

2. Major Health Problems

2.1 Communicable Diseases

2.1.1 Vaccine-preventable Diseases

Since the Ministry of Public Health launched the Expanded Programme on Immunization (EPI) in target population groups, the immunization coverage has remarkably improved (Table 5.9 and Figure 5.6).

Figure 5.6 Coverage of immunization: BCG, DPT_3 , OPV_3 , HB_3 measles among children and TT_2^+ booster among pregnant women, 1982-2006



Sources: ⁽¹⁾ Department of Disease Control, Ministry of Public Health. ⁽²⁾ Bureau of Policy and Strategy, Office of the Permanent Secretary, MoPH.

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Table 5.9

:									Cov	erage	(perc	ent) in	fiscal	year								
Activity	1982 ⁽¹⁾ .	1983 ⁽¹⁾	1984 ⁽¹⁾	1985 ⁽¹⁾	1986 ⁽¹⁾ .	1 987 ⁽¹⁾ 1	988 ⁽¹⁾ 1	989 ⁽¹⁾ 1	990 ⁽¹⁾ 19	991 ⁽¹⁾ 19	992 ⁽¹⁾ 15	93 ⁽¹⁾ 19	94 ⁽¹⁾ 199	5 ⁽¹⁾ 1996	3 ⁽²⁾ 1997	⁽²⁾ 1998 ⁽⁵	1999 ⁽²⁾	2000 ⁽²⁾	2001 ⁽²⁾	2002 ⁽²⁾	003 ⁽³⁾	006 ⁽⁴⁾
Children																						
<1 yr																						
BCG (%)	73	75	76	78.4	89.5	87.4	88.6	94.1	96.3	96.8 9	17.4 g	18.1 97	.9 98.	4 98.4	96.9	96.5	95.6	98.8	89.4	98.1	99.5	98.0
$DPT_{_3}(\%)$	21	48	53	60.5	73.9	72.8	74.8	34.2	89.4	39.8 9	11.5 C	12.2 92	.9 93.	7 94.3	92.5	95.9	92.1	94.4	89.1	89.8	97.6	97.1
$OPV_{_3}$ (%)	34	40	53	59.3	71.8	71.3	73.8	33.2	89.3	39.8 9	11.5 C	12.2 92	.7 93.	7 94.3	92.3	95.8	93.0	94.5	89.3	89.7	97.6	97.6
Measles (%)	ī	I	I	I	I	48.2	51.1	51.4	78.4 8	31.5 8	36.3 E	6.1 86	.0 89.	8 90.8	73.0	87.2	90.5	83.8	83.1	83.7	96.1	91.4
$\operatorname{HB}_{_{3}}(\%)$	I	I	I	I	I	I	I	I	I	-	5.4	7.1 65	.5 79.3	3* 90.7	88.5	93.0	90.4	94.9	87.9	88.8	96.0	88.3
Pregnant																						
women																						
$TT_{2} + T$	30	38	40	48	50	53.1	59.6	75.9	81.6 8	31.6 8	87.8 8	16.4 86	0.9 92.	93.0	82.5	85.7	80.4	74.0	75.5	74.5	93.3	89.2
BOOSIET (%)																						

Sources: ⁽¹⁾ Data for 1982-1995 were derived from the Department of Communicable Disease Control, Ministry of Public Health.

- ⁽²⁾ Data for 1996-2002 were derived from the Bureau of Policy and Strategy, Office of the Permanent Secretary MoPH.
 - * Data from the 1st Provincial Health Survey (1995).
- ⁽³⁾ Data for 2003 were derived from the survey on coverage of the basic immunization program and the polio immunization campaign, 2003. Department of Disease control, MoPH.
- (4) Data for 2006 were derived from the child situation survey, Thailand, Dec 2005-Feb 2006. National Statistical Office.

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As a result of such a high immunization coverage, the morbidity rates of vaccine-preventable diseases have a tendency to decline (Table 5.10 and Figure 5.8), However, it is noteworthy that in 2001-2002, the incidence of measles increased slightly partly due to an epidemic among the hilltribe people (Figure 5.7).

Besides, it was noted that hepatitis B infection had a rising incidence, probably resulting from a more extensive surveillance effort (Figure 5.9).

	Incidence	e of vaccine-preventa	able diseases	per 100,00	0 population	
Year	Measles	Neonatal tetanus	Diphtheria	Pertussis	Poliomyelitis	Hepatitis B
1977	20.2	72.1	5.2	7.2	2.1	n.a.
1979	28.9	70.0	4.4	11.2	2.3	0.09
1981	51.1	59.8	1.6	6.2	0.5	0.14
1983	70.2	53.6	2.1	9.8	0.3	0.12
1985	66.2	60.4	1.4	4.8	0.1	0.55
1987	78.3	47.9	1.0	2.7	0.04	1.57
1989	22.5	28.1	0.1	2.2	0.03	3.30
1991	46.9	14.5	0.09	0.5	0.009	5.98
1993	25.2	4.7	0.04	0.6	0.015	4.39
1995	16.4	6.4	0.03	0.2	0.003	3.13
1996	9.5	0.05	0.08	0.13	0.03	2.20
1997	22.03	0.04	0.06	0.17	0.00	2.27
1998	22.39	0.03	0.08	0.16	0.00	2.53
1999	5.38	1.55	0.08	0.08	0.00	2.60
2000	6.67	0.03	0.02	0.16	0.00	2.71
2001	11.86	0.36	0.02	0.12	0.00	2.80
2002	16.48	1.14	0.02	0.02	0.00	3.44
2003	7.17	0.01	0.01	0.04	0.00	3.68
2004	6.66	0.02	0.02	0.03	0.00	4.54
2005	5.67	0.01	0.00	0.04	0.00	4.41
2006	5.31	0.00	0.00	0.11	0.00	5.48

Table 5.10 Incidence rates of major vaccine-preventable diseases in Thailand, 1977-2006

Source: Bureau of Epidemiology, Department of Disease Control, MoPH.





Figure 5.7 Incidence of neonatal tetanus and measles in Thailand, 1977-2006

Source: Bureau of Epidemiology, Department of Disease Control.





Source: Bureau of Epidemiology, Department of Disease Control.







Source: Bureau of Epidemiology, Department of Disease Control.

2.1.2 Diarrhoea

Acute diarrhoea is still a crucial public health problem with a relatively slight change in incidence among both children and adults, particularly among children under five years of age whose incidence is higher than that in adults (Figure 5.10). A recent provincial health status survey revealed that the diarrhoea incidence in children was declining from 6.0 episodes/person/ year in 1995 to 3.6 episodes/person/year in 2001.⁷ Nevertheless, the incidence was still higher than the target of not exceeding 1 episode/person/year (Table 5.11). However, the mortality rate has been declining considerably due to improved and extensive coverage health services as well as the success of the campaign on oral rehydration therapy (ORT).

⁷ Bureau of Policy and Strategy, Ministry of Public Health. In-depth Analysis of the Data of Provincial Health Status Survey, 2003.



Figure 5.10 Incidence and mortality rates of diarrhoea in Thailand, 1977-2006



Source: Bureau of Epidemiology, Department of Disease Control.

Type of areas	Illness (episodes/person/year)							
Type of areas	1995	1996	2001	Target, 8th Plan				
Municipality	4.9	3.1	3.4					
Non-municipality	5.2	3.4	3.9					
Total	6.0	3.4	3.6	Not exceeding 1				

Source: Provincial Health Status Surveys, 1995, 1996, and 2001.

2.1.3 Helminthiasis

Overall, the prevalence of intestinal parasitic diseases has been declining, except for liver fluke whose prevalence is relatively increasing in the North (Table 5.12). A survey on liver fluke situation, using the modified Kato-Katz method of faecal examination, revealed that 90.6% of those who had liver fluke infestation had a parasitic egg count of less than 1,000 eggs per gram of faeces.⁸

However, another report on helminthiasis surveillance in Nan province, under the Phufa Development Programme according to the initiation of HRH Princess Maha Chakri Sirindhorn, between 2002 and 2004, revealed that among three groups of people (primary schoolchildren, students at the Hilltribe Community Learning Centre, and the general public) the people in that locality still have helminthic diseases at a prevalence rate higher than the set target of 20% (Table 5.13).

H 1 · 4 · ·		Prevalence, percent						
Heiminthiasis	1981	1991	1996	2001				
Hookworm disease	40.56	27.69	21.6	11.4				
Ascariasis (roundworm)	4.04	1.46	1.9	1.2				
Trichuriasis (whipworm)	4.46	4.34	3.9	1.5				
Liver fluke - whole country	14.7	15.2	11.8	9.6				
- Liver fluke, Northeast	34.6	24.01	15.3	15.7				
- Liver fluke, North	5.6	22.9	29.7	19.3				

 Table 5.12
 Prevalence rates of common helminthiasis

Source: Department of Disease Control, Ministry of Public Health.

⁸ Department of Disease Control. Evaluation of the Helminthiasis Control Project in Thailand at the End of the 8th National Health Development Plan, 2001. Division of General Communicable Diseases, Department of Disease Control, 2001.



		P	revalenc	e (perce	ent) in p	opulatio	on grouj	ps	
Halminthiagia		2002			2003			2004	
neminunasis	1	2	3	1	2	3	1	2	3
Liver and intestinal fluke	22.5	1.0	65.3	19.6	3.4	58.4	5.5	1.6	42.1
infections									
Hookworm infection	41.4	37.0	45.8	25.0	14.1	44.1	21.5	9.1	38.3
Ascariasis (roundworm)	35.5	88.0	12.4	38.1	86.9	19.5	49.3	60.5	27.3
Trichuriasis (whipworm)	37.9	62.5	6.8	37.3	48.3	12.1	47.3	63.4	13.7
Enterobiasis (pinworm)	1.9	0.8	1.2	1.2	0.2	0.2	1.5	0.3	0.9
Taeniasis (tapeworm)	0.2	0.0	4.2	0.4	0.0	3.6	0.1	0.0	4.2

Table 5.13 Prevalence of helminthiasis in Nan province

Source: Report on helminthiasis surveillance in Nan province, under the Phufa Development Programme according to the initiation of HRH Princess Maha Chakri Sirindhorn, between 2002 and 2004.

Note: Population groups:

- 1 = primary schoolchildren;
- 2 = students at Hilltribe Community Learning Centre; and
- 3 = general public.

2.1.4 Acute Respiratory Infection among Children

Currently, acute respiratory infection is still a crucial public health problem in Thailand. **Pneumonia is the number one cause of death, among all infectious diseases, in children under five.** The incidence of pneumonia in children has fallen from 5.2% in 1995 to 1.85% in 2006; and its mortality rate (per 100,000 population) has steadily dropped from 15.1 in 1990 to 1.78 in 2006 (Figure 5.11).

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Figure 5.11 Incidence and mortality of pneumonia in children under five in Thailand, 1990–2006

Sources: ⁽¹⁾ Department of Disease Control, Ministry of Public Health.

⁽²⁾ Bureau of Epidemiology, Department of Disease Control.

2.1.5 Leptospirosis

Leptospirosis is a re-emerging infectious disease having an incidence rate between 0.2 and 0.7 per 100,000 population during the period 1981-1996. But the incidence and mortality rates was on the rise, i.e. the incidence per 100,000 population rising from 0.67 in 1996 to 23.2 in 2000, but dropping to 6.29 in 2006 (Figure 5.12). Over 90% of the patients live in the Northeastern region of the country (Figure 5.13). However, for the period 2001-2006, both the incidence and mortality rates were declining.

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Figure 5.12 Incidence and mortality rates of leptospirosis in Thailand, 1981-2006

Source: Bureau of Epidemiology, Department of Disease Control.





Source: Bureau of Epidemiology, Department of Disease Control.



2.1.6 Leprosy

The Leprosy Control Programme in Thailand has been implemented for over 40 years with the initiation of His Majesty the King and support of the World Health Organization as well as several NGOs. The Programme has been quite successful in reducing the leprosy prevalence rate from 5 per 1,000 population in 1955 to 0.02 per 1,000 population in 2006 – a nearly 100-fold reduction (Figure 5.14). The disease is no longer regarded as a public health problem in Thailand.

The success of the Programme has been partially attributable to the introduction of the short-course multiple-drug therapeutic (MDT) regimens, recommended by the World Health Organization since 1984.



Figure 5.14 Incidence of Leprosy in Thailand, 1977-2006

Source: Department of Disease Control, Ministry of Public Health. **Note**: MDT = Multiple-drug therapy

2.1.7 Rabies

As a result of the Rabies Control Programme implemented by the Ministry of Public Health in collaboration with the Department of Livestock Development of the Ministry of Agriculture and Cooperatives, the rabies morbidity/mortality rate has dropped considerably from 0.53 per 100,000 population in 1977 to 0.04 per 100,000 population in 2006 (Figure 5.15).

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Figure 5.15 Morbidity/mortality rate of rabies in Thailand, 1977-2006



Source: Bureau of Epidemiology, Department of Disease Control.