

ETHICAL REVIEW COMMITTEE, ICDDR,B.

Zethlyn, Dearden

Principal Investigator *Chelabority, de Franca* Trainee Investigator (if any)

NA

Application No. 93-002

Supporting Agency (if Non-ICDDR,B) NA

Title of Study Identifying the barriers Project status:

timely treatment for acute respiratory

(☒) New Study

() Continuation with change

Infections in infants and young children.

() No change (do not fill out rest of form)

Circle the appropriate answer to each of the following (If Not Applicable write NA).

Source of Population:

(a) Ill subjects ☒ Yes ☐ No

(b) Non-ill subjects ☒ Yes ☐ No

(c) Minors or persons under guardianship ☒ Yes ☐ No

Does the study involve:

(a) Physical risks to the subjects Yes ☒ No

(b) Social Risks Yes ☒ No

(c) Psychological risks to subjects Yes ☒ No

(d) Discomfort to subjects Yes ☒ No

(e) Invasion of privacy Yes ☒ No

(f) Disclosure of information damaging to subject or others Yes ☒ No

Does the study involve:

(a) Use of records, (hospital, medical, death, birth or other) Yes ☒ No

(b) Use of fetal tissue or abortus Yes ☒ No

(c) Use of organs or body fluids Yes ☒ No

Are subjects clearly informed about:

(a) Nature and purposes of study ☒ Yes ☐ No

(b) Procedures to be followed including alternatives used ☒ Yes ☐ No

(c) Physical risks ☒ Yes ☐ No

(d) Sensitive questions ☒ Yes ☐ No

(e) Benefits to be derived ☒ Yes ☐ No

(f) Right to refuse to participate or to withdraw from study ☒ Yes ☐ No

(g) Confidential handling of data ☒ Yes ☐ No

(h) Compensation &/or treatment where there are risks or privacy is involved in any particular procedure ☒ Yes ☐ No

5. Will signed consent form be required:

(a) From subjects Yes ☒ No

(b) From parent or guardian (if subjects are minors) ☒ Yes ☐ No

6. Will precautions be taken to protect anonymity of subjects ☒ Yes ☐ No

7. Check documents being submitted herewith to Committee:

— Umbrella proposal - Initially submit an overview (all other requirements will be submitted with individual studies).

☒ Protocol (Required)

☒ Abstract Summary (Required)

☒ Statement given or read to subjects on nature of study, risks, types of questions to be asked, and right to refuse to participate or withdraw (Required)

☒ Informed consent form for subjects

☒ Informed consent form for parent or guardian

☒ Procedure for maintaining confidentiality

☒ Questionnaire or interview schedule *

* If the final instrument is not completed prior to review, the following information should be included in the abstract summary:

1. A description of the areas to be covered in the questionnaire or interview which could be considered either sensitive or which would constitute an invasion of privacy.
2. Examples of the type of specific questions to be asked in the sensitive areas.
3. An indication as to when the questionnaire will be presented to the Cttee. for review.

I agree to obtain approval of the Ethical Review Committee for any changes involving the rights and welfare of subjects before making such change.

Sushila Zethlyn
 Principal Investigator

NA

Trainee

A-031969

IDENTIFYING THE BARRIERS TO TIMELY TREATMENT FOR ACUTE
RESPIRATORY INFECTIONS IN INFANTS AND YOUNG CHILDREN

1. Principal Investigators: Zeitlyn, Dearden, Chakraborty,
de Francisco
2. Co-Investigators: Faisal
3. Consultants: Becker
4. Start Date: January, 1993
5. Date of Completion: October, 1994
6. Total Budget Requested: \$47,174
7. Funding Source: Not yet determined
8. Head of Program: Dr. R. Bradley Sack, Associate
Director, Community Health Division

R. Bradley Sack

Abstract Summary

Quantitative and qualitative methods will be used to assess barriers to the timely treatment of acute respiratory infections (ARI) in infants and young children. This study will take place in two blocks of ICDDR,B's MCH-FP Matlab treatment area. Hypothesized barriers to the appropriate treatment of ARI include perceptions of ARI, the perceived appropriateness of allopathic medicine for the treatment of ARI, especially for young infants, and caretakers' inability to leave the household, delegate childcare responsibilities, or make independent decisions regarding the use of health care services. It is expected that results from this study will play an important part in formulating strategies for the treatment of ARI in Bangladesh and elsewhere.

9. Aims of the Project

General Aim

- 1) To identify major modifiable barriers and constraints to timely recognition and effective treatment-seeking by parents of children with ARI.
- 2) To develop recommendations to promote appropriate health service utilisation by parents of under five children suffering from ARI.

Specific Aims

- 1) To investigate parental perceptions of their child's ARI symptoms.
- 2) To investigate parental ideas on the cause of ARI. In those cases resulting in death, parents will also be queried about cause of death.
- 3) To document the home treatment, if any, given by parents to their children.
- 4) To identify the major sources of outside treatment sought by parents.
- 5) To investigate the reasons for non-utilisation of ICDDR,B and government health services (outpost clinics and hospitals) for the treatment of ARI.
- 6) To identify key household decision makers to whom ARI health education messages should be targeted.

Significance

It is anticipated that this study will form part of a larger umbrella protocol of ARI studies to be developed by Andres de Francisco. ARI is the major preventable cause of death among children in the developing world (Bale, 1990) and in the Matlab treatment area, it is the second major contributor to mortality. Because the onset of ARI is almost always sudden, prompt, appropriate treatment is mandatory if the child's life is to be spared. Nevertheless, a number of factors may prevent parents from seeking appropriate care in a timely fashion. It is important to know whether parents are able to recognize the signs and symptoms of ARI. Parents' understanding of the causes of respiratory disease may also alter their health-seeking behavior. For example, when spiritual forces are thought to contribute to ARI, non-allopathic treatment is frequently sought. Given current social norms, mothers are rarely able to make decisions independently nor are they allowed to travel far from their households. As a

consequence, they may feel unable to seek adequate medical attention, even in life-threatening situations.

This study will be conducted in the Matlab treatment area of the International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B) where a pneumonia control programme has been in place since 1988. The pneumonia control programme is part of a larger maternal and child health and family planning programme (MCH-FP) which was initiated a decade early. Currently, all moderate cases of ARI in children less than 5 years of age are treated at home by female Community Health Workers (excepting neonates). All severe cases are referred to the Matlab hospital. While education about the signs and symptoms of ARI, home treatment, and referral form an integral part of treatment area services, in Matlab's comparison area, considerably less is known about the incidence and management of ARI.

Because this study simultaneously examines a number of potential barriers to the appropriate treatment of ARI, it should help in the development of recommendations for a strategy to promote timely utilisation of services. This study will have important implications for the national ARI programme. One outcome of the study will be to assist the government services to increase utilisation of ARI treatment. The findings from the study may also have implications for national and international strategies to develop an effective and acceptable community-based approach to referring and treating for ARI.

10. Ethical Implications

Since this study will use unobtrusive techniques of data collection, it will in no way endanger the health or well-being of subjects. Only interviews and in-depth observations will be used to gather data from respondents once permission is obtained from each informant. All data will be treated anonymously.

Interviews will be conducted with parents whose child is currently suffering from an ARI episode. In cases of moderate ARI, parents will be encouraged to comply with CHWs' treatment at home with antibiotics. In cases of severe ARI, parents will be encouraged to take their children to the ICDDR,B Matlab Treatment Centre.

11. Research Plan

a. Background

ARI is the major cause of death for children in the developing world and the third leading cause of death in Matlab for children under five years of age (Bale, 1990; ICDDR,B, 1992). It is estimated that ARI accounts for at least 30% of the fourteen million child deaths which occur annually in less developed nations (Bale, 1990). In the Matlab treatment area, incidence and attack

rates appear to be inversely related to the child's age, with children under one year of age experiencing the greatest risk (Stewart et al., no date).

A number of risk factors for ARI have been identified including biomass smoke pollution, outdoor air pollution, environmental tobacco smoke, chilling, vitamin A deficiency, protein calorie malnutrition, low birth weight, and poor breastfeeding practices. Nevertheless, the importance of each appears to vary depending on the study population of interest (Selwyn, 1990). Consequently, it is important to examine data on ARI-related morbidity and mortality within a specific context.

To develop effective home care advice, referral, and other recommendations for appropriate communication with parents and caretakers of young children, a description of the cultural explanatory model is required. Some anthropological work has already been undertaken in this area by Parker (1990) in rural and urban areas of Bangladesh. From Parker's study (1990), we gain an understanding of the terminology, classification, and beliefs that Bangladeshi women hold about different forms of respiratory illness. For example, Parker notes that dietary restrictions on the part of nursing mothers are a primary component of home treatment of ARI.

From the various focus group studies that have been undertaken in Matlab (Zeitlyn and Chakraborty, no date), a fairly consistent picture of the terminology used to describe symptoms of ARI emerges. Focus groups, however, do not always give a clear impression of the impediments and constraints to care-seeking that people face in real-life situations. For example, it is abundantly clear from focus groups that the classification of symptoms, etiology, types of disease, and appropriate treatment strategies are neither clear nor uniform. Small infants and newly delivered women are believed to be particularly prone to attack from supernatural forces (Jordan, 1983; Blanchet, 1987). Thus symptoms such as febrile convulsions or refusal of the breast may be interpreted as a sign of supernatural attack requiring spiritual treatment (Parker, 1990; Zeitlyn and Islam, 1988). Focus group results also suggest that pneumonia may be confused with asthma which is believed to be related to the moon's cycle. Allopathic medicine is not considered effective for asthma and other treatment may be sought (Zeitlyn and Chakraborty, no date).

While treatment rates for children less than 12 months old are similar to those of children 1 year old or older in the Matlab treatment area (Stewart, et al.), results from on-going focus group discussions (Zeitlyn and Chakraborty, no date) suggest that there may be major impediments to seeking appropriate health care for infants, including the perception that allopathic treatment is dangerous and inappropriate for very young infants. In focus groups, parents often expressed concern that allopathic medicines

were "too strong" for infants. In such instances, parents frequently preferred home remedies or treatments by kobirajs and homeopathic healers because these medicines were felt to be more suitable for the infant's delicate constitution (Zeitlyn and Chakraborty, no date). Given the increased incidence of ARI among those less than 12 months of age (and particularly among those less than two months of age), it becomes absolutely essential that barriers to appropriate care at this age be identified and thoroughly understood.

Focus group participants may say that in a life threatening situation mothers should disregard normal prohibitions on leaving home without a husband's permission to take children for treatment (Zeitlyn and Chakraborty, no date). Real situations, however are not always so clear cut and lack of confidence in their own judgement of what constitutes a life-threatening situation may inhibit women from taking a timely decision. For a young mother, leaving the home without support of senior kin almost inevitably entails a loss of family reputation. If the inexperienced mother is mistaken about the need to seek treatment she may face criticism. On the other hand, if the child dies at a health practitioner's home, the ICDDR,B Treatment Centre, or the government hospital, she may also be blamed. Information on the context of decision-making and women's mobility outside the household can only be obtained by discussing actual decisions rather than by asking hypothetical questions about decision-making in general.

The age of the mother and her position in the household may also influence her decision-making autonomy. A study comparing epidemiological data from ten countries found that maternal age was a significant factor in determining autonomous decision-making in all but one study population (Selwyn, 1990). For these reasons it is important to understand the social context within which decisions about ARI are made.

Gender may be an important confounding factor in the treatment of ARI. Anecdotal evidence suggests that in Matlab, males are more likely than females to suffer from ARI, a finding substantiated in other parts of the world (Bale, 1990). While male children are also more likely than females to receive hospital treatment, it is not yet clear how gender influences treatment-seeking behaviour.

For other diseases, including diarrhoea, female children are taken to the hospital significantly less often than males although the rate of incidence is equal (Chowdhury et al., 1991). Female children in Matlab also have a lower rate of hospital admission for diarrhoea. Nevertheless, they are more likely than males to suffer from severe malnutrition. Given these findings, we would expect that the child's gender will also influence parental treatment seeking behaviour for ARI. Nonetheless, the complex relationship between gender, pre-disposing diseases such as malnutrition, and

ARI has yet to be disentangled.

b) Hypotheses

The following hypotheses will guide research on barriers to treatment of ARI:

- 1) Parents who do not seek treatment for their children are less capable than those who do of recognizing the symptoms of ARI, including rapid breathing and, in the case of severe ARI, chest in-drawing.
- 2) Parents who do not seek treatment for their children are more likely to ascribe children's ARI to supernatural forces.
- 3) Parents who do not seek allopathic treatment for their children are more likely than those who do to feel that allopathic treatment for very young infants is too "strong" and may cause adverse side effects.
- 4) Parents who do not seek outside treatment for their children are also more reluctant than those who do to take young infants outside the bari.
- 5) Mothers who do not take children for treatment of ARI are less likely than those who do to feel able to act independently in seeking outside treatment for ARI.
- 6) Parents who do not seek treatment are more likely than those who do to cite time costs involved in taking children for treatment as an impediment to seeking care.

c) Research Plan

1) Data

As part of this prospective cohort study, data will be collected on approximately 175 children over the course of one to one and a half years. This study will rely upon quantitative and qualitative methods to compare three groups of children: 1) those whose parents or caretakers sought no treatment for ARI, 2) those who sought non-formal treatment for ARI, and 3) those who used ICDDR,B facilities at any time (this last group will inevitably include those who also pursued non-formal treatment). CHWs will conduct fortnightly surveillance in the Matlab treatment area to identify children under the age of five who manifest symptoms of ARI. Once CHWs have identified cases of ARI, interviewers will conduct follow-up interviews to determine health-seeking behavior, if any. While it is expected that CHWs will identify a majority of cases during routine fortnightly visits to each household, children whose family members or neighbors refer them to CHWs for care will also be included in this study.

Only children with moderate or severe ARI will be included in this prospective cohort study. We will follow the current WHO definition of moderate ARI as having a respiratory rate greater than 50 breaths per minute (for children between the ages of 2 and 12 months) or 40 breaths per minute (for children 12 months or older) with no accompanying chest in-drawing or other signs of severe disease. ARI will be considered severe if chest retractions or other signs of severe disease are present. Children less than two months old who manifest chest indrawing or fast breathing (60 or more breaths per minute) will be considered to have severe ARI on account of their age. It is entirely possible that parents or other caretakers may have a completely different definition of ARI and its severity. Qualitative work can help identify parents' perceptions of ARI and its severity. Children who experience multiple episodes of ARI during the study period will be included in data collection only once: at first onset. Further, siblings will not be included in this study. The exclusion of siblings and subsequent episodes for a given child prevents clustering of risk factors for failure to treat. Children identified post-mortem will not be included in this study since the death of the child may alter parents' perceptions of the illness episode. Nevertheless, children who die after being identified by CHWs will be included in the study.

It is estimated that collectively, the 12 CHWs who will participate in this study will be able to conduct surveillance for two of ICDDR,B's MCH-FP Treatment Area. The total population represented (adults and children) for two blocks is approximately 50,000 individuals. Currently, CHW's conduct routine ARI surveillance on a fortnightly basis. Given the brevity of the questionnaire CHWs will be expected to complete upon identifying a case of ARI (please see appendix A form 1), the collection of this additional information should not impinge upon their work load.

Once cases have been located and parents agree to participate in the study, data collection will begin. The first round of data collection will be taken by CHWs and will be used to identify children and describe their symptoms. The first follow-up will occur 24 hours after baseline data collection and will be used to determine parents' (in most cases, mothers') perceptions of children's symptoms, perceived cause of disease, and health-seeking behavior, if any. Choice of provider and, in those cases where no treatment is sought, reasons for not seeking treatment, will also be explored. In addition, barriers which might prevent mothers from seeking outside treatment as well as factors which modify the type of treatment sought will also be examined. These include appropriateness of treatment and acceptability of making independent decisions and traveling outside the home. A second follow-up, 48 hours after identification of the child, will be similar in content to the first follow-up. Its primary purpose is to assess on-going health-seeking behavior, if any. A final follow-up, 96 hours after initial contact with CHWs, should allow

ample time for parents to pursue various health care options. Three interviewers will be needed for these follow-up visits.

Two types of questionnaires will be administered to mothers at baseline and at follow-up. Structured interviews will be used to collect quantitative information baseline and at follow-up (24, 48, and 96 hours after identification of child). A final in-depth and unstructured interview will be administered in conjunction with participant observation, once all structured interviews are completed. Qualitative data collection will occur for a sub-sample of 50 parents whose children are diagnosed with ARI. The criteria for selecting this sub-sample will be determined on the basis of quantitative results. We might, for example, select those parents who reject referral and refuse to comply with the specified regimen and compare these with a second sub-sample who actively seek treatment rather than waiting for a routine visit by the CHW. We might also select a sub-sample of parents who seek a range of treatment alternatives. The questions to be asked in the in-depth interview will be determined by the selection criteria and thus can not be specified here. Questionnaires are attached as appendix A.

2) Sample Size

Determination of sample size is based on a limited number of hypotheses. All sample size calculations are one tailed and are based on an alpha level of .05 and a beta level of .80. Numbers presented below represent the minimum needed for each group of health care seekers (i.e., non-seekers, non-formal seekers, and those who at some point used ICDDR,B services). While it is anticipated that 12 months will be needed to obtain sufficient numbers of participants for each group, if adequate sample sizes have been reached prior to this point in time, surveillance will end.

General formula:

$$\frac{(2 \times \overline{p} \overline{q})}{d^2} \times (Z_{\alpha} + Z_{\beta})^2$$

Hypothesis:

Parents who do not seek treatment from ICDDR,B for their children are less capable than those who do of recognizing the symptoms of ARI, including rapid breathing and, in the case of severe ARI, chest retraction.

DiPrete (1991) reports that in Pakistan when queried about danger signs "needed" to provoke medical-seeking behavior for ARI, 60% of parents could not identify a single indicator of acute respiratory infection. We hypothesize that in the group of mothers who seek allopathic treatment for their children, only 35% will be unable to recognize the symptoms of ARI as defined above.

$$\frac{(2 \times .475 \times .525)}{25^2} \times 6.18$$

N = 50 in each group

Hypothesis:

Parents who do not seek treatment from ICDDR,B are more likely than those who do to feel that allopathic treatment for very young infants is too "strong" and may cause adverse side effects.

DiPrete (1991) indicates that in Colombia, 86% of mothers whose children had ARI treated their children with home remedies rather than treating with antibiotics. We expect that only 61% of mothers who employ allopathic treatment for their children will feel that allopathic treatment is too strong or may cause adverse side effects.

$$\frac{(2 \times .735 \times .265)}{25^2} \times 6.18$$

N = 39 in each group

Hypothesis:

Parents who do not use the ICDDR,B sub-centres or treatment center are also more reluctant than those who do to take young infants outside the bari.

Gittelsohn (no date) indicates that 50% of Gambian mothers whose children suffered from mild ARI would be unwilling to take their neo-nates outside of the home for the treatment of pneumonia and non-pneumonia ARI. We anticipate that only 25% of mothers whose children receive allopathic treatment are unwilling to take young infants outside the bari for treatment.

$$\frac{(2 \times .375 \times .625)}{25^2} \times 6.18$$

N = 47 in each group

Hypothesis:

Mothers who do not take children to ICDDR,B facilities for the

treatment of ARI are less likely than those who do to feel able to act independently in seeking outside treatment for ARI.

In the Gambia, 48% of mothers of children with ARI reported that their husbands had participated in the decision to take affected children to the health center. We expect that only 23% of mothers whose children are treated by allopaths for ARI indicate the need to consult other individuals before taking a sick child for outside treatment.

$$\frac{(2 \times .355 \times .645)}{25^2} \times 6.18$$

N = 46 in each group

Given that a sample size of at least 50 is needed for each group, and assuming that 15% of those contacted will not participate, the overall sample size needed is 174 (3 groups x 58 individuals per group).

3) Analyses

Quantitative analyses will be used to determine the extent to which health-seeking behavior is influenced by a range of factors, including parental perceptions of ARI, their understanding of its etiology, perceived efficacy of allopathic and non-allopathic treatment, concerns about leaving the household for outside treatment, and reservations about making unilateral decisions for health care. Chi-squares will be used to compare parents who follow treatment regimens given by CHWs or who use ICDDR,B treatment facilities to parents who do not. Relative risks will also be used to compare the incidence rate (measure of disease occurrence over a specified period of time) of the exposed to the unexposed. Exposure in this instance entails the presence of risk factors for failure to seek ICDDR,B treatment. These risk factors include parental perceptions of ARI which are not conducive to allopathic treatment-seeking behavior, a perceived etiology of ARI which would discourage allopathic attention, beliefs regarding the inappropriateness of Western medicine, and reservations about leaving the household or taking independent decisions. Given the sudden onset and resolution of ARI, follow-up will, of necessity, be very brief. Nevertheless, follow-up at several points in time will allow for calculation of incidence rates for failure to treat with allopathic medicine for each group. Disease in this instance will not be presence of ARI (a necessary criterion for entering the study), but failure to seek appropriate care for ARI. Polytomous logistic regression models will be used to weigh the relative impact of each of these factors in determining health-seeking behavior.

Basic socio-economic data on maternal age, educational status, social class, child's birth order, and distance to the nearest government treatment facility will be collected and controlled for in analyses. Other potentially confounding factors include severity and duration of disease, gender and age of the child, mother's position within the household, and childcare responsibilities (proxy: number of "dependent" children--to be defined using qualitative methods). Mothers who themselves referred children to surveillance team members will be differentiated from mothers of those identified by team members. It should be noted that much of the information regarding potentially confounding factors (e.g., social class and birth order) is already available through ICDDR,B's Demographic Surveillance System. Consequently, it will not need to be collected again.

Qualitative analyses will include an investigation of parents' perceptions of symptoms. Qualitative analyses will also consider the processes that lead to particular decisions about various types of therapy and a detailed understanding of the reasons people fail to comply. One to two days of parent and child observation may be combined with the administration of in-depth interviews if it is felt that observation will assist in analysis of processes such as decision-making or treatment seeking. The interviewer will inquire about the parents' recollections of the child's symptoms, their understanding of the cause of ARI, their treatment-seeking behaviour, the sequence and timing of treatment seeking and reasons for failure to consult allopaths, where appropriate. Open-ended qualitative interviewing techniques will also be used to investigate the mother's recall of the decision-making processes that took place during the illness episode.

SELECTION

Those selected for qualitative investigation will be a sub-sample of the whole. They will be purposively selected to address specific questions that arise in the course of the quantitative study. Thus, for example, if distance is found to be a determining factor in the treatment of ARI, parents who sought treatment but live far from the treatment centre might be compared with those who live close to the treatment facilities but did not seek treatment. The qualitative component of the study will facilitate and assist in our interpretation of our results.

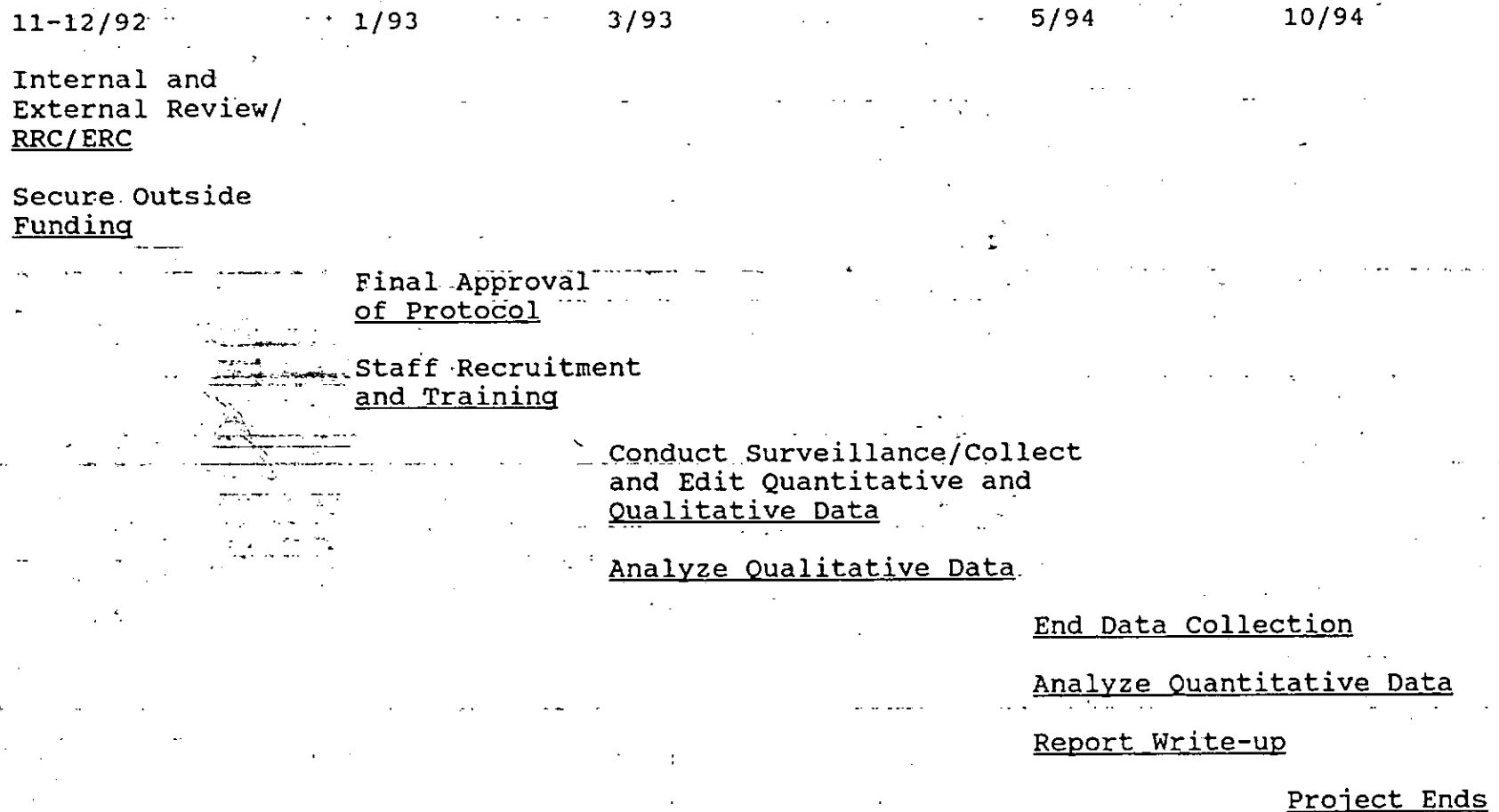
Interviewing parents of children with ARI will require tact and sensitivity. An experienced female interviewer who has conducted verbal autopsies and focus groups will be trained and very closely supervised by the anthropologist. Initial quantifiable data will be recorded on a questionnaire but a tape recorder will be used to record qualitative data that can later be transcribed by the interviewer and translated.

4) Limitations

Using CHWs to identify cases of ARI could bias the selection process. As CHWs visit every two weeks we may also miss some cases in between their visits. As an ARI intervention has been established for some years in the Matlab treatment area it could be argued that this area is unrepresentative of service provision for the country as a whole.

13. Flow Chart

The following diagram depicts the proposed time frame for completion of various components of the study:



14. Itemized Specific Tasks for Investigators

Investigator:	Task:
Zeitlyn, Dearden	1. Manage overall project
Zeitlyn, Dearden, de Francisco, Faisal, Chakraborty	2. Develop and refine protocol
Becker	3. Consult on data collection and analysis and overall project management
Dearden, de Francisco, Zeitlyn, Chakraborty	4. Develop questionnaires Field test questionnaires
Zeitlyn, Faisal, Dearden	5. Develop outlines for participant observation and in-depth interviews
Zeitlyn, Chakraborty, Faisal	6. Identify and train interviewers
de Francisco, Zeitlyn, Chakraborty, Dearden	9. Identify surveillance area for ARI
Dearden, de Francisco, Chakraborty	10. Oversee quantitative data collection, management of data and clean-up
Zeitlyn, Faisal, Chakraborty	11. Oversee collection of qualitative data
Dearden, de Francisco, Chakraborty	12. Analyze results of quantitative data
Zeitlyn, Faisal, Dearden	13. Analyze results of qualitative data
All	14. Report write-up

Title of Protocol:

Identifying the barriers to timely treatment
for ARI in infants and young children

Budget

Local Salaries	Level	Position	Person- Months	Rate/ Month	Amount (\$)
National Anthropologist	GS-6	1	6		0
Field Coordinator		1	2		0
Field Supervisor	GS-5	1	20	379	7580
CHWs	CHW	12	20		
Interviewers	GS-3	3	20	237	14220
Data Processing Ass't	GS-3	1	3	237	711
Subtotal					22511
International Salaries					
Anthropologist (PI)		1	6		0
Health and Child Survival Fellow (PI)		1	5		0
MCH-FP Physician		1	2		0
Statistician		1	1		0
Local Travel (1500 hrs)					2500
Supplies and Materials					1000
Stationary, Office Supplies, Copying					
Other Contractual Costs					1500
Printing, country boatmen, messenger service, training for 1-day workshop on ARI					
Drugs/Hospital Supplies for the Treatment of ARI					5000
Inter-departmental Costs					500
Maintenance					
Other Costs					
Capital Expenditures					3000
PC computer and printer					
Subtotal					36011
Overhead at 31%					11163
Total:					47174

Note: The salary of the field coordinator, MCH-FP services is already covered under another budget. Salaries of the Health and Child Survival Fellow, National Anthropologist, and Statistician are covered by the Health and Child Survival Fellows Program, Johns Hopkins University, and the Ford Foundation. Salaries of the PI/Anthropologist and MCH-FP Physician are also covered under other budgets.

Bibliography

- Bale, J. (1990). Creation of a research programme to determine the etiology and epidemiology of Acute Respiratory Tract Infection among children in developing countries. Reviews of Infectious Diseases, 12, Supplement 8.
- Blanchet, T. (1987). Meanings and rituals of birth in rural Bangladesh. Dhaka: The University Press.
- Chowdhury, H. R., Fauveau, V., Yunus, M., Zaman, K., and Briend, A. (1991). Is acute watery diarrhoea an important cause of morbidity and mortality among rural Bangladeshi children? Transactions of the Royal Society of Tropical Medicine and Hygiene, 85, 128-30.
- DiPrete, L. (1991). Acute Lower Respiratory Infection: A review of experience in four countries. Bethesda, MD: Primary Health Care Operations Research (PRICOR) Service Quality Assessment Series.
- Fauveau, V., Koenig, M. A. and Wojtyniak, B. (1991). Excess female deaths among rural Bangladeshi children: An examination of cause-specific mortality and morbidity. International Journal of Epidemiology, 20, 3.
- Gittelsohn, J. (no date). Ethnographic study of Acute Respiratory Infections in the Gambia. Volume 1: Final report of the core and confirmatory studies. Baltimore, MD: UNICEF/Johns Hopkins University School of Hygiene and Public Health, Department of International Health.
- ICDDR,B (1992). Demographic Surveillance System - Matlab: Registration of demographic events - 1987. Dhaka, Bangladesh.
- Jordan, B. (1983). Birth in four cultures: A crosscultural investigation of childbirth in Yucatan, Holland, Sweden and the United States. Montreal: Eden Press.
- Parker, B. (1990). ARI Among Children in Bangladesh. New York: UNICEF.
- Selwyn, B. J. (1990). The epidemiology of Acute Respiratory Tract Infection in young children: Comparison of findings from several developing countries. Reviews of Infectious Diseases, 12, Supplement 8.
- Stewart, M. K., de Francisco Serpa, L. A., Fauveau, V., and Chakraborty, J. (no date). Pneumonia control in Bangladeshi children: Home-based treatment or referral? Programmatic lessons from rural Bangladesh. Manuscript submitted for publication.

Zeitlyn and Chakraborty (no date). Unpublished raw data from ongoing focus group study of parents' perceptions of ARI.

Zeitlyn, S. J. and Islam, F. (1988). The socio-cultural context of breastfeeding in Bangladesh. Paper presented at a series of workshops in medical schools organised by The Bangladesh Campaign for the Promotion and Protection of Breastfeeding.

Consent Form (in English)

International Center for Diarrheal Disease Research, Bangladesh
Johns Hopkins University School of Hygiene and Public Health

Protocol on Identifying the Barriers to Timely Treatment for Acute
Respiratory Infections in Infants and Young Children

Verbal Consent Form for Questionnaires

We are currently conducting research on child health in Matlab. The purpose of this study is to help us better understand how the health of children can be improved. This research is being carried out by the International Center for Diarrheal Disease Research, Bangladesh and the Johns Hopkins University School of Hygiene and Public Health, located in the United States. As part of this study, we will be asking questions of parents whose children are suffering from respiratory difficulties to determine what types of care are sought. As a parent whose child is currently suffering from ARI, your participation in this study can give us important insights into how the delivery of health services in Matlab can be improved. In determining who might participate in this study, we selected parents like yourself whose child is less than five years old and who is currently suffering from ARI.

As part of this study, we will be asking you to answer questions about recent changes in your child's health, if any, and treatment sought. If you agree to participate in this study, we will interview you today and then again tomorrow (24 hours later) and three days from now (72 hours later). We expect that each interview will take less than 45 minutes. We may also return at a later point in time to conduct more open-ended questions about your child's health. We do not anticipate the need for further questions at a later date. You should know that you are not required to answer any questions which might make you uncomfortable. In addition, if you choose not to participate in this study, any medical attention you now receive or expect to receive in the future--from Community Health Workers, ICDDR,B Sub-centers, or the Matlab hospital--will not be jeopardized. Be assured that as far as is reasonably possible, your responses to questions will be treated confidentially.

We expect minimal risk to those who decide to participate in this study. You should be aware that it is possible that information you provide might be disclosed to others. Additionally, your time in responding to questions and the sensitive nature of some aspects of this study may pose risk or discomfort to you. However, every effort will be made to treat your responses confidentially. You should also be aware that the information obtained as part of this study will help researchers in understanding the health and well-being of children less than five years of age. If you would like to participate in this study, please give your verbal consent.

Signature of staff person obtaining consent Date of consent

Name of person for whom consent has been obtained

Appendix A
Questionnaires

ARI SURVEILLANCE FORM USED BY CHW

(Baseline Survey) To identify children with ARI

CHW Code

Date of visit / / / / / (dd-mm-yy)

Current ID # for Child /_/_/_/_/_/_/_/_/_/_

Checklist of symptoms observed by Interviewer

Symptom	Response	Code
Rapid breathing (50 ⁺ breaths/minute)		1=Yes 2=No 9=NS/DK
Fever		
Indrawn chest		
Cough		
Wheezing		
Others (specify)		

INTERVIEW #1--STUDY ON ARI--24 hours (2nd day) after identification

(To be used only for currently active cases of ARI)

Interviewer Code

Date of visit / / / / / (dd-mm-yy)

Current ID # for Child / / / / / / / / / / /

Checklist of symptoms observed by Interviewer

Symptom	Response	Code
Rapid breathing, (50 ⁺ breaths/minute)		1 Yes
Fever		2 No
Indrawn chest		9 NS/DK
Cough		
Wheezing		
Others (specify)		

[Interviewer...Has child previously participated in this study? If yes, child should not be included again in study. If no, then include child in study.]

#	Question	Response	Skip to:
1	Place of interview	1 husband's house 2 mother's/parents' house 3 other (specify) _____	
2	[Note mother's/caretaker's response exactly] How is the child?		

#	Question	Response	Skip to:
3	If mother says child is not well [note exact words and then use check list] How can you see that the child is ill?		
4	Checklist:	1 Rapid breathing 2 Breathing difficulty 3 Cold 4 Fever 5 Indrawn chest 6 Cough 7 Chest noise 8 Others (Specify) _____ _____ _____	
5	How many days has the child been like this? [Interviewer, you may need to probe to determine <u>when</u> in mother's daily routine she first noticed that there was something wrong with child].	_____ (in hours)	
6	What do you call this condition?		
7	[Is the word pneumonia used?]	1 Yes 2 No 9 NS/DK	
8	What are the causes of it?		
9	Is this disease influenced by nature (e.g., the moon's cycle)?	1 Yes 2 No 9 NS/DK	
10	Is this disease influenced by something else?	1 Yes 2 No 9 NS/DK	If NS/DK or no, skip to question 12

#	Question	Response	Skip to:
11	What?		
	[If mother does not perceive that child is sick, inform her about the child's sickness and advise her to seek available treatment. If mother recognises that the child is sick, ask about treatment and note her exact words, then ask appropriate questions below concerning specific treatment options she mentions and order or sequence in which they were sought].		
12	What treatment have you given to the child for this sickness?		
13	[Interviewer, please indicate which types of treatments have been given].	1 Home treatment 2 Outside treatment 3 No treatment	If home or outside treatment, skip to grid
14	[If no treatment was sought (either inside or outside the home), probe on various types of possible treatment (from practitioner grid below). If still no response, ask:] Why have you not sought treatment?		If no treatment sought, skip to question 49

[If yes to outside treatment, find appropriate sections in grid below. Let respondent provide answers spontaneously at first, then probe on each specific treatment. Use boxes below to number practitioners in the order they were seen].

Question:	Codes:	K	A	H	G	I	P	C	O
15 Order of Visit:									
16 Home visit or visit to chamber?	1 Home of child 2 Chamber 3 Home of CHW								
17 Chamber within walking distance of home?	1 Yes 2 No 9 NS/DK								
18 If no, how much would it cost to take a rickshaw or countryboat?	in Taka								
19 Did you take child to chamber?	1 Yes 2 No 9 NS/DK								
20 Who accompanied the child?	1 Mother only 2 Mother+other female relatives/friends (specify) 3 Mother+other male relatives/friends except husband (specify) 4 someone other than mother (specify) 5 both parents 6 CHW alone 7 CHW plus other individuals								
21 Is practitioner related to you?	1 Yes 2 No 9 NS/DK								
22 If practitioner is related, how?	[open ended]								
23 What did you pay this person?	1 in kind (specify) 2 in cash (specify) 3 debt								

K=Kobiraj; A=Allopath; H=Homeopath; G=GOB; I=ICDDR,B; P=Pharmacy; C=CHW from ICDDR,B; O=Other

Question:	Codes:	K	A	H	G	I	P	C	O
24 Type of treatment(s) given:	1 homeopathic 2 herbal 3 tablet 4 syrup 5 injection 6 spiritual (specify) 7 ayurvedic 8 other (specify) 9 ns/dk								
25 [If tablets or syrup, ask mother to show]...is medicine an approved antibiotic?	1 Yes 2 No 9 NS/DK								
26 Have you followed practitioner's advice/taken the prescribed medication?	1 Yes, fully 2 Yes, partially 3 Not at all 9 NS/DK								
27 If no, why not?	{Open-ended}								
28 Why did you choose this treatment? (multiple answers possible)	1 proximity/easy access 2 previous positive experience with practitioner 3 previous positive experience with treatment 4 advice of relative 5 age of child 6 other (specify)								
29 [If relevant] Why did you choose this treatment before/after choosing others?	{Open-ended}								

K=Kobira; A=Allopath; H=Homeopath; G=GOB; I=ICDDR,B; P=Pharmacy; C=CHW from ICDDR,B; O=Other

#	Question	Response	Skip to:
30	Who decided to seek the/se treatments?	1 Husband 2 Mother-in-law 3 Father-in-law 4 Sister-in-law 5 Mother's mother 6 Mother's father 7 Combination of respondent and any of the above 8 Other (specify)	
31	Has your child suffered like this before?	0 Never 1 Yes, once 2 Yes, > once 9 NS/DK	If never or NS/DK, skip to question 33
32	Did you seek any outside treatment?	1 Yes 2 No 9 NS/DK	
33	[If GOB/ICDDR,B treatment has not been sought] Are you aware that free treatment is available at ICDDR,B/GOB? [If not, explain clearly where treatment is available and advise to seek treatment fast].	1 Yes 2 No 9 NS/DK	
34	How many days before the illness of the child did CHW visit?	_____ (in days)	
35	Did you call her or did she contact you on a routine visit?	1 Respondent called CHW 2 CHW routine visit 3 Respondent visited CHW's house 9 NS/DK	

#	Question	Response	Skip to:
36	Did you tell CHW your child was sick?	1 Yes 2 No 9 NS/DK	
37	Did CHW examine child?	1 Yes 2 No 9 NS/DK	
38	What did she say was wrong?		
39	[Interviewer, was pneumonia mentioned?]	1 Yes 2 No 9 NS/DK	
40	Did CHW prescribe any medicine?	1 Yes 2 No 9 NS/DK	If NS/DK or no, skip to question 43
41	What?		
42	[According to respondent] What is the correct dose?	_____ (dose) _____ (times/day)	
43	What (other) advise did CHW give?		
44	When will the CHW visit next?		If no medicine given, skip to question 47
45	Can you please show me the medicine the CHW gave you?	_____ # of tablets remaining	
46	[Was the correct number of tablets taken?]	1 Yes 2 No 9 NS/DK	

#	Question	Response	Skip to:
47	If <u>children</u> need outside medical treatment, who in general decides about the treatment of the child?	1 Mother 2 Father 3 Mother-in-law 4 Father-in-law 5 Husband's sister 6 Other (specify) _____	
48	[If respondent cares for more than one child] If you need to seek outside treatment for a child, with whom do you usually leave the other children?	1 Husband's family 2 Wife's family 3 Don't leave 9 NS/DK	
49	Is child breastfed?	1 Yes, partial 2 Yes, fully 3 No	If no, skip to question 52
50	Have you changed your own diet since the onset of child's illness?	1 Yes 2 No 9 NS/DK	If NS/DK or no, skip to question 52
51	How?		
52	Has your child's diet changed?	1 Yes 2 No	If no, skip to question 55
53	How?		
54	Is this amount of food more, less, or the same amount as usual?	1 More 2 Less 3 About the same 9 NS/DK	

#	Question	Response	Skip to:
55	When did you last leave this para (for any reason)?	_____ (weeks) [00. for no visit outside of para]	If 00, skip to question 59
56	Where did you go?		
57	Who accompanied you?	_____ (relation) _____ (age)	
58	In the past month, how many times have you left this para?	_____	
59	Have you ever visited the ICDDR,B sub-centre?	0 Never 1 Yes, once 2 Yes, more than once 9 NS/DK	If Never or NS/DK, skip to question 62
60	Who accompanied you?	1 Husband 2 Mother-in-law 3 Father-in-law 4 Husband's sister 5 Mother 6 Father 7 Health Worker (CHW) 8 Other (specify) _____	
61	Whose permission was needed to go?	1 Permission not needed 2 Husband 3 Mother-in-law 4 Father-in-law 5 Husband's sister 6 Other (specify) _____	

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#	Question	Response	Skip to:
62	Have you ever visited ICDDR,B's Matlab Treatment Centre or the GOB Upazilla Health Centre?	1 Yes 2 No 9 NS/DK	If NS/DK or no, skip to question 66
63	Who accompanied you?	1 Husband 2 Mother-in-law 3 Father-in-law 4 Husband's sister 5 Mother 6 Father 7 Health Worker (CHW) 8 Other (specify) _____	
64	Whose permission was needed to go?	1 Permission not needed 2 Husband 3 Mother-in-law 4 Father-in-law 5 Husband's sister 6 Other (specify) _____	
65	Did you <u>inform</u> anyone (else) before going to ICDDR,B's Matlab Treatment Centre or the GOB Upazilla Health Centre?	1 Yes 2 No 9 NS/DK	
66	Has your child recently experienced diarrhea?	1 Yes 2 No 9 NS/DK	If NS/DK or no, thank mother for her time.
67	Type of diarrhea?	1 Watery 2 Liquid 3 Semi-solid	
68	With or without blood?	1 With blood 2 Without blood 9 NS/DK	

INTERVIEW #2--STUDY ON ARI--48 hours (3rd day) after identification

(To be used only for currently active cases of ARI)

Interviewer Code

Current ID # for Child /_/_/_/_/_/_/_/_/_/_/_/_/_/_/_/_

Checklist of symptoms observed by Interviewer

Symptom	Response	Code
Rapid breathing (50+ breaths/minute)		1 Yes
Fever		2 No
Indrawn chest		9 NS/DK
Cough		
Wheezing		
Others (specify)		

#	Question	Response	Skip to:
1	[Note mother's/caretaker's response exactly] How is this child now?		
2	Has child's condition improved since last visit?	1 Yes 2 No 9 NS/DK	If NS/DK or no, skip to question 4
3	How can you see that (s)he has improved?		Skip to question 5
4	How can you see that his or her condition has worsened?		

#	Question	Response	Skip to:
5	Checklist of symptoms observed by mother:	1 Rapid breathing 2 Breathing difficulty 3 Cold 4 Fever 5 Indrawn chest 6 Cough 7 Chest noise 8 Others (Specify) _____ _____	
6	On our last visit, we advised you to seek treatment for your child. Could you please tell us what has happened since our last visit?		
7	Did you discuss our advice with any members of your family?	1 Yes 2 No 9 NS/DK	If NS/DK or no, skip to question 9
8	With whom?	1 Husband 2 Mother-in-law 3 Father-in-law 4 Husband's sister 5 Mother 6 Father 7 Other (Specify)	
9	What treatment have you given <u>since we last spoke with you?</u>	1 Home treatment 2 Outside treatment	If outside treatment, skip to question 12
10	What was the treatment?		
11	Who suggested this treatment?	_____ (relation)	

[If yes to home or outside treatment since last interview, find appropriate sections in grid below. Let respondent provide answers spontaneously at first, then probe on each specific treatment. Use boxes below to number practitioners in the order they were seen].

Question:	Codes:	K	A	H	G	I	P	C	O
12 Order of Visit:									
13 Home visit or visit to chamber?	1 Home of child 2 Chamber 3 Home of CHW								
14 Chamber within walking distance of home?	1 Yes 2 No 9 NS/DK								
15 If no, how much would it cost to take a rickshaw or countryboat?	in Taka								
16 Did you take child to chamber?	1 Yes 2 No 9 NS/DK								
17 Who accompanied the child?	1 Mother only 2 Mother+other female relatives/friends (specify) 3 Mother+other male relatives/friends except husband (specify) 4 someone other than mother (specify) 5 both parents 6 CHW alone 7 CHW plus other individuals								
18 Is practitioner related to you?	1 Yes 2 No 9 NS/DK								
19 If practitioner is related, how?	[open ended]								
20 What did you pay this person?	1 in kind (specify) 2 in cash (specify) 3 debt								

K=Kobiraj; A=Allopath; H=Homeopath; G=GOB; I=ICDDR,B; P=Pharmacy; C=CHW from ICDDR,B; O=Other

Question:	Codes:	K	A	H	G	I	P	C	O
21 Type of treatment(s) given:	1 homeopathic 2 herbal 3 tablet 4 syrup 5 injection 6 spiritual (specify) 7 ayurvedic 8 other (specify) 9 ns/dk								
22 [If tablets or syrup, ask mother to show]...is medicine an approved antibiotic?	1 Yes 2 No 9 NS/DK								
23 Have you followed practitioner's advice/taken the prescribed medication?	1 Yes, fully 2 Yes, partially 3 Not at all 9 NS/DK								
24 If no, why not?	[Open-ended]								
25 Why did you choose this treatment? (multiple answers possible)	1 proximity/easy access 2 previous positive experience with practitioner 3 previous positive experience with treatment 4 advice of relative 5 age of child 6 other (specify)								
26 [If relevant] Why did you choose this treatment before/after choosing others?	[Open-ended]								

K=Kobiraj; A=Allopath; H=Homeopath; G=GOB; I=ICDDR,B; P=Pharmacy; C=CHW from ICDDR,B; O=Other

#	Question	Response	Skip to:
27	Who decided to seek the/se treatments?	1 Husband 2 Mother-in-law 3 Father-in-law 4 Sister-in-law 5 Mother's mother 6 Mother's father 7 Combination of respondent and any of the above 8 Other (specify)	
28	Has your child suffered like this before?	0 Never 1 Yes, once 2 Yes, > once 9 NS/DK	If never or NS/DK, skip to question 30
29	Did you seek any outside treatment?	1 Yes 2 No 9 NS/DK	
30	[If GOB/ICDDR,B treatment has not been sought] Are you aware that free treatment is available at ICDDR,B/GOB? [If not, explain clearly where treatment is available and advise to seek treatment fast].	1 Yes 2 No 9 NS/DK	

#	Question	Response	Skip to:
31	Would you consider using this ICDDR,B/GOB treatment?	1 Yes 2 No 9 NS/DK	If yes, skip to question 33
32	Why not?	1 Distance 2 Transport cost 3 Purdah 4 Permission 5 Work loss 6 Previous bad experience 7 Previously unaware of facilities 8 Cleanliness of facilities is unacceptable 9 Poor dr/nurse interaction with patients 10 other (specify)	
	[If purdah is a factor, ask questions 33-36]		
33	Is this your own decision?	1 Yes 2 No 9 NS/DK	
34	Do other bari members observe purdah in the same way?	1 Yes 2 No 9 NS/DK	
35	Do any adult women in this bari regularly leave the bari?	1 Yes 2 No 9 NS/DK	
36	Would you feel able to go if another adult could accompany you?	1 Yes 2 No 9 NS/DK	

#	Question	Response	Skip to:
	[If permission is a factor, ask questions 37-39]		
37	From whom do you require permission?	1 Mother-in-law 2 Father-in-law 3 Others (specify) _____	
38	Is this person here at present?	1 Yes 2 No 9 NS/DK	
39	Why is permission required?	1 money involved 2 breaks purdah 3 child responsi- bilities 4 Other (specify) _____	
	[If work loss is a factor, ask question 40]		
40	Please describe the tasks you cannot leave.	1 processing rice or other crops 2 poultry 3 cash labour 4 childcare 5 food preparation 6 other (specify) _____	
	[If previous bad experience is a factor, ask question 41]		
41	Please tell us what you did not like about your previous experience.		

(To be used only for currently active cases of ARI)

Current ID # for Child /./././././././././././././././././

Symptom	Response	Code
Rapid breathing (50+ breaths/minute)		1 Yes
Fever		2 No
Indrawn chest		9 NS/DK
Cough		
Wheezing		
Others (specify)		

1

#	Question	Response	Skip to:
5	Checklist of symptoms observed by mother:	1 Rapid breathing 2 Breathing difficulty 3 Cold 4 Fever 5 Indrawn chest 6 Cough 7 Chest noise 8 Others (Specify) _____ _____	
6	During our last two visits, you indicated that you had seen [interviewer, list all practitioners caretaker has consulted up to this point]. Is there anyone else you have seen--either since we last spoke with you or since onset of illness?	1 Yes 2 No 9 NS/DK	
7	Was this treatment given exclusively in the home or did the child travel outside the home to receive treatment?	1 Home treatment 2 Outside treatment	If home treatment, skip to question
	For <u>all</u> outside treatment occurring since the identification of ARI, find appropriate sections below.		
8	Kobiraj	1 Yes 2 No 9 NS/DK	
9	Were you satisfied with the treatment you received from this provider?	1 Yes 2 No 9 NS/DK	
10	Why or why not?		

#	Question	Response	Skip to:
11	Allopath	1 Yes 2 No 9 NS/DK	
12	Were you satisfied with the treatment you received from this provider?	1 Yes 2 No 9 NS/DK	
13	Why or why not?		
14	Homeopath	1 Yes 2 No 9 NS/DK	
15	Were you satisfied with the treatment you received from this provider?	1 Yes 2 No 9 NS/DK	
16	Why or why not?		
17	GOB	1 Yes 2 No 9 NS/DK	
18	Were you satisfied with the treatment you received from this provider?	1 Yes 2 No 9 NS/DK	
19	Why or why not?		
20	ICDDR, B	1 Yes 2 No 9 NS/DK	
21	Were you satisfied with the treatment you received from this provider?	1 Yes 2 No 9 NS/DK	
22	Why or why not?		

#	Question	Response	Skip to:
23	Pharmacies	1 Yes 2 No 9 NS/DK	
24	Were you satisfied with the treatment you received from this provider?	1 Yes 2 No 9 NS/DK	
25	Why or why not?		
26	Other (specify)	1 Yes 2 No 9 NS/DK	
27	Were you satisfied with the treatment you received from this provider?	1 Yes 2 No 9 NS/DK	
28	Why or why not?		
29	Were there other treatments you would have liked to give your child but were unable to?	1 Yes 2 No 9 NS/DK	If NS/DK or no, skip to question 32
30	Which ones?		
31	What prevented you from seeking these treatments?	1 too costly 2 too far away 3 restrictions on traveling outside the household 4 husband/relatives/in-laws objected 5 childcare resp's/other duties 6 child's health improved 7 other (specify)	

[If GOB/ICDDR,B treatment has not been sought, explain clearly where treatment is available and advise parents to seek treatment fast].

#	Question	Response	Skip to:
32	Is child breastfed?	1 Yes, partial 2 Yes, fully 3 No	If no, skip to question 35
33	Have you changed your own diet since the onset of child's illness?	1 Yes 2 No 9 NS/DK	If NS/DK or no, skip to question 35
34	How?		
35	Has your child's diet changed?	1 Yes 2 No	If no, skip to question 38
36	How?		
37	Is this amount of food more, less, or the same amount as usual?	1 More 2 Less 3 About the same 9 NS/DK	
38	Which foods was your child eating immediately before becoming sick with illness?		
39	And what is your child eating now?		

Title: Identifying the Barriers to Timely Treatment for ARI in Infants and Young Children.

Summary of Referee's Opinions: Please see the following table to evaluate the various aspects of the proposal by checking the appropriate boxes. Your detailed comments are so ght on a separate, attached page.

	Rank Score		
	High	Medium	Low
Quality of Project	✓		
Adequacy of Project Design		✓	
Suitability of Methodology	✓		
Feasibility within time period	✓		
Appropriateness of budget	✓		
Potential value of field of knowledge	✓		

CONCLUSIONS

I support the application:

a) without qualification

b) with qualification

- on technical grounds

- on level of financial support

☒
☐
☐
☐
☐

I do not support the application

Name of Referee:

Signature:..

5.1.1992

Position:

Institutio

Detailed C

Dr Zeitlyn
Dr. Deindler

COMMENTS ON THE PROPOSED RESEARCH ON
IDENTIFYING THE BARRIERS TO TIMELY TREATMENT FOR ARI
IN INFANTS AND YOUNG CHILDREN

I strongly feel that the proposed research, "Identifying the Barriers to Timely Treatment for ARI in Infants and Young Children", should be funded. The policy implications of the study are extremely important. The research proposal is articulate and well thought out. There are however a few minor methodological issues that need to be pointed out.

1. Although the study deals at length with both the questions and the analytical framework of the survey component, the sections on the qualitative component seem sketchy. It is stated that "open-ended qualitative interviewing techniques" will be used to gather insights into parental perception of symptoms, their understanding of the causes of ARI, therapies sought, etc. However, given that this will be a major study (both in terms of time and financial involvement), the proposal required a more detailed explanation of the design of the qualitative component.
2. I am skeptical of the adequacy of the survey to address issues of "parental ideas on the causes of ARI" and "identification of key household decision makers". Information on these should be sought through the open-ended interviews and through participant observation techniques.
3. On the questionnaire:
Interview # 1 Q 9: Extremely vague phrasing; how is "nature" translated into Bangla? Confusing for the respondent.

The decision making process (decisions to seek treatment, I-1 Q-30; I-1 Q-47; I-2 Q-27;) within the household can be extremely complex, requiring participant observation techniques for its unravelling. Information from the survey questions is bound to inaccurately simplify domestic reality.

The questions on "mobility" (I-1 Q-55 to Q-58), take the "bari" boundary as the defining separation of public space and private space. However this separation is contingent on diverse factors including time of day and paths out of the "bari". For purposes of this study the "para" may be a better indicator of whether the women is able to seek out external medical assistance.

I-1 Q-64: Must differentiate between "permission required" and "person informed".

I-2 Q-7&8; I-2 Q-39: Again too complex to get accurate information through survey.

cc: Dr. Zeithyn
Dr. Searden

ccs Dr. Zentlyn

Page 1 (of 2)

Title: Identifying the Barriers to Timely Treatment for ARI in Infants and Young Children.

Summary of Referee's Opinions: Please see the following table to evaluate the various aspects of the proposal by checking the appropriate boxes. Your detailed comments are so ght on a separate, attached page.

Rank Score

	High	Medium	Low
Quality of Project	✓		
Adequacy of Project Design	✓		
Suitability of Methodology	✓		
Feasibility within time period	✓		
Appropriateness of budget	✓		
Potential value of field of knowledge	✓		

CONCLUSIONS

I support the application:

a) without qualification

b) with qualification

- on technical grounds

- on level of financial support

I do not support the application

☒
☐
☐
☐
☐

Please briefly provide your opinions of this proposal, giving special attention to the originality and feasibility of the project, its potential for providing new knowledge and the justification of financial support sought; include suggestions for modifications (scientific or financial) where you feel they are justified.

(Use additional pages if necessary)

Title: Identifying the Barriers to Timely Treatment for ARI in Infants and Young Children.

PI:

Reviewer:

This is a good research proposal and is likely to contribute in understanding the problems of ARI among the children of Bangladesh. The study incorporates both quantitative and qualitative aspects of data collection which is the strength point of the proposal.

The study provided a balanced budget over an appropriate time frame. Hopefully, when completed, the study will serve both academic and practical purposes.

In response to external reviewers' comments on the proposed research entitled "Identifying the barriers to timely treatment for Acute Respiratory Infections in infants and young children", we have made the following observations and changes.

1. Reviewers rightly point out that the sections on the qualitative component of the study are less developed. The reason for this is that it is proposed to undertake in-depth interviews with sub-samples who will be selected on the basis of our quantitative results. The nature of the sub-sample will dictate the type of questions to be formulated. Thus for example we might select the following sub-groups for in-depth follow up interviews: (i) those parents who do not comply with prescribed treatment or reject advice to take their child to the ICDDR,B centre or sub-centre, (ii) those who actively seek ICDDR,B treatment rather than waiting for the CHW's routine visit (iii) those who seek alternative treatments from kobiraj or village doctors. It is important to emphasise, however, that we can not predict which sub-groups will be selected until we have some quantitative results on which to base our selection criteria. This issue has been expanded on, in the proposal to address the reviewer's concern.
2. One reviewer suggests that the survey may not be adequate to capture ideas on causation of ARI and the decision making process. This will have to be investigated through very careful pre-testing of the questionnaire. Unpublished focus group studies and field experience indicate that it may be possible to address ideas on causation. Identification of key household decision-makers may, as the reviewer suggests, have to be sought through open-ended interviews and observation.
3. The investigators are very grateful for the thorough, detailed and constructive comments that the reviewers have made on the questionnaire. All these will be born in mind when pre-testing the questionnaire. The point on mobility that suggests that the para rather than the bari should be taken as an indicator has been incorporated into the questionnaire as suggested.