

## **Appendix 1. Survey Questionnaire**

Public reporting burden of this collection of information is estimated to average 20 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. Send comments regarding this burden estimate or any other aspect of this collection of information including suggestions for reducing this burden to CDC/ATSDR Reports Clearance Officer; 1600 Clifton Road NE, MS D-74 Atlanta, Georgia 30333; ATTN: PRA (0920-1011)

Interviewer: \_\_\_\_\_

Date of Interview: \_\_\_\_\_

Identification number: \_\_\_\_\_

### A. Introduction

In this interview, we will be asking you questions about your pregnancy, your health, your baby's health and some things you might have been exposed to during pregnancy. These questions cover many topics and will hopefully help us to understand better why some infants have microcephaly and other do not.

Current age of mother: \_\_\_\_\_ (years)

Current age of baby: \_\_\_\_\_ (circle: weeks or months)

Residential location:  Urban  Suburban  Rural

Sex of the baby:  Male  Female  Ambiguous

### B. Maternal residence and travel history

1.. How long have you lived in Paraíba?

Years: \_\_\_\_\_ Months: \_\_\_\_\_  Don't know

2. How long have you lived at your current address?

<1 month  1-6 months  7-12 months  >12 months

3. While you were pregnant, did you live in?

Same neighborhood  Different neighborhood but same municipality  
 Different municipality  Different state (not Paraíba)

**Note: If the mother has lived at the location less than 7 months (plus the age of the infant), the woman might not meet the eligibility criteria for the investigation, verify inclusion criteria**

4. During your pregnancy, did you travel more than 3 hours from your home?

Yes  No (skip to C)  Don't know (skip to C)

5. Please list travel dates and destinations:

Dates: \_\_\_\_\_ Locations: \_\_\_\_\_

Dates: \_\_\_\_\_ Locations: \_\_\_\_\_

Dates: \_\_\_\_\_ Locations: \_\_\_\_\_

### C. Pregnancy information

1. What was this baby's date of birth?

/ (DD/MM/YYYY)

2. What date did the doctor give you as a due date for this baby's birth?

/ (DD/MM/YYYY)

Don't know

3. In your pregnancy with this baby how many babies were you carrying? (a single baby,

twins, or more babies?)

Number of babies: \_\_\_\_\_

4. How many times have you been pregnant before this pregnancy, including pregnancies that may have ended in miscarriages, stillbirths, or other outcomes?

Number of pregnancies: \_\_\_\_\_

5. Are there any (other) children born in your extended family with microcephaly?

No       Yes; describe

who: \_\_\_\_\_

#### D. Illnesses during pregnancy

Now I am going to ask you some questions about any illnesses you may have had during your pregnancy.

1. From the month before you became pregnant through the end of your pregnancy, did you have an illness with any of the following symptoms? *[If yes, record week of pregnancy if possible, and month(s) of pregnancy if week is unknown]*

Fever:             No       Yes, when? \_\_\_\_\_ (weeks or months)             Don't know

Rash:             No       Yes, when? \_\_\_\_\_ (weeks or months)             Don't know

Joint pains:     No       Yes, when? \_\_\_\_\_ (weeks or months)             Don't know

Red eyes:         No       Yes, when? \_\_\_\_\_ (weeks or months)             Don't know

2. From the month before you became pregnant through the end of your pregnancy, did you have any of the following illnesses or infections? *[If yes, record week of pregnancy if possible, and month(s) of pregnancy if week is unknown]*

Kidney, bladder, or urinary tract infection     No       Yes, when? \_\_\_\_\_ (weeks or months)             Don't know

Yeast infection     No       Yes, when? \_\_\_\_\_ (weeks or months)             Don't know

Toxoplasmosis     No       Yes, when? \_\_\_\_\_ (weeks or months)             Don't know

Cytomegalovirus (CMV)     No       Yes, when? \_\_\_\_\_ (weeks or months)             Don't know

Rubella (German measles)     No       Yes, when? \_\_\_\_\_ (weeks or months)             Don't know

Herpes             No       Yes, when? \_\_\_\_\_ (weeks or months)             Don't know

Syphilis            No       Yes, when? \_\_\_\_\_ (weeks or months)             Don't know

Chickenpox         No       Yes, when? \_\_\_\_\_ (weeks or months)             Don't know

LCMV (lymphocytic Choriomeningitis)       No       Yes, when? \_\_\_\_\_ (weeks or months)       Don't know

3. From the month before you became pregnant through the end of your pregnancy, did you have any other infections that we haven't discussed? [If yes, record week of pregnancy if possible, and month(s) of pregnancy if week is unknown]

No       Yes (please specify): \_\_\_\_\_  
When: \_\_\_\_\_ (weeks or months)

4. Have you ever been diagnosed with any of the following conditions?

- High blood pressure       Diabetes (not during pregnancy)       Diabetes during pregnancy
- Respiratory Disease       Neurologic Disease       Heart Disease
- Other chronic medical condition: \_\_\_\_\_
- None of the above
- Don't know

**E. Medications**

Now I'm going to ask you about medications that you may have taken while you were pregnant.

1. From the month before you became pregnant, through the end of your pregnancy, did you take any over-the-counter or prescription medications? [If yes, record week of pregnancy if possible, and month(s) of pregnancy if week is unknown]

No       Yes       Don't know

List medications:

\_\_\_\_\_ When: \_\_\_\_\_ (weeks or months)  
\_\_\_\_\_ When: \_\_\_\_\_ (weeks or months)  
\_\_\_\_\_ When: \_\_\_\_\_ (weeks or months)  
\_\_\_\_\_ When: \_\_\_\_\_ (weeks or months)  
\_\_\_\_\_ When: \_\_\_\_\_ (weeks or months)

2. From the month before you became pregnant, through the end of your pregnancy, did you take any traditional medicine or herbal medications? [If yes, specify medication and record week of pregnancy if possible, and month(s) of pregnancy if week is unknown]

No       Yes      What medication: \_\_\_\_\_  
When: \_\_\_\_\_ (weeks or months)

No       Yes      What medication: \_\_\_\_\_  
When: \_\_\_\_\_ (weeks or months)

No       Yes      What medication: \_\_\_\_\_  
When: \_\_\_\_\_ (weeks or months)

3. From the month before you became pregnant, through the end of your pregnancy, did you take any multivitamins, prenatal vitamins, or folic acid supplements? *[If yes, record week of pregnancy if possible, and month(s) of pregnancy if week is unknown]*
- No       Yes, When: \_\_\_\_\_ (weeks or months)       Don't know

## F. Smoking and alcohol exposures

The next questions are about cigarette and alcohol use.

1. From the month before you became pregnant through the end of your pregnancy, did you *[If yes, record week of pregnancy if possible, and month(s) of pregnancy if week is unknown]*:

Smoke cigarettes       No       Yes  
 When: \_\_\_\_\_ (weeks or months)  
 How many per day: \_\_\_\_\_

2. From the month before you became pregnant through the end of your pregnancy, did any member of your household:

Smoke cigarettes       No       Yes  
 Inside the house:  No       Yes  
 When: \_\_\_\_\_ (weeks or months)  
 How many per day: \_\_\_\_\_

Smoke shisha or hookah       No       Yes  
 Inside the house:  No       Yes  
 When: \_\_\_\_\_ (weeks or months)  
 How much per day: \_\_\_\_\_

3. From the month before you became pregnant to the end of your pregnancy, did you drink any wine, beer, liquor, such as cachaça, or mixed drinks? *[If yes, record week of pregnancy if possible, and month(s) of pregnancy if week is unknown]*:

No       Yes, when: \_\_\_\_\_ (weeks or months)  
 How often:  Daily     Weekly     Monthly     <6 times  
 Once     None

## G. Environmental exposures

Now we are going to ask about other things you might have been exposed to during your pregnancy.

1. What is your main source of drinking water during your pregnancy?

A faucet/tap       A rural aqueduct  
 A well       Bottled water/filter  
 A river or pond       Cistern or tank  
 Other source: \_\_\_\_\_       Don't know

2. Do you do anything to filter or clean your drinking water?

No       Yes, how? \_\_\_\_\_       Don't know

3. How much time did you spend outdoors each day during your pregnancy?

<1 hour                       1-4 hours                       5-8 hours                       >8 hours

4. Did you keep windows and doors open during the day when you were pregnant?  
 Yes                                       No                                       Don't know

5. Did your windows and doors have screens covering them?  
 Yes                                       No                                       Don't know

6. Did you wear insect repellent when outside while you were pregnant?  
 All the time                                       Some of the time                                       Never

7. During your pregnancy, were you exposed to [*If yes, record week of pregnancy if possible, and month(s) of pregnancy if week is unknown*]:

Pesticide     No     Don't know     Yes, Name of pesticide: \_\_\_\_\_  
When: \_\_\_\_\_ (weeks or months)  
How often? Daily/Weekly/Monthly/<5 times

Insecticide     No     Don't know     Yes, Name of insecticide: \_\_\_\_\_  
When: \_\_\_\_\_ (weeks or months)  
How often? Daily/Weekly/Monthly/<5 times

Rodenticides     No     Don't know     Yes, Name of rodenticides: \_\_\_\_\_  
When: \_\_\_\_\_ (weeks or months)  
How often? Daily/Weekly/Monthly/<5 times

Fertilizers     No     Don't know     Yes, Name of fertilizer: \_\_\_\_\_  
When: \_\_\_\_\_ (weeks or months)  
How often? Daily/Weekly/Monthly/<5 times

Fumigants     No     Don't know     Yes, Name of fumigant: \_\_\_\_\_  
When: \_\_\_\_\_ (weeks or months)  
How often? Daily/Weekly/Monthly/<5 times

#### **H. Assessment of infant**

Now I am going to ask you some questions about your baby's health.

1. In general, how would you describe your baby's health?

Excellent                                       Fair  
 Very good                                       Poor

Good  
If fair or poor,

explain: \_\_\_\_\_

2. Since your baby was born, has he/she had any of the following?

- |                  |                             |                              |
|------------------|-----------------------------|------------------------------|
| Seizures         | <input type="checkbox"/> No | <input type="checkbox"/> Yes |
| Fever            | <input type="checkbox"/> No | <input type="checkbox"/> Yes |
| Hearing problems | <input type="checkbox"/> No | <input type="checkbox"/> Yes |
| Vision problems  | <input type="checkbox"/> No | <input type="checkbox"/> Yes |
| Other condition  | <input type="checkbox"/> No | <input type="checkbox"/> Yes |

If other,  
describe: \_\_\_\_\_

### I. Additional demographic and household characteristics

Now I just want to ask a few remaining questions about you and your family.

1. How would you describe your race?

- |                                |                                     |  |
|--------------------------------|-------------------------------------|--|
| <input type="checkbox"/> White | <input type="checkbox"/> Black      | <input type="checkbox"/> Mulatto                       |
| <input type="checkbox"/> Asian | <input type="checkbox"/> Indigenous | <input type="checkbox"/> Other (please specify): _____ |

2. What was the highest grade or year of school or college that you had completed at the time this baby was born?

- |  |   |
|--|---|
| <input type="checkbox"/> No formal schooling | <input type="checkbox"/> 1-3 years university           |
| <input type="checkbox"/> 1-6 years           | <input type="checkbox"/> Completed technical college    |
| <input type="checkbox"/> 7-8 years           | <input type="checkbox"/> 4 years university (bachelors) |
| <input type="checkbox"/> 9-11 years          | <input type="checkbox"/> Master's degree                |
| <input type="checkbox"/> 12 years            | <input type="checkbox"/> Advanced degree (MD, PhD, JD)  |

3. During the 9 months that you were pregnant, how much income does your family make in a month? Please include income from all members in your household.

- |  |  |
|--|--|
| <input type="checkbox"/> < R\$500          | <input type="checkbox"/> R\$3,000-R\$6,999 |
| <input type="checkbox"/> R\$500-R\$1,499   | <input type="checkbox"/> > R\$7,000        |
| <input type="checkbox"/> R\$1,500-R\$2,999 | <input type="checkbox"/> Do not know       |

4. How many people were supported by this income, including adults and children?

Number: \_\_\_\_\_

### J. Concluding remarks and sample collection

In closing, we would like to sincerely thank you for your time, answering our questions and providing us some blood to see if your baby or you were infected with Zika virus. Your contribution to this important investigation will help us greatly in our efforts to better understand the reason why so many baby are being born with microcephaly in Brazil. Thank you.

1. Was a blood sample taken from the mother?

- |                              |                             |
|------------------------------|-----------------------------|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No |
|------------------------------|-----------------------------|

2. Was a blood sample taken from the infant?

Yes

No