

REFERENCES

- Arsarat, C. (1994). *The study of the health behavior on Dengue Hemorrhagic fever of the primary school students, educational zone-9*. Master's thesis, the faculty of public health, Mahidol University.
- Basic Public Health Committee Office. (1999). *The information of supervisor for Health Officer in the Basic Public Health in Province*. Nonthaburi: The Office of Deputy of The Ministry of Public Health.
- Budraj, S. (1984). The promotion for mosquitoes control in the small community, *The infectious journal*. 10,1, 64-71.
- Bureau of Epidemiology. (2003). *Planing to Prevention and control communicable disease in the Planing of Health Development 8th*. Bangkok: Agricultural Cooperation Printing House.
- Bureau of Epidemiology. (2002). *Planing to Prevention and control communicable disease in the Planing of Health Development 8th*. Bangkok: Agricultural Cooperation Printing House.
- Bureau of Epidemiology. (2001). *Planing to Prevention and control communicable disease in the Planing of Health Development 8th*. Bangkok: Agricultural Cooperation Printing House.
- Chittrasirinuwat, P. (2001). Participatory in community on the prevention and control of DHF case study in Lamare Subdistrict Surin Province. *Journal of Medical Science*, 11, 5,11.
- Chomchoeynititham, N. (1990). *Studying the efficiency of health program on the prevention and control of DHF of mothers having children aging 5-9 years old in Nonthaburi Province*. Master's thesis, the faculty of public health, Mahidol University.

- Chunawutthiyanon, S. (1989). *The people behaviors about the breeding areas of the Aedes Mosquitoes*. Master's thesis, the faculty of social science and humanities, Mahidol University.
- Department of communicable disease control, Ministry of Public Health. (2003). *Planning to Prevention and control communicable disease in the Planning of Health Development 8th*. Bangkok: Agricultural Cooperation Printing House.
- Department of communicable disease control, Ministry of Public Health. (2001). *Planning to Prevention and control communicable disease in the Planning of Health Development 8th*. Bangkok: Agricultural Cooperation Printing House.
- Department of communicable disease control, Ministry of Public Health. (1997). *Planning to Prevention and control communicable disease in the Planning of Health Development 8th*. Bangkok: Agricultural Cooperation Printing House.
- Division of Communicable Disease Control, Trang Public Health Office. (2003) *Annual report 2003*. Bangkok: Agricultural Cooperation Printing House.
- Green, L.W. & Kruter, M.W. (1991). *Health promotion planning : An educational and environmental approach*. Toronto : Mayfield publish in Company.
- Jittasirinuwat, P. (2001). *The integrated community participation of DF Control and Prevention case study of La Mae District, Chumporn Province*. Master's thesis, the faculty of public health, Mahidol University.
- Jantharasa, B. (1998). Knowledge, Attitude and the health behavior of the public health volunteers, Leai province. *The public health journal*. 15, 5, 281-290.
- Kitpredaborisuit, B. (1992). *The methods of Social science study*. (6th revision). Bangkok: B&B Publishing.
- Kittisupornpan, V. (1992). *The factors that influenced to knowledge of the high school students grade 12 for the health environment by the nuclear power plant*. Master's thesis, the faculty of social science and humanities, Mahidol University.

- Klinubon, C. (2000). The factors which effected to the preventive and control behavior of Dengue disease in the primary school students, Petchaburi province. *The public health journal of Petchaburi province*. 11, 18, 6-11.
- Kunnajak, P. (1973). *The attitude of the undergraduate student to the production in Thailand*. Master's Thesis, the faculty of science, Chulalongkorn University.
- Larsuwong, K. (1981). *The psychological study*. Bangkok: Mahakutrajavithayalai.
- Lawrence, W.G. & Marshall, W. K. (1991). *Health promotion planning are approach: (2nd ed.)*. Mountain View: Mayfield Publishing.
- Lemenshow, S. (1990). *Solutions Manual to Accompany Applied Survival Analysis: Regression Modeling of Time to Event Data*. New York: Wiley .
- Likitprasert, N. (1989). *The factors that effected to the acceptance on using arbat sand for population control of mosquitoes*. Master's thesis, the faculty of public health, Mahidol University.
- Limkamsuk, V. (1996). *The technology evaluation for development the resources for the preventive control of Dengue disease*. Master's Thesis, the faculty of public health, Mahidol University.
- Mackay, B.C. (1992). *AIDS and Protection Motivation Theory (PMT) Effects of Imagined Scenarios on Intent to use Condoms*. Michigan: Bell & Howell.
- Makmasin, A. (1996). The probability of the Dengue Hemorrhagic fever control program at school for the academic year 1993, *The infectious journal* 10,3,192-201.
- Makmog, S. (1999). *The factors that had been relevant to the preventive and control behavior of Dengue disease of students in Bureeram province*. Master's Thesis, the faculty of science, Mahidol University.

- Makornsan, N. (1994). *The factors that influenced to the health behavior as defined in the national health standard of the primary school students grade-6 in Supanburi province*. Master's Thesis, the faculty of public health, Mahidol University.
- Manonyapiju, N. (1985). *The health education research*. Bangkok: Aksornbandish.
- Marumdee, S. & Somboonphol, K. (2001). *Evaluating the public prevention and control of DHF: Project on the occasion of 72nd Anniversary of His Majesty the King on 5 December 1999 in 1999-2000 in Suphanburi Province*. Suphanburi: thawatkanpim.
- Medical Council. (1997). *Annual report 1997*. Bangkok: Agricultural Cooperation Printing House.
- Ministry of public health. (2004). *The conclusion of the situation of Dengue disease*. Retrieved 11 January, 2005, from <http://www.cdnet.moph.go.th/dhfweb/week46/index1.htm>.
- Muangman, T. & Suwam, S. (1986). *The organization behavior*. Bangkok: Thaiwattanapanit.
- Nantawong, P. & Talungpetch, M. (2000). The efficacy of the health education program for the preventive control of Dengue disease in the primary school students, Muang district, Nakornsrihammaraj. *Infection journal*.26, 2, 89-97.
- Nattesri, S. (1996). *The comparison study of the factor which influenced on the preventive HIV infection behavior in the undergraduate male students in Engineering department. Vocational studies and the high school in Bangkok*. Master's thesis, the faculty of public health, Mahidol University.
- Nounkam, P. (1992). *The social factors and the cultures that effected to the salt consumption behavior of people in Mahongsorn province*. Master's thesis, the faculty of social science and humanities, Mahidol University.

- Nounlaor, W. (1994). *The evaluation for the preventive control of Dengue Hemorrhagic fever program in the primary schools, Muang district, Nakornrajasrma*. Master's thesis, the faculty of medicine, Chulalongkorn university.
- Pleankam, P. (1999). *The fundamental public health Rajchaburi* : Thammarakkarpim.
- Poungngan, P. (1994). *The study of the situation of Dengue Hemorrhagic fever in slum, Huakwang*. Master's thesis, the faculty of medicine, Chulalongkorn university.
- Pukaoluan, S. (1997). *The preventive behavior of the Iodine deficiency disease of the primary school students in Krabi province*. Master's thesis, Institute for population and social research, Mahidol University.
- Rakpao, S & Doungkomsawat, S. (1997). *The health education process for the development of the health behavior, the case study of: the behavior development of the consumers in community*. (1st e.d.). Bangkok: Educational welfare program, Boromrajchanok institute, the office of deputy of The Ministry of Public Health.
- Ramasuitra, P. (1988). The roles of the social factors to the disease control. *The infection Journal*. 14,1, 75-95.
- Roger (1983). *A Way of Being*. Retrieved may 1, 2005, from http://ifets.icee.org/periodical/vol_4_2002/renate.html
- Sae Ung, P. (1992). *Studying the efficiency of health program on the behaviors of DHF prevention. In this research, the Health Belief Model was applied with the social support from teachers and father/mother*. Master's thesis, the Faculty of public health. Mahidol University.
- Sakchainanon, B. & Usaha, J. (1999). The education to community as regarded to the preventive control of Dengue disease. *Infection journal*. 25, 4, 315-321.

- Sangwaree, K. (1994). *The analysis of the expense of the ministry of public health for the preventive control of mosquitoes as the disease carriers*. Master's thesis, the faculty of economics, Kasetsart university.
- Sawaddiwudhipong, W., Chovakiratipong, C., Nguntra, P., Koonchote, S., Khumklam, P. & Lerdlukanarong, P. (1992). Effect of health education on community participation in control of dengue hemorrhagic fever in an urban area of Thailand. *Southeast Asian J Trop Med Public Health*. 23, 2, 200-206.
- Somprayone, S. (1982). *The tutorials for the health education*. (3rd e.d.). Bangkok: Thaiwattanapanit.
- Soonongbua, A. (2001). The model of participation and cooperation of Klong Si Community, Muang Chaiyaphum Municipality. Master's thesis. The Faculty of public health. Mahidol University.
- Suwan, P. (1997). *The health supports in America: The document for seminar about the health supports. 3-7 March*. Bangkok: Thaiwattanapanit.
- Suwan, P. (1991). *The health behavior: Kitti Watanakul, Editor. The tutorials for the health education, unit 1-7*. (9th e.d.). Bangkok: Sukhothaiithamathiraj University.
- Suwan, P. (1983). *The attitude: The measurement and the changes of the health Behavior*. (2nd e.d.). Bangkok: Thaiwattanapanit.
- Suwanna, K. (1998). *The factors that related to the health care behavior of the student*. Master's thesis, the faculty of the family health, Mahidol University.
- Suwannit, C. (2002). Studying the health care of them self of Thai family when healthy and sick. *Infection journal*. 26, 2. 30-36.
- Theppanom, M. & Sawing S. (1986). *The organization behavior*. Bangkok: Thaiwattanapanit.
- Usaha, C. & Sakchainanon B. (2001). *Studying the factors affecting the prevention of DHF of overall people*. Bangkok: Agricultural Cooperation Printing House.

- Walaisathien, J. (2001). *Studying the opinions, knowledge, understanding and practices in the prevention and control of DHF in the high risk areas in Surin Province*, Surin: Aksornkanpim.
- Wangpanit, P. (1983). *The knowledge evaluation*. Bangkok: Thaiwattanapanit.
- Wangrunghap, Y. (1995). The evaluation of success for the Dengue disease control program in the primary schools. *The infectious journal*. 21, 4, 222-228.
- Wangrunghap, Y. (1993). *Dengue Hemorrhagic Fever. (2nd e.d.)*. Bangkok: the organization of the war veteran support.
- Wiwatwarapong, N. (1994). *The evaluation for the preventive control of Dengue Hemorrhagic fever program in the primary schools, Muang district, Nakornrajasrima*. Master's thesis, the faculty of medicine, Chulalongkorn university.
- World Health Organization [WHO], (2002). *Aedes Research Unit. Fact sheet no 117*. Geneva : WHO.
- Yanviroj, W. (1991). *The factors that influenced to Dengue Hemorrhagic fever in Chiangmai province: the comparison study on between each district which had the highest and lowest rate of Dengue Hemorrhagic fever*. Master's Thesis, the faculty of public health, Mahidol university.

APPENDIX

APPENDIX

No.....

**The Study of the Caretaker's Performance for Prevention of
Dengue fever (DF) During Care of Patients at Home**Direction

This questionnaire is the part of the research study having the objective to study results of the performance in prevention of Dengue fever of the caretakers during care of the patients at home. The questionnaire responses will be used to plan the appropriate and efficient guidelines for the prevention of Dengue fever further.

All answers will be confidentially kept and used only for the academic purposes. After the research, any respondent interested in the research conclusion can contact the Public Health Office Ban Khuan Subdistrict, Muang District, Trang Province 92000. The researcher hereby would like to thank for all kind cooperation and useful information.

Dr. Witoon Luangdilok
Researcher
Student of Master of Public Health
Public Health College, Chulalongkorn University

**Questionnaire of the caretaker's performance for prevention of
Dengue fever (DF) during care of patients at Home
(For the main caretakers of DF patients)**

Part 1: Personal data and related factors

Direction: Please make the mark ✓ in the parenthesis () and fill in the space in front of the statement, which is correct and true.

1.1 Personal data of the caretaker

1. Gender
 - () 1. Male
 - () 2. Female
2. Religion
 - () 1. Buddhism
 - () 2. Islam
 - () 3. Christianity
3. Age..... years old (Full age)
4. Occupation
 - () 1. Farmer, Gardener, Field Farmer
 - () 2. Merchant
 - () 3. Government Officer, State Enterprise Officer
 - () 4. Employee
 - () 5. Other (Specify)
5. Highest education
 - () 1. Non-Formal education
 - () 2. Primary Education
 - () 3. Secondary education/Vocational certificate
 - () 4. Diploma
 - () 5. Bachelor's Degree
 - () 6. Higher than bachelor's degree

6. Average income of family (Baht per month)
- () 1. Less than 5,000 Baht () 2. 5,000 – 10,000 Baht
- () 3. 10,001 – 15,000 Baht () 4. More than 15,000 Baht
- () 5. Other (Specify).....
7. Marital status
- () 1. Single () 2. Married
- () 3. Widowed () 4. Divorced, Separated
8. Number of Caretakers Providing Care for DF Patients: persons
9. What is the relationship between the patient and the caretaker?
- () 1. Child of the care taker
- () 2. Father and mother of the care taker
- () 3. Brother, sister, aunt, uncle, grandfather, grandmother
- () 4. Other (Specify).....
10. In the previous five years, is anyone in your family suffered from DF?
- () 1. No
- () 2. Yes, choose the year and fill in the number of patients
- 2.1 In 2004, Person (s)
- 2.2 In 2003, Person (s)
- 2.3 In 2002, Person (s)
- 2.4 In 2001, Person (s)
- 2.5 In 2000, Person (s)
11. Have you experience taking care of other DF patients?
- () 1. No
- () 2. Yes Please specify the number of patients: person (s)
12. Do you know that the knowledge about DF status of the patient to whom care was provided?
- () 1. No
- () 2. Yes, from whom? Please specify:.....

1.2 Factors related to the prevention of DF

13. From whom have you received the advice on the prevention of DF?
(More choices are available)
- () 1. I never receive any advice from anyone.
 - () 2. From the doctors, nurses or medical team member.
 - () 3. From the relatives receiving the advice from doctors.
 - () 4. From the public health officers working near residence.
(not the medical team)
 - () 5. From the Public Health Volunteers (PHVs)
 - () 6. From the neighbors
 - () 7. Other (Specify)
14. Where have you source of knowledge about DF? (More choices are available)
- () 1. Television
 - () 2. Radio
 - () 3. Newspaper
 - () 4. Village News Center
 - () 5. Doctors, nurses, public health officers
 - () 6. PHVs
 - () 7. Community leaders
 - () 8. Other (Specify)
15. From whom have you received the cooperation for the prevention of DF? (More choices are available)
- () 1. Family members
 - () 2. Neighbors
 - () 3. Village Headman, village Committee
 - () 4. Tambol Administration Organization
 - () 5. Doctors, nurses, public health officers
 - () 6. PHVs
 - () 7. Community leaders
 - () 8. Other (Specify)

Part 2: Factors related to the caretakers providing care for DF patients

2.1 Knowledge on DF

Direction: Please make the mark ✓ in the parenthesis () and fill in the space in front of the statement, which is correct and true.

1. Which kind of mosquito is the intermediate host of DF

<input type="checkbox"/> 1. <i>Anopheles</i>	<input type="checkbox"/> 2. <i>Aedes aegypti</i> mosquitoes
<input type="checkbox"/> 3. Urban mosquitoes	<input type="checkbox"/> 4. <i>Black</i> mosquitoes
2. When the intermediate host of DF will bite people?

<input type="checkbox"/> 1. In the morning	<input type="checkbox"/> 2. In the daytime
<input type="checkbox"/> 3. In the evening	<input type="checkbox"/> 4. At night
3. How can DF be spread?

<input type="checkbox"/> 1. By the blood of mosquitoes	<input type="checkbox"/> 2. By the blood of patient
<input type="checkbox"/> 3. When the mosquitoes bite people	<input type="checkbox"/> 4. Drinking water with mosquitos' eggs
4. Who can be most suffered from DF?

<input type="checkbox"/> 1. Children	<input type="checkbox"/> 2. Adults
<input type="checkbox"/> 3. Old people	<input type="checkbox"/> 4. Patients
5. Concerning the symptoms of DF patient, which one is true?

<input type="checkbox"/> 1. The patient has high fever which fever cannot be reduce by medicines or tepid sponge.	<input type="checkbox"/> 2. The patient vomits or bloody stool.
<input type="checkbox"/> 3. The patient has bloody spots on body surface	<input type="checkbox"/> 4. All choices are correct.
6. Which medicine should not be bought for the patient?

<input type="checkbox"/> 1. Antipyretic, Aspirin	<input type="checkbox"/> 2. Antipyretic, Paracetamol
<input type="checkbox"/> 3. Electrolyte powder	<input type="checkbox"/> 4. Medicines for abdominal distension

7. To prevent the growth of *Aedes aegypti* mosquitoes, when should larvae be destroyed?
- () 1. Any time () 2. Every 7 days
() 3. 7 – 10 days () 4. Every 2 weeks
8. While the child is suffered from DF, why do the caretaker prevent the patient from being bitten by mosquito?
- () 1. Because the patient has DF and the patient will get worse if he/she is bitten by mosquito.
() 2. Because the diseases can be spread to others as the mosquitoes is the intermediate host.
() 3. Because the child may be allergic to mosquitoes.
() 4. Because the child will be more itchy.
9. While having the DF patient at home, what should we do?
- () 1. Sleep under bed net all the time
() 2. Avoid not being bitten by mosquito
() 3. Get rid of the mosquitoes sources in the house and nearby
() 4. All choices are correct
10. Which method can prevent the DF?
- () 1. Find the mosquitoes sources in the house and nearby
() 2. Avoid being bitten by mosquito by sleeping under bed net
() 3. Always get rid of the larvae of mosquitoes both in the house and surrounding areas
() 4. All choices are correct

2.2 Information on the perception of risk and severity of DF

Direction: Please make the mark ✓ in the parenthesis () and fill in the space in front of the statement, which is correct and true.

Statement	Opinion Levels					
	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	
1. When compared with financial, drugs or educational problems, the problem of DF is most important.						
2. When a member of family or community is suffered from DF, all people in the family or community can be infected by DF as well.						
3. If there is a DF patient, the local public health officer should be immediately informed.						
4. The role to eliminate the mosquitoes larvae should be assigned to the PHVs.						
5. Getting rid of the mosquitos' sources is very difficult.						
6. DF presents serious symptoms.						
7. You are unconcerned when finding the mosquitoes larvae in the house.						
8. DF is an importance infectious disease						
9. Getting rid of the <i>Ades aegypti</i> mosquitoes cannot prevent the DF.						

10. The best way to prevent the DF is to protect the DF patients from being bitten by the mosquitoes.					
11. You feel very ashamed when the villagers regard your home as DF source.					
12. You are willing to allow the public health officer to spray ULV in your house and surrounding areas as a prevention of DF.					
13. The public health officers should spray ULV to kill mosquitoes rather than advising you to get rid of the larvae in your house.					
14. Having the DF patient in your house, you will be very worried and afraid that other family members will be infected.					
15. The <i>Aedes aegypti</i> mosquitoes bite the DF patients cannot spread the DF disease to other people.					
16. People may die by DF disease.					
17. The prevention and control of <i>Aedes aegypti</i> mosquitoes should be performed only in the houses having DF patients.					

Part 3: Information on the performance related to the prevention of DF

Direction: Please make the mark in the parenthesis () and fill in the space in front of the statement, which is correct and true.

Questions	Yes			Never
	Always	Some times	Rarely	
1. When having the DF patient at your house, you try to find the mosquito sources in your house.				
2. When finding the mosquitoes larvae, you get rid of them immediately.				
3. To protect the patient, you manage him/her sleep under the bed net.				
4. You clean your house carefully and thoroughly to get rid of the mosquito sources.				
5. Your family members and you get rid of the mosquito sources in the house and surrounding areas together.				
6. When having the DF patient at your house, you particularly get rid of the mosquito sources more frequently.				
7. When having the DF patient in your house, you particularly try to protect the patient from being bitten by the mosquitoes.				
8. To avoid the mosquitoes, you use the mosquitoes repellent or spray.				
9. In the normal period, you try to find the mosquitoes larvae every seven days.				
10. You close all jar covers in the house upside down.				
11. You turn upside down all coconut shells, used tires and other mosquitoes sources in the surrounding of the house.				
12. Even after the patient has recovered, you still get rid of the mosquitos' larvae in the house.				
13. Do you think, are there mosquitoes in your house and nearby? () 1. No () 2. Yes				

Observation and Interview

Part 4: The evaluation of performance for the prevention of DF

4.1 Observation on the performance for the prevention of DF

Observation	Yes			No
	High	Medium	Low	
1. The patients sleep under the bed net or use any method to prevent from being bitten by mosquito.				
2. Abate sand is used at the house of patients to get rid of the mosquito sources.				
3. All coconut shells are turned upside down in the house of patients to get rid of the mosquito sources.				
4. All jar covers in the house of patients are closed to get rid of the mosquito sources.				
5. Elimination of mosquito breeding sources is done in the house of patient by other methods.				
6. Do you find mosquitoes larvae in the house or surrounding areas of the patients? () 1. No () 2. Yes				

4.2 Interview on the performance for the prevention of DF (Questions were asked to the adult patients. If the patients were children, the questions were asked to their mother or caretaker instead)

(1) Is the patient in the recovery period bitten by the mosquito?

() 1. No

() 2. Yes

(2) Does the patient use any method to avoid being bitten by the mosquito?

() 1. No (Go to Question No. 4)

() 2. Yes (Go to Question No. 3)

(3) How the patient prevents himself/herself from being bitten by the mosquito? Who helps the patient?

.....
.....
.....

(4) How the family of the patient gets rid of the mosquitos' larvae in the house and surrounding areas?

.....
.....
.....

(5) Who are the caretakers providing the prevention of DF?

.....
.....
.....

(6) Which activities are performed to prevent the family from DF?

.....
.....
.....

(7) Which activities are performed to prevent the community from DF?

.....
.....
.....

Thank you very much for your kind cooperation
The Researcher

Patient's Name:.....Address:

HN..... Being sick from: to

CURRICULUM VITAE

Name : Witoon Luangdilok

Date of Birth : June15,1957

Gender : Male

Nationality : Thai

Marital Status : Married

Education Background : General Practice MD.
Chiang Mai University Thailand.

Preventive Medicine (Epidemiology)
Medical council. Thailand.

Present Position : Expert Preventive Medicine, Level 9.

Organization : Trang public health office.