With an excellent collaboration of the national epidemiology network in 2012, Bureau of Epidemiology, Department of Disease Control was able to utilize surveillance data gathered from the 506 Reporting forms at utmost. This effective national surveillance system brought to timely response to disease clusters and health crises as well as efficiency of disease prevention and outbreaks control.

Beginning with situation of food- and water-borne diseases in 2012, mushroom poisoning had been increasing to the highest rate of morbidity and mortality in a decade. Amanita mushroom was a major cause both in the North and Northeast of Thailand. Outbreaks of hepatitis A occurred in several districts of BungKan province. More than 1,000 cases were reported during two epidemic waves that lasted for three months. From an epidemiological investigation, an ice factory was a source of infection in the hepatitis A outbreaks. Food poisoning outbreaks were found in several Gymboeree camps that were located in two adjacent areas of Saraburi and NakhonRatchasima provinces. Hundreds of students and teachers from different schools were attacked by a causative agent “Norovirus”. Ice factories in the areas were potential sources of infection. Both outbreaks of hepatitis A and Norovirus food poisoning reflected that there were poor quality controls to detect and prevent viral agents contaminated in the ice-processing factory. Systematic quality improvement of food factories needs to be addressed as a national agenda.

Epidemics of diphtheria among adult populations (natural immunity to diphtheria is at low level in adult persons) were reported in many provinces of Northeast. It was not only occurred in the adult group, but it also was found in children who did not receive diphtheria toxoid on the recommended schedule. Symptoms begin with a low-grade fever, a red sore throat, mild cough and grey pseudomembrane on the throat and extending to tonsils and uvular. Diphtheria can cause deaths as a result of respiratory obstruction and/or myocarditis. Active and passive surveillance systems were set for greater efficiency together with case-finding in close contacts and villagers in the community. Diphtheria toxoid was given to children and adults at the district level for control measures. Tetanus toxoid has been replaced by Diphtheria and Tetanus Toxoids(dT) in pregnant women and patients with wounds who required tetanus prevention. This strategy can prevent the disease in a small portion but not an entire population. When reaching to ASEAN economic community in 2015, massive population movement can cause epidemics of diphtheria and another vaccine-preventable diseases.

The situation of dengue, including dengue fever, dengue hemorrhagic fever and dengue shock syndrome in 2012 is highlighting. Dengue cases were reported less than 5-year median number of cases from January to September. In general, the number of dengue cases was low in September toward the end of the year.
Surprisingly, the number of reported dengue cases had increased obviously and tended to have nationwide epidemic in 2013. Disease distribution by place from September to December in 2012 was revealed that the most dengue cases were reported in Bangkok, Songkhla, Nakhon Ratchasima, Surin, Nakhon Sawan, Nakhon Si Thammarat, Chiang Mai, Buri Ram, Chon Buri and Rayong, respectively. The average age of getting dengue infections was shifting upwards, which the median age was 16 years old or high school students. Most of cases were admitted in internal medicine wards. The internal medicine wards should be well prepared for early case detection and timely treatment of dengue patients in 2013.

Drowning remained a major public health problem in Thailand. Data from the national injury surveillance (IS) gathered number of serious injury cases sought care at the emergency room of 33 large hospitals and included death cases within 7 days after injury occurrence. Since 2007, drowning had been ranked as the fifth leading cause of external cause of injury. Proportional injury morbidity and mortality rates declined slightly. The highest proportion of deaths was reported in children aged 1-4 years followed by aged 5-14 years. Most of serious injury cases were small children at home. The occurrence was mostly incident at natural water reservoir (23.29%). Drowning was excessively reported for 44.41% in summer school break from March to May and again from September to November, especially in weekend from 12.00 p.m. to 06.00 p.m. Raising awareness about drowning prevention among child guardians should include some measures such as help and encourage children to learn swimming and water safety survival skills, always provide close and constant attention to children, know how and when to use a life jacket, especially with children, learn safe ways of rescuing others without putting themselves in danger, and learn first aid and CPR.

Smog is air pollution that affected health and economy extending over great areas. Forest fires in agricultural areas were caused major source of smog. Upper North and Deep South of Thailand had experienced the most impact from the smog continuously in the past 10 years. Smoke haze surveillance of 8 provinces in North from January to April in 2012 showed that the total suspended particulate (TSP) less than 10 micrometers in diameter (PM10) was greater than 120 micrograms per cubic meter (µg/m3) over 24 hours, which was an air quality indicator for health effect. The highest value of TSP was 479.1 µg/m3 in Mae Sai District, Chiang Rai, 354.8 µg/m3 in Muang District, Mae Hong Son, and 293.4 µg/m3 in Muang District, Chiang Rai and Muang District, Phayao, respectively. The haze particles caused an increased number of patients presented with symptoms of respiratory tract, heart and circulatory system, eyes irritation and contact dermatitis. Morbidity rate of respiratory tract symptoms was 6,933.10 per 100,000 populations. Vulnerable groups included young children, elders, and people who already have chronic heart or lung disease. A trend of smog pollution has increased every year. To solve the smog problem in a long term, multidisciplinary cooperation by controlling sources forest fires and monitoring of health impacts must be continued to provide information for addressing the problem.

Translated by Soawapak Hinjoy