

## Appendices

## **Appendix 2.1: Danger signs of pneumonia**

The WHO classifies ARI according to the signs seen in children. It makes a distinction by age: the infant (under two months old), or the child (from two months to five years old). Health workers are requested to diagnose children by looking first for danger signs. Any child found to have a danger sign will be classified as having severe disease and should be referred to a hospital, since its life is threatened. A child without a danger sign should be checked on any sign that could be a symptom of pneumonia (WHO, 1992; 1994)

### *A) Classification of illness in the child between two months and five years*

*according to signs observed:*

#### 1. Very severe disease:

- not able to drink, convulsions, abnormally sleepy, or difficult to wake, stridor in calm child, or severe malnutrition

#### 2. Severe pneumonia:

- chest indrawing

#### 3. Pneumonia (not severe):

- fast breathing (at least 50 times per minute up to 12 months old, or 40 at least times per minute up to five years old)

#### 4. No pneumonia (cough or cold):

- a child without chest indrawing or fast breathing

*B) Classification of illness in the child under two months old according to signs*

*observed:*

1. Very severe disease:

- stopped feeding well, convulsions, abnormally sleepy or difficult to wake, stridor or wheezing, fever or low body temperature

2. Severe pneumonia:

- fast breathing (at least 60 times per minute), chest indrawing

3. No pneumonia (cough or cold):

- no fast breathing, chest indrawing, or danger signs

### **Appendix 3.1: Proposal baseline study**

The research will be carried out by an appraisal team, including programme health staff, health officials, community members, and possibly technical specialists (sanitation, hygiene, nutrition...). Inclusion criteria for appraisal team members will be: familiarity with communities and its health problems, ability to cooperate in a team, ability to communicate with the community in an unthreatening way, ability to listen and record narratives, and ability to examine records.

The baseline study will last for about ten days and will be facilitated by a consultant who has experience with RPA. It will start with a four day workshop, in which the appraisal team will (1) receive an introductory explanation on the aim and methodology of the baseline study, (2) develop a checklist for data collection (using the list of variables discussed in section 3.4.1 – “b” as guidelines), and decide how to obtain it, (3) develop data collection tools (observation lists, semi-structured questionnaires) and decide which type of documents are needed, (4) train on interviewing people and test the questionnaires. After the workshop, the information will be collected, which will last for about three days. This will be followed by analysis of the information (1 day). The findings will be reviewed with the key informants to check their validity (1 day). A workshop report will be written (1 day).

### **Appendix 3.2: Data collection tools used during the baseline study**

#### **1) Consultation of documents:**

Access to documents will have to be negotiated with the authorities or other organizations before starting the baseline study. Documents will give information on activities and processes going on in the community, and will give ideas about important questions that should be asked in the interviews, or observations to be made (Patton, 1990). They may provide general information on environmental health hazards, risk behaviour, etc... (Annett & Rifkin, 1995). Health facility registers may provide mortality and morbidity figures on ARI.

#### **2) Semi-structured interviews:**

Team members will interview key-informants (teachers, shop-keepers (male and female), traditional health practitioners, woman association members and leaders, or other non-prominent community members, because of their access to information about the community, rather than for their personal opinions (Annett & Rifkin, 1995).

#### **3) Observation:**

Observation will be done unobtrusively (Patton, 1990) in public places, or in the houses that are visited for interviews, with consent from the owner. Observation will include living conditions and relations between different social groups in public places.

**Appendix 3.3: Questionnaire to elicit personal data of participants to the PAR process**

Name of respondent: .....

Address: .....

**Data concerning mother**

1 age .....years

2 formal education

1 none

2 primary school (grade 1 - 4)

3 primary school (grade 5 - 6)

4 second. school (grade 1 - 3)

5 second. school (grade 4 - 6)

6 higher studies

3 occupation.....

4 income...../month

5 Do father and mother live together with their children?

1 yes

2 they are separated

3 other.....

6 How many children live in the family?.....

7 Has any child under five in this family been ill with pneumonia before?

1 yes

2 no

**Data concerning father**

1 age.....years

2 formal education

1 none

2 primary school (grade 1 - 4)

3 primary school (grade 5 - 6)

4 second. school (grade 1 - 3)

5 second. school (grade 4 - 6)

6 higher studies

3 occupation.....

4. Income ...../month

**Appendix 3.4: Examples of questions to ask participants to elicit their perceptions of signs of ARI in their children in the past, and their responses**

(modeled on the questionnaire used for my data collection exercise in Chonburi Province, see Chapter 4)

1. Did it ever happen that your child made some noise when breathing?

- 1 no noise
  - 2 not sure
  - 3 it made some noise (please, say what you did?)
- .....

2. Did it ever happen that your child had a cough for more than two weeks?

- 1 no
- 2 not sure
- 3 yes → what did you do?

- 1 nothing
  - 2 self-medication (which drugs?)
- .....

- 3 go to medicine doctor for traditional herbs
- 4 go to health volunteer
- 5 go to private clinic
- 6 go to health center
- 7 ask for advice from relatives or neighbours
- 8 go to government hospital
- 9 other.....

3. Did your child ever have convulsions?

- 1 no
- 2 not sure
- 3 yes → what did you do?

- 1 nothing
- 2 give traditional herbs
- 3 go to health volunteer
- 4 go to someone who is familiar with health problems
- 5 go to private clinic
- 6 go to health center
- 7 give drugs (which ones?) .....
- 8 go to private hospital

4. Has your child ever been abnormally sleepy (“inert”)?

- 1 no
- 2 not sure
- 3 yes → what did you do?
  - 1 nothing
  - 2 give traditional herbs
  - 3 go to the health volunteer
  - 4 go to someone who is familiar with health problems
  - 5 go to doctor at primary health care center
  - 6 go to the health center
  - 7 give drugs (which ones?) .....
  - 8 go to private hospital
  - 9 other .....

5. Does your child sometimes have a runny nose?

- 1 no
- 2 not sure
- 3 yes → what do you do?
  - 1 use cotton
  - 2 use some tissue to clean the nose
  - 3 other.....

6. Did your child ever show fast breathing?

- 1 no
- 2 not sure
- 3 yes → what did you do?
  - 1 nothing
  - 2 give traditional herbs
  - 3 go to health volunteer
  - 4 go to someone who is familiar with health problems
  - 5 go to private clinic
  - 6 go to health center



- 7 give drugs (which ones?) .....
- 8 go to private hospital
- 9 other .....

7. Did your child ever show chest indrawing?

- 1 no
- 2 not sure
- 3 yes → what did you do?
  - 1 nothing
  - 2 take traditional medicine
  - 3 go to health volunteer
  - 4 give traditional herbs
  - 5 go to private clinic
  - 6 go to health center
  - 7 ask advice from relatives or neighbours
  - 8 give drugs (which ones?)
  - .....
  - 9 go to private hospital
  - 10 other .....

**Appendix 3.5: WHO chart for the management of the child with cough or difficult breathing (WHO, 1994)**

This chart gives an overview of the danger signs in children less than five years of age.

This chart urges a health worker that notices one of the mentioned danger signs to give the child a first dose of antibiotics and to refer it urgently to a hospital. On the basis of this recommendation I consider all action by caretakers who do not seek immediate treatment from a trained health worker when observing these danger signs, as delaying. The danger signs are:

a) in children less than two months old:

- fever
- not feeding well
- low body temperature

b) in children more than two months old:

- convulsions
- not able to drink
- abnormally sleepy
- difficult to wake
- noisy breathing
- fast breathing
- chest indrawing

### **Appendix 3.6: UNICEF recommendations to prevent pneumonia and to give home treatment to children with an ARI (UNICEF, 1993).**

UNICEF recommends caretakers to apply following measures to protect their children against pneumonia:

- breastfeeding until the child is six months old
- provide a balanced diet, rich in vitamin A
- immunizations (before the child is one year old)
- have children who do not breastfeed sleep alone to avoid the spread of cough and colds

Other possible measures, pertaining to elementary hygiene and considered preventive against diarrhoea, are also applicable in the case of ARI, e.g. washing a child's hands often, or washing a child's face at least once a day.

Children suffering of an ARI, can be treated at home:

- continued feeding (breastfeeding or mother's milk, or other meals for children who do not breastfeed);
- continued giving of fluids;
- keep the child warm, but not hot;
- clear the nose (especially before breastfeeding or sleeping);
- aerate the sleeping room;
- avoid indoor pollution through tobacco smoke or cooking fires);
- avoid spitting and sneezing close to a sick child; avoid contact of people with colds and coughs with babies

### **Appendix 3.7: Health education and training in life supporting skills**

The facilitators will set health education objectives, which match their health objectives (WHO, 1988). The health education objectives should be expressed in terms of specific knowledge or skills participants should acquire. Such skills can be considered ideal behaviour (behaviour that, from a scientific point of view, would lead to the desired health objective). However, in the course of their interaction with the participants, the facilitators may decide to lower their targets and replace what they consider ideal behaviour for feasible behaviour. This would express the most realistic behavioural goal that their intervention is expected to promote (see *A Tool Box for Building Health Communication Capacity*, 1996).

During the process the participants may request to be taught specific health lessons. In order to teach effectively health educators should understand the participants' perspective (and understand that they may act rationally, even though from a bio-medical view their behaviour may be considered irrational (Iyun & Tomson, 1996)). Health educators should avoid eradicating undesired behaviour, but rather try to embed their health messages in the existing participants' perceptions, that are being used as a vehicle for transmission of new ideas (Stone, 1986; McNee et al., 1995). In addition to this, participants making their own learning materials has the advantage of active learning and better dissemination to peer groups (Rudd & Comings, 1994).

Training in life supporting skills will depend on the actual skills the participants master and the learning and other targets that are being defined during the process. Such skills can have a varied character, e.g. related to enhancing access to resources, to improve communication with other stakeholders, to advocate one's own cause... Rains & Ray (1995) give the example of a group of volunteers with no research background, who want to detect the causes of some of the major health problems in their town. After deciding that a questionnaire is the right tool to elicit the information needed, the group is instructed by university researchers into the principles of carrying out a questionnaire survey and of analyzing the data.

### **Appendix 3.8: Operational Definitions**

- caretaker: the person(s) who are responsible for the child's well-being, and who cater for its physical, mental, and other needs, and who have, in virtue of this, close contact with the child.

- unwarranted delay: death of a child, either at a health facility, or at home, reportedly after having suffered of acute cough and fever

-fast breathing (clinical definition)

a) children under 2 months: 60/min.

b) children from 2 months to 1 year: 50/min

c) children above 1 year: 40/min

(WHO, 1994)

- Participatory Action Research (PAR): “(...) a process of collective, community-based investigation, education and action for structural and personal transformation.” (P. Maguire, quoted in Wang et al., 1996). For the purpose of this proposal I will define PAR as the process in which a facilitator induces the participants (caretakers) to define the problems related to pneumonia in their children, as well as solutions to these problems; and in which outsiders give health messages on a need basis as indicated by the participants, and with their full cooperation in its organization; and in which the facilitators assist the participants in developing life and problem solving skills.

- cases of pneumonia: as diagnosed by a qualified health worker

- danger sign of pneumonia: fast breathing (Malik Kundi et al., 1996)

- participant: caretaker who volunteered to do the pre-test and attended at least 80% of the PAR sessions
- Rapid Participatory Appraisal (RPA): the process in which a team of programme members and community representatives carry out a survey of the needs of a community, using data collection methods such as observation, in-depth interviews, and consultation of documents (Annett & Rifkin, 1995)
- facilitator: a staff member of the organizing institution, with a development back-ground, assuming the role of change agent, and assisting the participants to explore their situation, learn. and develop skills to improve their life.

**Appendix 4.1: Use of antibiotics in common cold in Thailand and Chonburi province (year 1995; children under five)**

	Regional Hospital	Community Hospital	Health Center
Chonburi Province	50.4%	64.2%	30.4%
Whole country	35.6%	47.7%	46.2%

Source: Ministry of Public Health, Department of communicable Disease Control, ARIC Section. TB Division: Programme for Control of Acute Respiratory Infections: Achievements 1990-1997



## Appendix 4.2: Questionnaire, first version (English)

### QUESTIONNAIRE

Number: .....

respondents: caretakers of children under five years old who have been treated for pneumonia in Cholburi district hospital between 1 January and 31 December 1997.

Name of respondent:

Sexe:

Age:

Education:

Education of partner:

Number of children in household:

1. Is there a health volunteer in your village? Please, mark appropriate box.

yes    no    not sure

2. Has a health educator been assigned to your family? Please, mark appropriate box.

yes    no    not sure

3. Who do you seek treatment from usually? Please, mark appropriate box, or boxes.

health volunteer

health educator

doctor in private clinic

Primary Health Care Center

pharmacist

myself, the respondent (self-care)

traditional healer (samun pai)

other (please, specify:.....)

4. Which signs did the child show in the beginning that made you aware that may be it was ill?

Please, mark appropriate boxes.

- wheezing:                    yes        no        not sure

- coughing:                    yes        no        not sure

- not able to drink:            yes        no        not sure

- not able to eat:              yes        no        not sure

- convulsions:                yes        no        not sure

- abnormally sleepy:            yes        no        not sure

- difficult to wake:            yes        no        not sure

- stridor in calm child:        yes        no        not sure

- fever:                        yes        no        not sure

- runny nose:                 yes        no        not sure

- fast breathing:                yes        no        not sure

- chest indrawing:              yes        no        not sure

- other (please, specify:.....)

5. Can you describe the signs you saw?

6. Which is the single one sign that prompted you to seek treatment for your child?
7. How many days did your child show the sign you mentioned in question 6?
8. Had you ever seen a child with this sign before?  
 yes      no      not sure
9. When you noticed that your child was may be ill, did you ask advice to other people on what was the best thing to do? If yes, to whom? Please, mark the appropriate box or boxes.
- health volunteer
  - health educator
  - family member
  - pharmacist
  - Primary Health Care Center
  - friends
  - doctor in private clinic
  - other (please, specify:.....)
10. Which person gave the first care to your child? Please, mark the appropriate box or boxes.
- health volunteer
  - health educator
  - pharmacist
  - myself, the respondent (self-care)
  - Primary Health Care Center
  - doctor in private clinic
  - traditional healer (samun pai)
  - other (please, specify:.....)
11. Who decided that the child should be brought to the hospital?
12. How long did it take to bring the child from your home to the hospital?
13. What do you think if your child coughs many times in a short time (e.g. ten minutes)? Please, mark only one box.
- it is normal
  - it is not normal, but not worrying
  - it is worrying
  - it is alarming
  - other (please, specify:.....)
14. What do you do if your child coughs many times in a short time (e.g. ten minutes)? Please, mark the appropriate box or boxes.

nothing  
give cough syrup  
go to samun pai  
go to the health volunteer  
go to the health educator  
give lemon and honey  
give lemon and salt  
go to the doctor in a private clinic  
go to the Primary Health Care Center  
ask advice to someone  
give a drug (please, specify:.....)  
other (please, specify:.....)

15. What do you think when your child wheezes many times in a short time (e.g. ten minutes)? Please, mark only one box.

it is normal  
it is not normal, but not worrying  
it is worrying  
it is alarming  
other (please, specify:.....)

16. What do you do if your child wheezes many times in a short time (e.g. ten minutes)? Please, mark the appropriate box or boxes.

nothing  
go to samun pai  
go to the health volunteer  
go to the health educator  
go to the doctor in a private clinic  
go to the Primary Health Care Center  
ask advice to someone  
give a drug (please, specify:.....)  
other (please, specify:.....)

17. What do you think when your child has fever (a higher temperature than normal when you touch its forehead with your hand) for more than one day? Please, mark only one box.

it is normal  
it is not normal, but not worrying  
it is worrying  
it is alarming  
other (please, specify:.....)

18. What do you do if your child has fever (a higher temperature than normal when you touch its forehead with your hand) for more than one day? Please, mark the appropriate box or boxes.

nothing  
go to samun pai  
go to the health volunteer  
go to the health educator  
go to the doctor in a private clinic  
go to the Primary Health Care Center  
ask advice to someone  
give paracetamol  
give other drug (if yes: which one?)  
give a drink (ahaan oon - a soup)  
keep the child warm  
rinse the body with a wet towel  
other (please, specify:.....)

19. What do you think when your child has convulsions? Please, mark only one box.

it is normal  
it is not normal, but not worrying  
it is worrying  
it is alarming  
other (please, specify:.....)

20. What do you do if your child has convulsions ?

nothing  
go to samun pai  
go to the health volunteer  
go to the health educator  
go to the doctor in a private clinic  
go to the Primary Health Care Center  
ask advice to someone  
give drug (please, specify:.....)  
other (please, specify:.....)

21. What do you think if your child has fast breathing (when its breathing rate is clearly faster than normal)? Please, mark only one box.

it is normal  
it is not normal, but not worrying  
it is worrying  
it is alarming  
other (please, specify:.....)

22. What do you do if your child has fast breathing (when its breathing rate is clearly faster than normal)? Please, mark the appropriate box or boxes.

nothing  
go to samun pai  
go to the health volunteer  
go to the health educator  
go to the doctor in a private clinic  
go to the Primary Health Care Center  
ask advice to someone  
give drug (please, specify:.....)  
other (please, specify:.....)

Thank you for giving some of your time to answering these questions.

**Appendix 4.3: Questionnaire, second version (English)**

**QUESTIONNAIRE**

Number: .....

Tambon: ..... Village: .....

respondents: caretakers of children under five years old who have been treated for pneumonia in Chonburi district hospital between 1 January and 31 December 1997.

Name of respondent:

Sex:

Age:

Education:

Education of partner:

Number of children in household:

1. Is there a health volunteer in your village? Please, mark appropriate box.

yes      no      not sure

2. Who do you seek treatment from usually? Please, mark appropriate box, or boxes.

health volunteer

doctor in private clinic

Primary Health Care Center

pharmacist

myself, the respondent (self-care)

traditional healer (samun pai)

other (please, specify:.....)

3. Did your child (in the beginning [of its sickness])

before it was treated in Chonburi hospital

show coughing? (many times in a short period, e.g. ten minutes)? Please, mark the appropriate box or boxes.

yes      no      not sure

if yes, go to question 4

if no, or not sure, go to question 5

4. If yes, what did you do? Please, mark appropriate box or boxes

nothing  
give cough syrup  
go to samun pai  
go to the health volunteer  
go to the health educator  
give lemon and honey  
give lemon and salt  
go to the doctor in a private clinic  
go to the Primary Health Care Center  
ask advice to someone  
give a drug (please, specify:.....)  
other (please, specify:.....)

5 Did your child (in the beginning [of its sickness])  
before it was treated in Chonburi hospital  
show wheezing (many times in a short time, e.g. ten minutes)

yes no not sure

if yes, go to question 5.  
if no or not sure, go to question 6

6. If your child showed wheezing, what did you do? Please, mark the appropriate box or boxes.

nothing  
go to samun pai  
go to the health volunteer  
go to the health educator  
go to the doctor in a private clinic  
go to the Primary Health Care Center  
ask advice to someone  
give a drug (please, specify:.....)  
other (please, specify:.....)

7. Was your child (in the beginning [of its sickness])  
before it was treated in Chonburi hospital  
(sometimes) unable to drink?

yes no not sure

if yes, go to question 8  
if no, or not sure, go to question 9

8. If your child was (sometimes) unable to drink, what did you do? Please, mark appropriate box or boxes.

9. Was your child (in the beginning [of its sickness])  
before it was treated in Chonburi hospital  
(sometimes) unable to eat?

yes no not sure

if yes, go to question 10

if no, or not sure, go to question 11

10. If your child was unable to eat, what did you do? Please, mark appropriate box or boxes.

11. Did your child (in the beginning [of its sickness])  
before it was treated in Chonburi hospital  
show convulsions?

yes no not sure

if yes, go to question 12

if no, or not sure, go to question 13

12. If your child showed convulsions what did you do? Please, mark appropriate box or boxes

nothing  
go to samun pai  
go to the health volunteer  
go to the health educator  
go to the doctor in a private clinic  
go to the Primary Health Care Center  
ask advice to someone  
give drug (please, specify:.....)  
other (please, specify:.....)

13. Was your child (in the beginning [of its sickness])  
before it was treated in Chonburi hospital  
(sometimes) abnormally sleepy?

yes no not sure

if yes, go to question 14

if no, go to question 15

14. If your child was abnormally sleepy, what did you do? Please, mark appropriate box or boxes

15. Was your child (in the beginning [of its sickness])  
before it was treated in Chonburi hospital



(sometimes) difficult to wake?

yes      no      not sure

if yes, go to question 16

if no, or not sure, go to question 17

16. If your child was difficult to wake, what did you do? Please, mark appropriate box or boxes.

17. Did your child (in the beginning [of its sickness])  
before it was treated in Chonburi hospital  
show stridor?

yes      no      not sure

if yes, go to question 18

if no, or not sure, go to question 19

18. If your child showed stridor, what did you do? Please, mark appropriate box or boxes.

19. Did your child (in the beginning [of its sickness])  
before it was treated in Chonburi hospital  
show fever (a higher temperature than normal when you touch its forehead with your hand for  
more than one day)?

yes      no      not sure

if yes, go to question 20

if no, or not sure, go to question 21

20. If your child had fever, what did you do? Please, mark the appropriate box or boxes.

- nothing
- go to samun pai
- go to the health volunteer
- go to the health educator
- go to the doctor in a private clinic
- go to the Primary Health Care Center
- ask advice to someone
- give paracetamol
- give other drug (if yes: which one?)
- give a drink (ahaan oon - a soup)
- keep the child warm
- rinsed the body with a wet towel
- other (please, specify:.....)

21. Did your child (in the beginning [of its sickness])  
before it was treated in Chonburi hospital

have a runny nose?

yes      no      not sure

if yes, go to question 22

if no, or not sure, go to question 23

22. If your child had a runny nose, what did you do? Please, mark the appropriate box or boxes.

23. Did your child (in the beginning [of its sickness])  
before it was treated in Chonburi hospital  
show fast breathing (when its breathing rate is clearly faster than normal)?

yes      no      not sure

If yes, go to question 24

if no, or not sure, go to question 25

24. If your child showed fast breathing, what did you do? Please, mark the appropriate box or boxes.

nothing  
go to samun pai  
go to the health volunteer  
go to the health educator  
go to the doctor in a private clinic  
go to the Primary Health Care Center  
ask advice to someone  
give drug (please, specify:.....)  
other (please, specify:.....)

25 Did your child (in the beginning [of its sickness])  
before it was treated in Chonburi hospital  
show chest indrawing?

yes      no      not sure

if yes, go to question 26

if no, or not sure, go to question 27

26. If your child showed chest indrawing, what did you do?

27. Did your child (in the beginning [of its sickness])  
before it was treated in Chonburi hospital

show any other sign, not mentioned above, that made you think it was may be ill? (please, specify:.....)

if yes, go to question 28

if no, go to question 29

28. What did you do when your child showed the sign that you mentioned in question 27?

29. When you noticed that your child was may be ill, did you ask advice to other people on what was the best thing to do? If yes, to whom? Please, mark the appropriate box or boxes.

health volunteer

health educator

family member

pharmacist

Primary Health Care Center

friends

doctor in private clinic

other (please, specify:.....)

30. Which is the single one sign that prompted you to seek treatment for your child?

31. Had you ever seen a child with this sign before?

yes      no      not sure

32. How many days did your child show the sign you mentioned in question 30 when it was treated in the hospital?

33. Which person gave the first care to your child? Please, mark the appropriate box or boxes.

health volunteer

pharmacist

myself, the respondent (self-care)

Primary Health Care Center

doctor in private clinic

traditional healer (samun pai)

other (please, specify:.....)

34. Did the person who treated your child first, as in question 33 give it a drug ?

yes      no

if yes, go to question 35

if no, go to question 36

35. If yes, which drug?

36. Did your child receive care by a second person after the first care was given by the person you mentioned in your answer to question 33?

yes      no

If yes, go to question 37

If no, go to question 38

37. Who was the second person from whom your child received care as you mentioned in your answer to question 36? Please, mark the appropriate box (only one answer possible)

health volunteer

pharmacist

myself, the respondent (self-care)

Primary Health Care Center

doctor in private clinic

traditional healer (samun pai)

other (please, specify:.....)

38. Who decided that the child should be brought to the hospital?

39. How long did it take to bring the child from your home to the hospital?

Thank you for giving some of your time to answering these questions.



3 อาชีพคือ..... 3

อาชีพคือ.....

4 รายได้.....บาท/เดือน

4 รายได้.....บาท/เดือน

5 ปัจจุบันบิดาและมารดาของเด็กอาศัยอยู่ด้วยกันหรือไม่

1 อยู่ด้วยกัน

2 แยกกันอยู่

3 อื่นๆ (ระบุ) .....

6 ในครัวเรือนมีบุตรทั้งหมดจำนวน ..... คน

7 ในครัวเรือนเคยมีเด็กอายุต่ำกว่า 5 ปี เป็นโรคปอดบวม ก่อนหน้าเด็กคนนี้หรือไม่

1 เคย

2 ไม่เคย

#### ข้อมูลเด็ก

8 เด็กคนนี้เป็นบุตรคนที่.....

9 เพศ ชาย หญิง

10 เด็กคนนี้เข้ารับการรักษาในโรงพยาบาลชุมชนเมื่ออายุ.....ปี.....เดือน

1. ในหมู่บ้านของท่านมี อสม. หรือไม่

- 1 มี 2 ไม่มี 3 ไม่แน่ใจ

2. เมื่อมีคนในครอบครัวป่วย ส่วนใหญ่จะไปรักษาที่ผู้ใด

1. อสม. 2. คลินิก เอกชน  
3. สถานีอนามัย 4. ไปร้านขายยา  
5. รักษาเอง 6. แพทย์แผนโบราณ  
7. ใช้สมุนไพร 8. โรงพยาบาลของรัฐ  
9. โรงพยาบาลเอกชน

3. ในช่วงที่บุตรของท่านป่วย บุตรของท่านมีอายุต่ำกว่า 2 เดือน หรือไม่

- 1 ใช่ 2 ไม่ใช่ 3 ไม่แน่ใจ  
↓ ↓  
ไปตอบข้อ 6

4. บุตรของท่านดูดนม/หรือทานอาหารได้น้อยหรือไม่

- 1 ไม่ใช่ 1 ไม่ทำอะไร  
2 ไม่แน่ใจ 2 กวาดล้น  
3 ใช่ → ท่านทำอะไร 3 ให้ทานยา ระบุ .....

5. ก่อนมารับการรักษาที่โรงพยาบาลชลบุรี บุตรของท่านมีไข้หรือไม่

1 ไม่มี

2 ไม่แน่ใจ

3 มี → ท่านทำอะไร

1 ไม่ทำอะไร

2 ใช้สมุนไพร

3 ไปหา อสม.

4 ไปหาแพทย์ที่คลินิกเอกชน

5 ไปสถานเอนามัย

6 ขอคำแนะนำจากคนอื่น (ญาติ, เพื่อนบ้าน)

7 ให้อาลดไข้

8 ให้กินยาอื่น ๆ ระบุ .....

9 ให้ดื่มน้ำอุ่น, ซุป

10 ทำให้ร่างกายอบอุ่น

11 เช็ดตัวด้วยผ้าเปียก

12 หาแพทย์โรงพยาบาลเอกชน

13 ไปโรงพยาบาลรัฐ

14 อื่นๆ ระบุ

6. ก่อนมารับการรักษาที่โรงพยาบาลชลบุรี บุตรของท่านไม่กินนม หรือน้ำใช้หรือไม่

1 ไม่ใช้

2 ไม่แน่ใจ

3 ใช้ → ท่านทำอะไร

1 ไม่ทำอะไร

2 แผนโบราณ (ใช้สมุนไพร)



- 3 หา อสม.
- 4 หาผู้ที่มีความรู้ด้านสุขภาพ
- 5 ไปหาแพทย์ที่คลินิกเอกชน
- 6 ไปโรงพยาบาลของรัฐ
- 7 ไปสถานีนามัย
- 8 ขอคำแนะนำจากคนอื่น (ที่ไม่ใช่เจ้าหน้าที่สาธารณสุข)
- 9 ใช้ยา ระบุ .....
- 10 อื่น ๆ ระบุ .....

7. ท่านได้ยินเสียงผิดปกติเมื่อลูกของท่านหายใจหรือไม่

- 1 ไม่ได้ยิน
- 2 ไม่แน่ใจ
- 3 ได้ยิน ท่านทำอะไร

8. ก่อนมาโรงพยาบาลชลบุรี บุตรของท่านมีอาการไอบ่อย ๆ หรือไม่

- |  |  |
|--|--|
| <ol style="list-style-type: none"> <li>1 ไม่มี</li> <li>2 ไม่แน่ใจ</li> <li>3 มี → ท่านทำอะไร</li> </ol> | <ol style="list-style-type: none"> <li>1 ไม่ทำอะไร</li> <li>2 รักษาเอง ระบุ .....</li> <li>3 หาหมอแผนโบราณ (กวาดคอ)</li> <li>4 ไปหา อสม.</li> <li>5 ไปหาแพทย์คลินิกเอกชน/โรงพยาบาลเอกชน</li> <li>6 ไปสถานีนามัย</li> <li>7 ขอคำแนะนำจากคนอื่น (ญาติ หรือเพื่อนบ้าน)</li> <li>8 โรงพยาบาลของรัฐ</li> <li>9 อื่นๆ ระบุ.....</li> </ol> |
|--|--|

9. ก่อนมารับการรักษาที่โรงพยาบาลชลบุรี บุตรของท่านมีอาการชักหรือไม่

- |   |                    |   |  |
|---|--------------------|---|--|
| 1 | ไม่มี              |   |  |
| 2 | ไม่แน่ใจ           |   |  |
| 3 | มี → ท่านทำอย่างไร | 1 | ไม่ทำอะไร  |
|   |                    | 2 | ใช้สมุนไพร                                       |
|   |                    | 3 | หา อสม.  |
|   |                    | 4 | หาผู้ที่มีความรู้ด้านสุขภาพ                      |
|   |                    | 5 | ไปหาแพทย์ที่คลินิกเอกชน                          |
|   |                    | 6 | ไปสถานเอนามัย                                    |
|   |                    | 7 | ขอคำแนะนำจากคนอื่น (ไม่เป็นเจ้าหน้าที่สาธารณสุข) |
|   |                    | 8 | ให้ยา ระบุ .....                                 |
|   |                    | 9 | โรงพยาบาลเอกชน                                   |

10. ก่อนมารับการรักษาที่โรงพยาบาลชลบุรี บุตรของท่านมีอาการซึมหรือไม่

- |   |                    |    |  |
|---|--------------------|----|--|
| 1 | ไม่มี              |    |  |
| 2 | ไม่แน่ใจ           |    |  |
| 3 | มี → ท่านทำอย่างไร | 1  | ไม่ทำอะไร  |
|   |                    | 2  | ใช้สมุนไพร                                       |
|   |                    | 3  | หา อสม.  |
|   |                    | 4  | หาผู้ที่มีความรู้ด้านสุขภาพ                      |
|   |                    | 5  | ไปหาแพทย์ที่คลินิกเอกชน                          |
|   |                    | 6  | ไปสถานเอนามัย                                    |
|   |                    | 7  | ขอคำแนะนำจากคนอื่น (ไม่เป็นเจ้าหน้าที่สาธารณสุข) |
|   |                    | 8  | ให้ยา ระบุ .....                                 |
|   |                    | 9  | โรงพยาบาลเอกชน                                   |
|   |                    | 10 | อื่น ๆ ระบุ.....                                 |

11. ก่อนมารับการรักษาที่โรงพยาบาลชลบุรี บุตรของท่านมีอาการปลุกตื่นยากใช่หรือไม่

- 1 ไม่ใช่
  - 2 ไม่แน่ใจ
  - 3 ใช่ ท่านทำอย่างไร
- .....
- .....

12. ก่อนมารับการรักษาที่โรงพยาบาลชลบุรี บุตรของท่านมีอาการน้ำมูกไหลหรือไม่

- 1 ไม่มี
- 2 ไม่แน่ใจ
- 3 มี → ท่านทำอย่างไร

- 1 ใช้ไม้พันสำลีซับจมูก
  - 2 ใช้ผ้านุ่มๆ หรือกระดาษทิชชู่ม้วนให้ปลายแหลมสอดซับน้ำมูก  
ในจมูก
  - 3 อื่นๆระบุ
- .....

13. ก่อนมารับการรักษาที่โรงพยาบาลชลบุรี บุตรของท่านหายใจเร็วหรือไม่

- 1 ไม่ใช่
- 2 ไม่แน่ใจ
- 3 ใช่ → ท่านทำอย่างไร

- 1 ไม่ทำอะไร
- 2 ใช้สมุนไพรม
- 3 ทา อสม.
- 4 หาผู้ที่มีความรู้ด้านสุขภาพ
- 5 ไปหาแพทย์ที่คลินิกเอกชน
- 6 ไปสถานเอนามัย
- 7 ขอคำแนะนำจากคนอื่น (ไม่เป็นเจ้าหน้าที่สาธารณสุข)

- 8 ให้อาหาร ระบุ .....
- 9 ไปโรงพยาบาลเอกชน
- 10 อื่น ๆ ระบุ .....

14. ก่อนมารับการรักษาที่โรงพยาบาลชลบุรี บุตรของท่านมีลักษณะหายใจแล้วหน้าอกบวมหรือไม่

- 1 ไม่มี
- 2 ไม่แน่ใจ
- 3 มี → ท่านทำอะไร 1 ไม่ทำอะไร
  - 2 แพนโบราณ
  - 3 ทา อสม.
  - 4 ใช้สมุนไพร
  - 5 ไปหาแพทย์ที่คลินิกเอกชน
  - 6 ไปสถานีนอนมัย
  - 7 ขอคำแนะนำจากผู้อื่น (ญาติ, เพื่อนบ้าน)
  - 8 ให้อาหาร ระบุ .....
  - 9 โรงพยาบาลเอกชน
  - 10 อื่นๆ ระบุ.....

15. อาการเจ็บป่วยอะไรของบุตรท่าน ที่ท่านจะต้องรีบพาไปรักษา

.....

16. ผู้ที่ให้การดูแลคนแรกแก่บุตรของท่านคือ

- 1 ตัวตนเอง (ถ้าตอบข้อนี้ให้ไปต่อข้อ 20)
- 2ญาติ (ปู่, ย่า, ตา, ยาย, ป้า ฯลฯ) (ถ้าตอบข้อนี้ให้ไปต่อข้อ 20)
- 3 คนดูแลเด็ก (ถ้าตอบข้อนี้ให้ไปต่อข้อ 20 )
- 4 สถานีนอนมัย (ถ้าตอบข้อนี้ ให้ไปต่อข้อ 19)
- 5 โรงพยาบาล (ถ้าตอบข้อนี้ให้ไปต่อข้อ 20)

17. คนแรกที่รักษานบุตรของท่าน เป็นผู้ที่ให้ยาใช้หรือไม่

- 1 ไม่ใช่
- 2 ไม่แน่ใจ
- 3 ใช่ → ถ้าใช่ ยาอะไร ระบุ
  - 1 ยาปฏิชีวนะ
  - 2 อื่นๆ ระบุ.....
  - 3 ไม่แน่ใจ

18. หลังจากที่ได้รับบริการดูแลไปแล้ว (ข้อ 16) ถ้าอาการไม่ดีขึ้น ท่านจะพาบุตรของท่านไปรักษาที่ไหน

- 1 อสม. (ถ้าตอบข้อนี้ไปตอบคำถามข้อ 20)
- 2 ร้านขายยา (ถ้าตอบข้อนี้ไปตอบคำถามข้อ 20)
- 3 แพทย์คลินิกเอกชน (ถ้าตอบข้อนี้ไปตอบคำถามข้อ 20)
- 4 แผนโบราณ (สมุนไพร) (ถ้าตอบข้อนี้ไปตอบคำถามข้อ 20)
- 5 โรงพยาบาลเอกชน (ถ้าตอบข้อนี้ไปตอบคำถามข้อ 20)
- 6 สถานีนอนมัย (ถ้าตอบข้อนี้ไปตอบคำถามข้อ 19)
- 7 โรงพยาบาล (ถ้าตอบข้อนี้ไปตอบคำถามข้อ 20)
- 8 อื่นๆ ระบุ ..... (ถ้าตอบข้อนี้ไปตอบคำถามข้อ 20)

19. ใครเป็นผู้ที่ตัดสินใจพาเด็กมาที่สถานีนอนมัย .....  
(ไปตอบคำถามข้อ 21)

20. ใครเป็นผู้ที่ตัดสินใจพาเด็กมาที่โรงพยาบาล.....

(ไปตอบคำถามข้อ 22)

21. เป็นเวลากี่วัน หลังจากที่ท่านพบอาการของบุตรในข้อ 15 จนถึงวันที่ท่านนำบุตรมารักษาที่  
สถานื่อนามัย/ศูนย์แพทย์

1 1-2 วัน                      2 3-4 วัน                      3 5-6 วัน                      4 มากกว่า 6 วัน

(ผ่านไปตอบข้อ 23)

22. เป็นเวลากี่วัน หลังจากที่ท่านพบอาการของบุตรในข้อ 15 จนถึงวันที่ท่านนำบุตรมารักษาที่โรงพยาบาล

1 1-2 วัน                      2 3-4 วัน                      3 5-6 วัน                      4 มากกว่า 6 วัน)

23. ท่านมีอุปสรรคในการพาบุตรของท่านไปรับการรักษาที่สถานื่อนามัยและโรงพยาบาลหรือไม่

1. การเดินทางไม่สะดวกในเวลานั้น
2. ปัญหาด้านการเงิน
3. มีปัญหาทางด้านครอบครัว
4. อื่น ๆ ระบุ .....



7 Has any child under five in this family been ill with pneumonia before?  
1 yes                      2 no

Data of child

8 birth rank of child in family.....

9 sex    boy                      girl

10 Age of child when treated for this episode of pneumonia in Chonburi  
hospital.....years.....months





- 13 go to government hospital
- 14 other

6. Did your child before it went to Chonburi hospital stop drinking?

- 1 no
- 2 not sure
- 3 yes → what did you do?
  - 1 nothing
  - 2 give traditional herbs
  - 3 go to health volunteer
  - 4 go to someone who is familiar with health problems
  - 5 go to private clinic
  - 6 go to government hospital
  - 7 go to health center
  - 8 ask advice from others (who do not work in public health)
  - 9 give drugs (which ones) .....
  - 10 other .....

7. Did your child in the beginning of its sickness make some noise when breathing?

- 1 no noise
- 2 not sure
- 3 it made some noise (please, say what you did?)  
.....

8. Did your child before it went to Chonburi hospital have a cough?

- 1 no
- 2 not sure
- 3 yes → what did you do?
  - 1 nothing
  - 2 self-medication (which drugs?)  
.....
  - 3 go to medicine doctor for “kwaatko”
  - 4 go to health volunteer
  - 5 go to private clinic
  - 6 go to health center
  - 7 ask for advice from relatives or neighbours
  - 8 go to government hospital
  - 9 other.....

9. Did your child when it went to Chonburi hospital have convulsions?

- 1 no
- 2 not sure
- 3 yes → what did you do?
  - 1 nothing
  - 2 give traditional herbs
  - 3 go to health volunteer
  - 4 go to someone who is familiar with healt problems
  - 5 go to private clinic
  - 6 go to health center
  - 7 ask advice from someone who does not work in public health
  - 8 give drugs (which ones?) .....
  - 9 go to private hospital

10. Was your child, before it went to Chonburi hospital abnormally sleepy (“inert”)?

- 1 no
- 2 not sure
- 3 yes → what did you do?
  - 1 nothing
  - 2 traditional herbs
  - 3 go to the health volunteer
  - 4 go to someone who is familiar with health problems
  - 5 go to doctor at primary health care center
  - 6 go to the health center
  - 7 ask advice from someone who does not work in public health
  - 8 give drugs (which ones?) .....
  - 9 go to private hospital
  - 10 other .....

11. Was your child before it went to Chonburi hospital difficult to wake?

- 1 no
- 2 not sure
- 3 Yes (what did you do?)

.....  
.....

12. Did your child before it went to Chonburi hospital have a runny nose?

- 1 no
- 2 not sure
- 3 yes → what did you do?
  - 1 use cotton buds
  - 2 use some tissue to clean the nose
  - 3 other

.....

13. Did your child before it went to Chonburi hospital show fast breathing?

- 1 no
- 2 not sure
- 3 yes → what did you do?
  - 1 nothing
  - 2 give traditional herbs
  - 3 go to health volunteer
  - 4 go to someone who is familiar with health problems
  - 5 go to private clinic
  - 6 go to health center
  - 7 ask advice from someone who does not work in public health
  - 8 give drugs (which ones?) .....
  - 9 go to private hospital
  - 10 other .....

14. Did your child before it went to Chonburi hospital show chest indrawing?

- 1 no
- 2 not sure
- 3 yes → what did you do?
  - 1 nothing
  - 2 take traditional medicine
  - 3 go to health volunteer
  - 4 give traditional herbs
  - 5 go to private clinic
  - 6 go to health center
  - 7 ask advice from relatives or neighbours
  - 8 give drugs (which ones?)

.....

- 9 go to private hospital
- 10 other .....

15. Which was the single one sign that prompted you to seek treatment for your child?

.....

16. Who gave your child the first care?

- 1 respondent (self-care) (go to question 17)
- 2 family (grandfather, grandmother, father, mother, older sister....) (go to question 17)
- 3 paid caretaker (go to question 17)
- 4 health center (go to question 19)
- 5 hospital (go to question 20)

17. Did the person who gave the first treatment to your child give it some drugs?

- 1 no
- 2 not sure
- 3 yes → which ones?
  - 1 antibiotics
  - 2 other drugs (which ones).....
  - 3 not sure

18. When your child did not become better after it received care from the first person (in question 16), to whom did you bring it ?

- 1 health volunteer (go to question 20)
- 2 drug store (go to question 20)
- 3 private clinic (go to question 20)
- 4 someone who uses trad. drugs and herbs (go to question 20)
- 5 private hospital (go to question 20)
- 6 primary health care center (go to question 19)
- 7 hospital (go to question 20)
- 8 other ..... (go to question 20)

19. Who decided that the child should be brought to the health center?

.....

(go to question 21)

20. Who decided that the child should be brought to the hospital?

.....

(go to question 22)

21. How many days after you saw the sign that prompted you to seek treatment for your child (as in question 15) was it received at the health center?

- 1 1-2 days                      2 3-4 days                      3 5-6 days    4 more than 6 days  
(go to question 23)

22. How many days after you saw the sign that prompted you to seek treatment for your child (as in question 15) was it received at the hospital?

- 1 1-2 days                      2 3-4 days                      3 5-6 days    4 more than 6 days

23. Which problems did you have when your child was brought to the hospital?

1. no transport available
2. no money available
3. family problems
4. other .....

**Appendix 4.6: Morbidity of children under five in Chonburi Province and Muang district (1997)**

Disease	Muang district		Chonburi Province	
	Cases	Percentage	Cases	Percentage
Dengue	182	10%	385	4%
<b>Pneumonia</b>	<b>342</b>	<b>19%</b>	<b>1328</b>	<b>12%</b>
Diarrhoea	1042	57%	6242	58%
Others	251	14%	2757	26%
Total:	1817	100%	10712	100%

Source: MOPH, Thailand, 1997

**Appendix 4.7: Pneumonia in children less than five in Thailand and in Chonburi province, 1996**

	Cases	Total Deaths	Number Of Children < 5 Years	Morbidity Rate	Mortality Rate	Case Fatality Rate
Thailand	96,954	220	5,400,339	1.79	4.07	0.226
Chonburi Province	1,134	3	71,756	1.58	4.18	0.26

Source: MOPH, Thailand, 1996



**Appendix 4.8: Tambons of Muang district with classification as urban, semi-urban, or rural, distance from Chonburi hospital, and cases of pneumonia in children <5 per tambon.**

Number	Tambon	Distance From Hospital	Cases Per Tambon
1 (Urban)	Bang Phra Soi	1 Km	13
2 (Urban)	Ma Kham Yong	1 Km	6
3 (Urban)	Baan Kot	1 Km	18
4 (Urban)	San Suk	13 Km	30
5 (S.-Urb.)	Baan Suan	3 Km	91
6 (Rural)	Nong Rie	7 Km	11
7 (Rural)	Na Pa	9 Km	13
8 (Rural)	Nong Khang Khaok	5 Km	8
9 (Rural)	Don Hua Law	5 Km	3
10 (Rural)	Nong Mai Deng	12 Km	27
11 (Rural)	Bang Sai	5 Km	14
12 (Rural)	Khrong Tamruk	10 Km	6
13 (Rural)	Muang	13 Km	9
14 (Rural)	Baan Puk	12 Km	4
15 (Rural)	Huai Kapi	13 Km	19
16 (Rural)	Samed	8 Km	24
17 (Rural)	Ang Si La	12 Km	7
18 (Rural)	Saam Nagabaok	14 Km	3
			TOTAL: 306

Source: columns 1-3: Muang district health office; column 4: Chonburi hospital patients listing

**Appendix 4.9: Primary Sampling Units**

PSU	Category	Number Of Tambons	Tambon Names
1	Urban	3	Bang Phra Soi, Ma Kham Yong, Baan Kot
2	Urban	1	San Suk
3	Semi-Urban	1	Baan Suan
4	Rural	13	Nong Rie, Na Pa, Nong Khang Khaok, Don Hua Law, Nong Mai Deng, Bang Sai, Khrong Tamruk, Muang, Baan Puk, Huai Kapi, Samed, Ang Si La, Saam Nagabaok

**Appendix 4.10: sample size per PSU**

PSU	Number Of Cases	Sample Size
1	37	9
2	30	7
3	91	22
4	148	35
TOTAL:	306	73

**Appendix 4.11: SSUs selected at random per cluster**

PSU	SSUs (Tambons)
1	Baan Kot
2	San Suk
3	Baan Suan
4	Na Pa, Nong Mai Deng, Baan Puk, Ang Si La

**Appendix 4.12: Villages selected at random per tambon**

PSU	SSU (Tambons)	TSU (Villages)
1	Baan Kot	N.A.
2	San Suk	Villages # 6, 7, 9, 12, 14
3	Baan Suan	Villages # 2, 5
4	Na Pa, Nong Mai Deng, Baan Puk, Ang Si La	N.A.

**Appendix 4.13: Sample coverage**

PSU	Sample Size	Number Of Responses	Response Rate (%)
1 (Baan Kot)	9	4	44.44
2 (San Suk)	7	6	85.71
3 (Baan Suan)	22	15	68.18
4 (Na Pa, Nong Mai Deng, Baan Puk. Ang Si La)	35	31	88.57
TOTAL:	73	56	76.71

**Appendix 4.14: Respondents who state that there is a health volunteer in their village**

Tambon	Yes	No	Not sure	Total
Baan Kot	3	0	1	4
San Suk	0	0	6	6
Baan Suan	0	12	3	15
Na Pa	6	0	0	6
Nong Mai Deng	16	0	0	16
Baan Puk	2	1	0	3
Ang Si La	6	0	0	6
TOTAL:	33	13	10	56

**Appendix 4.15: respondents who state that there is a health volunteer in their village, and health facility usually visited when someone in their family is ill**

FACILITY VISITED	NUMBER
Visit trained health worker (other than health volunteer)	31
Other than trained health worker	1
Both visit trained health worker and other measure	1
TOTAL:	33



**Appendix 4.16: Problems reported by respondents who stated that fast breathing prompted them to seek treatment when going to Chonburi hospital**

Problems Incurred	Number And Percentage
No Problem	10 (71.43 %)
No Transport	1 (7.14 %)
No Money	2 (14.29 %)
No Time	1 (7.14 %)
Total:	14 (100 %)

**Appendix 4.17: Education of respondents who stated that fast breathing prompted them to seek treatment**

Educational Level	Number And Percentage
No Formal Education:	2 (14.29 %)
Primary School (1-4)	5 (35.71 %)
Primary School (5-6)	4 (28.57 %)
Secondary School (1-3)	1 (7.14 %)
Higher Studies:	2 (14.29 %)
Total:	14 (100%)

**Appendix 4.18: Decision-makers in the referral process to a trained health worker**

Decision-maker	Number	Percentage
Mother	37	66.07
Mother and Father	3	5.36
Father	6	10.71
Grandmother	6	10.71
Grandmother and Grandfather	1	1.79
Grandfather	1	1.79
Aunt	2	3.57
TOTAL:	56	100

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**1995 - 1997: Primary Health Care Programme Manager for HealthNet International in Western Upper Nile, Southern Sudan**

**1993 - 1995: Country Manager for Medecins Sans Frontieres, Southern Sudan Programmes**

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