monitoring of the infection rate, strengthed the quality of medical care available for acute cases, and ensured that resources can be deployed effectively. The agency has increased the number of locations at which subsidized immunization is available to over 4,300, and has increased the number of people eligible for subsidized influenza antivirals.

Section 6 Control of Emerging Infectious Diseases

1. Implemented a total of six military simulations for severe biological incidents or terrorist attacks in six municipalities, including Taoyuan City, Taichung City, Tainan City, Kaohsiung City, Yilan County, and Taitung County. The simulation exercises involved relevant response personnel to perform designated duties and mobilization of laboratory biosafety contingency teams as designed in standard operating procedures. The simulations were highly acknowledged by the Executive Yuan.
2. Established a rapid screening program for biosafety and expanded the existing detection capacity of biological pathogens.
3. Established an international exchange network to expand Taiwan's international presence:
   (1) Visited Israel and Australia's competent health authorities in May and December of 2018 respectively to exchange experiences in disease control.

Figure 6-7 Confirmed Cases of Severe influenza-related complications in 2018

Source: Taiwan Centers for Disease Control



(2) Visited Austria and the U.S. in July, August and November in 2018 to attend "The 4th International Conference on Influenza and Zoonotic Diseases", "The 7th International Meeting on Emerging Disease and Surveillance" and "International Conference on Emerging Infectious Diseases" respectively.

(3) The Ministry hosted the "2018 Symposium of Preparedness and Response to Emerging Infectious Diseases of Medical Institutions" and invited experts in infectious disease response from Singapore, Hong Kong, Italy, and the U.S. as speakers.

4. Implemented the infectious disease contingency plan exercise at hospitals responsible for pandemic response in the Communicable Disease Control Medical Network, with the Middle East respiratory syndrome coronavirus as the simulation scenario. The exercise was a semi-noticed drill in which the participating hospitals were informed of only the scheduled time of the exercise to test 6 participating response hospitals for their response capacity and degree of response preparedness.

Section 7 Control of Imported Communicable Diseases

Taiwan implements all necessary quarantine measures for ships, aircraft, and people. Seaport and airport authorities are required to establish health and safety work teams to prevent the importation and exportation of communicable diseases.

1. Quarantine at international ports

In 2018, 27,623,223 people entered Taiwan. Of these, 26,401 were identified as symptomatic by the infrared thermometer diagnostic stations at Taiwan's airports and seaports. Of those, 158 people were confirmed to be infected with notifiable communicable diseases, of which 151cases were diagnosed with dengue fever, 7 cases with chikungunya fever.

2. Prevention of Travel-Related Communicable Diseases

Travel clinics were set up to provide counseling to travelers regarding appropriate vaccines and preventive medication. In 2018, travel clinics at 30 contracted hospitals provided services to 31,540 patients.

Chapter 3 Communicable Disease Preparedness and Response, and Infection Control

The MOHW continues to maintain the"Communicable Disease Control Medical Network"(Figure 6-8) and implements periodic inspections of isolation beds at hospitals responsible for pandemic response. Regular training and drills are also conducted to enhance preparedness.

Section 1 Pandemic Influenza Preparedness and Response

1. To innovate the management of anti-epidemic materials and enhance stockpile efficiency, the MOHW has:

   (1) Established an e-commerce procurement platform, ensured the circulation and exchange mechanism for protective equipment as well as a Level III Inventory Management System for anti-epidemic supplies: protective clothing, N95 masks, surgical masks, etc.

   (2) Maintained a stockpile of influenza antivirals that covers 10-15% of the population, and the scope of application for these antivirals is expanded during the influenza peak season.

2. Established an inter-ministerial emergency response mechanism to better respond to avian influenza outbreaks in Taiwan.

   (1) Through an inter-ministerial platform and relevant meetings, the agricultural institutes encouraged livestock farmers, and animal disease prevention personnel to receive influenza vaccination. The inoculation rate was 95.9%.

   (2) Monitored possible mutations in the avian influenza virus and the risk of poultry-to-human transmission and supervises the health surveillance of poultry farm workers conducted by the local health authorities. No instances of new human infection were reported.

3. Monitored influenza virus antigenicity, drug resistance, genetic mutation and the emergence of new strains. Virus strains from Taiwan were sent to the WHO reference laboratories in Japan and the US. as a reference for vaccine strain selection.

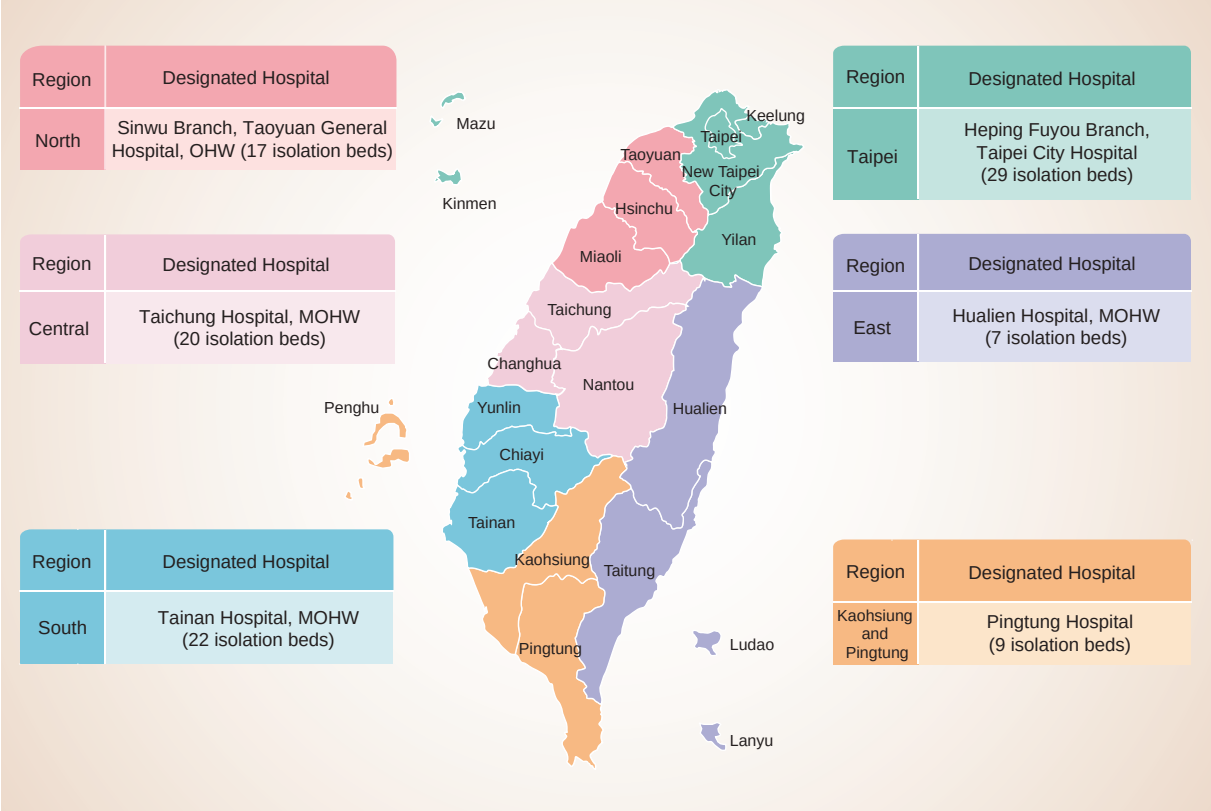
Section 2 Healthcare-associated Infection Control and Laboratory Biosafety Management

1. Since 2017, the frequency of hospital infection control inspection has been changed from at least once per year to at least once every two years. In 2018, a total of 254 hospitals were inspected by local health bureaus. The initial pass rate was 97.8%, and all of the hospitals that failed the initial inspection passed the re-inspection.

2. The infection control inspection for correctional institutions and infant centers was implemented for the first time in 2018, with inspectors visiting 51 correctional institutions and 353 infant centers to perform the inspection. The initial pass rate came to 100% and 99.7%; all the infant centers that failed the initial inspection passed the re-inspection.

Figure 6-8 The Communicable Disease Control Medical Network

Source: Taiwan Centers for Disease Control



Note: In 2018, the total number of isolation hospitals was 132. In each region, there is one designated hospital and one supporting hospital.

3. Established an infection control inspection information system for hospitals and long-term care institutions. The system became operational in 2018 and facilitated the analysis and management of information, streamlined the administrative process and reduced manpower load of the inspection operation.
4. Strengthened multi-channel surveillance on multidrug-resistant organisms (MDROs).
   (1) The Antimicrobial Resistance Management and Surveillance System were launched in March of 2017, providing two reporting mechanisms, including the Electronic Data Interchange mechanism and a manual uploading mechanism. The system collects the results of antimicrobial susceptibility tests and related data of the important bacteria in the WHO Priority Pathogens List. More than 100 hospitals were enrolled in 2018.
   (2) Established a surveillance plan for antimicrobial resistance to collect the strains of key pathogens as listed by the WHO to monitor their antibiotic resistance and key resistance genes.
5. At the 71st World Health Assembly (WHA), the Ministry hosted the “Forum on Antimicrobial Resistance (AMR) - A Threat to Global Health Security” by inviting a panel of experts and councilors of the Swiss Federal Assembly to discuss the topic of antibiotic resistance.
6. The Ministry hosted the “APEC International Conference on Antibiotic Resistance” and invited local and foreign experts in antibiotic management or infectious disease control to share their strategies and results in the promotion of antibiotic resistance prevention.
7. In response to WHO’s emphasis on antibiotic resistance issues, activities to celebrate World Hand Hygiene Day and World Antibiotic Awareness Week activities were held.

8. Laboratory biosafety management

(1) Implemented laboratory biosafety inspections at domestic high-containment laboratories and installation units with highly dangerous pathogens and toxin use/storage by conducting on-site inspections to ensure these highly sensitive premises are secured:

A. 15 storage installations and 24 high-containment laboratories/ installation units with highly dangerous pathogens and toxin use/storage were chosen for inspection. All inspected units were able to rectify identified oversights within the specified period to achieve a 100% correction rate.

B. 7 domestic laboratories/storage facilities for controlled pathogens and toxins were inspected, with a 100% inspection completion rate. All inspected units were able to rectify identified oversights within the specified period to achieve a 100% correction rate.

(2) Assisted 17 domestic biotechnology-related laboratories in completing their "Laboratory Biological Risk Management System". As of the end of 2018, there were 60 such laboratories that have introduced this system as demonstration units that would help the government in the promotion and improvement of self-management capacities for laboratories.

(3) There were 502 installation units that possess and use risk group 2 or above pathogens and biotoxins, with their categories and numbers shown in Table 6-2.

Table 6-2 Numbers of Entity Types by Laboratory Biosafety Management in 2018

Source: Taiwan Centers for Disease Control

Category / Types note	Government Agency	Medical Institution	Academic Research Institution	Other	Subtotal	Total
Institutional Biosafety Committees	20	153	54	269	496	502
Biosafety Specialist	0	0	0	6	6	

Notes: If the number of employees in installation units keeping or using risk group 2 or above pathogens and biotoxins is more than 5, the installation unit shall be set up as an "Institutional Biosafety Committees (IBCs)." If the number is less than 5, a biosafety specialist shall be assigned. Both IBCs and biosafety specialists shall be reported to the Taiwan Centers for Disease Control of the Ministry of Health and Welfare.

Section 3 Research and Laboratory Testing

1. A total of 122,376 specimens were tested, of those, 20,928 were found to contain a pathogen or tested positive for a related antibody, yielding a positive rate of 17.1%.
2. A total of 4,597 specimens from suspected cases with arbovirus infections were tested. Among them, there were 3 imported cases with Zika virus infection and 7 cases of Chikungunya virus infection. No indigenous cases of either virus was identified in Taiwan.
3. Provided molecular diagnoses for seven antituberculosis drugs that reduce discordances between phenotypic and genotypic drug susceptibility testing results and shorten diagnosis to treatment time to improve the treatment success rate.
4. Continued the operation of PulseNet Taiwan to detect food-borne disease clusters, which has successfully identified a salmonellosis and traced its origin to pigs and poultries. Used the whole genome sequence-based genotyping method to generate genetic profiles of bacterial isolates, which are comparable among laboratories of PulseNet International.
5. Implemented community-based surveillance of enterovirus and respiratory viruses and provided a systematic reference for infectious disease early warning indicators, public health prevention actions, laboratory diagnostic technique and vaccine developments.
6. Completed technology transfer for Dengue NS1 Antigen Rapid Test Kit, and helped participating companies complete the registration of in vitro diagnostic device licensing.

7. Sent influenza virus isolates to the WHO Influenza Collaborating Centers to participate in global influenza surveillance.
8. Applied the "Automatic nucleic acid detection platform" for pathogen detection in diarrhea clusters, which can shorten the test time and assist in the detection of emerging pathogens.
9. Continued to collect and diversify the Taiwan Pathogenic Microorganism Genome Database (TPMGD) and biomaterial inventory. Presently, the database contains more than 33,000 entries of genetic sequencing, with 1,734 strains of influenza virus, 1,304 strains of enterovirus and 5,048 strains bacteria in the inventory. The inventory has provided the resources needed in biomaterial applications submitted by 21 academic units and 9 enterprises in the sector, thereby proven its value in aiding academic researches and test kit development.
10. Under the Global Cooperation and Training Framework (GCTF), the MOHW collaborated with the Ministry of Foreign Affairs and AIT to jointly host the "International Workshop on Laboratory Diagnosis for Enterovirus". Representatives from 15 New Southbound Policy nations were invited to participate in the technical exchanges and thereby helping the participating nations to bolster their capacity for enterovirus molecular diagnostics, which will in turn enhance the Asia-Pacific region's capacity for relevant inspection and diagnosis.
11. Assisted Taiwan Blood Services Foundation to analyze the nature of correlation in alleged cases of hepatic viral infection transmitted through blood transfusion to clarify the correlation of the pathogen to the blood donor and receiver so that relevant aid can be administered. In 2018, there were a total of 7 cases of contention but none of the blood donors and receivers in these cases were found to be correlated with regards to the infection.
12. Evaluated existing standard inspection process for HIV to establish a working reference in the formulation of relevant prevention policies and revision of AIDS Prevention Handbook so as to shorten the time required for HIV confirmed diagnosis for treatments to be implemented as early as possible.
13. At present, integrase inhibitor has been listed as the recommended first-line medication in the "Regulations on the Use of HIV Prescription Drug". However, as no FDA approved genetic testing kit is available in Taiwan, the Agency is offering an HIV integrase inhibitor resistance test as a basis of reference for the replacement of prescription drugs.

Chapter 4 Immunization

Section 1 Current Immunization Status and Trends

To sustain Taiwan's immunization policy, an "Immunization Fund" was established in accordance with Article 27 of the Communicable Disease Control Act in 2010. The Fund serves as a stable funding source to implement new immunization policies each year. In 2018, the scope of the publicly funded hepatitis A vaccine became available to every national and was included in the routine vaccination program for children. At present, there are 10 free routine vaccines for young children that can prevent 15 infectious diseases. The immunization schedule for these vaccinations is shown in Table 6-3.

A "National Immunization Information System" was established to monitor and track the immunization status of young children. Children's routine vaccination coverage rate has been maintained, as shown in Figure 6-9. To deal with the side effects of immunizations, the government has established the "Vaccine Injury Compensation Program (VICP)" to enable victims to receive the assistance they are legally entitled to.

Table 6-3 Routine Vaccinations for Children, and Immunization Schedule

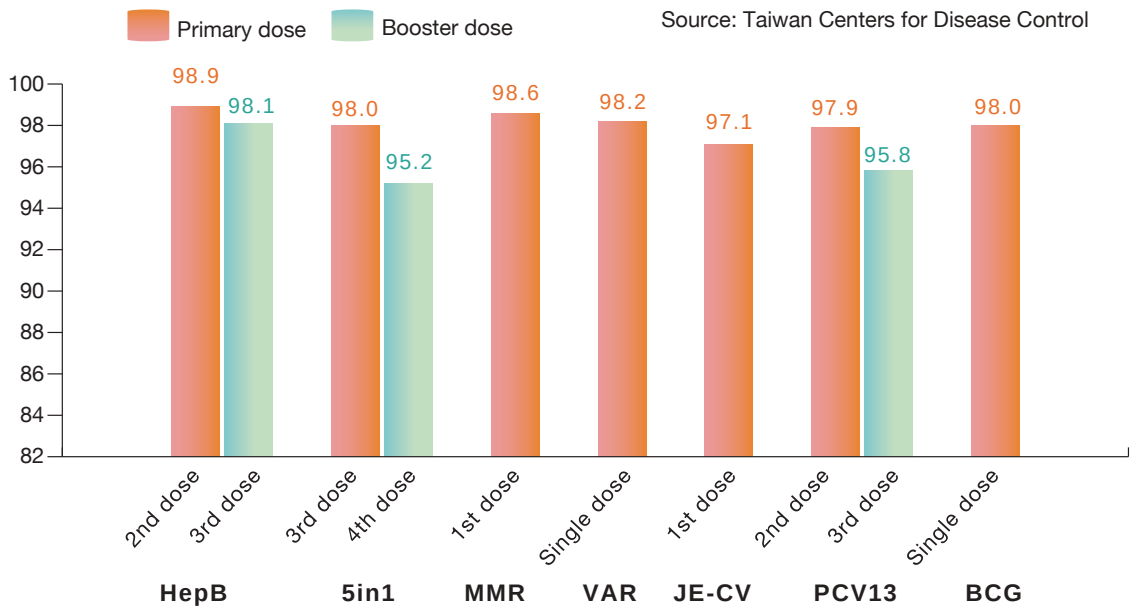
Last updated: 2019 July

Source: Taiwan Centers for Disease Control

Age of inoculation	Vaccine type
Within 24 hours of birth	HBIG[1] (Administered to newborns whose mothers tested positive for HBsAg)
	Hepatitis B 1
1 month	Hepatitis B 2
2 months	DTaP-Hib-IPV (5in1) 1
	PCV 1(13-valent)
4 months	DTaP-Hib-IPV (5in1) 2
	PCV 2(13-valent)
5 months	BCG 1 (recommended vaccination time is 5-8 months after birth)
6 months	Hepatitis B 3
	DTaP-Hib-IPV (5in1) 3
6 months to elementary school age	Influenza
12 months	MMR 1
	Varicella
12 – 15 months	PCV 3(13- valent)
	Hepatitis A 1[2]
1 year and 3 months	JE-CV 1
1 year and 6 months	DTaP-Hib-IPV (5in1) 4
1 year and 6 months to 1 year and 9 months	Hepatitis A 2
2 years and 3 months	JE-CV 2
Between 5 years and 1st grade in elementary school	DTaP-IPV
	MMR 2
	JE-CV [3]

Notes: 1. Starting from July 2019, the targets of HBIG haves been expanded from newborns whose mothers tested positive for HBeAg to newborns whose mothers tested positive for HBsAg.
2. After January, 2018, hepatitis A vaccine target children who are more than 12 months old and born after January 1, 2017, as well as the pre-school children in 30 mountainous townships, and 9 neighboring mountainous towns, Kinmen county and Lienchiang county.
3. Children who have completed 3 doses of inactivated vaccines have to receive 1 dose of JE-CV.

Figure 6-9 Immunization Coverage Rate for Children under 3 years old in 2018



- HepB: Hepatitis B vaccine
- 5in1:Diphtheria, tetanus, acellular pertussis, inactivated polio and Haemophilus influenza type b conjugate vaccine
- MMR: Measles, mumps and rubella vaccine
- VAR: Varicella vaccine
- PCV13: 13-valent pneumococcal conjugate vaccine
- BCG: Bacille Calmette-Guérin vaccine
- JE-CV: Japanese encephalitis chimeric vaccine- live attenated.

Note: Due to the transition from mouse brain-derived inactivated Japanese encephalitis (JE) vaccine to live chimeric JE vaccine, children who have received 3 doses of inactivated JE vaccine should receive 1 dose of live chimeric JE vaccine after the age of 5 to complete the series of JE vaccination

※Statistical period: As of end of December 2018

Section 2 Development and Manufacture of Antiserums/vaccines

In an effort to safeguard the health of citizens, Taiwan Centers for Disease Control has opted to manufacture snake antivenom immunoblobulin domestically by commissioning the National Health Research Institute's bioproduction plant to produce snake antivenom immunoblobulin into freeze dried antivenom for the treatment of those bitten by poisonous snakes.

1. MOHW Minister hosted the plaque unveiling ceremony and the inauguration of the National Antivenom Hyperimmune Horse Farm, which is complete with 6 stables, 4 outdoor athletic fields, two horse walkers and a clean room for plasma separation. The farm can house up to 100 horses.
2. In 2018, a total of 500 liters of snake antivenom immunoblobulin is separated from the blood of hyperimmunized horses in 2018. The National Health Research Institute's bioproduction plant was also commissioned to produce 2,600 doses of freeze dried antivenin for domestic patients suffering from poisonous snake bites.

MOHW Minister inspecting the National Antivenom Hyperimmune Horse Farm on October 20, 2018

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