

CHAPTER 1

CHARI DYNASTY

AND THAI PUBLIC HEALTH

The development of public health in Thailand has been associated with the monarchy institution since the Sukhothai period and in the Rattanakosin (Bangkok) period in particular. Thus, this chapter focuses on the relationships between the Royal House of Chakri Dynasty and the public health system in Thailand, which are phased into different eras as follows:

1. The Era of Thai Traditional Medicine Revival (1782-1851)

The reigns of King Rama I through King Rama III (the first through third Kings) of the Rattanakosin period were a period of national **reconstruction** with efforts in **assembling various technical disciplines** for use as references for study and national development.

1.1 The Reign of King Rama I (1782-1809)

King Rama I (Phrabat Somdet Phra Buddhayodfa Chulalok the Great) renovated Wat* Photharam (Wat Pho), renamed it Wat Phra Chetuphon Wimon Mangklaram, and had traditional medicine formulas as well as body exercise or stretching methods assembled and inscribed on cloisters, walls. Regarding official drug procurement, the Department of Pharmacy (Krom Mo Rong Phra Osoth) was established, similar to that in the Ayutthaya period. The medical doctors who were civil servants were called **royal doctors** (*mo luang*) and other doctors who provided medical services to the general public were called **private doctors** (*mo ratsadorn* or *mo chaloai sak*).

1.2 The Reign of King Rama II (1809-1824)

King Rama II (Phrabat Somdet Phra Buddhaloetla Naphalai) had traditional medicine textbooks gathered again by inviting all experts/practitioners to assemble indications of various medicines. Anyone having a good medicine formula was requested to present it to the King. Then the royal doctor department would select and inscribe the good ones in the **Royal Formulas for the Royal Pharmacy (Tamra Luang Samrab Rong Phra Osoth)** for the public's benefits.

In 1816, the King promulgated the Royal Pharmacists (Panakngarn Phra Osoth Thawai) Law, under which royal pharmacists had powers to seek medicinal herbs throughout the country; and no one could raise any objection. And thus they passed on the practices to their next generations.

* Wat means Buddhist monastery.

1.3 The Reign of King Rama III (1824-1851)

King Rama III (Phrabat Somdet Phra Nangklao Chao Yu Hua) renovated Wat Ratchaorasaram and had traditional medicine formulas inscribed on stone plates and stone columns around temple's verandas. With the royal command, Wat Phra Chetuphon was renovated once again and, in the Wat's compound, medicine formulas were inscribed on marble plates affixed to the walls of the temple and cloisters, describing the causes of diseases and how to cure such diseases. Rare medicinal herbs were planted so that the people could study and use for self-care without confining them for use only in any particular family. The Wat is thus considered the "first open university" in Thailand.

In 1828, the fifth year under the reign of King Rama III was regarded as the time that Western medicine began to play a key role in medical and health care in the country. The Western medical care including dangerous disease prevention was provided to the people. **Dr. Dan Beach Bradley**, generally known to the people as "Mo Bradley", an American Christian missionary who came to Thailand in 1835, **initiated a disease prevention** programme for the first time in the country with **smallpox inoculation**. Then, in 1838, the King advised the royal doctors to learn the inoculation techniques from Dr. Bradley in order to provide immunization services to civil servants and the public.

In 1849, Dr. Samuel Reynolds House, commonly known as **Mo House**, another doctor of the American missionary **introduced the use of ether as anaesthetic for the first time in Thailand**.

2. The Era of Civilization

During the reigns of King Rama IV, through King Rama VI, there were diplomatic relationships with Western countries and more Christian missions. The King visited foreign countries and brought back various kinds of civilization for application in the Kingdom, which steadily became modernized; so did the medical and health system.

2.1 The Era of King Rama IV (1851-1868)

During the reign of King Rama IV (Somdet Phra Chomklao Chao Yu Hua or King Mongkut), the Thai medical service was divided into two systems: traditional medicine and modern medicine.

Three American doctors (Drs. Bradley, House and Lane) lived in Thailand for a long time during that period. Dr. House played an active role in the control of cholera by using water mixed with tincture in treating the patients orally.

Although Western medicine was further expanded, for example to obstetric or childbirth services, it was unable to change the value of the people as Thai traditional medicine had been used culturally for several generations and was part of Thais' lifestyle

2.2 The Reign of King Rama V (1868-1910)

Previously, there was no public hospital to provide curative care to the people as only temporary hospitals were set up at various places to care for patients during epidemics. After the epidemic

subsided, the hospitals were abolished. King Rama V (Phrabat Somdet Phra Chulachomkloa or King Chulalongkorn) initiated a medical care programme for the poor by establishing a **Hospital Management Committee** in 1886 under the Chairmanship of the King's brother, Prince (Krommamuen) Siriwachsangkat. A hospital was constructed and completed in 1888 and named "**Siriraj Hospital**" in commemoration of his son, **Prince Siriraj Kakuttaphan**, who had died of dysentery. Later on, the King established a **Nursing Department** responsible for the management of Siriraj Hospital, replacing the Hospital Management Committee in 1889. The Department was then under the Ministry of Education (Krasuang Dharmmakon) with King's brother, Prince (Krommamuen) Damrong Rajanuparp, as the Director-General. During that period a number of major medical services events occurred:

In 1889, a medical school (Phaetthayakorn School) was established in Siriraj Hospital, whose curriculum included both Western and traditional medicine. And in 1895, the first **Medical Welfare Textbook (Tamra Phaetthayasat Songkhro)** covering both types of medical practices was published.

In 1896, a midwifery school was established with the personal funds of Queen Sri Patcharintara Boromarachininart in the Siriraj Hospital compound.

In 1897, a new edition of the **Medical Welfare Textbook** was published whose contents mostly dealt with Western medicine.

In 1905, a sanitation management programme was piloted for the first time, in Tambon Tha Chalom (subdistrict) of Samut Songkhram Province.

In 1907, two medical textbooks (medical literature or wetchasat wanna and medical welfare) were published and were considered the "first national medical and pharmaceutical textbooks".

A Medical Division was set up to take responsibility for the epidemic control and smallpox inoculation for the people outside the capital.

2.3 The Reign of King Rama VI (1910-1925)

During the reign of King Rama IV (Phrabat Phra Mongkutkloa Chao Yu Hua or King Vajiravudh), a number of medical and health activities were initiated as follows:

In 1911, King Chulalongkorn Memorial Hospital was built with partial funding from the King's own accounts and the Thai Red Cross Society (then known as Sapha Unalom Daeng) was established.

In 1912, the Pasteur Institute was established to be responsible for the rabies prevention and control programme: and Vajira Hospital was established.

In 1914, under the Ministry of Interior, pharmacies (Osoth Sapha) were set up to provide curative care and dispense drugs; and later each pharmacy was renamed "Health Centre" (Suk Sala).

In 1916, the Nursing Department was renamed "Public Protection Department" (Krom Prachapiban) under the Ministry of Interior.

In 1916, Prince Chainat Narenthorn revised the medical education system by adding more clinical practices **while withdrawing traditional medicine** as the two systems were not compatible and it was difficult to identify knowledgeable Thai traditional medicine teachers who were willing to teach.

In 1917, the Army Medical School was established.

In 1918, the medical and sanitation programmes, previously under the Ministry of Interior and the Ministry of City Affairs (Nakhon Ban), were merged and named the Public Health Department on 27 November, with Prince Chainat Narenthorn as the first Director-General.

In 1920, the Queen Saovabha Memorial Institute was established: and the Thai Red Cross Society was registered as a member of the International Federation of Red Cross and Red Crescent Societies on 8 April.

In 1922, the Young Red Cross Division and the Nursing School were established under the Thai Red Cross Society.

In 1923, **the Medical Practice Act** was promulgated to control medical services and practices so that there would be no harm done by unknowledgeable or untrained practitioners.

3. The Era of Pioneering Modern Medical and Health Services (1917-1929)

the King's father, Somdet Phra Mahitalathibet Adulyadej Vikrom Phra Boromarajchanok (commonly known as HRH Prince Mahidol of Songkla), was the first Thai prince to become seriously interested in medicine and public health. That was because he had deemed that the medical and health services were not up-to-date; and the people were highly vulnerable to illnesses, particularly communicable diseases. With his firm resolution to provide modern medical care to the people, he dedicated himself to the foundation and development of medicine by resigning from the Royal Thai Navy and studying medicine and public health at Harvard University in the United States of America. He intended to bring back modern technology for developing the Thai medical and health care system. Through his steady perseverance, he graduated with a Certificate of Public Health and a Doctor of Medicine degree (cum laude). He then returned to Thailand to perform numerous medical and health activities that were extremely beneficial to the country and Thai people. He had donated funds for such medical programmes as construction of a medical school, a hospital and a dormitory for nurses. His personal financial support was used as fellowships for doctors and nurses to study abroad. He served as a Thai delegate in negotiation with the **Rockefeller Foundation** on assistance for Thai medical service development. His support for medical research involved the initiation of the medical research and investigation programme at Siriraj Hospital. Besides, he had participated in teaching medical and nursing students, and served as a medical resident at Siriraj Hospital and Chiang Mai's McCormick Hospital. He had supported maternal and child health (MCH) services by modifying Vajira Hospital as a large maternal hospital to serve as a training centre for nurses, midwives, public health nurses, social welfare workers and traditional birth attendants, so that there would be more MCH personnel.

Throughout his life, HRH Prince Mahidol had undertaken activities to promote the nation's medical and health services that are greatly beneficial to all Thai citizens. It was the foundation of the Thai public health system that has resulted in steady and sustainable development, similar to that in other civilized nations. Due to his prestige and ingenuity, he was named "**the Father of Thai Modern Medicine**"; and the University of Medical Sciences mainly producing medical and health the personnel was renamed "**Mahidol University**" in commemoration of his good deeds.

4. The Era of the Conception of the Ministry of Public Health

4.1 The Reign of King Rama VII (1925-1934)

During the reign of King Rama VII (Phrabat Somdet Phra Pokkloa Chao Yu Hua, commonly known as King Prajadhipok), a **ministerial rule** on modern and traditional medical practices was enacted, specifying that:

A. **Modern medical practitioners** were those who used healing arts based on knowledge from international textbooks that had progressed through studies, research, and experiments of scientific experts worldwide.

B. **Traditional medical practitioners** were those who used healing arts based on the observations and skills that had been verbally passed on from previous generations or the ancient notebooks with no scientific backups.

In 1926, the Public Health Department was reorganized and divided into 13 divisions, namely, Administration, Finance, Advisors, Editing, City Protection, Engineering, Health, Pharmacy, Narcotics, Mental Illness Hospital, Sanitation Promotion, City Sanitary Doctors, and Vajira Hospital.

4.2 The Reign of King Rama VIII (1934-1946)

During the reign of King Rama VIII (Phrabat Somdet Phra Chao Yu Hua Ananda Mahidol), Prime Minister Field Marshall Plaek Pibulsongkram issued an order in 1942 appointing a Committee on Medical Reorganization, which proposed the establishment of a Ministry of Public Health to the Cabinet and then to the Parliament. Later on the Ministries and Departments Reorganization Act (Amendment No. 3) of B.E. 2485 (1942) was promulgated, under which the present-day Ministry of Public Health was established.

Regarding medical services, more studies were conducted on herbal medicine during 1942-1943 while World War II was expanding to Southeast Asia, resulting in drug shortages. Professor Dr. Ouy Ketsingh conducted a study on antimalarial herbal medicine at Sattahip Hospital. After the war ended, the problem of drug shortages remained, the government decided to set a policy for the MoPH Government Pharmaceutical Organization (GPO) to also produce herbal medicines.

4.3 The Reign of King Rama IX (1946-present)

4.3.1 His Majesty King Bhumibol Adulyadej (Rama IX), the present King, has been interested in and concerned about of the well-being, particularly health conditions, of all citizens. His Majesty has made a great resolution to make all Thai people happy by initiating numerous projects including those on disease prevention, health promotion, curative care and rehabilitative services. All Thai citizens highly appreciate his graciousness. Even foreigners also realize and appreciate his health initiatives as evidenced by **WHO's presentation of the Health For All Gold Medal** in 1992 and the presentation of Gold Medal of Appreciation by the International Commission on Iodine Deficiency Disorder Control, for his advice on the concept and direction for disseminating iodized salt to prevent iodine deficiency. Besides, in 2001 the Franklin and Eleanor Roosevelt Institute and the World Committee on Disability presented His Majesty with a Franklin

Delano Roosevelt International Disability Award in recognition of Thailand's achievements of major targets of the UN's global plan of action on persons with disabilities. Some major public health activities that have been graciously supported/initiated by His Majesty are as follows:

(1) The Establishment of the Ananda Mahidol Foundation

The Ananda Mahidol Foundation was established because of His Majesty's interest in the welfare and well-being of the Thai people as it has been deemed that experts in advanced technical knowledge are required for national development. Thus, those with outstanding academic records should be promoted and supported to study abroad in certain fields with the expectation that, upon graduation, such people will return to serve the country in their respective field of study. On a pilot scale, the initiative was financed with the Ananda Mahidol Fund in 1955.

Later, on 3 April 1959, His Majesty decided to change the Fund's name and status to "The Ananda Mahidol Foundation" and donated 20,000 baht of his personal funds as an endowment, in commemoration of his elder brother, the late King Ananda Mahidol (King Rama VIII), **and awarded a first scholarship for studying medicine abroad.**

The Foundation's objective is to promote and support advanced studies with scholarships for qualified bachelor's degree graduates from any Thai university. The scholarship recipients, who are outstanding technically and morally, will further their advanced studies abroad; then upon graduation return to transfer such knowledge to a younger generation in an effort to help develop the nation. Several research institutes have been established for returnees to undertake research studies in the country.

His Majesty, who founded the Foundation, has served as its honorary president; and the first 10-member Executive Committee of the Foundation was chaired by the late Princess Mother (Somdet Phra Srinagarindra Baromarajanai). At present, the Executive Committee comprises 18 members under the chairmanship of Her Royal Highness Princess Maha Chakri Sirindhorn.

Since 1959-2003 the Foundation has awarded over 287 scholarships for overseas studies, out of which 227 have graduated and returned and another 60 are still studying. Among the returnees, 71 are medical doctors and 5 dentists; and among those studying, 4 are medical doctors and 5 dentists. The returnees have taken turns appearing on the television programme entitled "**One of the Royal Initiatives: Human Capital Building Project**", on Channel 9, MCOT, every Saturday at 20:30 hours. Its purpose is to disseminate their knowledge and experiences to the public.

(2) The Establishment of the Rajapracha Samasai Foundation

In 1954, His Majesty the King granted a permission to show the movie of his personal life at Chaloe Krung Theatre and gave all the proceeds of 444,600.50 baht for the construction of the **Ananda Mahidol Building** at Siriraj Hospital in commemoration of the late King Ananda Mahidol. An additional 1,558,561 baht from his private funds and public donations was given for the construction. The building was inaugurated by His Majesty on 9 June 1957.

Upon completion of that building at Siriraj, there was a funding leftover of 175,065.75 baht. At the request for funding of the then Public Health Minister for **building an institute for personnel training** and

research on leprosy at Phra Pradaeng Hospital in the amount of one million baht, His Majesty gave the remaining funds to initiate such activities for leprosy patients.

On 16 January 1958, Their Majesties the King and Queen graciously presided over the foundation stone laying ceremony at Phra Pradaeng Hospital. Upon completion of the building, at the MoPH's request, His Majesty named the place "**Rajapracha Samasai Institute**". The King had also been concerned about the education of lepers' children who were not infected, but isolated in a nursery of the Department of Health. Then **Rajapracha Samasai School** was established for this purpose with the initial royal funds of one million baht. The King presided over the school opening ceremony and later on visited it again several times. At present, the school has its own foundation (separate from the Rajapracha Samasai Foundation) and has been transferred to the Department of General Education, taking other students, similar to other schools of the Ministry of Education.

(3) The Establishment of the Prince Mahidol Award Foundation under the Royal Patronage

The Prince Mahidol Award Foundation under the Royal Patronage was established on 1 January 1992 to commemorate the 100th anniversary of the birth of His Royal Highness Prince Mahidol, the King's father. In addition to serving as a remembrance to him, the Foundation aims to disseminate the reputation of Prince Mahidol, who performed numerous medical and health activities that were extremely beneficial to the country. With his personal funds, a number of doctors and nurses were sent for advanced study abroad, and a medical school building and a hospital (common ward) building were constructed. He served as a Thai delegate in negotiation with the **Rockefeller Foundation** on assistance for Thai medical service development. All his efforts were the foundation on assistance for the Thai medical system, resulting in its advancements similar to those in other civilized nations at present. Thus, he was named "the Father of Thai Modern Medicine and Public Health". In remembrance of his good deeds, the "Mahidol Award Foundation under the Royal Patronage" was established and later renamed "Prince Mahidol Award Foundation under the Royal Patronage" on 28 July 1997.

Two awards are given each year to individuals demonstrating outstanding contributions to the advancement of medicine and public health throughout the world. The Foundation Committee is at present chaired by HRH Princess Maha Chakri Sirindhorn.

Between 1992 and 2003, Prince Mahidol Awards were given to 37 individuals or institutions, 18 of whom had outstanding contributions in the field of medicine and 19 in public health.

(4) Iodine Deficiency Control Project

As His Majesty the King has been so concerned about the problem of iodine deficiency disorders, the Iodine Deficiency Control Project is regarded as one of the top priority projects of the MoPH. In 1991, the King initiated a pilot project in Samoeng District of Chiang Mai Province to distribute iodized salt for preventing iodine deficiency disorders such as goitre and mental retardation. Furthermore, he has been interested in developing an appropriate technology for small-scale iodized salt producers and supported Chiang Mai Technical College to develop a medium-size iodizing machine, which is currently being used nationwide.

Later, His Majesty a study on “**salt route**” to find out about the salt production and distribution system across the country. The results have been used by the MoPH in assisting iodized salt producers appropriately.

On the occasion of the 50th Anniversary (Golden Jubilee) of His Accession to the Throne in 1996. His Majesty bestowed iodized salt the MoPH for further distribution to the people nationwide. With the royal permission, the Golden Jubilee emblem was printed on each bag of the salt; thus, the salt was called “**royally bestowed salt**”. His interest and support have stimulated awareness and cooperation among various agencies concerned in all sectors of Thai society, resulting in the project success nationwide.

4.3.2 Her Majesty Queen Sirikit has always supported the King's health projects. **The Queen serves as the President of the Thai Red Cross Society** and as a patron of associations and foundations involved in health activities such as **the Foundation for the Blind, the Foundation for the Mentally Retarded, and the Foundation for the Deaf**. Importantly, Her Majesty is the patron of the **Polio Immunization Campaign Project**, which has steadily reduced the polio incidence. the disease is expected to be eradicated in Thailand in the near future. Besides, Her Majesty was Presented with the **Lindbergh Award** on 16 May 1995 from the Charles A and Anne Morrow Lindbergh Foundation for her internationally recognized work on “**creating a balance between technology and nature**”. She was the first lady to receive such an award.

In addition, Her Majesty the Queen has been supporting and participating in other health activities as follows:

(1) **Royal Medical Services Project**. During Her Majesty's stay at one of the royal residences outside Bangkok, the Queen will have a mobile medical unit, comprising royal doctors, Red Cross personnel and royal staff, provide medical care to the people to the extent possible and refer the severe cases to hospitals.

(2) **Village Doctors Project**. Her Majesty has initiated the “village doctors project” to enable villagers to help each other. Selected village volunteers were trained in the village doctors course with living allowances provided by the project. Upon completion, each trained village doctor was given a bag of medical supplies and returned to his own village to provide primary care before referring a severe case to a doctor. The project has been very beneficial to local villagers.

(3) **Royal Patronage of Patients**. The Queen has been patronizing poor patients in terms of medical care, living allowances, children's educational allowances, and appropriate occupational support.

To commemorate the auspicious occasion of the 72nd Birthday Anniversary (6th 12- month Cycle) of Her Majesty Queen Sirikit, on 12 August 2004, the MoPH has initiated and implemented several major projects as follows:

(1) **Eye and Heart Project in Commemoration of Her Majesty the Great Queen's 72nd Birthday Anniversary**. The project plans to perform 7,200 heart surgeries and 100,000 cataract surgeries.

(2) **Food Safety Project for Her Majesty the Mother of the Land**. The project's aim is provide the people with safe food that is free from pathogenic and chemical contamination, by developing a

system for the quality control and assurance of food production, and monitoring the food chain so that it is up to the international standards.

(3) Disability Correction Surgery, Physical Rehabilitation and Eye–lens Replacement for Leprosy Patients Project in Commemoration of Her Majesty Queen Sirikit's 6th Cycle Birthday. Its aim is to perform 72 surgeries on leprosy patients to correct and rehabilitate their physical disabilities, especially for those who have suffered from complications with defects in the hands, feet and face. It will provide eye–lens replacement surgery on 72 cataract/leprosy patients.

(4) The Establishment of Centres for Helping Children and Women Victims of Violence Crisis Project in Commemoration of Her Majesty Queen Sirikit's 6th Cycle Birthday. The project aims to set up 76 centres to help children and women who are victims of violence in all regional hospitals nationwide.

(5) Public Mental Health Promotion Project in Commemoration of Her Majesty Queen Sirikit's 6th Cycle Birthday. The project aims to educate the public and communities about mental health promotion and to help them to live a mentally happy life.

(6) Tuberculosis Eradication Project in Commemoration of Her Majesty Queen Sirikit's 6th Cycle Birthday. The project plans to do a proactive case finding and provide treatment for 72,000 tuberculosis cases until they all are cured.

4.3.3 Her Royal Highness the Princess Mother (Somdet Phra Srinagarindra Baromarajanani), the late mother of the King, was one of the important members of the Royal Family who had undertaken or supported numerous activities related to the public health as follows:

(1) In 1956, the Princess Mother began to patronize the Foundation for Assistance of the Disabled by donating her personal funds for the operations of the Foundation and seeking support from local and international individuals as well as agencies concerned for persons with disabilities.

(2) In 1963, the Princess Mother began to patronize the Foundation for Lepers in Lampang Province by donating her personal funds for the construction of Jitaree School building and a dormitory and providing financial support for the children of lepers as well as for the operations of the school. Consequently, the quality of life of lepers' children and people with poverty has been much improved.

(3) In 1967, the Princess Mother accepted the New Life Foundation under her patronage in order to help rehabilitate the disabled lepers.

(4) In 1969, **Mobile Medical Corps (Por Or Sor Wor mobile medical units)** were set up, comprising volunteer doctors, dentists, nurses, health workers and volunteers from both central and provincial levels. The units have been providing curative, preventive, promotive and rehabilitative care to the people in remote areas.

(5) In 1973, a **Volunteer Flying Doctors** Unit was launched and later on became a **Radio Medical Services Unit** that provided medical consultation to remote health centres via radio communications in 25 provinces. Since 1976, the MoPH had undertaken similar services for other provinces. In 1996, they were all transferred to be under the MoPH.

(6) In 1974, HRH the Princess Mother established the **Princess Mother's Medical Volunteer Foundation** and bestowed a first endowment of one million baht. The Royal Thai Government as well as public and private agencies from within and outside the country have provided financial support and medical supplies to the Foundation.

In 1986, a specialized medical services project was initiated to provide surgical care for patients with cataract, cleft lip and cleft palate, prosthetic/orthotic services, rheumatic heart disease and impacted tooth.

(7) Dental health services of the Mobile Medical Corps include the following:

(7.1) Activities on the National Dental Health Day, 21 October each year.

(7.2) Mobile dental services, two mobile dental service vans were provided to the provinces with Mobile Medical Corps to provide dental services to the people.

(7.3) Dental health surveillance activities among students in primary schools and border patrol police-operated schools.

(7.4) Campaigns on "clean teeth, good gum" as part of the merit-making to benefit the late Princess Mother, on her death date, 18 July each year.

(8) In 1992, HRH the Princess Mother donated her personal funds of 500,000 baht to establish an Artificial Legs Foundation and HRH Princess Galyani Vadhana also donated another 750,000 baht to produce artificial legs for poor people regardless of race or religious belief.

Besides, the Princess Mother had also financially supported research studies of various individuals and institutions to strengthen their scientific and technological capacity in the fields of health sciences, chemistry and pharmacy.

In recognition of her prestige and devotion for health promotion of Thai people, in 1990 the World Health Organization presented the Princess Mother with "**The Health For All Gold Medal Award**". Furthermore, on 21 October 2000, UNESCO honoured the Princess Mother as a world leader in public service in the fields of education, applied science, and human, social and environmental development. In addition, on the 100th birthday anniversary, the Princess Mother was named "**the Mother of Thai Public Health**",

4.3.4 Her Royal Highness Princess Galyani Vadhana Krom Luang Naradhiwas Rajanagarindra, the King's elder sister, is the President of the **Kidney Disease Foundation** of Thailand, and has supported curative care, prevention of kidney and urinary tract diseases, and research as well as dissemination of knowledge on such a disease.

Besides, the Princess has continued supporting projects initiated by the late Princess Mother. She has also served as the Honourary President of the Princess Mother's Medical Volunteer Foundation since 18 August 1995. She has also had outstanding contributions to the international mental health promotion and drug dependence prevention programmes, giving importance to young childhood development (being a patron of the Young Children in Slums Foundation and several other foundations), making donations for setting up supplementary food funds, and providing books and toys for enhancing child development according to their age. In recognition of her reputation and contributions, the South-East Asia Regional office of the

World Health Organization presented her the WHO/SEARO Award on 19 August 2003.

4.3.5 His Royal Highness Crown Prince Maha Vajiralongkorn is the Honourary President of the Crown Prince Hospitals Foundation. The Crown Prince presided over the foundation stone laying and opening ceremonies of all 21 Crown Prince Hospitals (district-level hospitals in remote areas). With great interest in health activities, he regularly visits the hospitals and gives advice to the MoPH on how to improve hospitals, efficiency and quality for the people's benefit.

4.3.6 Her Royal Highness Princess Maha Chakri Sirindhorn (Somdet Phra Debaratrasuda Sayamborommarjakumari) is particularly interested in improving the nutritional status of children and youths. Thus, several royally initiated projects have been launched such as the Agriculture for School Lunch Project, aiming to help improve health and nutritional status of children in remote areas particularly in border patrol police-operated schools. Later on, the Ministry of Education has adopted this approach and got it replicated in all other schools nationwide. Besides, the Princess has supported the Project on Nutritional Status Improvement for Children under 5 and the Child Development Centres with her personal funds.

To promote child growth and development, the Princess has initiated the Nutritional and Health Promotion for Mothers and Children in the Remote Areas Project. Its aim is to provide the knowledge on nutrition and health services to pregnant women, lactating mothers, and children aged 0-3 years, and to improve nutritional status of mothers so that they will have health newborns and babies who will grow up and develop up to their full potential.

In addition, the Princess serves as the Chairperson of the National Committee on Iodine Deficiency Control. With her leadership and support, the iodine deficiency problem has been reduced to the level that it is no longer a public health problem.

The Princess has also given advice on how to use the information technology for improving the potential of children living in the remote areas, who are disadvantaged in terms of education, sick children and the disabled to make use of IT equipment for learning purposes. This effort, with herself serving as the Chairperson of the project's steering committee, will help such people to develop their quality of life and provide them with an equal opportunity for education.

4.3.7 Her Royal Highness Princess Chulabhorn has been playing an outstanding role as a scientist. Her reputation is internationally recognized and she was awarded the Einstein Gold Medal from UNESCO. The Princess has contributed to several medical and health development activities and established the Chulabhorn Foundation to assist in medical and health education. The Chulabhorn Research Institute was also established by the Princess as a centre for scientists to conduct research studies aimed at developing scientific products or findings that will be beneficial to the nation and resolve urgent health, environmental and agricultural problems. Besides, the Institute has also implemented the Chulabhorn Village Development project in the southern provinces of Nakhon Si Thammarat and Surat Thani, whose aim is to improve environmental conditions and well-being of the people, based on the primary health care concept and self-reliance approach.

4.3.8 Her Royal Highness Princess Somsawalee has continuously performed royal

functions initiated by Their Majesties the King and Queen, particularly those related to social development. She has been involved in activities of the Sai Jai Thai Foundation since 1975 by visiting and boosting morale of military and police officers, volunteers and civilians who were injured in the fight against terrorists and admitted at various hospitals. She has been elected a member of the Foundation Committee.

Regarding medical and health activities, Princess Somsawalee is particularly interested in the HIV/AIDS problem as evidenced by the fact she always presides over the Thian Song Chai (Candlelight in the Mind) Festival almost every year if she is not engaged in any other more important function. The festival has been held by the Thai Red Cross Society and the Wednesday Friends Club (a club of people living with HIV/AIDS) on 1 December, the World AIDS Day, every year since 1991 with the aim of enhancing good understanding among the HIV-infected and uninfected people. It also aims to show to society as a whole that HIV-infected people are not dangerous to the public; an infected person can be healthy and beneficial to the family and society. Her kindness has also been extended to all other Red Cross projects such as the Prevention of Mother-to-Child Transmission of HIV Project and the Friends Help Friends While in Difficulties Project.

Besides, the Princess has performed other duties on behalf of HRH Princess Maha Chakri Sirindhorn at graduation ceremonies, conferring degrees or certificates to the graduates of MoPH Nursing Colleges, at the new auditorium of Suan Amphorn, as well as privately-run Mission and Christian Nursing Colleges almost every year. She sometimes presides over the opening ceremony of the Disabled Persons Day exhibition at Suan Amphorn. With her concern over the well-being of the elderly, she has visited elderly people at Bang Khae Home for the Elderly, making them extremely delighted.