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Date 31.1.96

Principal Investigator ANJALI SHARMA
Application No. 96-002
Title of Study IMPROVING CARE-SEEKING BEHAVIOR FOR CHILDREN'S ILLNESSES: AN INTERVENTION TRIAL IN URBAN BANGLADESH

Trainee Investigator (if any) 26
Supporting Agency (if Non-ICDDR,B) _____
Project status:
(X) New Study
() Continuation with change
() 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 N.A.
(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 ☒ N.A.

5. Will signed consent form be required:

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

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

7. Check documents being submitted herewith to Committee:

- ☒ NA 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
☒ FOR FES; SURVEY; TO BE COMPLETED
☒ 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.

SIX MONTHS INTO THE STUDY.

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

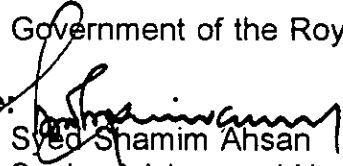
Anjali Sharma
Principal Investigator

ENTERED 21 JUN 1998

Trainee

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SECTION I: RESEARCH PROTOCOL

- Principal Investigators:** Anjali Sharma
International Fellow
Urban MCH-FP Extension Project
2. **Other Investigators:** Dr. Abdullah H. Baqui
Dr. Shams El Arifeen
3. **Title of Project:** Improving Care-seeking Behavior for Children's
Illnesses: An Intervention Trial in Urban Bangladesh
4. **Starting Date:** Upon RRC/ERC approval
5. **Date of Completion:** 14 months from the start of the study
6. **Total Budget Requested:** US \$ 164,712.85
7. **Funding source:** Government of the Royal Netherlands
8. **Head of Programme:** 
Syed Shamim Ahsan
Senior Advisor and Head
Health and Population Extension Division

Improving Care-Seeking Behavior For Children's Illnesses: An Intervention Trial in Urban Bangladesh

Investigators:
Anjali Sharma
A. H. Baqui
Robert E. Black
Joel Gittelsohn
Shams el Arifeen

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PROPOSAL

ANJALI SHARMA

February 2, 1996

Abstract

Acute Respiratory Infections (ARI) account for approximately 18-25% of the Bangladesh child mortality. Many of these deaths are due to pneumonia, most forms of which could be cured through appropriate and timely case management with antibiotics. The correct use of antibiotics depends on the ability of caretakers to seek treatment outside the home. The 1995 Demographic Health Survey, Bangladesh (DHSB) report found that of the children who need medical attention (had a cough and rapid or difficult breathing) only 33.4% were taken to a qualified and appropriate health provider. Caretakers must recognize the need to use clinical assistance, have access to health care facilities, receive correct treatment advice, and subsequently adhere to the treatment regime. Systemically, the health workers should be trained to correctly recognize and treat pneumonia. To ensure the correct use of antibiotic treatment, local health facilities, local knowledge and household decision-making patterns have to be considered. As such, the local situation needs to guide any attempt to intervene in the decision-making process.

The study is a quasi-experimental effectiveness trial, with a pre-post control group, of an intervention based on ethnographic data. The study, to be conducted in the PVO World Vision's project area (Dhalpur and Golapbagh) in Kamalapur, Dhaka consists of two main parts: a focused ethnography and an intervention trial.

Based on the premise that an intervention that takes into account local beliefs, norms and practices will enhance recognition of illness and utilization of appropriate health facilities for childhood illnesses, the study begins with a focused ethnographic study. A simultaneous evaluation of the current World Vision, Bangladesh ARI program will assess the systemic capacity to effectively manage cases of ARI. The ethnographic phase aims to elicit local ethnomedical explanatory models and subsequent health seeking behavior. It adapts the methods and guidelines of the World Health Organization's Focused Ethnographic Studies (FES: 1991) protocol. The FES collects data that provides an insight into the socio-cultural context of responses to illness at the household as well as provider level in order to develop an ARI intervention program. Data collection techniques borrowed from the FES include interviews, freelisting of illnesses with exploration of causes and treatment, assessing the relationship between local terms and physical signs and symptoms with video tape in a clinic, sorting of signs and symptoms into illness categories and severity rating tasks. To the guidelines for drawing narrative of the past ARI episode will be added a guide for drawing a narrative of the last childhood illness at home. A field guide to consult key informants and focus groups on intervention-specific information, such as, sources of communication and ways to sustain new behavior will be developed.

The current ARI program as offered by World Vision (WV) will be assessed by the use of a competency test, an inventory of supplies and an assessment of their role in the community. Based on this information, ARI training for the WV providers and for private practitioners will be provided to ensure the availability of "appropriate" facilities.

The second part of the study consists of designing and pretesting the intervention in an area similar to the study area. The analysis of the ethnographic data will inform the intervention design, which will be evaluated in various stages of production. The initial ideas, the ensuing audio and visual material and, the final intervention methods and product will be pretested using highly structured focus groups of in-house personnel, local artists and caretakers of children under five from the Kamalapur area.

The community workers serving WV's Kamalapur project area form thirteen natural compartments. The WV clinic (Golapbagh) serves six of these compartments and another WV clinic (Dhalpur) serves the remaining seven. These two areas will then be treated as two clusters to be randomly assigned to

an intervention and control group. At 0.33% expected pneumonia rate per child year, approximately 91 cases should be identified over 4 2-week recall periods. At a 0.05 significance level and power of 80%, we should be able to detect an approximately 20% absolute increase in the timely use of appropriate clinical facilities in the intervention area. Each household that makes up these clusters will be visited four times for a two week recall of illness episodes, over a period of six months. The interactions with the intervention and control groups will be of the same intensity and duration. They will differ only with respect to the contents of the intervention, which will be based on the focused ethnographic study. The impact of the intervention will be assessed by the pre and post intervention test scores of the mothers of the children under four years of age in the two groups. The questionnaire will be formalized following the results of the ethnographic study (approximately four months after the study begins). The posttest will also evaluate the intervention to keep those components that aided appropriate utilization and to discard or modify those that had no impact or had a secondary undesirable effect.

Finally, postevaluation, modification of the intervention, training for workers in the control area, re-training for workers in the intervention area and introduction of the intervention into the control area will commence over a period of 1-2 months in a joint effort by WVB and the Research Assistants.

If successful, this intervention can be generalized to other urban areas in Dhaka with a few modifications. The principles that guided the intervention can be disseminated for further use by other organizations. If caretakers can be provided with and be persuaded to utilize appropriate healthcare facilities for their ill under-five children without active casefinding, then the costs and efforts of a national program can be more manageable.

9. Aims of project

We propose to implement and evaluate a community-based intervention aimed at increasing timely use of appropriate clinical facilities for pneumonia in children under five years of age by their caretakers. As such, current efforts¹ at ARI intervention and, local knowledge about ARI and its appropriate treatment shall be assessed to inform a more locally relevant intervention. The intervention, to be designed after this initial evaluation, will itself be assessed after a 6 month period to identify which of its components need reinforcement and which need modification.

(a) GENERAL AIM

The study has three broad goals:

- 1) evaluate the current ARI-based activities in a poor urban area of Dhaka,
- 2) increase in the timely (to be defined) use of appropriate (to be defined) clinical facilities for pneumonia cases, and
- 3) implement and evaluate the subsequent intervention to allow for required modifications in its design, if any.

(b) SPECIFIC AIMS

The main objective of the proposed study is to develop and test an intervention that evaluates and improves upon current intervention efforts to reach, motivate and support caretakers to seek timely and appropriate care for ALRI and related childhood illnesses.

The associated hypothesis are as follows:

Specific Hypotheses

1. An intervention that takes into account local belief, norms and knowledge will improve upon present efforts to increase the timely² utilization of appropriate³ clinical facilities for pneumonia in children under-five.
2. Such an intervention will also improve present efforts at communications for ARI as measured by increase in ARI-related knowledge by 65%.

¹ The current World Vision program depends on one-two visits to each household by an assigned community volunteer. They also provide immunization clinics, referrals and antibiotics.

As per WHO recommendations:

1. when unable to drink or if becomes sicker
2. if child has cough and fast or difficult breathing
3. if child has diarrhoea and drinks poorly or has bloody stools
4. if the baby is less than 2 months old and is breastfeeding poorly or has any of the above signs

³ to be defined

The specific objectives are:

i. Descriptive Objectives (to be met by the ethnography and guided by the HBM)

1. To generate a list of symptoms that alert parents to the ill-health of children.
2. To develop an explanatory model of illnesses based on those symptoms.
3. To describe how the mothers rank these signs and symptoms/illnesses in terms of severity.
4. To describe what types of households and children are perceived as likely to fall ill.
5. To describe treatment seeking behavior for ill children.
6. To describe the factors that affect the decision-making process with regard to child health.
7. To identify the major barriers to appropriate careseeking.
8. To identify factors that attract careseekers to the health facility.
9. Heighten community perception of childhood illnesses and available health care services.
10. Identify the appropriate channels of communication.

ii. Intervention Objectives (to be designed based on ethnographic data and tested by the pre-post survey)

1. Increase the timely (to be defined) use of appropriate (to be defined) clinical facilities for pneumonia cases.
2. Increase ARI-related knowledge by 65%.

(c) SIGNIFICANCE

If successful, this intervention can be generalized to the three wards and the principles that guided it can be disseminated for use in other areas. If caretakers can be provided with and persuaded to utilize appropriate healthcare facilities for their ill under-five children without active casefinding, then the costs and efforts of a national program can be more manageable.

10. Ethical implications, informed consent and confidentiality

Consent will be at two levels: community and individual. The PI and Research Investigators will meet with community leaders and volunteers in both intervention and control groups to explain the project objectives and invite their comments and recommendations. Verbal informed consent, in the face of illiteracy, will be obtained from the key informants, respondents and interviewees after a disclosure statement and an explanation of the study (APPENDIX I). No written permission of other household members will be asked. However, the respondent may choose to do so.

While the study does not provided specific treatment for any serious health problems, they will be trained to identify and respond to any childhood illness they encounter. They may refer the child(ren) to the closest health care facility or to the hospital, as required.

All information gathered will be kept confidential. The interview will be conducted with as much privacy as possible; the questionnaire and the data collection form will be given an identification code, with the linkage being kept in a locked register at the office. Interviewers will be instructed to maintain strict confidentiality of the information they collect.

11. Background

Acute Respiratory Infections (ARI) have a variety of clinical manifestations and etiological agents. Each of the various etiological agents for ARI cause a multitude of syndromes. These include Acute Upper Respiratory infections (AURI) such as cold, Otitis Media and Pharyngitis and Acute Lower Respiratory Infections (ALRI) such as Croup, Stridor, Bronchitis, Bronchiolitis and Pneumonia (WHO 1990). Episodes with AURI are usually mild and self-limiting, and very rarely, lead to death (Berman & McIntosh 1986). Of the ALRIs, pneumonia, and particularly bacterial pneumonia, is the most important and frequent cause of ARI-specific mortality (Pio et al 1988). As with bronchiolitis, pneumonia involves tachypnea, cough, nasal flaring, retractions, wheezing, and cyanosis (Kirkwood 1991).

a. Definitions:

Most pneumonia experienced in the developing world is bacterial in nature, the main pathogens being H. influenza and S. pneumoniae (Shann 1986). Therefore, most interventions seek to control deaths by bacterial pneumonia with appropriate and timely dispensation of antibiotics to impact the overall ARI-specific mortality rate in children under five. The WHO (1994:19) definitions for respiratory conditions in children aged 2 months to 5 years are as follows:

SEVERE PNEUMONIA OR VERY SEVERE DISEASE: This includes children with danger signs: inability to drink, has had convulsions and/or is abnormally sleepy or difficult to wake (p.8), chest indrawing, or stridor in a calm child.

PNEUMONIA: This includes children aged 2 to 12 months with 50 or more breaths per minute and children aged 1-5 years with 40 or more breaths per minute and NO chest indrawing.

NO PNEUMONIA: COUGH OR COLD: This includes children with no chest indrawing or fast breathing as defined above.

For infants, between 1 week and under 2 months of age, convulsions, fast breathing (60 or more per minute), severe chest indrawing, grunting, difficult to wake, weak or absent cry, not consolable within an hour, umbilical redness extending to the skin, fever or low body temperature, decreased movement and the inability to attach successfully or suckle effectively are indicative of **possible serious bacterial infection**. Pus draining from the ear, red umbilicus or draining pus, or skin pustules suggest local bacterial infection. In the absence of any of the above signs, the examiner can conclude that bacterial infection is unlikely (from the chart "Assess, Classify and Treat the Sick Young Infant: Age 1 week up to 2 months).

b. Prevalence:

ARI occur in young children globally. However, they rarely pose a threat in the North where the few severe episodes are promptly and effectively addressed (Kirkwood 1991). In the South, the severity and the longer duration of the illness along with inappropriate treatment makes ARI a public health problem for children under five (Anderson & Turner 1991). Six community studies found that incidence rates for ARI ranged from 12.7 to 16.8 new episodes per 100 child-weeks at risk with ALRI ranging from .2-3.4 new episodes per 100 child weeks (Selwyn 1990). The highest incidence rates were in younger children. Most children living in urban areas suffer 5-8 episodes per year and, in deprived circumstances, pneumonia causes the most complications (Douglas 1991).

A longitudinal community-based study conducted in 1989 in a low income peri-urban area of Syria, found an average prevalence of 23% for ARI in children under five (Bashour et al 1994). The same study also found a peak age-specific incidence for pneumonia in children 0-5 months and a higher incidence and prevalence for male children. In rural Turkey, Beser and Cakmakci (1994) found a prevalence of 35.7% for ARI in children under five without rickets. Gunay et al (1994) found a

prevalence of at least 40% in a province of Central Anatolia, Turkey. Another study in Malaysia reports a 2-week prevalence of 30% (Lye et al 1994). Of these, 94% had mild, 1% had moderate and 5% had severe ARI.

The Bangladesh MOH (1993) estimates that in the city of Dhaka, each child under five averages 7-9 ARI episodes of 7-14 days each annually. The Bangladesh Demographic Health Survey report (1995) estimates the prevalence of ARI by asking mothers whether their children under three years of age had a cough with short, rapid breathing (indicative of pneumonia) in the two weeks preceding the survey. For 1993-94, the results indicate that 24% of the children under three meet this criteria with no significant differences by sex, birth order, mother's education or urban-rural residence. For specifically urban areas, the two-week prevalence approximates 24.8%.

c. Effect on mortality and morbidity:

While the estimate for global diarrhea specific mortality exceeds that of ARI, several countries report higher ARI than diarrheal mortality (Mata 1978, Pandey et al 1985, Aung 1985, Greenwood et al 1987, Parker 1987, Health Alert 1991). The UNICEF (Grant 1988) and WHO reports (1988), attribute 4 million of the fifteen million infant and child deaths to ARI, 80% of which are due to pneumonia. The WHO interim programme report (1993) suggests that 19 developing countries with an estimated infant mortality rate of over 40/1000, individually contribute more than 1% and collectively more than 80% of the global pneumonia mortality in children under five years of age. These 19 developing countries feature three from the subcontinent: India, Bangladesh and Pakistan, with a proportional contribution to the global pneumonia mortality of 28.5, 7.8 and 7.7% respectively.

One-third of the child mortality figures can be attributed to ARI or ARI related illnesses (WHO 1993). Neonates, particularly in the first week of life (Bartlett et al 1991, Victora et al 1987) and infants up to 6 months of age face the greatest risk of ARI-related morbidity and mortality (Reddaiah & Kapoor 1988, Mosley et al 1990). Those under 2 months of age account for 20-30% of the total under five deaths (Nichter 1994). Two to three-year old children experience more respiratory infections than other age groups. Stansfield (1987) estimates that timely administration of antibiotics and immunization against diseases which increase risk for ARI could prevent 98% of these ARI-related deaths.

ARI often occurs in relation with other childhood illnesses such as diarrhea, malnutrition and/or measles (Rahman et al 1990). As co-morbidity factors, these illnesses may occur simultaneously or sequentially. Thus, ARI and/or diarrhea may follow an episode of measles. Pneumonia often presents itself as a complication of measles and pertussis, particularly among malnourished children (Pio 1986), and may follow influenza or viral pneumonia (Busse 1991). Pneumonia unassociated with measles causes 70% of all ARI deaths, post-measles 15%, pertussis 10% and bronchiolitis and croup syndromes 5% (Busse 1991). Malnourished children face a higher risk of both bronchitis and pneumonia than better nourished children (James 1972). Additionally, malaria may cause chest retractions, rapid breathing and diarrhea, symptoms usually associated with respiratory infections (Nichter 1994). Similarly, it may be difficult to distinguish ARI from sepsis and meningitis in young infants (Anderson & Turner 1991, Seeger & Lasch 1987). These findings are in keeping with the WHO 1990 report that summarizes that most pneumonia cases and deaths, particularly in the first few months of life, go undetected.

Among infants in Bangladesh, ARI, diarrhea and tetanus account for 54% of all infant deaths (Arifeen et al 1993) and, along with measles constitute the most serious childhood illnesses. The ARI-specific childhood mortality rate causes concern because of its unaltered rate of about 18-25% for the past decade. Spika et al (1989), using verbal autopsy found that ALRI accounted for 29% of the annual under five deaths. They estimate that infants under 6 months of age account for 50% of the under-

five ARI mortality rate. While deaths among children between 3 and 4 years old occur mostly from October to January, those among infant under 5 months of age followed the seasonal birth pattern (twice the number of births occur in winter as compared to summer: Becker 1994:370). Malnutrition and measles had the most significant association with fatal ALRI.

A retrospective analysis of deaths among patients hospitalized for diarrhea in Dhaka during 1970 (90% children under 5) found that among those patients who died, 72% died primarily of septicaemia and 28% of pneumonia (Mitra et al 1991). However, in 90% of the cases, multiple conditions contributing to the death were noted. Similarly, Butler et al (1989) found that 11 out of 37 cases of deaths due to shigellosis were complicated by pneumonia. ARI concomitant with acute diarrhoea, increases the duration of diarrhoea (Mahalanabis et al 1991). Using data from the national survey conducted by the Control of Diarrhoeal Disease Programme, Government of Bangladesh (GOB) in 1992-93, Salway and Nasim (1994) found that 7.4% of the deaths were due to combined diarrhoeal and ARI causes and 15.5% of all deaths under five were associated with ARI. Sixty percent of these cases were presented with fever being the symptom of concern. Other studies confirm that signs of respiratory illnesses in conjunction with the primary illness has a significant association with under-five mortality in Bangladesh (eg. Mitra et al 1990). Therefore, case management for ARI must also consider treatment measures for other accompanying childhood illness.

d. Mechanisms by which pneumonia contributes to morbidity and mortality:

Death during bacterial pneumonia occurs due to respiratory failure. The edema fluid or exudate expands the lungs and reduces air entry into the alveoli (Anderson & Turner 1991). The exudate in the airspace have easy access to the bloodstream through the capillaries in the alveoli (Seeger & Lasch 1987). Shock may further complicate end-organ perfusion and a mixed respiratory and metabolic acidosis may precede death due to ARI.

The respiratory tract and its mucosal surfaces provide the host with mechanical, nonimmunologic, immunologic and a combination of these defense mechanisms to minimize the incidence of infection (Kaltfrieder 1988). Failure in any of the various steps of defense increases the likelihood of infection even from a small bacterial inoculum. In a healthy lung, bacteria multiply and pneumonia occurs when a critical ratio of organisms to phagocytic cells is passed (Onofrio et al 1983). The larger or more toxic the inoculum, the higher the potential for lower respiratory infection.

Bacterial invasion of the lung may occur through aspiration, colonization and hematogenous spread. Pneumonia is most frequently initiated by aspiration of pathogenic bacteria from the oropharynx (Megran & Chow 1986). Riley et. al. (1991) suggest that perhaps, the heavy oropharyngeal colonization among children in the developing world contributes to the higher occurrence of pneumonia. The microorganisms are spread through the vessel walls, causing a characteristic blue necrotic area within blood cell walls. The bacteria can easily travel through the blood stream to cause sepsis (Anderson & Turner 1991).

The lobe or a lung segment may experience bacterial invasion, usually by *S. pneumoniae* (Palmer 1987), and the respiratory defense system can get rid of the problem in five days. In uncomplicated lobar pneumonia, both the alveolar epithelium and the macrophage regenerate completely without any scar tissue formation. Bronchopneumonia, usually caused by staphylococcus can be normally resolved in three weeks. The microabscess associated with staphylococcus can leave scar tissue. Infection may also spread if the abscess ruptures into a bronchiole and from there into the bloodstream to cause sepsis (Seeger & Lasch 1987).

The possible deficiencies in the respiratory tract defense mechanisms include damage to the epithelial cilia, inherited complement or antibody deficiencies and a low neutrophil count (Busse 1991). Damage

to the epithelial cilia may occur due to exposure to noxious or toxic substances or inborn defects. Bacterial infection of the bronchus or from viral respiratory infections can also injure the cilia and increase the likelihood of airway colonization. Furthermore, vitamin A deficiency impairs the integrity, differentiation and regenerative capacity of respiratory epithelium (Pinnock et al 1986).

Though rare, inherited or acquired complement deficiencies increase the hosts' susceptibility to pulmonary infection (Toews & Vial 1984). C3 deficiency contributes to recurrent sinopulmonary infections from *S. pneumoniae*, *S. aureus* and *H. influenzae* because of the subsequent lack of complement opsonization, bacterial cytolysis and chemotactic recruitment of leukocytes (Busse 1991). Similarly, antibody deficiencies usually result in infection by *S. pneumoniae* and *H. influenzae*. While most people remain asymptomatic, some experience recurrent sinusitis and pneumonia. The absence of IgA (1/500 newborn) allows the bacteria to bind to and colonize at the airway epithelium (Ammann & Hong 1971). In the premature infant, diminished levels of surfactant may predispose the child to pneumonia. Lack of both Zinc and Vitamin A deficiency impair many immune functions (Busse 1991).

A low neutrophil count ($<1,500/\text{mm}^3$) increases the probability of infection. Viral or malarial infections lead to neutrophil deficiencies as do vitamin B₁₂ or folate deficiencies and exposure to toxins (Busse 1991).

Children in the developing world are no more susceptible to these deficiencies than those of the developed world (Busse 1991). Nor does the disease process differ between children across the world (Anderson & Turner 1991). The high case-fatality rate of the developing world results from other related factors such as poverty, lack of access to health services and malnutrition. Some of these factors are related in the following section.

e. Interactions with other Factors:

Environmental risk factors, socioeconomic deprivation, host immunity factors associated with malnutrition and virulence of infection all conspire to cause significant suffering and death by ARI. The risk factors that increase incidence and severity of ARI in developing countries include large family size, lateness in birth order, crowding, Low Birth Weight, malnutrition, Vitamin A deficiency, lack of breastfeeding, pollution and young age (Anderson & Turner 1991). Factors that may play a role in regulating oropharyngeal colonization include smoking (also passive exposure), underlying illness, malnourishment and abnormalities in mucociliary clearance (Busse 1991). In a case control study to identify the risk factors for severe pneumonia, Shah et al (1994) found young age, immunization, delayed weaning, and sharing of bedroom significant. In an univariate analysis, they found parental education, environmental pollution, discontinuation of breastfeeding in infants, malnutrition, low birth weight, previous history of severe ARI, unresponsiveness to earlier treatment and use of non-allopathic medicine demonstrated a significant effect on risk of death. Tupasi et al (1990) suggest inadequate housing, inaccessible health services and prevalent malnutrition as possible contributors to ARI. Victora et al (1989) identified lack of breastfeeding, low birth weight, number of under-5 children in the family, father's education, and family income as factors closely related to ARI morbidity and mortality.

In the subcontinent, the gender bias in parental attention may account for the differential outcomes. In rural western India, parents showed a male bias in seeking treatment from private practitioners, following referrals and expending resources irrespective of the severity of illness, parent's income, occupation or education (Ganatra & Hirve 1994). Stanton and Clemens (1988) suggest that female deaths unlike male deaths may be resource-independent and more the result of non-allocation of resources in urban Dhaka. Other factors included being under a year old, head of household being on daily wages as opposed to a salary, and a small or poorly constructed residence. In poor households, presence of a same-sex sibling increased the risk of dying for both boys and girls.

While these factors demonstrate a strong association with ARI morbidity and mortality, causal relationships between them remains unclear. The WHO panel (1992) concluded that of the possible risks posed by biomass smoke pollution, outdoor air pollution, tobacco smoke, chilling, vitamin A deficiency, protein calorie malnutrition, low birth weight and poor breastfeeding: 1) the effects of vitamin A and biomass smoke was inconclusive; 2) the causal links between outdoor pollution, passive smoking or chilling and ARI remain unclear and 3) there was a causal link between malnutrition, low birth weight, lack of breastfeeding and pneumonia morbidity and mortality.

f. Control of ARI:

Reduction in ARI occurs with improved living conditions, water and sanitation, housing and nutritional status (McKeown 1976 in Bhattacharya 1993). In the interim period, solutions for the control of ARI include 1) improved case management, 2) health education and 3) strengthening immunizations for diphtheria, pertussis, measles and tuberculosis (WHO 1984). The prohibitive costs of recently developed vaccines for *H. influenzae* and a polyvalent pneumococcal vaccine limits primary prevention to the immunization program (Bhattacharya 1993). In any event, vaccine preventable ARI accounts for only 15-25% of all ARI deaths (Pio et al 1988). The remaining 85% demand appropriate case management and health care utilization.

A study in Bohol, Philippines, found that in the absence of antibiotics, death could result in as little as 48 hours, thus emphasizing the importance of accessibility and utilization of health care services (The Working group 1993). Reddaiah and Kapoor (1992) found that in rural Haryana, India, more than half (58.4%) of the parents did not seek any medical care for their child, who subsequently died. Similarly, amongst those who died of childhood illnesses in Indramayu, West Java, Indonesia (under 5 mortality rate of 80.7/1000), 22% had sought no care outside of the home and 42% had sought non-allopathic care (Sutrisna et al 1993). A case-control study of mortality from acute respiratory infections among children under five, conducted in Mexico, found that ARI deaths tended to occur in the poorest neighborhoods, that 78% of the deceased were under 6 months of age and that 68% of the deaths had occurred at home (Cardenas et al 1992). These deaths were associated with the failure to receive antibiotics. A retrospective study of two-weekly incidence of ARI in the under five children of rural area of Alwar district, Rajasthan, India in December of 1989 found a two-weekly incidence rate of 33/100 under-fives (Madhav et al 1990). Fifty percent of these ARI cases were left untreated.

In a meta-analysis of six published intervention trials, Sazawal and Black (1992) concluded that the case-management strategy recommended by WHO substantially impacts infant and under-5 mortality, at least where the Infant Mortality Rate is at least 90/1000 livebirths. Fauveau et al (1992) found a reduction of 28% in ALRI mortality due to non-specific interventions such as immunization, distribution of Vitamin A, referral for severely ill children and nutritional rehabilitation for the malnourished and a reduction of 32% due to systematic case finding and management by community health workers. They suggest that combined specific and non-specific interventions can reduce mortality by as much as 50% and the overall under five mortality by as much as 30%. Campbell et al (1990) found that after education, mothers recognized fast and difficult breathing as features of a severe disease, ARI. They also sought care for 51% of the occasions when the child complained of chest pain and for 70% of the time that the child had 'open chest.' Such education has typically been disseminated by didactic and group interaction. Islam et al (1992) have also noted the success of interactions between health workers and health assistants offering immunization, health education and nutritional rehabilitation to mothers with ill children in a busy hospital setting in Bangladesh.

Community-based prospective surveillance and case management by community health workers successfully continues in Ilorin, Kwara State, Nigeria (Fagbule et al 1994). However, these require thrice weekly home visits by trained community health worker. Alternatives to such active case-findings include surveillance by community volunteers or mothers. Hughart et al (1992) found that

semi-literate and illiterate community volunteers were able to refer and follow-up clients for immunization as well as maintain adequate records. While they did not meet the target numbers, 87% of the children and 96% of the women referred completed the full series of immunizations. Possibly these referrals ensued from social rather than purposeful visits, hence the low rate of contact but high rate of success upon contact. Shah et al (1993) report that the use of the home-based maternal record (HMBR) promoted self-care and timely identification of at-risk cases.

Together with education for mothers to motivate appropriate health seeking behavior for ARI, the maintenance of skilled workers, essential drugs and equipment, an operating referral system, adequate supervision and active monitoring sustains desirable behavior change (Thomason 1991). Reddaiah and Kapoor (1993) explain the observed lack of impact of the standard case management on death due to ARI in rural Haryana, India, as inadequate antibiotic coverage (57 and 23% for moderate and severe pneumonia respectively), moderate compliance with referrals and the institution of workers parallel to those already frequented. Bang et al (1994) report that, if adequately supported by the health system, Traditional Birth Attendants (TBAs) can successfully manage childhood pneumonia at the lowest possible cost and with a high degree of acceptance. They found that the TBAs were more available, had better outreach, had more access to neonates and were most cost-effective while maintaining a low and equivalent fatality rate as paramedic workers and village health volunteers. People expressed the highest satisfaction with the TBAs' services as compared to the other two types of health workers. In other areas, over-treatment with antibiotics needs attention (Kravitz & Sanders 1994, Sow et al 1995). Hunte and Sultana (1992) suggest programs for physicians and pharmacists in the area of health education and communication as well as the education of both men and women to prevent overmedication.

g. Constraints to appropriate health care-seeking:

One aspect of directed efforts at educating people to recognize illnesses and seek appropriate treatment involves understanding what people recognize as illness, what treatment they seek and why, as well as what prevents them from accessing institutionalized health care services.

Recognition: The WHO diagnostic procedure depends on the recognition of rapid breathing and sub-costal chest retractions, the most reliable signs of pneumonia (Nichter 1994). However, caretakers may seek care for fever, difficult breathing, tight ribs, mucus production and changes in eating or sleep patterns rather than rapid breathing or chest indrawing (see special issue on ARI in *Medical Anthropology* 15(4) 1994). Sometimes, symptoms culturally recognized as severe may include only chest indrawings (Bangladesh: Stewart et al 1994; Pakistan: Mull & Mull 1994), only rapid breathing (Indonesia: Kresno 1994), or neither (India: Dyal Chand & Bhattacharya 1994, Philippines: Nichter & Nichter 1994). Additionally, these symptoms may be recognized as part of other illnesses. What biomedicine labels as "rapid" breathing may be understood under the umbrella terms "tired" (Honduras) or "difficult" (West Java: Kresno 1994) breathing. Hence, interventions that stress either of the two signs, (i.e. rapid breathing or chest indrawing), or the single illness category "pneumonia" may fail to translate into appropriate action.

Causation: The second aspect of understanding health-seeking behavior concerns the identification of crucial domains of culturally instituted meanings and practices. Leslie (1983) suggests that illnesses are understood in a variety of ways including 1) punishment associated with sorcery and witchcraft, 2) disruption of normal process associated with the humoral system and 3) malfunction of bodily function as associated with biomedicine. Local conceptual models are generally pluralistic including elements of each of these traditions. Typically, understanding the types of recognized illnesses and the criteria for categorization (taxonomies) influence treatment seeking decisions. For instance, in most South Asian countries, people believe that cold in the body causes phlegm. As such, they use ointments, hot foods and antibiotics to burn or melt it. Similarly, for illnesses that they believe are caused by

spirits or bodily dislocation, they consult spiritual healers or traditional practitioners.

Conversely, attempted treatment may guide the final diagnosis of the household (India). People may consult many practitioners and combine various treatment regimes either sequentially or simultaneously. In a punjabi-speaking Pakistani village, women differentiated pneumonia from cold, but few perceived fast breathing as a sign of pneumonia (Rehman et al 1994). The "cold" roots assigned to both cough and pneumonia underlines the "heat producing" home remedies and feedings. Both illnesses warranted the attention of an allopath but most would change either the medicine or the allopath if the child's health did not improve in two days. The treatment in use when the child starts getting well then clarifies the underlying cause of illness. In this process contagion beliefs do not feature and risk to siblings becomes even higher. Indeed, in rural Haryana, India, Saini et al (1992) found that very few mothers were aware of ARI's infectious nature.

Severity: Perceived severity of an illness also informs healthcare seeking behavior. Most mothers view high fever as a cause for concern. Kundi et al (1993) report that mothers of children with fast breathing but no chest indrawing, attending a hospital outpatient clinic expressed concern about persistent severe cough with high fever, inability to sleep and excessive crying rather than fast breathing. Denno et al (1994) found that while mothers differentiated between mild and severe ARI, a substantial number did not consider symptoms of dyspnoea, tachypnoea, chest retractions, cough along with fever and anorexia or lethargy serious enough for medical attention.

Cues to Action: Of those who noticed the fast breathing and/or had previous experience with pneumonia brought their children earlier to the clinic than those who did not. Mothers tend to believe that severe forms of illnesses come from its milder form. Thus, known treatments for mild illnesses may be attempted, thereby delaying treatment for serious illnesses. These treatments include swaddling the child and seating it in the sun (Pakistan: Mull & Mull 1994), teas (Osinusi & Oyejide 1990), ointments, and avoiding the cold and wet. While seemingly harmless (even desirable practices), swaddling could prevent the mother from seeing the chest indrawing; the kerosene mixed into the ointment could burn the child's skin and the ointment when ingested could be toxic (Medical Anthropology 15(4) 1994). Other home antidotes aim at removing all the internal factors (eg. mucus, fever) that characterize mild illnesses. The release of internal heat through high fever and rashes (measles) may be encouraged or vomiting may be induced to release the mucus in the stomach. Denno (1994) found that some mothers in Kumasi, Gambia, gave castor oil and enemas to their children to prevent ARI and used antibiotics to treat cough. In rural Haryana, mothers practiced food restrictions and used warm mustard oil for earaches (Saini et al 1994). These practices are neither desirable nor harmless as they increase the risk of further illness and possibly death for the child.

The Household Political-Economy: Within the schema of ethnomedical diversity, major axes of constructed domains within a particular culture include age, gender and class relations. In the context of children's illness, gender and kin power relations as well as economic resources become important considerations. Often men have authority over women (Rosaldo & Lampere 1974), mothers-in-law over daughters-in-law (Saini et al 1992) and those controlling the resources on dependents. Within the private domain, the mother may resort to home remedies. However, when the child needs to go outside the home for treatment, she might have to defer to those with higher authority (husband, mother-in-law). Even after the family decides to seek care, the mother might have to wait until a male or elder female agrees to accompany her to the health care center.

Barriers: Limited allocation or limited availability of resources can also lead to lack of health care utilization or the extension of antibiotic use from one every four hours to one every twelve hours (Nichter 1994). The antibiotics leftover from past severe episodes may then be used to treat milder upper respiratory infections (Osinusi & Oyejide 1990). Eclectic in their use of medicines (Nichter

1989), people often carry customary patterns of medicinal utilization into allopathic medicine (Hunte & Sultana 1992). For instance, people used to mixing herbs, trying treatments and amulets in quick succession or simultaneously, may similarly mix or experiment with allopathic medicines. These practices of misuse and discontinued use contribute to the growing resistance to chemotherapy. Additionally, preferences such as those for private over government doctors, syrups, tablets and/or injections, and for those who successfully treated a past illness guide treatment seeking behavior (Nichter 1994). Conversely, long waiting times or distances, especially in the wet and cold deter appropriate utilization.

Other psycho-social costs of utilization include embarrassment, fear, child care difficulties and competing demands on mothers' time (Coreil et al 1994). System factors of concern include accessibility, acceptability, availability, accommodation and affordability while weighing health care alternatives. Even when mothers know of the consequences of frequent ARI attacks and importance of early treatment, they did not seek care from the allopath due to transportation and child care problems (Vasanthamala & Arokiasamy 1989).

Health care seeking behavior in Bangladesh: The Kobiraj, Hakim and Homeopath, practicing ayurveda, unani and homeopathy respectively, coexist with allopaths in Bangladesh (Bhardwaj & Paul 1986, Stewart 1994). While most people in rural Bangladesh show a preference for allopathic practitioners, the unavailability of registered physicians impedes regular and appropriate allopathic treatment (Amin et al 1989). Distance from a qualified allopathic practitioner exerts a significant influence on infant deaths (Paul 1991). Most seek a physician's care only for severe illness, usually in the interests of time and money (Bhardwaj & Paul 1986). People expect a natural recovery where they do not perceive any symptoms of severe illness (Amin et al 1989). Bhardwaj & Paul (1986) report that the increased availability of allopathic medicines has a corresponding increase in its usage. Also, educated parents were more likely to use allopathic care (Amin et al 1989). In urban Bangladesh, most people use modern health care facilities, with almost half of them preferring private sector facilities (Rahman & Bhuiya 1992).

Mothers do not seek care for young infants outside the home (Fauveau et al 1992), usually for fear of further illness due to exposure to the elements (Amin et al 1989). The conferred qualities of non-threatening and mild make non-allopathic medicines more attractive for use with children (Amin et al 1989). In addition, boys get more medical attention than girls because of the cultural male preference (Stanton and Clemens 1988).

In relation to pneumonia, chest indrawing attracts maternal attention and along with labored breathing, lethargy and inability to feed becomes a greater source of concern for the mother, (Stewart 1994) than the grandmother (BASICS et al 1994). This poses a problem where the mother relies on her mother-in-law for guidance or permission with regard to healthcare.

In general, beliefs of exposure, maternal factors, and supernatural forces related to ARI guide household diagnosis and treatment behavior (Stewart 1994). In the local schema, exposure to cold winds lead to colds but hot winds carrying spirits, and other diseases such as measles and diarrhea are believed to cause pneumonia. The mother's improper behavior or exposure can cause pneumonia; her eating fish with eggs during pregnancy can cause spiritual disorders and, sex before delivery can cause asthma. Both colds and asthma can cause pneumonia. Depending on the perceived cause of illness, treatment ranges from home remedies, homeopathic and allopathic medicines, to spiritual healers and prescribed and proscribed behavior for the mother. If the retracted chest is diagnosed as "pneumonia" then allopathic medicine is sought as opposed to the spiritual healer for "alga." If exposure to cold breastmilk is seen as the cause, then the homeopath is consulted.

Stewart's (1994) ethnographic data suggests that mothers link other illnesses with pneumonia and believe that severe forms of illnesses come from its milder form. Therefore, home remedies include attempts at expulsion of mucus through induced vomiting or ingestion of purgatives. Similarly, full expression of measles may be encouraged as an antidote for high fever (Blanchet 1989). Past experiences with pneumonia and/or allopathic medicine also inform action. For instance, Islam and Nielsen (1993) found that while 79% of the mothers they surveyed agreed with the need for postnatal care, only 26% actually attended clinic. Though 71% had access to health care services, 91% delivered at home with the help of a traditional birth attendant. Under-utilization was primarily due to incompatible hours and misbehavior of the staff. These experiences often result in interaction with the pharmacists who have flexible evening hours and are close to the slum (BASICS et al 1994). The pharmacists keep essential drugs and commonly sell paracetamol, antacid, aspirin, ORS, antibiotics and other chemotherapeutics over-the-counter. As discussed earlier, these practices of non-adherence to treatment or self-treatment contribute to bacterial resistance to chemotherapy.

Other constraints to timely and appropriate health care for ARI include perceptions of health care services, material and economic constraints and, family organization and decision-making factors. Most people show a preference for private over government doctors for quality care, often at greater distances and costs (BASICS et al 1994). While the purdah system traditionally confines the mother at home, visits to the health professional appears to have gained acceptability (Qamrul 1993, Blanchet 1989). Nonetheless, the implicit permission of the husband and mother-in-law is required. The mother-in-law is often consulted for children's illness. If the mother were literate or the father relatively moneyed then the services of the fixed posts are sought. However, in urban areas where substitute caretakers may be hard to find, the mother may not be able to take a child for care (BASICS 1994).

f. Rationale

The Bangladesh Demographic Health Survey report (1995) estimates that in urban areas, 33.4% of the children who have a cough with rapid breathing see a practitioner at a health facility, health post, health center, hospital or private clinic. While these figures are better than those for rural areas (27.4%), previous comparisons between slum and non-slum dwellers reveals the disparity in health status within cities. For instance, the 1991 infant mortality rate for urban and rural Bangladesh approximated 91 and 65 per thousand respectively, some estimates for Dhaka slums were 138 (ICDDR/B, UHEP). These findings support WHO's (1991) concern regarding national health statistics that obscure differences in health status and survival chances within urban areas of most developing countries. Stewart (1994) found that in rural Bangladesh fewer than 20% of the children who died of pneumonia were seen by health workers prior to death. This suggests that those most in need of clinical attention are least likely to utilize health services. In her study area, Stewart remarked on the lack of health education programs to facilitate utilization for ARI. Similarly, BASICS's (1994) preliminary assessment of the conditions in urban slums suggests that while efforts are directed at the general site, slum-dwellers themselves receive minimal health education or direct services. As such, intervention research directed at reducing the important causes of infant mortality in poor urban Dhaka areas would be both timely and appropriate.

Most studies have operated under ideal conditions with active case detection, supervision and monitoring. On a national level, increased self-referral and adherence to treatment along with the provision of adequate and accessible services can facilitate the reduction of ARI mortality. In the interests of human and monetary resources for health services, national programs must depend on self-referral for case management based on parental recognition of an illness episode followed by an informed decision for care-seeking (Bhattacharya 1993). Once the child receives the appropriate medical attention, adherence to treatment becomes an issue of concern. To ensure the correct use of antibiotic treatment, local knowledge and decision-making patterns have to be integrated into

education programs. As such, the local situation needs to guide any attempts to intervene in the decision-making process. This study postulates that an intervention that takes into account local knowledge will enhance recognition of illness and utilization of appropriate health facilities for childhood illnesses. Easily understood communications on physiological signs of illness and appropriate care and dosage will improve both care-seeking behavior and adherence to referral and treatment.

This study attempts to understand the local conception and response to illness by conducting a focused ethnographic study and confirming these findings through a pre-intervention survey. Beliefs or behaviors contrary to the biomedical recommendations will be addressed by the intervention. The postintervention survey will test whether there has been any change in rate of utilization and if so, will attempt to answer why.

I. Theoretical considerations:

This study combines anthropological and health communication theories to plan, implement and evaluate an intervention that takes into account local beliefs, knowledge and practices to improve care-seeking behavior for illnesses and completion of antibiotic regimes for children under five years of age. Anthropological theory aids in identifying motivations and their relationship to socioeconomic class and prior exposure to risk, in examining the relationship between emic (insider) and etic (outsider) theories, and along with communication theories, in selecting an appropriate intervention design and increasing the understanding of behavior and its change (Stanton et al 1992). Epidemiological procedures help in the surveillance of illnesses to determine the adequacy and timeliness of the reported or exhibited behavior.

As section A.2.g of this paper has implied decisions on what physiological states are considered as illness, what symptoms lead to its categorization, the perceived causes of these illnesses, symptoms that signify severity of illness, the expected course of illness influence the resultant preferred course of action given the existing health and knowledge systems. Additionally, perceptions of the services offered by the existing health care workers as well as physical and psycho-social factors determine the final facility of choice.

The delivery of an intervention suited to popular needs requires an understanding of the decision-making process that leads to health care seeking behavior (Bhattacharya 1993). The focused ethnography that precedes the intervention attempts to do so by relying on two anthropological theories: the Household Production of Health and that of Social Interaction. The Household Production of Health suggests that healthcare seeking is a

dynamic behavioral process through which households combine their (internal) knowledge, resources, and behavioral norms and patterns with available (external) technologies, services, information, and skills to restore, maintain and promote the health of their members (Berman, Kendall, Bhattacharyya, 1989:2).

The household and household processes become the focus of research, and health facilities and programs become the available external resources. Thus the available services, information and skills for the treatment of childhood illness as well as the household socio-economic status, composition, power relations, language, previous experience with illness and treatment with special considerations for age and sex of the child become areas of interest. Anthropology distinguishes between the biological state of disease and the socio-cultural constructs of illness and sickness (Bhattacharya 1993). That is, physiological changes (disease, example hypertension) may not be socially recognized as illness or socially defined illnesses may not be based on physiological changes (eg. hysteria).

The theory of Social Interaction fuses the social and historical construction of health and knowledge systems with individual psychology and the negotiation of daily experience. According to Simon & Gagnon (1973), any behavior emerges from a culturally written "script." Through the process of socialization, people in each culture learn their age/ gender / class specific "parts" and those complementary roles to which they must respond, anticipate and "act out" the appropriate interaction as the script unfolds. However, what they choose as their response depends upon the nature of their interactions and situations. Analogous to the theater process, Simon and Gagnon (1973) identify three levels of scripting: cultural scenarios which present and guide appropriate goals, objects, relationships, and roles; interpersonal scripts where, given the cultural scenario, the individual reconstructs the relevant particulars to suit a specific social situation; and intrapsychic scripts which connects individual desires and social meanings to manage, order and facilitate health. Thus the Scripting Theory offers a model for the role of culture and for individual agency.

Since the decision to treat occurs within a "Therapy Management Group" (TMG)⁴, it often involves negotiations of different explanatory models. Cultural patterns and inconsistencies within cultural values and individual lived experiences inform health-related behavior. While the influence of culture seems all pervasive, the social context within which it operates allows for modification of behavior. Most poor areas operate under competing cultural norms about what might be considered an illness, its cause or its treatment. Even where there may be a shared conceptual model, explanatory models for particular illness episodes may differ (Bhattacharya 1993). For instance, the allopath may use the biomedical model to diagnose pneumonia, the mother may use humoral system to diagnose an illness, and the grandmother may attribute the illness to ghosts.

Publicly-held knowledge about childhood illnesses indicates that reasons and meanings are learned, complex, relation-specific, culturally constructed and socially regulated. However, with each TMG interaction over an illness episode, nuanced changes in household explanatory models occur. Within this dynamic context, the structures within which treatment occur and the power relations that maintain conceptual and social systems themselves become open to change. The questions this theory then asks includes what are the expected behaviors of fathers, mothers and grandmothers with regard to illness, who has the power to decide where to seek care, who are the non-family members who facilitate the process, how do they talk about health, and which people are influential in public settings.

The focused ethnography helps identify cognitive areas that correspond to biomedical thought and need reinforcement and vice versa, as well the venues of possible dialogue about health issues. While these facilitate communication and increase the potential for appropriate action, they do not assure an enhancement of interpersonal efficacy where appropriate information, self-motivation, and the ability to use available resources effectively and consistency, facilitate behavior change. Therefore, this study draws up on the Health Belief Model (HBM) with a particular emphasis on the component of self-efficacy as derived from Bandura's social cognitive model (1977a).

The Health Belief Model (Hochbaum 1958, Janz and Becker 1984), initially developed to explain non-participation in prevention or screening programs, has applications for people's responses to symptoms (Kirscht 1974) and their behavior in response to diagnosis with particular respect to compliance (Becker 1974). The model holds that individuals take action to ward off, screen for or to

A therapy management group comes into being whenever an individual or set of individuals becomes ill or is confronted with overwhelming problems. Various maternal and paternal kinsmen, and occasionally their friends and associates, rally for the purpose of sifting information, lending moral support, making decisions, and arranging details of therapeutic consultation. (Janzen 1978:4)

control ill-health conditions if they 1) feel susceptible to that condition, 2) believe that the health condition has potentially severe consequence(s), 3) if they regard a course of action as beneficial in reducing either the severity of the illness or their susceptibility to it and 4) if they believe that the advocated health measures are at a lower personal cost than the ill-effects of the disease (Stanton et al 1992). The concept of cues which trigger action, though included in the model, have been discussed but not systematically studied. The model also has not been thoroughly examined in cross-cultural settings where different illnesses are perceived as threats, different definitions for the same culturally-recognized illness exists and where the recommended action may not fit into the cultural framework (Brieger, personal communications). Other variables considered by the model include sociodemographic factors, particularly education, in the perception of susceptibility, severity, benefits and barriers.

Bandura's concept of self-efficacy or efficacy expectation increases the Health Belief Model's explanatory power (Rosenstock, Strecher & Becker 1988). Self-efficacy is defined as "the conviction that one can successfully execute the behavior required to produce the outcomes" (Bandura 1977b p79). This concept proves useful when attempting to modify life-style behaviors that require long-term changes. Not only must people feel threatened by an illness, they must also believe that they can manage it viz. ability to recognize the illness, seek treatment outside, administer the correct dosage and complete the antibiotic regime.

The Janz and Becker review (1984) of the model's performance included preventive health and screening behavior as influenza, Tay-Sachs carrier status screening, breast self-examination and attendance at screening programs. Sick-role behaviors included compliance with anti-hypertensive regimens, diabetic regimens, medication regimens for parents to give to their children with otitis media or for their asthmatic children. Summary results provide substantial empirical support for the HBM with findings from prospective studies at least as favorable as those obtained from retrospective ones. Perceived barriers was found to be the single most powerful predictor of behavior relative to other HBM constructs across a variety of behaviors and studies. Perceived susceptibility was a stronger predictor of preventive health behavior and perceived severity was strongly related to sick-role behavior.

The following model adapts Stanton et. al's (1992) model for operationalizing the HBM theory for a handwashing intervention.

Healthcare Utilization intervention based on the Health Behavior Model

COMPONENT CATEGORY ITEMS

Severity	Knowledge	Perceptions of variation of types of respiratory infection
	Personal experience	Homogeneity in perception of illness type perceived seriousness
Vulnerability	Knowledge	Perception of causality
	Personal experience	Perception of self (sickly/healthy; good person/bad)
	Locus of control	Cultural definition of susceptibility
		Homogeneity in perception of susceptibility
		Perception of the types of children/households that experience serious childhood illnesses
Efficacy	Response efficacy	Perception of causality of respiratory infections
	Knowledge	Perception of the benefits of using the clinic for respiratory infections
	Personal experience	Perception of self as competent
	Self efficacy	Perception of self-ability to follow through with behavior
	Social skills	Self-perception regarding ability to influence others
	Self esteem	
Barriers	Psychologic	Self esteem and self-reinforcement
		Peer approval and social support
	Physical	Antibiotic availability and cost
		Distance
		Time
		Fatigue
		Danger
	Health care	Inappropriate diagnosis

ii. Methodological considerations:

This study will use anthropological and epidemiological methods to combine both qualitative and quantitative analysis in the planning and evaluation of the intervention. Ethnographic methods and an evaluation of the existing ARI program will help identify the desirable changes within the household/community as well as in the health system. In this study, ethnographic efforts will be focused on care-seeking behaviors for ill under five children. It will attempt to answer what physiological states are considered as illness, what symptoms lead to its categorization, what are the perceived causes of these illnesses, what symptoms signify severity of illness, what is the expected course of illness, and what is the resultant preferred course of action given the existing health and knowledge systems, what are the expected behaviors of fathers, mothers and grandmothers with regard to illness, who has the power to decide where to seek care, who are the non-family members who facilitate the process, how do they talk about health, and which people are influential in public settings. During this process, the concerns of the people gain voice and the appropriate venues, mediums and persons for communication become clear.

Because people interact in the culturally accepted mode, the provision of situations that use those modes make education more effective (Saravia-Shore & Arvizu 1992). Macroethnography observes larger social systems and structures to provide the broader sociocultural, political and economic context guiding personal action. Parallely, microethnographical data presents the context of primary or

one to one interaction. Thus, ethnography accounts for sociocultural processes and intragroup relationships which provide a contextual background to effective health programs. The benefits of ethnographic research using primarily qualitative research have been well documented (Bentley et. al. 1992, Bernard 1994, Spradley 1979, Pelto 1970). Gittelsohn et. al. (to be published) present four main benefits: explorative flexibility, in-depth information, validation of information and a holistic approach.

The generated ethnographic data links concepts and hypothesis to the empirical world. Sampling strategies and comparisons within and across groups and subgroups lead to findings that encompass multiple aspects of health-related behavior (Belcher 1994). Sampling consists of choosing successive informants from different groups to advance findings until no new information emerges (Glasser & Strauss 1967). Exploring a topic through the use of different qualitative methodologies with differing members of the group (eg. by sex/age/prestige) triangulates information (respondent validation; Miles & Huberman 1984) to capture the "whole picture" surrounding care-seeking behavior. Cognitive maps of a particular situation vary by informant profession, gender, ethnicity, communal role and other similar factors. However, making these differences explicit, clarifying the nature of the arguments, the differing approaches to risk and how various meanings evolved can bring these maps into enough of an alignment to facilitate effective action (Weissman 1994). Traditionally, qualitative research methods has valued helping informants communicate their experiences in the way they prefer (Tyson 1994). This flexible adaptation to the needs of informants (time, environment, style) gains their trust and facilitates open expression. The resultant prolonged engagement, persistent observation and triangulation assure the trustworthiness and credibility of the data (Belcher 1994).

In this study, the ethnographic data will help in the development of the survey questionnaire by providing the researchers with the appropriate terminologies and ways of talking about illnesses. This will reduce the likelihood of people misunderstanding or reinterpreting the questions. It will also help identify those specific beliefs and/or behaviors that need modification. Thus the intervention design can only be determined after the ethnography.

This study ultimately wants to measure how much change the intervention brings about as well as what causes the change. Such measures require quantitative observations (Bernard 1994). This study uses a quasi-experimental design to test the effectiveness of an intervention based on ethnographic data with a pre-post comparison group. This design can be considered a quasi-experiment because it randomly assigns a cluster to the intervention group and the other to the control group. A pre intervention test measures the ARI-related knowledge and child care practices for ill under-five children in both groups. The intervention, an independent variable is introduced in the intervention group and lastly in a posttest, the dependent variables are again measured (Bernard 1994). The survey in turn will help confirm the generalizability of the data generated by the ethnography.

This design will allow us to examine the effect of the intervention on the utilization of health care facilities for childhood illnesses, on ARI related knowledge and on the intention to take appropriate action for childhood illnesses. The comparison group helps to control for possible confounding due to a courtesy bias. The study also examines the principles that make an intervention work. These tenets can then be transferred to other settings.

iii. METHODS OF PROCEDURE

A. Study Population

The study population consists of households with children under five in the less well-to-do wards 30,

84 and 85 in Kamalapur, a project area served by the PVO World Vision of Bangladesh (WVB). World Vision operates in three areas of urban Dhaka, covering a total of 13 sq. kms. These areas include A) wards 30, 84, 85 in Kamalapur, B) wards 42, 43 and 44 in Mohammedpur and C) wards 45 and 46 again in Mohammedpur. Compared to the other two areas served by WVB, the Kamalapur area has a lower overall socio-economic status, lesser assistance from non-governmental organizations and is a relatively newer settlement.

Due to limited resources, there is no fixed government health facility in Kamalapur. World Vision provides all the Child Survival interventions in this area along with preventive and curative health services to families in their project areas in Kamalapur and Mohammedpur. Other NGOs and private clinics, traditional birth attendants and homeopaths provide all the available curative care. The referral sites for childhood illnesses include the Telegu Community Clinic, Save the Children and World Vision Bangladesh's Nutritional Rehabilitation Center in the area. Community members express satisfaction with the quality and accessibility of care in these sites as opposed to distant or expensive alternatives.

The current ARI program has concentrated on maternal recognition of pneumonia signs/ symptoms and on promoting active case presentation. However, educational visits are limited to one-two per year and the communication materials on ARI do not address local beliefs and practices. The project has both community-based workers to teach and clinic-based staff to manage ARI cases. The PHNs (Public Health Nurses) are trained to assess/treat the ALRI cases manageable at home level or at the project center. Severe cases are referred to hospital care. Further ARI training for WV and other providers (including private) will ensure the availability of "appropriate" facilities for the study areas.

In Kamalapur, the area served by WV's clinic in Golapbagh has 6 CWDs while that in Dhalpur has 7 CDWs. The Golapbagh area has 8,995 families with 6,691 under-5 children. The Dhalpur area has 10,648 families with 6,725 under-5 children. The total number of under-5 children is 13, 416.

B. Inclusion Criteria

All households with children under four (to prevent attrition of children crossing five) will be eligible for the study.

C. Exclusion Criteria

There are no exclusion criteria. However, if a mother does not recognize the severity of an illness in a sick child at the time of a visit by a member of the surveillance team, then the mother will be informed and advised to take the child for care. This will not be counted as "timely" utilization of "appropriate" clinical facilities.

D. Study Design

The study is a quasi-experimental effectiveness trial, with a pre-post control group, of an intervention based on focused ethnographic data. The study to be conducted in the Golapbagh and Dhalpur areas of Kamalapur, Dhaka will consist of five phases.

The first phase is the ethnographic phase and evaluative phase for the current WVB ARI program. The ethnographic phase aims to elicit local ethnomedical explanatory models and subsequent health seeking behavior. It adapts the methods and guidelines of the World Health Organization's Focused Ethnographic Studies (FES: 1991) protocol. The FES collects data that provides an insight into the socio-cultural context of responses to illness at the household level in order to develop an ARI intervention program. Data collection techniques borrowed from the FES include interviews, freelist

of illnesses with exploration of causes and treatment, assessing the relationship between local terms and physical signs and symptoms with video tape in a clinic, sorting of signs and symptoms into illness categories and severity rating tasks. To the guidelines for eliciting narrative of the past ARI episode will be added a guide for eliciting a narrative of the last childhood illness at home. A field guide to consult elicit key informants and focus groups on intervention-specific information, such as, sources of communication and ways to sustain new behavior will be developed. This section is designed to take 10 weeks from data collection to analysis.

The current ARI program as offered by World Vision will be assessed by the use of a competency test, an inventory of supplies and inclusion of some questions in the pre intervention test (eg. have you heard of the World Vision?, has someone from there ever visited you? how often? what did they talk about? etc). Retraining, if required, will be offered to assure the availability of "appropriate" facilities. Any inadequacy of antibacterial supply found in comparison to the projected demand will also be addressed.

The second phase consists of designing and pretesting the intervention and conducting the cross-section pre-intervention survey on ARI. The analysis of the ethnographic data will inform the intervention idea, which will be evaluated in various stages of production to avoid unnecessary time, money and personnel expenditure on a faulty design. The initial ideas, the ensuing audio and visual material and the final intervention methods and product will be pretested using highly structured focus groups. The purpose of this exercise is to verify the compatibility of the idea with existing norms, the clarity of the message and the acceptability of the medium of instruction before expending all creative and monetary efforts. The pre-intervention survey instrument will be pretested to ensure the clarity of the questions and then administered in the study area.

The third phase consists of the implementation of the intervention. The implementation team will be responsible only for the intervention procedures. During this time, a monitoring team will collect information on the two-week period prevalence of childhood illnesses and the recourse to treatment. This will help identify the appropriateness and timeliness of the response. The monitoring team will be trained so that the manner in which they ask questions and refer cases will be standardized across the intervention and control group. The monitoring as well as the implementation team will be closely supervised to ensure that they perform the tasks that they are assigned and that they do it in the manner that they were trained.

The fourth phase of the study will be the evaluation of the intervention by the post intervention test. The post intervention test will be the same as the pretest, except for the addition of some questions to questionnaire to check for diffusion of information to the control areas. The cross-sectional survey will have enough statistical power to detect an absolute 20% difference (approximately) in the utilization of health care in the intervention group. It will also be used to detect a 65% difference in ARI-related knowledge. The posttest will further evaluate the intervention to keep those components that aided appropriate utilization and to discard or modify those that had no impact or had a secondary undesirable effect.

The fifth phase of the study involves modification of the intervention, training for workers in the control area, re-training for workers in the intervention area and introduction of the intervention into the control area over a period of 1-2 months in a joint effort by WVB and the Research Assistants.

E. Variables and Data Collection

a. Variable Definition and Measurement

APPENDIX A provides operational definitions of all variables to be used in this study. The construction of secondary variables have also been presented.

The data will contain continuous variables (education level, age, income etc), ordinal scales (eg. severity of illness etc) and nominal categories (eg. presence or absence of a behavior). The continuous variables may later be categorized based on the literature and/or the distribution of the data.

The dependent variables in the study are:

- 1) Sought care for sick child in time (yes/no)
- 2) Sought care for sick child from the appropriate facility (yes/no)
- 3) Intends to engage in appropriate careseeking behavior (yes/no)
- 4) Increase in ARI-related knowledge (yes/no; the exact components of this will depend on the results of the Focused Ethnographic Study)

The independent variables in the study are:

Sociodemographic Factors	Personal Factors	Community factors	Intervention factors
Mother's education	Perceived severity	Peer approval	Exposure to the intervention
Father's education	Perceived susceptibility	Social hierarchy in decision-making	Perception of the intervention
Grandmother's presence at home	Response efficacy	Social models	Perception of the healthcare worker
Number of children in the household	Self-efficacy	Availability of appropriate care at health care facilities	Diffusion of intervention across sites
Household SES	Perceived benefit	Availability of substitute caretakers	
Age of the child	Perceived barriers	Work/seasonality issues	
Sex of the child	Fatigue	Distance from health care services	

b. Methods

PHASE I

The focused ethnography will be conducted by the PI, Research Investigator and two research assistants over a period of 10 weeks. Along with the training of personnel and data analysis, this phase may be expected to last for approximately 4 months. The WHO FES manual provides detailed guidance for sequential data collection and analysis. Based on these guides, interviews, freelist of illnesses with exploration of causes and treatment, assessing the relationship between local terms and physical signs and symptoms with video tape in a clinic, sorting of signs and symptoms into illness categories and severity rating tasks. To the guidelines for eliciting narrative of the past ARI episode will be added a guide for narrative of the last childhood illness at home. A field guide to consult key informants and focus groups on intervention-specific information, such as, sources of communication and ways to sustain new behavior will be developed.

Mapping: the area will have to be mapped to allow for ease in interviewing and to identify the various sources of health services.

Freelisting of illnesses: allows informants to list all the childhood illnesses they know, thereby producing a list of local terms. Careful probing and interviews with key informants generates a comprehensive list of terms for ARI illnesses, signs and symptoms, home remedies, causes and treatment of illnesses, and available practitioners.

Eliciting a narrative of past ARI/illness episode: will be drawn from both key informants and interviews with mothers in the community to understand home management practices and timing of careseeking. Though unstructured, these interviews aim to gather information on illness recognition, home care including food and liquid intake, and experience with providers.

Matching local terms to video taped illness episodes: The videotape developed by WHO shows (20) children aged 3 weeks to 2 years with different respiratory rates, wheezing, chest indrawing and stridor. This videotape is used to ask respondents to describe what they see. The first showing seeks unprompted responses and the second shorter viewing seeks to draw responses by prompting. Given the need for a video and electricity, this exercise will be carried out by the PI and Research Investigator in a clinic on 1) people accompanying a sick under-five child and waiting for the doctor and 2) a random sample of mothers with children under five who agree to come to the clinic for a viewing. The latter may be accompanied by a peer or with her family.

Sorting of signs and symptoms in illness categories: The illness sorting task involves the matching of illness terms with specific symptoms. The freelist generates illness and symptom terms which are then presented for matching to the respondents. For non-literate respondents, the cards are read out and responses noted.

Severity rating tasks: As a follow-up to the sorting exercise both illnesses and symptoms are sorted according to severity.

Semi-structured Interviews with provider: Semi-structured interviews have open-ended questions with very specific objectives. These will be conducted with health care providers to solicit provider terminology, perceptions of causes of delayed treatment seeking and recommendations with regard to antibiotics (APPENDIX B).

Semi-structured Interviews with mothers: will also contribute to the identification of sources of communication, potential change agents, individual and community approaches to behavior change and ways to sustain new behavior.

The following table summarizes the procedures used per interviewee group. Key informants will be interviewed 3-4 times and all other respondents only once. All the procedures for mothers at home shall be completed in one interview. However, elicitation of a past illness episode may require a re-visit.

Research Procedures by Respondent Type [Include topics]

Procedures	Key Informants (14)	Mothers at Home (20)	Mothers at Clinics (20)
Freelisting	X		
Past ARI episode	X	X	
Past illness episode		X	
Videotape	X		X

Illness Sorting Task	X	X	
Severity Rating	X	X	

Competency Tests and Spot checks: Based on the aims of the WVB's current program, an instrument to evaluate the skills of the health workers and the delivery of their message will be developed (APPENDIX C).

PHASE II

The pretesting of the intervention and of the survey on ARI will involve focus groups and a pilot test on a small group of people. The two Research Assistants from phase I will become the supervisors for the remaining data collection phases of this study. The focus groups will be conducted by the PI and Research Investigator and the pretest of the survey instrument and pilot test by fieldworkers under the supervision of the four RAs.

Focus groups: Focus groups are recruited to discuss a particular topic. The group typically consists of 6-12 members plus a moderator. The intervention idea will first be developed and reviewed by six in-house personnel. After several rough plans have been drafted to the same level of completeness, the concepts underlying the intervention and the ensuing materials shall be verified with 4 focus group each of mothers, grandmothers, artists in area and in-house personnel to make a total of 32 respondents. The chosen intervention will be piloted in one cluster and any needed modifications will be made before implementation to the other clusters. This will serve as the training grounds for the healthworkers.

Pretesting the Survey: The survey instrument will test for knowledge, attitude and practice with regard to ARI and other illnesses in children in the area. The instrument (APPENDIX D or one in use by the GOB or WVB) will be pretested with a few mothers in the clinic and the revised version in the community with 10 women of varying ages. The pretest will check for understanding of the instrument and the length of time taken to conduct it.

Pre-intervention survey: The survey will be a face to face interview with the interviewee responding to questions posed. The questions are mostly closed and pre-coded. However, there are some which will be more open-ended. For those who qualify their answers, the explanations will be written into the margins.

PHASE III

The implementation of the intervention depends on the results of the ethnography and the pretest of materials and pilot test of the intervention. During this time the survey team will work as monitoring team, different from the implementation team. Over four 6-week periods, they will collect information on 2-week illness episodes and the resorts to care. The implementation team will include 8 new recruits and will have a separate office from the ICDDR/B monitoring team in WVB premises.

Monitoring: Monitoring will consist of face to face home visits by randomly assigned teams using a semi-structured instrument for illnesses and treatment resort (APPENDIX F). If a new child under five comes to live in the house or there is a newborn, then an addendum to the census form and the Neonatal form respectively must be filled.

Implementation of the intervention: The intervention itself will address personal cognitive and affective determinants, actual behavior and environmental impediments or supports for appropriate careseeking behavior. It must inform people to increase their awareness and knowledge of health risks, development of social and self-regulative skills needed to translate concern into effective action, provision for guided action and corrective feedback in application and enlisting and creating social supports for desired personal change. As such the steps would be as follows:

Informational Component: Efforts to encourage people to seek appropriate care rely heavily on persuasive communications. These health messages need to include facts about the illness as well as guidance on appropriate behavior and perpetuation of the belief of self-efficacy. To be most effective, health communication should instill in people the belief that they have the capability to alter their health habits and should instruct them how to do it. To strengthen the staying power of self-belief, health communications need to emphasize the need for perseverant effort. There is some evidence that people respond better to messages of health losses to have them check of maladies but in terms of health benefits to adopt preventive behavior (DiClemente and Peterson 1994). Since we are intervening after the onset of illness, the emphasis on health loss may be preferred.

Besides being well-designed, the message must be effectively disseminated. Existing social, religious, educational and occupational organization can serve as highly effective disseminators of prevent health guidelines. The formative assessment must, therefore, address issues of appropriate mediums and channels of communication. The Jiggasha model in Bangladesh has used social networks to identify community members in the construction of socially coherent groups for developing community-based interventions (Kincaid: personal communication). Based on the convergence model, this intervention design promotes the exchange of information in a social group or clique.

The informational component of the intervention will be spread by the health workers. Half of the health workers will receive training and will be assessed on accuracy of information and delivery. They will then deliver the information to each of the households in their cluster. The remaining half of the health workers will continue with their community-based activities as before. The monitoring group will maintain surveillance of illness among children under five and the household response to those illnesses in both groups.

Development of Self-efficacy: Knowledge alone does not support behavior change. People have to believe that they have both the skills and the capacity to use them before they will attempt the new

behavior. Both self-regulative and risk-reduction strategies for dealing with the various situations that accompany illness and careseeking behavior must be modeled. People develop stronger belief in their capabilities and more readily adopt modeled ways if they see models similar to themselves solve problems successfully with the modeled strategies than if they see the models as very different from themselves (Bandura 1986). Thus the characteristics of the models (age, sex, SES, type of problem, the situation in which skill is enacted) should correspond to that of the target audience.

Enhancement of Social Proficiency: After people gain knowledge and new skills, they need guidance and opportunities to perform those skills. Initially, the practice can be in simulated situations through role-playing and receive informative feedback and suggested corrections with an emphasis on degree and speed of recovery from setback. Instruction in mental rehearsal also boosts perceived self-efficacy and improve actual performance in the face of illness (Bandura 1986). If the experience with the health care providers is positive in interaction and outcome, then the potential of repeating the experience increases. Therefore, this intervention will also address issues of availability and accessibility to adequate health care facilities and that of appropriate ARI case management offered by these facilities.

Social Supports for Personal Change: Behavior that violates prevailing social norms brings social censure or other punishing consequences. However, people adopt only certain standards of behavior and regulate their actions through self-evaluative consequences. Normative consensus strengthens both its modeling and sanctioning functions. Often, the norms of one's immediate group often overrides that of the larger group and the reactions of outsiders may raise no response. While personal changes may result from efficacy, it is mediated by peer norms. Therefore, the people that exert influence over the caretakers' behaviors must also be targeted. In this study, the mothers-in-law and husbands may be considered.

A major benefit of community-mediated intervention is that they can mobilize the power of formal and informal networks of influence for transmitting knowledge and cultivating beneficial patterns of behavior. It provides an effective means for creating the motivational preconditions of change, for modeling requisite skills, creating the motivational preconditions of change, for modeling requisite skills, for enlisting natural social reinforcements and establishing appropriate patterns of careseeking as the normative careseeking.

Prevention of Behavioral Lapses: Development of interventions for behavioral lapses are best advanced by interactional analysis of high-risk episodes rather than by search for correlates in demographic characteristics and measures of traits disembodied from the situational and social influences that can override self-regulation efforts. The research approach that is most informative and functional elucidates the high-risk episodes that arise recurrently and the modes of coping strategies that prove successful in interpersonal transactions.

PHASE IV

This phase has the posttest for both control and intervention groups. The questionnaire will be the same as that for the pre intervention test but will have a few more questions on it to 1) assess if those in the control group knew of the intervention and if so, what if its content do they know and 2) assess the procedural aspects of the intervention (what worked and what didn't).

Evaluation of the intervention will include questions on
Visitation (ever/in past month/perceived frequency and regularity)
Recall of message and posters
Number of specific messages recalled
Number of general messages recalled
Recall of using clinical services

Recall of use of clinic message
Recall of educational materials.

Judging responses to the health worker will require an evaluation of:
Willingness to learn/curiosity when free/busy
Willing to pay attention when free/busy
Happiness/anger when seeing CHW when busy/free
Attitude toward intervention and social norms (eg. Serving community, can change habits) Feelings
when do not follow the health workers instructions
Perception of the number using the clinic

The diffusion of knowledge will be assessed by finding out if:
The respondent ever discussed the intervention with anyone.
If so, with whom?
Was it a family member?
Who first discussed message?
Was the message discussed with other women?
Number of women with whom the respondent has discussed.

PHASE V

Based on the lessons learned from the evaluation, the intervention will be modified and the PI will supply any technical assistance required.

E. Logistics

Sequentially, the activities involved include:
Recruitment of Research Investigator and Research Assistants
Community meeting
Mapping
Census
Competency test
Inventory of supplies
Freelisting
Narration of past ARI episode
Matching illness terms to video
Sorting of signs and symptoms in illness categories
Severity rating task
Semi-structured interview with providers
Semi-structured interview with mothers
Writing the ethnographic report
Developing the intervention idea
Training Field assistants
Focus group to develop and review the intervention
Baseline
Implementation of the intervention
Monitoring
Post-test
Data analysis (ongoing)
Modification to intervention
Report/article writing

PHASE I

Implementation of the study will begin with community preparation: Meetings with community leaders and volunteers⁵ will be held in both intervention and control groups to explain the project objectives and to invite their comments and recommendations.

A map of the area will be drawn by the PI and Research Investigator in consultation with each of the community volunteers and a cluster of 28 women identified in each area served by a community volunteer. The survey team will be trained to fill out the census form. At 40 households per person/day, the census will be completed in approximately 20 days. It will include the number of households, families, child bearing age women, children under five years of age, socio-economic and education status, distance from a health facility. Age of children will be approximated using a calendar of historical and cultural events. Since economic status can be a sensitive topic, it shall be assessed by proxy measures such as ownership of or occupancy of house, construction material of the house, ownership of household assets, household water sources, latrine type and availability of electricity.

Current Health facilities will be visited by the PI and Research Investigator to assess their work load and capability to participate in the project as well as to get information about local morbidity and mortality patterns of all illnesses, supplies, health personnel turnover and all current health activities (APPENDIX B). A competency test for health personnel shall be administered (APPENDIX C).

Prior to the commencement of the trial, retraining and reassessment will be carried out for all health station personnel to assure a comparable level of quality of general health care and particularly for the diagnosis and management of ARI and other common causes of mortality in both intervention and control areas.

Drug supply systems will be established for antibiotics. This is to prevent differences in utilization occurring from because of differences in drug supply.

Two teams of a PI/Research Investigator, RA and a fieldworker will conduct the focused ethnography.

PHASE II

The PI/Research Investigator will conduct the analysis of the focused ethnography and along with an artist will plan an intervention (APPENDIX E). They will also conduct the in-house focus groups to monitor the acceptability of the plans/materials. The two RAs and fieldworkers will conduct the focus groups with key informants.

Golapbagh and Dhalpur will be randomly assigned to intervention and control groups. Disposition forms will be developed to facilitate identification of households with children under four and to monitor interviewers. There will be two types of disposition forms: 1) to assign households and 2) to record completed interviews and attempts to contact. These forms will have the house number, identifying features near the house and name of the head of household.

The PI/Research Investigator along with the two RAs will conduct training sessions (APPENDIX G) for the survey team. The pretest of the survey will serve as practice for this group.

The survey team will conduct the pre-intervention test.

⁵ The World Vision programme consists of self-motivated community volunteers. Since the identification of the families and the landmarks within their service area for amapping and census purposes will take no moer than 2 houets of their time, we anticipate their full cooperation without monetary incentives.

The survey team will then commence monitoring the childhood illnesses. They will now be called the monitoring team.

The intervention team will be trained by the Research Investigator and RAs.

Intervention will be introduced into an area and any modifications required will be made.

PHASE III

The implementation team will follow the route set by the monitoring team so that the intervention will be introduced in stages across both clusters. The implementation and the intervention teams will be kept separate and will work from the ICDDR/B and WVB offices respectively.

F. Sample size

PHASE I

The focused ethnography depends on purposive sampling of people considered knowledgeable in and those likely to have experienced aspects inherent in the area of study. In the case of childhood illnesses, these include health practitioners, mothers of children under five, older women who have had children and local health care workers. Based on the WHO FES (1991b) recommendations, key informants⁶ will include mothers with young children and experience with children's illnesses, local health care providers and local health care workers who have encountered and treated many children. They will be interviewed a number of times to ascertain and explore further information, particularly that received from others. Respondents include randomly selected mothers of children under five who represent various age, parity and religious groups.

The WHO manual recommends that 6-8 key informants be used for the Focused Ethnographic Study. To assure the representation of the three referral centers, the homeopaths, the traditional birth attendants, private clinicians, local health workers, chemists and older women, we will work with 14 key informants. These key informants will be identified by asking community volunteers and leaders who might be good to talk with. Initial meetings will establish the person's willingness to share information and articulate what people generally think about a topic.

Respondents "provide a general validation of the extent to which key informant reports reflect the beliefs and practices in the community ... [and give some indication] ... of the range of diversity in outlook and behavior" (WHO FES 1991:30). The FES recommends that 25-30 mothers be interviewed. They should represent a wide age, socio-economic and religious range. This study will purposefully select 30 caretakers from the community (10 caretakers from each ward) as well as 20 from the clinic to verify information and gauge the range of community responses to childhood illnesses.

"those persons with whom the investigator develops special relationships of informational exchange, in which the key informant is regarded as "an expert" with special knowledge due to that person's role in the local culture, amount of experience with the topic(s) of interest, and willingness to seriously consider and discuss the topic(s) about which the researcher is enquiring." WHO FES manual 1991, pg. 23.

Sample Size for the Focused Ethnographic Study

RESPONDENT TYPE	CRITERIA FOR INCLUSION	SAMPLE SIZE	SAMPLING METHOD
Key Informant	Health care providers, mothers with young children and experience with children's illnesses, local health worker	14	Purposive
Respondents	Caretakers of at least one child under 4 years of age	30	purposive sampling
	Caretakers of ill children under 5 brought to the clinic	20	random sampling

PHASE II

Pretesting of the intervention plans and materials shall be conducted by highly structured focus groups of key informants, local artists and in-house personnel of differing backgrounds. This is standard procedure for evaluating materials. Bernard (1994) suggests 8 people per focus group to avoid domination by one member and to optimize the capacity of the moderator to facilitate the focus group.

Sample Size for Pretesting the Intervention

RESPONDENT TYPE	CRITERIA FOR INCLUSION	SAMPLE SIZE	SAMPLING METHOD
In-house personnel	Preferably of a SES and education level compatible with the community	8	Purposive
Mothers	Caretakers of at least one child under 4 years of age; 2 from 4 dispersed clusters	8	Purposive
Grandmothers	have taken care with children and currently live with son and grandchildren	8	Purposive
Area artists	locally known artists;	8	random sampling

Pilot-testing of the intervention: 1 cluster (households selected as discussed below)

PRE-POST INTERVENTION SURVEY:

Dhalpur and Golapbagh will be randomly assigned to either an intervention or control group. The intervention is intended to increase timely use of appropriate (to be defined) clinical facilities for pneumonia cases, eventually leading to a reduction in ARI-specific morbidity and mortality among children under five.

Based on the expected pneumonia rate of 0.33/child year, the number of cases expected in 6,691 under-5 children (in Golapbagh) in one year:	2,208
Number of cases expected in 8 weeks (4x2):	340
Assuming a design effect of 3 (to account for clustering of behavior):	113
Assuming 20% of the cases will not be identified:	91

The difference in care seeking proportion that can be detected given a sample of 91 cases in each group (intervention and control) with a power of 80% and significance = 0.05:

Proportion of cases seeking "timely" care from an "appropriate" source:

<u>Control</u> (serving as baseline)	<u>Intervention</u>
20%	38.8%
30%	50.2%
35%	55.5%
40%	60.6%
45%	65.5%
50%	70.2%

Since all households per cluster will be visited by the survey and monitoring team, the survey will have more than adequate power to detect a 65% difference in ARI-related knowledge. The resulting data will be statistically corrected for using the household as the unit of analysis using the appropriate software (EGRET).

G. Data Management and Analysis Plan

The WHO manual includes data collection forms. Responses from the focused ethnography will be collected using these forms. The Research Investigator will check supplies daily. The Research Assistants (RA) will label the form/notebook with the interview identity, date collected and the location. All data will be entered on these forms. After collection, the RAs will meet with the PI to review data sheets. After reviewing the sheets, the PI will label the file/notebook spine by interviewer initials, update the data log book and store the data in a safe place by day.

The information from narratives of past and current episodes as well as the provider interviews will be recorded in Bengali and later transcribed in English (keeping the key Bengali words and phrases in romanized letters) for further analysis. The illness and severity sorting forms include summary and cross tabulation forms, which must be appropriately filled.

The steps in the qualitative data processing involve 1) description of the phenomena and the research process, 2) abstracting features and characteristics that seem prominent in the concrete, recorded data, 3) identifying similarities and patterns of connectedness in abstracted features and characteristics, 4) linking and sorting comparable items to categorize the data and elaborate inquiry to advance the research, 5) summarizing or characterizing conceptualizations that encapsulate the study as a profile, model or paradigm and finally, 6) relating findings to existing literature to establish the differences and similarities contributed by the new study (Gilgun 1994). The analysis of the qualitative data generated by the focused ethnography includes the construction of the explanatory model of respiratory illnesses from the perspective of the cultural belief systems, relating the signs and symptoms recognized by mothers to biomedically understood ARI, utilization of health care resources

and sequences of care-seeking as well as the major constraints to utilization.

The WHO manual contains data analysis forms for each procedure. The Freelisting forms will be used to tabulate frequency of response. Based on these, the most salient terms will be identified. Similarly, the information recorded at the illness narratives will be tabulated using standardized forms to follow the sequence of action from the recognition of illness to treatment outcome. Responses to the video are tabulated to understand which symptoms are readily recognized, which are recognized when prompted and to clarify the biological condition that the local terms refer to. The cross tabulation of the sorting exercise determines the percentage of respondents placing a specific symptom with a specific illness and a ranking of illnesses by severity. Semi-structured interviews for provider perceptions and caretaker responses to current illness will be coded and abstracted to understand provider diagnosis and treatment and caretaker responses to illness.

The data analysis is iterative and ongoing and will involve the Research Assistants, who later help plan the intervention

Pre-post Intervention test (adapted from Arifeen 1993 and Bhattacharya 1993)

For the management of survey data, each completed form will be checked by the RA in the field. The interviewers will submit the code forms and disposition forms to the RA. Using the disposition forms, the disposition codes will be entered into a log of all households. There will be four databases created: master, census, household members and survey which will be entered into DOS based program FoxPro 2.5. The master table will be used as the sampling frame and to create disposition forms for the survey. A hard copy of each record will be manually checked against the original and corrections made. In order to reduce data entry and recording errors, the survey table will have several repeated identifying information: para/bari, household, healthworker. Answers that are not precoded will be kept in Bengali using English script.

The supervisors will check each questionnaire in the field. Data forms will be reviewed and edited for completeness and accuracy. If necessary, an interviewer will revisit the household for clarification or missing information. Data will then be entered into the computer. A programme incorporating range and consistency checks will be used for data entry. Data will be periodically checked using frequency distributions and cross-tabulations to identify outliers and illogical data.

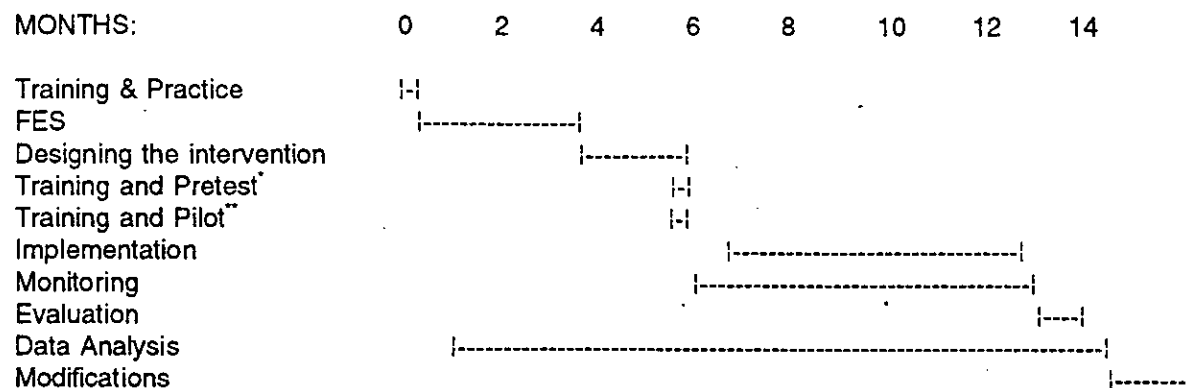
Data will be analyzed using the microcomputer based Statistical package for Social Sciences (SPSS PC 4.0). Each community will be assessed for recognition of symptoms/signs and sequela of action. Relative risks will be calculated to measure the association between exposure to the intervention and the outcome, health service utilization for children under five years of age.

Both dependent and independent variables will be examined using descriptive statistics (mean, median, frequency). As appropriate, recoding and/or categorization will be done. Rates and proportions will be estimated.

For categorically expressed variables, bivariate associations will be examined using the chi-square test or other tests as appropriate. The means of continuous variables will be compared using the Z test.

Logistic regression will be used to assess the simultaneous effect of multiple independent factors such as maternal education, poverty, child's age, child's gender, and number of other children on health service utilization. This will help control for confounding factors and identification of interactions. The potential confounders to look for in the study are availability of antibiotics in the community and availability of community volunteers in the communities.

13. Flow chart (sequence of tasks within time frame)



Training and Pre intervention test: Training of interviewers/monitors and test before implementation

Training and Pilot: Training of healthworkers and pilot for intervention

The study will begin with the training of the RAs (.5 month). After testing the FES instruments (APPENDIX H) in the field, they will begin the FES. The process from training to last data collection is estimated to take 3.5 months. While the intervention is being designed, the interviewers/monitors will be trained and the instruments for the census and survey pretested (2 months). They will then do the pre intervention test. Anticipated time for this process is .5 months. The healthworkers will be trained and the intervention will last 6 months with continuous monitoring. The post intervention test will be held at the end of the 6 months over 20 days (total 14 months).

14. Itemized specific tasks for each listed investigator

TASKS	Research Investigator (1)	Research Assistant (4)	Marketing Consultant (1)	Interviewers (20)	CHW (8)	Data Entry (4)
Mapping	x					
Census checks	x					
WV Competency tests	x	x				
Inventory of supplies	x	x				
Freelisting	x	x				x
Narration of past ARI episodes	x	x				x
Matching illness terms to video	x	x				x
Sorting of signs and symptoms	x	x				x
Severity rating task	x	x				x
Semi-structured interviews with provider	x	x				x
Semi-structured interviews with mothers	x	x				x
Writing the Ethnographic report	x					
Training Interviewers	x	x				
Developing the intervention	x	x	x			
Focus group	x	x	?			
Baseline	x	x		x		x
Implementation	x	x			x	
Monitoring	x	x		x	x	x
Post-test	x	x		x		x
Data Analysis	x					x
Modifications	x					
Report/Article writing	x					

BUDGET FOR STD STUDY

SALARY: LOCAL

Position	Grade	#	Rate	Month	Subtotal	Total
Research Investigator	NO-A	1	701	14	9,814	
Sr. Research Assistant	GS-4	2	295	12	7,080	
Secretarial Assist.	GS-4	2	295	6	3,540	
Field Research Assist.	GS-3	20	244	7	34,160	
DMA Gr-II	GS-3	4	244	7	6,832	
Field Worker	FW	8	75	6	3,600	
						\$65,026

SALARY: INTERNATIONAL

International Fellow	Fellow	1	1500	14	21,000	
						\$21,000

TRAVEL: LOCAL

Field Visits		170	2	14	4,760	
Misc. costs					1600	
						\$6,360

TRAVEL: INTERNATIONAL

Travel Costs		2	3200		6,400	
Perdiem		2	185	7	2,590	
						\$8,990

SUPPLIES & MATERIALS

Office supplies					1,000	
Field supplies					2,358	
Miscellaneous					4,000	
						\$7,358

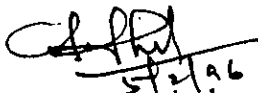
CAPITAL EQUIPMENT

PC/Notebook & accessories		3	3000		9,000	
Miscellaneous					1,000	
						\$10,000

OTHER DIRECT COSTS

Printing costs					3,000	
Miscellaneous					2,000	
						\$5,000

INTER-DEPARTMENTAL		
Xerox/mimeo	1,000	
Miscellaneous	1,000	
		\$2,000
=====		
TOTAL DIRECT COST		125,734
OVERHEAD (@ 31%)		38,978
TOTAL		164,712


 5/2/16
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Abstract Summary for the Ethical Review Committee

Protocol: Improving Care-Seeking Behavior For Children's Illnesses: An Intervention Trial in Urban Bangladesh

Acute Respiratory Infections (ARI) account for approximately 18-25% of the Bangladesh child mortality, which can easily be reduced through appropriate and timely case management with antibiotics. The study is a quasi-experimental effectiveness trial, with a pre-post control group, of an intervention based on ethnographic data and aimed at increasing timely and appropriate careseeking for pneumonia. The study, to be conducted in the PVO World Vision's project area (Dhalpur and Golapbagh) in Kamalapur, Dhaka consists of two main parts: a focused ethnography and an intervention trial. The intervention plans and the pre-posttest questionnaire will be formalized following the results of the ethnographic study (approximately four months after the study begins). Golapbagh and Dhalpur will be randomly assigned to an intervention and control group. At 0.33% expected pneumonia rate per child year, approximately 91 cases should be identified over 4 2-week recall periods. At a 0.05 significance level and power of 80%, we should be able to detect an approximately 20% absolute increase in the timely use of appropriate clinical facilities in the intervention area. The interactions with the intervention and control groups will be of the same intensity and duration, differing only with respect to the contents of the intervention. The impact of the intervention will be assessed by the pre and post intervention test scores of the mothers of the children under four years of age in the two groups. The posttest will also evaluate the intervention to keep those components that aided appropriate utilization and to discard or modify those that had no impact or had a secondary undesirable effect. Finally, postevaluation, modification of the intervention, training for workers in the control area, re-training for workers in the intervention area and introduction of the intervention into the control area will commence over a period of 1-2 months in a joint effort by WVB and the Research Assistants.

If successful, this intervention can be generalized to other urban areas in Dhaka with a few modifications. The principles that guided the intervention can be disseminated for further use by other organizations. If caretakers can be provided with and be persuaded to utilize appropriate healthcare facilities for their ill under-five children without active casefinding, then the costs and efforts of a national program can be more manageable.

The purpose of this study is threefold. First, to evaluate the current ARI-based activities in a poor urban area of Dhaka. Second, plan an intervention to increase the timely (to be defined) use of appropriate (to be defined) clinical facilities for pneumonia cases. And third, implement and evaluate the subsequent intervention to allow for required modifications in its design, if any.

The methods and procedures used by this study are summarized in the following points, as specified by the Committee in Attachment 1a.

- 1) The study has three distinct parts: the ethnography, planning of an intervention and the implementation and evaluation of the intervention. As such the required subject population are as follows:

Focused Ethnography:

RESPONDENT TYPE	CRITERIA FOR INCLUSION	SAMPLE SIZE	SAMPLING METHOD
Key Informant	Health care providers, mothers with young children and experience with children's illnesses, local health worker	14	Purposive
Respondents	Caretakers of at least one child under 4 years of age	30	purposive sampling
	Caretakers of ill children under 5 brought to the clinic	20	random sampling

Planning the intervention:

RESPONDENT TYPE	CRITERIA FOR INCLUSION	SAMPLE SIZE	SAMPLING METHOD
In-house personnel	Preferably of a SES and education level compatible with the community	8	Purposive
Mothers	Caretakers of at least one child under 4 years of age; 2 from 4 dispersed clusters	8	Purposive
Grandmothers	have taken care with children and currently live with son and grandchildren	8	Purposive
Area artists	locally known artists;	8	random sampling

Pre-post intervention survey: Mothers with at least one child under the age of four

Monitoring: Households with at least one child under the age of four

Verbal Informed voluntary consent for participation, in the face of illiteracy, will be obtained from the key informants, respondents and interviewees after a disclosure statement and an explanation of the study. No permission of other household members will be asked. However, the respondent may choose to do so.

2) NA

3) NA

4) All information gathered will be kept confidential. The interview will be conducted with as much privacy as possible and the interviewers will be instructed to maintain strict confidentiality of the information they collect.

The questionnaire and the data collection form will be given an identification code and kept in a locked cabinet. Only study staff with job responsibilities to data collection will be allowed access to the cabinet storing completed interviews. The respondents name will not be on the filed interviews, but will be on a cover sheet to the uncompleted interview (to facilitate the interviewer in finding the household and designated participant).

A separate list linking each respondent's name to study ID number will be held by the Principle Investigator and Senior Research Assistants. After completion of an interview, the respondent's

name and address will be removed, leaving only the unique identifier to distinguish the interview from other interviews.

Data entered into the computer will not include the names or addresses of the respondents, but will include the unique identifier. All name and address sheets that have been removed from the completed interviews will be retained by the investigator in a locked cabinet. Only the investigator will have access to this material.

5) **Focused ethnography and planning the intervention**

The key informants¹ will include mothers with young children and experience with children's illnesses, local health care providers and local health care workers who have encountered and treated many children. They will be interviewed a number of times to ascertain and explore further information, particularly that received from others. Respondents include randomly selected mothers of children under five who represent various age, parity and religious groups.

To assure the representation of the three referral centers, the homeopaths, the traditional birth attendants, private clinicians, local health workers, chemists and older women, we will work with 14 key informants. These key informants will be identified by asking community volunteers and leaders who might be good to talk with. Initial meetings will establish the person's willingness to share information and articulate what people generally think about a topic.

Respondents "provide a general validation of the extent to which key informant reports reflect the beliefs and practices in the community ... [and give some indication] ... of the range of diversity in outlook and behavior" (WHO FES 1991:30). The FES recommends that 25-30 mothers be interviewed. They should represent a wide age, socio-economic and religious range. This study will purposefully select 30 caretakers from the community (10 caretakers from each ward) as well as 20 from the clinic to verify information and gauge the range of community responses to childhood illnesses.

Planning the intervention will include highly structured focus groups of key informants (identified in the manner described above), local artists (within the area and/or from ICDDR,B) and in-house personnel (identified from ICDDR,B) of differing backgrounds. This is standard procedure for evaluating materials (Bernard 1994).

Pre-post intervention survey

Mothers with at least one child under the age of four will be randomly selected from the census data collected during the mapping of the community.

In each case, the assigned interviewer will visit the eligible participants in their homes (providers may be visited in their work place if they so prefer). The interviewer will introduce herself and the study to the participants including the purpose, requirements and risks/benefits. Verbal Informed voluntary consent for participation, in the face of illiteracy, will be obtained from the key informants, respondents and interviewees after a disclosure statement and an explanation of the study. No permission of other household members will be asked. However, the participant may choose to do so. The interviewer will act as a witness to the verbal consent. A copy of the consent form in Bengali will be given to the participants.

"those persons with whom the investigator develops special relationships of informational exchange, in which the key informant is regarded as "an expert" with special knowledge due to that person's role in the local culture, amount of experience with the topic(s) of interest, and willingness to seriously consider and discuss the topic(s) about which the researcher is enquiring." WHO FES manual 1991. pg. 23.

(a) Signed consent will not be obtained from illiterate participants. The interviewer will act as a witness to the verbal consent. A copy of the consent form in Bengali will be given to the participants.

(b) NA

(c) The attached consent forms state that the subjects confidentiality will be protected. While compensation or treatment is not provided by the study, referrals for ill children will be given.

6) The following table lists the procedures, subject type, place of interview, context, and time required

Procedures	Subject type	Place of interview	Context	Time required
Freelisting	Key informant	workplace/home	learn terminology for illnesses	30 minutes
Past ARI episode	Key informant Mothers	workplace/home home	learn of sequence of events	45 minutes
Videotape	Key informant Mothers	workplace/home home/clinic	match terms to actual symptoms	45 minutes
Illness Sorting Task	Key informant Mothers	workplace/home home	match symptoms to illnesses	30 minutes
Severity Rating	Key informant Mothers	workplace/home home	gauge perceived severity	30 minutes
Focus group	Key informant	ICDDR,B/home	plan intervention; evaluate materials	1.30 hrs
Survey	Mothers	home	KAP	45 mins
Monitoring	Mothers	home	surveillance	20 mins

7) The only direct benefit in participating in this study is that of getting referrals for ill children. However, if the intervention proves successful then the community will benefit by the reduction of pneumonia-related morbidity and mortality.

The study is important because it can provide population-specific information to public health programmes in Dhaka city that could help them shape programme recommendations for improving careseeking behavior for childhood illnesses. The study can also offer incidence and prevalence rates to informers of health services.

This study can also make a contribution to the literature on care-seeking behaviors, particularly in the context of pneumonia.

8) The activity does not require any use of records save for census and monitoring purposes. Therefore, birth certificates may be looked at to ascertain age, EPI cards to determine vaccination status, any prescriptions for medication IF available.

BIBLIOGRAPHY

- Amin R, Chowdhury SA, Kamal GM & Chowdhury J. 1989. "Community health services and health care utilization in rural Bangladesh." Soc Sci Med 29(12):1343-1349.
- Ammann AJ & Hong R. 1971. "Selective IgA deficiency: presentation of 30 cases and review of the literature." Medicine 50:223-36.
- Anderson VM & Turner T. 1991. "Histopathology of Childhood Pneumonia in Developing Countries." Reviews of Infectious Diseases 13(6): S470-476.
- Arifeen SE. 1993. "Birth Weight and Infant Mortality in the Slums of Dhaka city: A prospective Study." Proposal submitted to ICDDR/B April 6, 1993.
- Arifeen SE, Baqui AH, Nahar Q, Amin S & Uzma A. 1993. "Morbidity and Mortality Patterns in the slums of Dhaka." ICDDR/B.
- Aung T. 1985. "ARI in Childhood in Burma: What Happens Now?" In R. Douglas and E. Kerby-Eaton (eds.) Acute Respiratory Infection in Children. p. 93-95. Australia: U of Adelaide.
- Bandura, A. 1977a. Social Learning Theory. Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A. 1977b. "Self-efficacy: Toward a unifying theory of behavior change." Psychological Review 84:191-215.
- Bandura, A. 1986. Social Foundations of thought and action. Englewood Cliffs, NJ: Prentice-Hall.
- Bang AT, Bang RA & Sontakke PG. 1994. "Management of childhood pneumonia by traditional birth attendants: The SEARCH Team." Bull World Health Organ 72(6): 897-905.
- Bartlett AV, Paz de Bocaletti ME & Bocaletti MA. 1991. "Neonatal and early postneonatal morbidity and mortality in a rural Guatemalan community: the importance of infectious diseases and their management." Pediatr Infect Dis J 10(10):752-47.
- Bashour HN, Webber RH & Marshall TF. 1994. "A Community-based study of acute respiratory infections among preschool children in Syria." Journal of Tropical Pediatrics 40(4):207-213.
- BASICS et al. 1994. "Bangladesh Child Survival Assessment Urban Country Activity Plan." BASICS Technical Directive 000BG01005.
- Becker, M.H. ed. 1974. "The Health Belief Model and personal health behavior." Health Education Monographs 2:324-473.
- Becker S. 1994. "Understanding seasonality in Bangladesh." Ann N Y Acad Sci 709:370-8.
- Bentley ME et. al. 1992. "Use of Qualitative Research Methodologies for Women's Reproductive Health Data in India." in Scrimshaw, N. & Gleason G.R. (eds): RAP: Rapid Assessment Procedures, Qualitative Procedures for Planning and Evaluation of Health Related Programmes. MA: International Nutrition Foundation for Developing Countries, p. 241-250.

Berman P, Kendall C and Bhattacharya K. 1989. "The household production of health: Putting people at the center of health improvement." In I Sirageldin et al (eds) Towards More Efficacy in Child Survival Strategies Baltimore: JHUSHPH.

Berman S. 1991. "Epidemiology of acute respiratory infections in children of developing countries [Review]." Reviews of Infectious Diseases 13(Suppl 6):S454-62.

Berman S & McIntosh K. 1986. "Acute Respiratory Infections." In JA Walsh & KS Warren (eds) Strategies for Primary Health Care pp. 29-46. Chicago: U of Chicago Press.

Bernard HR. 1994. Research Methods in Anthropology: Qualitative and Quantitative Approaches 2nd ed. London: Sage Publications.

Beser E & Cakmakci T. 1994. "Factors affecting the morbidity of vitamin D deficiency rickets and primary protection." East African Medical Journal 71(6):358-362.

Bhardwaj SM & Paul BK. 1986. "Medical Pluralism and infant mortality in a rural area of Bangladesh." Soc. Sci. Med 23(10): 1003-1010.

Bhattacharya K. 1993. Understanding Acute Respiratory Infections: Culture and Method. Dissertation submitted in JHU, SHPH.

Busse WW. 1991. "Pathogenesis and Sequelae of Respiratory Infections." Reviews of Infectious Diseases 13(Suppl 6):S477-85.

Butler T, Dunn D, Dahs B & Islam M. 1989. "Causes of death and the histopathologic findings in fatal shigellosis." Pediatric Infectious Disease Journal 8(11): 767-72.

Campbell H, Byass P & Greenwood BM. 1990. "Acute lower respiratory infections in Gambian children: maternal perceptions of illness." Ann Trop Pediatr 10(1):45-51.

Cardenas VM, Koopman JS, Garrido FJ, Bazua LF, Ibarra JM & Stetler HC. 1992. "Protective effect of antibiotic on mortality risk from acute respiratory infections in Mexican children." Bull Pan Am Health Organ 26(2):109-120.

Coreil J, Augustin A, Halsey NA & Holt E. 1994. "Social and psychological costs of preventive child health services in Haiti." Soc Sci Med 38(2):231-238.

Denno DM, Bentsi-Enchill A, Mock CN & Adelson JW. 1994. "Maternal knowledge, attitude and practices regarding childhood acute respiratory infections in Kumasi, Ghana." Ann Trop Pediatr 14(4): 293-301.

DiClemente, RJ & Peterson JL. 1994. "Changing HIV/AIDS Risk Behaviors: The Role of Behavioral Interventions." In RJ DiClemente & JL Peterson (eds) Preventing AIDS: Theories and Methods of Behavioral Interventions. NY: Plenum Press.

Douglas RM. 1991. "Acute respiratory infections in children in the developing world." Semin Respir Infect 6(4):217-224.

Durkin MS, Islam S, Hasan ZM & Zaman SS. 1994. "Measures of socioeconomic status for child health research:

- Comparative results from Bangladesh and Pakistan." Social Science and Medicine 38(9): 1289-1297.
- Dyal Chand A & Bhattacharyya K. 1994. "The Marathi "Taskonomy" of Respiratory Illnesses in Children." Medical Anthropology 15(4):395-408.
- Fagbule D, Parakoyi DB, Spiegel R. 1994. "Acute respiratory infections in Nigerian children: prospective cohort study of incidence and case management." J Trop Pediatr 40(5):279-84.
- Fauveau V, Stewart MK, Chakraborty J & Khan SA. 1992. "Impact on mortality of a community-based programme to control acute lower respiratory tract infections." Bull World Health Organ 70(1): 109-116.
- Ganatra B & Hirve S. 1994. "Male bias in health care utilization for under-fives in a rural community in western India." Bull World Health Organ 72(1):101-104.
- Gittelsohn J et. al. (to be published) "Use of Ethnographic Methods for Applied Research on Diabetes Among Ojibway-Cree Indians in Northern Ontario."
- Glaser B & Strauss A. 1967. The Discovery of Grounded Theory. Chicago: Aldine.
- Grant JP. 1988. The State of the World's Children. NY: Oxford U Press for UNICEF.
- Greenwood et al. 1987. "Deaths in Infancy and Early Childhood in a Well-Vaccinated, Rural West African Population." Annals of Tropical Pediatrics 2:91-99.
- Gunay O, Ozturk A & Ozturk Y. 1994. "The impact of mothers' health education on the prevalence of acute respiratory infections in children." Turkish Journal of Pediatrics. 36(1):1-5.
- Health Alert. 1991. Philippine Health Matters 7:116-117. Philippines: Health Action Information Network.
- Hochbaum GM. 1958. Public participation in medical screening programs: A sociopsychological study. Washington DC: U.S. Government Printing Office, Public Health Services, PHS Publication 572.
- Hughart N, Silimperi DR, Khatun J & Stanton B. 1992. "A new EPI strategy to reach high risk urban children in Bangladesh, urban volunteers." Trop Geogr Med 44(1-2):142-148.
- Hunte PA & Sultana F. 1992. "Health-seeking behavior and the meaning of medications in Balochistan, Pakistan." Soc Sci Med 34(12):1385-97.
- Islam MA & Nielson CC. 1993. "Maternal and child health services: evaluating mothers' perceptions and participation." Public Health 107(4):243-9.
- Islam MA, Thilsted SH & Mahalanabis D. 1992. "Evaluation of preventive health services for hospitalized children under a child health programme." J Diarrhoeal Dis Res 10(4):205-212.
- James JW. 1972. "Longitudinal Study of the Morbidity of Diarrheal and Respiratory Infections in Malnourished Children." American Journal of Clinical Nutrition 25:690-694.
- Janz NK & Becker MH. 1984. "The health belief model: A decade later." Health Education Quarterly 11:1-47.

- Janzen J. 1978. The Quest for Therapy in Lower Zaire. Berkeley: University of California Press.
- Kaltreider HB. 1988. "Phagocytic antibodies and cell-mediated immune mechanisms." In JF Murray and JA Nadel (eds) Respiratory Medicine. Philadelphia: WB Saunders: 332-57.
- Kirkwood B. 1991. "Acute Respiratory Infections." In RG Feachem & DT Jamison Disease and Morbidity in Sub-Saharan Africa 158-172. Oxford: Oxford U P.
- Kirscht JP. 1974. "The health belief Model and illness behavior." Health Education Monographs 2:387-408.
- Kravitz J & Sanders D. 1994. "Paediatric pneumonia in Zimbabwe: management and pharmaceutical costs in inpatient care." J Trop Pediatr 40(1):17-23.
- Kresno S et al. 1994. "Acute Respiratory Illnesses in Children Under Five Years in Indramayu, West Java, Indonesia: A Rapid Ethnographic Assessment." Medical Anthropology 15(4):425-434..
- Kundi MZ, Anjum M, Mull DS & Mull JD. 1993. "Maternal perceptions of pneumonia and pneumonia signs in Pakistani children." Soc Sci Med 37(5): 639-60.
- Lanata CF, Quintanilla N & Verasegui HA. 1994. "Validity of a respiratory questionnaire to identify pneumonia in children in Lima, Peru." Int J Epidemiol 23(4):827-834.
- Leslie C. 1983. Social Research and Health Care Planning in South Asia. Paper for the South Asian Political Economy, Project II, Social Science Research Council, New Delhi. January 1983.
- Lye MS, Deavi U, Lai KP, Kaur H, Nair RC & Choo KE. 1994. "Acute respiratory infection in Malaysian children." Journal of Tropical Pediatrics 40(6):334-340.
- Madhav SM, Dixit GC, Prakasam PS, Sundaram NS, Shrivastava KN, Datta KK & Sharma RS. 1990. "A study of two-weekly incidence of ARI in under-five children of rural Alwar (Rajasthan)." J Commun Dis 22(4):243-246.
- Mahalanabis, D, Alam AN, Rahman N & Hasnat A. 1991. "Prognostic indicators and risk factors for increased duration of acute diarrhoea and for persistent diarrhoea in children." Int J Epidemiol 20(4): 1064-72.
- Mata LJ. 1978. The Children of Santa Maria Cauque: A Prospective Study of Health and Growth. MA: MIT Press.
- McKeown T. 1976. The Modern Rise of Population London: Edward Arnold.
- Megran DW & Chow AW. 1986. "Bacterial aspiration and anaerobic pleuropulmonary infections." In MA Sande, LD Hudson and RK Root (eds) Respiratory Infections. NY: Churchill-Livingstone 269-92.
- Miles MB & Huberman AM. 1984. Qualitative Data Analysis: Sourcebook of New Methods. London: Sage.
- Mitra AK, Engleberg NC, Glass RI & Chowdhury MK. 1990. "Fatal dysentery in rural Bangladesh." Journal of Diarrhoeal Diseases Research 8(1-2):12-7.
- Mitra AK, Khan MR & Alam AN. 1991. "Complications and outcome of disease in patients admitted to the intensive care unit of a diarrheal diseases hospital in Bangladesh." Transactions of the Royal Society of Tropical

Medicine & Hygiene 85(5): 685-7.

MOH, Bangladesh. 1993.

Mosley et al. 1990. "Respiratory Rates and Severity of Illnesses in Babies Under 6 Months Old." Archives of Disease in Childhood 65:834-837.

Mtango FDE & Neuvians DA. 1986. "Acute Respiratory Infections in children under five years, Central project in Bagameyo District, Tanzania." Transactions of the Royal Society of Tropical Medicine and Hygiene. 80: 851-858.

Mull DS & Mull JD. 1994. "Insights from Community-Based Research on Child Pneumonia in Pakistan." Medical Anthropology 15(4):335-352.

Nichter M. 1989. Anthropology and International Health: South Asian Case Studies. Boston: Kluwer.

Nichter M. 1994. "Introduction." Medical Anthropology 15: 319-334

Nichter M & Nichter M. 1994. "Acute Respiratory Illness: Popular Health Culture and Mother's Knowledge in the Philippines." Medical Anthropology 15(4):353-376.

Onofrio JM, Toews GB, Lipscomb MF & Pierce AK. 1983. "Granulocyte-alveolar-macrophage interaction in the pulmonary clearance of Staphylococcus aureus." American Review of Respiratory Diseases 127:335-341.

Osinusi K & Oyejide CO. 1990. "Child care practices with respect to acute respiratory tract infection in a poor, urban community in Nigeria." Rev Infect Dis 12(8):1039-41.

Palmer LB. 1987. "Bacterial colonization: pathogenesis and clinical significance." Clin Chest Med 8: 455-466.

Pandey M, Sharma P & Neupane R. 1985. "Preliminary Reports of a Community Study of Childhood ARI in Nepal." In R. Douglas and E. Kerby-Eaton (eds.) Acute Respiratory Infection in Children. p. 136-137. Australia: U of Adelaide.

Parker RL. 1987. "Acute Respiratory Illnesses in Children: PHC Responses." Health Policy and Planning 2:279-288.

Paul BK. 1991. "Health service resources as determinants of infant death in rural Bangladesh: an empirical study." Social Science and Medicine 32(1):43-9.

Pelto P. 1970. Anthropological Research: The Structure of Inquiry. NY: Harper and Row.

Pinnock CB, Douglas Davis, Badcock NR. 1986. "Vitamin A status in children who are prone to respiratory tract infections." Aust Pediatr J 22:95-99.

Pio A. 1986. "Acute respiratory infections in children in developing countries: An international point of view." Pediatric Infectious Disease 5(2):179-183.

Pio A. 1988. "WHO Programme on acute respiratory infections." I J Pediatr 55:197-205.

- Pio A, Leowski J & ten Dam, HG. 1985. "The magnitude of the problem of acute respiratory infection. In R.M. Douglas & E. Kerby-Eaton (eds) Acute Respiratory Infections in Childhood. Adelaide, Australia: University of Australia.
- Rahman MA et al. 1990. "Acute Lower Respiratory Tract Infections in Hospitalized Patients with Diarrhea in Dhaka, Bangladesh." Reviews of Infectious Diseases 12(8): S899-S906.
- Rahman MA & Bhuiya MA. 1992. "Utilization of health care services in Bangladesh." Bangladesh Med Res ounc Bull 18(2):72-6.
- Rahman S, Banu S & Nessa F. 1989b. "Health situation of slum dwellers of metropolitan area of Dhaka." Bangladesh Medical Research Council Bulletin 15(2):90-96.
- Rehman GN, Qazi SA, Mull DS & Khan MA. 1994. "ARI concepts of mothers in Punjabi villages: a community-based study." JPMA J Pak Med Assoc 44(8): 185-188.
- Reddaiah VP and Kapoor SK. 1988. "Acute Respiratory Infections in Rural Underfives." Indian Journal of Pediatrics 55:424-426.
- Reddaiah VP and Kapoor SK. 1992. "Socio-biological factors in underfive deaths in a rural area." Indian Journal of Pediatrics 59(5):567-71.
- Reddaiah VP and Kapoor SK. 1993. "Management of ARI for control of mortality in under-fives." Indian Journal of Pediatrics 60(2):283-8.
- Riley ID, Lehmann D & Alpers MP. 1991. "Pneumococcal vaccine trials in Papua New Guinea: relationships between epidemiology of pneumococcal infection and efficacy of vaccine." Review of Infectious Disease 13(6):S535-41.
- Rosaldo MZ & Lampere L (eds). 1974. Women, Culture and Society. Stanford: Stanford University Press.
- Rosenstock IM, Strecher VJ & Becker MH. 1988. "Social Learning Theory and the health belief model." Health Education Quarterly 15:175-183.
- Ross DA, Huttly SR, Dollimore N & Binka FN. 1994. "Measurement of the frequency and severity of childhood acute respiratory infections through household surveys in northern Ghana." Int J Epidemiol 32(3):608-616.
- Saini NK, Gaur DR, Saini V & Lal S. 1992. "Acute respiratory infections in children: a study of knowledge and practices of mothers in rural Haryana." J Commun Dis 24(2):75-55.
- Salway SM & Nasim SM. 1994. "Levels, trends and causes of mortality in children below 5 years of age in Bangladesh: findings from a national survey." Journal of Diarrhoeal Diseases Research 12(3):187-193.
- Saravia-Shore M & Arvizu SF. 1992. Cross-Cultural Literacy: Ethnographies of Communication in Multiethnic Classrooms. NY: Garden Publishing Inc.
- Sazawal S & Black RE. 1992. "Meta-analysis of intervention trials on case-management of pneumonia in community settings." Lancet 340(8818):528-33.

- Shann F. 1986. "Etiology of Severe Pneumonia in Children in Developing Countries." Pediatric Infectious Disease 5(2):247-252.
- Shah N, Ramankutty V, Premila PG & Sathy N. 1994. "Risk factors for severe pneumonia in children in South Kerala: a hospital-based case-control study." J Trop Pediatr 40(4):201-206.
- Shah PM, Selwyn BJ, Shah K & Kumar V. 1993. "Evaluation of the home-based maternal record: a WHO collaborative study." Bull World Health Organ 71(5):535-548.
- Sherman E. & William JR. (eds.) 1994. "Introduction: Coming of Age in Social Work-The Emergence of Qualitative Research." In Qualitative Research in Social Work. NY: Columbia University Press, p. 1-20.
- Simon W & Gagnon JH. 1973. Sexual Conduct, the Social Sources of Human Sexuality. Chicago: Aldine Publishing Company.
- Seeger W & Lasch HG. 1987. "Septic Lung." Rev Inf Dis 9(5): S570-79.
- Selwyn BJ. 1990. "The epidemiology of acute respiratory tract infection in young children: comparison of findings from several developing countries. Coordinated Data Group of BOSTID Researchers." Rev Infect Dis 12(8):S870-88.
- Sow O, Dialoo AB, Haba F, Diot P, Boissinot E & Lemarie E. 1995. "Acute respiratory infections in children - A community-based study comparing a Primary Health Center and a pediatric unit, Republic of Guinea." Tubercle & Lung Disease 76(1):4-10.
- Spika JS, Munshi MH et al. 1989. "Acute Lower Respiratory Infection: A Major Cause of Death in Children in Bangladesh." Annals of Tropical Pediatrics 9:33-39.
- Spradley JP. 1979. The Ethnographic Interview. NY: Holt, Rinehart & Winston.
- Stansfield SK. 1987. "Acute Respiratory Infections in the developing world: strategies for prevention, treatment and control." Pediatric Infectious Disease Journal 6:622-29.
- Stanton B, Black RE, Engle P & Pelto G. 1992. "Theory-driven behavioral intervention research for the control of diarrheal diseases." Social Science and Medicine 35(11):1405-20.
- Stanton BF & Clemens JD. 1988. "The influence of gender on determinants of urban childhood mortality in Bangladesh." Int J Epidemiol 17(1):129-135.
- Stewart MK et al. 1994. "Acute Respiratory Infections (ARI) in Rural Bangladesh: Perceptions and Practices." Medical Anthropology 15(4):377-394.
- Sutrisna B, Reingold A, Kresno S, Harrison G & Utomo B. 1993. "Care-seeking for fatal illnesses in young children in Indramayu, west Java, Indonesia." Lancet 342(8874):787-9.
- The Working Group on ARI, Respiratory Disease Committee, International Union Against Tuberculosis and Lung Disease, Paris, France. 1993. "Acute Respiratory Infections: conclusions of an IUATLD Workshop." Tubercle and Lung Disease 74:2-5.

- Thomason JA. 1991. "Health systems research and acute respiratory infections: essential focus on the health system." P N G Med J 34(3):215-219.
- Toews GB & Vial WC. 1984. "The role of C5 in polymorphonuclear leukocyte recruitment in response to *Streptococcus pneumoniae*." American Review of Respiratory Disease 129:82-86.
- Tupasi TE, de Leon LE, Lupisan S, Torres CU, Leonard ZA et. al. 1990. "Patterns of acute respiratory tract infection in children: a longitudinal study in a depressed community in Metro Manila." Rev. Infect. Dis 12(8): S940-9.
- Tyson K. 1994. "Heuristic Guidelines for Naturalistic Qualitative Evaluations of Child Treatment." In E. Sherman & JR William (eds.) 1994. Qualitative Research in Social Work. NY: Columbia University Press, p. 89-114.
- Vasanthamala A & Arokiasamy JT. 1989. "Knowledge, attitude and practice factors in childhood acute respiratory infections in a peninsular Malaysia health district." Asia-Pac J Public Health 3(3):219-223.
- Victora CG, Barros FC et al. 1987. "Birthweight and infant mortality: A longitudinal study of 5914 Brazilian children." Int J Epidemiol 16:239-245.
- Victora CG, Smith PG, Barros FC et al. 1989. "Factors for deaths due to Respiratory Infections among Brazilian infants." Int J Epidemiol 18(4):918-925.
- WHO. 1984. "A programme for controlling acute respiratory infections in children: A memorandum from a WHO meeting." Bull World Health Organ 62(1):47-58.
- WHO. 1988. Case Management of Acute Respiratory Infections in Children. Geneva: WHO.
- WHO. 1990. Acute respiratory infections in children: Case management in small hospitals in developing countries: A manual for Doctors and other Senior Health Workers. Programme for the Control of Acute Respiratory Infections. WHO/ARI/90.5.
- WHO. 1991. "Urbanization and health in developing countries: A challenge for health for all." World Health Statistics Quarterly 44(4).
- WHO. 1991b. Focused Ethnographic Study of Acute Respiratory Infections WHO/ARI programme.
- WHO. 1992. "Potential interventions for preventing pneumonia among young children, report of a meeting." March 1992.
- WHO. 1993. ARI: programme for control of acute respiratory infections: interim programme report. WHO/ARI/93.25.
- World Vision. 1995.
- Weissman HH. 1994. "The Administrator as Ethnographer and Cartographer." In E. Sherman & JR William (eds.) 1994. Qualitative Research in Social Work. NY: Columbia University Press, p. 52-62.

APPENDIX A OPERATIONAL DEFINITIONS OF VARIABLES

VARIABLES		DEFINITION
NAME	TYPE	
OUTCOME VARIABLES		
Sought care for sick child in time	Binary (Yes/No)	Took the child to care as soon as noticed that the child was exhibiting signs of severe illness
Sought care for sick child at the appropriate place	Binary (Yes/No)	Took the child to a qualified care facility
Intends to engage in appropriate careseeking behavior	Binary (Yes/No)	Says one should go and will go to the qualified care facility if the child were exhibiting some of the signs described.
Increase in Knowledge (components based on ethnographic information)	Continuous	Actual measure of increase
INDEPENDENT VARIABLES		
Maternal/paternal education	Continuous Ordinal Binary	Actual measures of years of school Categorization based on the distribution of data Some education/no education
Maternal/paternal employment	Ordinal Binary	Categorization based on distribution of data Employed/unemployed
Grandmother at home	Binary	Yes/no
Number of children in the household	Continuous Ordinal	Actual number Categorization based on distribution of data
Household income	Continuous Ordinal Binary	Actual measures of income Categorization based on distribution of data High/low income
Dwelling structure	Binary Ordinal	Good/poor Categorization based on distribution of data
Family assets	Binary Ordinal	High/low (based on ownership) Categorization based on distribution of data
Family religion	Nominal	Actual religion
Age of the child	Continuous Ordinal Binary	Actual age Category of age Below 1 and over 1 years of age

Sex of the child	Nominal	Actual sex
Perceived severity	Binary Ordinal	High/low Categorization based on distribution of data
Perceived susceptibility	Binary Ordinal	High/low Categorization based on distribution of data
Response efficacy	Binary Ordinal	High/low Categorization based on distribution of data
Self efficacy	Binary Ordinal	High/low Categorization based on distribution of data
Perceived benefit	Binary Ordinal	High/low Categorization based on distribution of data
Fatigue	Binary Ordinal	High/low Categorization based on distribution of data
Peer approval	Binary	High/low
Social Models	Binary	Yes/No
Availability of appropriate care	Binary Ordinal	Yes/no Categorization based on distribution of data
Availability of substitute caretakers	Binary Ordinal	Yes/no Categorization based on distribution of data
Distance from health services	Continuous Binary Ordinal	Actual distance Far/near Categorization based on distribution of data
Exposure to intervention	Continuous Binary Ordinal	Actual number of contacts Yes/no Categorization based on distribution of data
Perception of the intervention	Binary Ordinal	Good/bad Categorization based on distribution of data
Perception of health care worker	Binary Ordinal	Good/bad Categorization based on distribution of data
Diffusion of intervention across sites	Binary Ordinal	Good/bad Categorization based on distribution of data

APPENDIX B
PRACTITIONER SEM-STRUCTURED INTERVIEW (adapted from the WHO FES manual 1991)

Practitioner: _____

Date of interview: _____

Training: _____

1. What are the days and your timings when you see patients?

DAYS HOURS

FEES

2. Would you say that you see more adults or more children?

3. What is the most common complaint of the children that you see? Other common complaints?

4. About how many cases of respiratory problems (ARI) do you see in infants and small children per week/day?

5. Which facility or provider do most people take their small children when suffering from Respiratory problems (ARI)?

6. What are the types of respiratory infections you see most often in children under 5?

7. In this community, which of these respiratory infections causes death in children?

8. What are the main signs and symptoms that mothers pay attention to -- that they consider to be serious?

9. Specifically for pneumonia, what are signs and symptoms that mothers recognize and pay attention to?
10. Are these the same terms used by the people who come to see you?
11. Are there other terms that they might use for these Respiratory problems (ARI)?
12. Are there signs and symptoms of pneumonia that mothers should recognize, but do not seem to notice or pay attention to?
13. How does their complaint compare to what you find when you examine the child?
14. Do you think that people sometimes bring their small children too late for treatment when they have pneumonia?

How often does this happen?

What are the causes of the delay? Are neonates brought less frequently?

15. How do you usually treat children with pneumonia? What are the signs and symptoms that you associate with pneumonia?

16. How do you usually treat children with bronchitis? What are the signs and symptoms that you associate with bronchitis?
17. When you prescribe medicines, do most mothers complete the full dosage? If no, why not?
18. What do you think could be done to reduce the numbers of deaths from pneumonia and other Respiratory problems (ARIs)?

APPENDIX C

Evaluation Component for the WVB project

A. Aim

The actual evaluation will depend on the overall aim of the WVB project.

In general, for community-based workers, effective interpersonal communication skills depend upon:

1. set of verbal and non-verbal behaviors and interpersonal communication skills necessary to establish a comfortable environment and positive rapport
2. adequate information and knowledge transferral
3. review of ARI specific information

B. Evaluation design

This evaluation design will be program-based. It intends to identify areas where improvements in the training program are warranted. Since the training of service providers is standardized, a standardized evaluation instrument may be used. An individual roster should be maintained so that in the future, the personnel can be evaluated against their own performance. Subjective indicators should be clarified to the providers during their training, supervisory and evaluation sessions.

Scores could be categorical, for eg.,

- 0= not at all
- 1= very rarely
- 2= often
- 3= always
- NA= not applicable

APPENDIX D

Mother's Questionnaire: Pre-intervention Survey Form (adapted from Bhattacharya 1993)

Cross checked _____

Date Entry _____

[FILL OUT THIS SECTION AHEAD OF TIME - FROM DISPOSITION FORM

1. Ward _____
2. Cluster _____
3. House _____
4. Interviewer _____
5. Date dd/mm/yy _/_/_/

INTRODUCTION

I have come from WORLD VISION. Children get many kinds of illnesses. We want to learn why these illnesses occur, what cures them and how to cure them. I will ask you a few questions. Please give us your opinion.

6. What is the name of your youngest child? When was s/he born?

Name _____	Age (Months) ____	Sex _____	Male=1 female=2
			<u>AGE</u> ____
			<u>SEX</u> ____

7. Is this your first child? FRSTCHLD

Yes.....1
No.....2

7. _

8. Are you breastfeeding your youngest child? BF

Yes.....1
No.....2

8. _

9a. Do you have to go outside the house for your work? OUT_WORK

Yes.....1
No.....2 [GO TO Q10]
Sometimes....3

9a. _

9b. Do you take the child with you? TAKECHLD

Yes.....1 [GO TO Q10]
No.....2
Sometimes....3

9b. _

9c. Who looks after the child when s/he is not with you? DAYCARE

Mother-in-law 1
Older sibling/cousin, unmarried 2
Older sibling/cousin, married 3
Neighbor 4
Other [SPECIFY] _____

9c. _

10. Suppose your child has a cough, if something came out, what should be done when home remedies are having no effect? WET CGH

Health worker 1
Private doctor 2
Government doctor 3
Hakim/kobiraj/homeopath 4
World Vision 5
No treatment 6
Don't Know 7
No response 8

10. _

11. Suppose your child has a cough, if something came out, what should be done when home remedies are having no effect? PERS CGH

Health worker 1
Private doctor 2
Government doctor 3
Hakim/kobiraj/homeopath 4
World Vision 5
No treatment 6
Don't Know 7
No response 8

11. _

12. If yellow mucus comes out while coughing, what should be done when home remedies are having no effect? YELL MUC

Health worker 1
Private doctor 2
Government doctor 3
Hakim/kobiraj/homeopath 4
World Vision 5
No treatment 6
Don't Know 7
No response 8

12. _

13. If with cough, there is breathing difficulty, what should be done when home remedies are having not effect? DIF BRE

Health worker	1	
Private doctor	2	
Government doctor	3	
Hakim/kobiraj/homeopath	4	
World Vision	5	
No treatment	6	
Don't Know	7	
No response	8	13. _

14. If there is rapid breathing while coughing, what should be done when home remedies are having not effect? FAS BRE

Health worker	1	
Private doctor	2	
Government doctor	3	
Hakim/kobiraj/homeopath	4	
World Vision	5	
No treatment	6	
Don't Know	7	
No response	8	14. _

15. Suppose there is cough. If there is noise while breathing, what should be done when home remedies are having not effect?

NOI BRE

Health worker	1	
Private doctor	2	
Government doctor	3	
Hakim/kobiraj/homeopath	4	
World Vision	5	
No treatment	6	
Don't Know	7	
No response	8	15. _

16. If the chests draws in while coughing, what should be done when home remedies are having not effect? IND CHST

Health worker	1	
Private doctor	2	
Government doctor	3	
Hakim/kobiraj/homeopath	4	
World Vision	5	
No treatment	6	
Don't Know	7	
No response	8	16. _

17. If the child has a cough and cries all the time, what should be
done when home remedies are having not effect? CONT CRY

Health worker	1	
Private doctor	2	
Government doctor	3	
Hakim/kobiraj/homeopath	4	
World Vision	5	
No treatment	6	
Don't Know	7	
No response	8	17. _

18. If the child is acting restless, what should be
done when home remedies are having not effect? RESTLESS

Health worker	1	
Private doctor	2	
Government doctor	3	
Hakim/kobiraj/homeopath	4	
World Vision	5	
No treatment	6	
Don't Know	7	
No response	8	18. _

19. If the child becomes inactive, what should be
done when home remedies are having not effect? INACTIVE

Health worker	1	
Private doctor	2	
Government doctor	3	
Hakim/kobiraj/homeopath	4	
World Vision	5	
No treatment	6	
Don't Know	7	
No response	8	19. _

20. If the child's hands and feet become limp, what should be
done when home remedies are having not effect? LIMP

Health worker	1	
Private doctor	2	
Government doctor	3	
Hakim/kobiraj/homeopath	4	
World Vision	5	
No treatment	6	
Don't Know	7	
No response	8	20. _

21. If the child has a cough and cannot eat or drink anything, what should be done when home remedies are having not effect? ANOREXIA

Health worker	1	
Private doctor	2	
Government doctor	3	
Hakim/kobiraj/homeopath	4	
World Vision	5	
No treatment	6	
Don't Know	7	
No response	8	21. _

22. If with a cough, the child has a fever what should be done when home remedies are having not effect? FEVER

Health worker	1	
Private doctor	2	
Government doctor	3	
Hakim/kobiraj/homeopath	4	
World Vision	5	
No treatment	6	
Don't Know	7	
No response	8	22. _

23. If the child vomits, what should be done when home remedies are having no effect? VOMITING

Health worker	1	
Private doctor	2	
Government doctor	3	
Hakim/kobiraj/homeopath	4	
World Vision	5	
No treatment	6	
Don't Know	7	
No response	8	23. _

24. If with a cough there is diarrhea, what should be done when home remedies are having no effect? DIARRHEA

Health worker	1	
Private doctor	2	
Government doctor	3	
Hakim/kobiraj/homeopath	4	
World Vision	5	
No treatment	6	
Don't Know	7	
No response	8	24. _

25. a. Have you heard of pneumonia? KNOWPNEU

Yes.....1

No.....2 [GO TO Q26]

25a. _

b. What happens when a child gets pneumonia? PNEU_SX

26. A few days ago, we were in another area. There, a woman named M said that her two year old child had a cough and cold for 3-4 days.

She was wondering if she should show her child to the doctor. Do you think she should take her child to the doctor? M_1

Yes.....1
No.....2
DK.....8

26. _

27. M showed her child to the doctor. The doctor said that the child only had cough and cold. There was nothing to worry about. There was no need to give medicines even. The child would get better with proper food.

Do you think that M should do what the doctor says and stop worrying or should she see another doctor? M_2

Yes.....1
No.....2
DK.....8

27. _

28. In another village, there was a 23 year old woman named P. She said that a few days ago, her 1 year old child started having a cough and fast breathing. P. thought that these things were common in children and there was nothing to worry about.

Do you also think that these things are common in children and nothing to worry about?
COMMON

Yes.....1
No.....2
DK.....8

28. _

29. a. Do you think P should do something at home? HOME_REM

Yes.....1
No.....2 [GO TO Q30]
DK.....8 [GO TO Q30]

29a. _

b. What should she do at home? HH_RX

30. Should P take her child to traditional healer (Kobiraj, hakim, homeopath)? TRADHEAL

Yes.....1
No.....2
DK.....8

30. _

31. Should she take the child to a World Vision healthworker? HLTHWORK
- Yes.....1
No.....2
DK.....8
31. _
32. Should she take the child to a government doctor or hospital? GOVTHOSP
- Yes.....1
No.....2
DK.....8
32. _
33. Should she take the child to a private doctor? PVT_DOC
- Yes.....1
No.....2
DK.....8
33. _
34. Should she buy medicines from eh chemist without going to doctor? CHEMIST
- Yes.....1
No.....2
DK.....8
34. _
35. Should she give some medicine left-over from an earlier dose? LEFT_MED
- Yes.....1
No.....2
DK.....8
35. _
36. Should she refer to an old prescription and buy medicines? OLD_MED
- Yes.....1
No.....2
DK.....8
36. _
37. What would happen if P's child were not taken to the doctor? What other symptoms would have been there?
- [1=Unaided; 2=Aided; 3=Would not occur; 8=DK]
- | | | | |
|--------------------------|-----------------|---------|---|
| Breathing Difficulty | <u>BRE_DIF2</u> | 1 2 3 8 | _ |
| Breathlessness | <u>BRTHLESS</u> | 1 2 3 8 | _ |
| Continuous Cough | <u>CONTCGH2</u> | 1 2 3 8 | _ |
| Continuous crying | <u>CONTCRY2</u> | 1 2 3 8 | _ |
| Child almost unconscious | <u>UNCONSC</u> | 1 2 3 8 | _ |
| Chest indrawing | <u>INDRAWG2</u> | 1 2 3 8 | _ |

Diarrhea	<u>DIARRHE2</u>	1 2 3 8	—
Eyes roll up	<u>EYESROLL</u>	1 2 3 8	—
High fever	<u>HGHFEV2</u>	1 2 3 8	—
Inactive child	<u>INACTIV2</u>	1 2 3 8	—
Inability to eat/drink	<u>ANOREX2</u>	1 2 3 8	—
Limp hands and feet	<u>LIMP2</u>	1 2 3 8	—
Restlessness	<u>RESTLES2</u>	1 2 3 8	—
Wet cough	<u>WETCGH2</u>	1 2 3 8	—
Vomiting	<u>VOMIT2</u>	1 2 3 8	—
Fast breathing	<u>FASTBRE2</u>	1 2 3 8	—

38. Should P shut the doors and windows in her house? VENTILAT

Yes.....1
No.....2
DK.....8

38. —

39. If P herself is well, should she stop breastfeeding her child? STOP_BF

Yes.....1
No.....2
DK.....8

39. —

40. If P herself has cough and cold, should she stop breastfeeding? BF_MA_IL

Yes.....1
No.....2
DK.....8

40. —

41. What should P do if her child has fever along with cough, cold and rapid breathing?

FEVER_RX

Yes.....1
No.....2
DK.....8

*Response
not clear*

41. —

42. P took her child to the doctor. The doctor prescribed medicines for 5 days and said her child would soon get well. What signs and symptoms would indicate to P that her child is improving?

[CIRCLE TWO ONLY] IMPV SX1; IMPV SX2

Ability to feed.....1
 Fall in temperature.....2
 Slower breathing.....3
 Reduced coughing.....4
 More active.....5
 Stops crying.....6
 Don't Know.....8

42a. _ 42b. _

Other signs SX_OTHR

43. How many days should Panna wait to see some improvement in her child? WAIT DAY
 _ _ Days

43. _ _

44. The doctor recommended that the child sleep on its stomach to clear the nose. Do you think it would be harmful to put the child on its stomach? SLP_STOM

Yes.....1 Why? _____
 No.....2 YES WHY
 DK.....8

44. _

45. After giving medicines for 3 days, P thought her child had gotten better. Should she continue the medicines for 5 days as the doctor recommended? COMPLNCE

Yes.....1
 No.....2
 DK.....8

45. _

46. The doctor warned P that if her child had difficulty in breathing or chest indrawing, s/he should be brought to him/her immediately.

a. Do you think P will be able to recognize difficulty in breathing? REC_DFBR

Yes.....1
 No.....2
 DK.....8

46a. _

b. Do you think P will be able to recognize chest indrawing? REC_INDR

Yes.....1
 No.....2
 DK.....8

46b. _

47. When a child is not well, should s/he be given more food than when the child is well? FOOD_OFT
- Yes.....1
No.....2
DK.....8
47. _
48. What food should be give more often? WHATFOOD
- _____
49. When a child is not well should s/he be given milk more often than when s/he is well? MILK_OFT
- Yes.....1
No.....2
DK.....8
49. _
50. What foods and drinks should be given to a child who has fever along with cough, cold, and rapid breathing? FOODFEVR
- _____
51. When a child has a fever, should s/he be given rice? RICE
- Yes.....1
No.....2
DK.....8
51. _
52. When a child has a fever, what foods should not be given? AVOID_FD
- _____
53. When a child has a fever along with a cough and cold, what foods should the child's mother avoid? AVOID_MA
- _____
54. When a child has a fever, should the quantity of food be [READ LIST] FOOD_QTY
- Increased.....1
Decreased.....2
or stay the same.....3
Don't Know.....8
54. _
55. When a child has a fever, should the quantity of milk be [READ LIST] MILK_QTY
- Increased.....1
Decreased.....2
or stay the same.....3
Don't Know.....8
55. _

56. What would you call an illness with rapid breathing and chest indrawing?
[1 = Unprompted; 2 = Prompted; 3 = Would not call it this; 8 = DK]

Sardi <u>SARD</u>	1	2	3	8	—
Sardi kashi <u>SAR KAS</u>	1	2	3	8	—
Hapani/Taan <u>HAPANI</u>	1	2	3	8	—
Buke sardi jama <u>BUKE SAR</u>	1	2	3	8	—
Pasli <u>PASLI</u>	1	2	3	8	—
Pneumonia <u>PNEUMON</u>	1	2	3	8	—
Double Pneumonia <u>DBL PNEU</u>	1	2	3	8	—

Other names for this illness OTH NAME

57. Has any child in your household had rapid breathing without chest indrawing? EXP_FSB

Yes.....1
No.....2

57. _

58. Has any child in your household had rapid breathing with chest indrawing? EXP_CHIN

Yes.....1
No.....2

58. _

59. Do you think that if a child along with measles, has cough and is breathing fast that this normal or that the child should be taken to the doctor immediately? MEASLES

This is normal and after the rash subsides, the child will be taken to a doctor.....1
The child should be taken to the doctor immediately.....2

59. _

60. If a child gets a cold, do you think smoke from a chulha is harmful? CHULHA

Yes.....1
No.....2
DK.....8

60. _

61. If a child gets a cold, do you think cigarette smoke is harmful? CIGARET

Yes.....1
No.....2
DK.....8

61. _

62. If a child gets a cold, do you think incense smoke is harmful? INCENSE

Yes.....1
No.....2
DK.....8

62. _

63. Whom did you consult the last time that your child had a cold and home treatments were not working
[READ LIST]

[1=Yes in the same ward; 2=yes, in a different village; 3=did not consult; 8=DK]

World Vision	<u>WV</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>8</u>	
Government hospital/clinic	<u>GVTHOSP2</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>8</u>	—
Private hospital/clinic	<u>GVTHOSP2</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>8</u>	—
Traditional Healer (homeopath, Hakim, Kobiraj)						
	<u>TRADHEAL2</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>8</u>	
Other places:	<u>OTHPLACE</u>					

64. Were you given medicines by this provider or did you buy them from a prescription?
MEDICINE

Given medicines.....1
Bought with prescription.....2
Given some, bought balance.....3
No medicine recommended.....4
Don't know.....8

64. _

65. Can you describe these medicines? [READ LIST]
[1=Yes; 2=No; 8=DK]

White pills	<u>WHTEPILL</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>8</u>	
Other color pills	<u>OTH_PILL</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>8</u>	—
Powder	<u>POWDER</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>8</u>	—
Capsules	<u>CAPSULE</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>8</u>	—
Injections	<u>INJECT</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>8</u>	—
Cough syrups/mixtures	<u>SYRUP</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>8</u>	—
Other medicines:	<u>OTH_MEDS</u>					

66. Which of these medicines work fast? [1=Yes; 2=No; 8=DK]

White pills	<u>FWHTEPILL</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>8</u>	
Other color pills	<u>FOTH_PILL</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>8</u>	—
Powder	<u>FPOWDER</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>8</u>	—
Capsules	<u>FCAPSULE</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>8</u>	—
Injections	<u>FINJECT</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>8</u>	—
Cough syrups/mixtures	<u>FSYRUP</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>8</u>	—

67. Which of these medicines work best for a child under 1 year old? [READ LIST, CIRCLE 2 ONLY]

White pills (loose)	1	<u>MED1</u> <u>U1</u> _
White pills (packet)	2	<u>MED2</u> <u>U1</u> _
Colored pills (loose)	3	
Colored pills (packet)	4	
White powder	5	
Colored powder	6	
Capsules	7	
Injections	8	

68. Which of these medicines work best for a child between 1 and 3 years old? [READ LIST, CIRCLE 2 ONLY]

White pills (loose)	1	<u>MED1</u> <u>A1</u> _
White pills (packet)	2	<u>MED2</u> <u>A1</u> _
Colored pills (loose)	3	
Colored pills (packet)	4	
White powder	5	
Colored powder	6	
Capsules	7	
Injections	8	

69. How often do you watch TV? TV

Never	1	
Daily	2	
More than once a week	3	
Around once a week	4	
Around once a month	5	
Less often	6	69. _

70. How often do you listen to the radio? RADIO

Never	1	
Daily	2	
More than once a week	3	
Around once a week	4	
Around once a month	5	
Less often	6	70. _

_____ TO BE ANSWERED BY FIELD INVESTIGATOR _____ 71. How did the interview go? Was the respondent interested in the subject?

Interruptions?	Yes	No
----------------	-----	----

APPENDIX E

Guidelines and Basic Components in using FES Material in Planning the Intervention.

FES MATERIAL	INFORMATION GATHERED	USE IN PLANNING INTERVENTION
Freelisting	Vocabulary Signs and Symptoms Home remedies Perceived causes Perceived treatments Available practitioners	-language -reinforcement of correct recognition, remedies, causes, treatments. -modification of the incorrect -training for practitioners -increase in the number of practitioners (?)
Eliciting narrative of past illness episode	Sequence of events and identification of weaknesses in the decision making process	-suggest steps that can be taken at each decision "cross-road." -reinforce the steps -gain social support
Matching local terms to video taped illness episodes	Local terms for medical conditions	-language
Sorting of signs and symptoms in illness categories	Identification of illnesses that might include signs and symptoms related to pneumonia	-include those illness terms in the intervention message
Severity rating task	Identification of those illnesses and signs that are considered severe in rank order	-reinforce or introduce the idea of health loss with pneumonia -give due recognition and mention of those things that people consider serious.
Semi-structured interviews with health providers	Terminology Perception of causes of delayed treatment seeking Recommendations with regard to antibiotics	-match provider terminology with "lay" terminology -address issues related to delayed treatment seeking -retraining for appropriate dispensation of antibiotics
Semi-structured interviews with mothers	Terminology Perception of causes of delayed treatment seeking Practices with regard to antibiotics Identify channels of communication Identify potential change agents Suggested approaches to facilitate and sustain change	-match provider terminology with "lay" terminology -address issues related to delayed treatment seeking -address issues surrounding inappropriate use or utilization of antibiotics. -use the appropriate medium of communication -recruit potential change agents -use suggestions in the planning of the intervention

APPENDIX F

Home-based Monitoring (from Treatment Resort Form in Bhattacharya 1993)

Place of ID: _____ Date of ID: _____

Age (months): _____ Weight (Kg): _____ Sex: M F

Immunization status: (Circle doses completed)

BCG OPV1 OPV2 OPV3 DPT1 DPT2 DPT3 Measles DK

LBW Baby: Y N DK Nutritional Status: Normal 1 2 3 DK

Practitioner Diagnosis: _____

SYMPTOM RECOGNITION: What was wrong with the child right at this moment? Can you tell me everything that was wrong with the child from head to toe?

Signs and Symptoms:

1. _____
2. _____
3. _____
4. _____
5. _____

DISCOVERY: How did you first realize the child was sick?

What symptoms did you notice first?

1. _____
2. _____
3. _____
4. _____

DAYS ILL: How many days had the child been sick? After you first noticed that the child was sick, how many days did you wait to seek care? The child became sick on _____ and you sought care on ____.

of Days: ____

HOME CARE: What did you do at home for the child? What did the child eat and drink? Was there any change from the normal diet? Was the appetite normal?

CARE RESORT 1: Place: _____ Treatment: _____

Any improvement or change in the child? _____

Reasons for going there (including triggering symptoms):

Been there before? What happened then?

Who did you consult about taking the child? Who disagreed with taking child here?

Cost: Taka:

Who paid? (need to borrow?):

CARE RESORT 2: Place: _____ Treatment: _____
Any improvement or change in the child? _____

Reasons for going there (including triggering symptoms):

Been there before? What happened then?

Who did you consult about taking the child? Who disagreed with taking child here?

Cost: Taka: _____ Who paid? (need to borrow?): _____

CARE RESORT 3: Place: _____ Treatment: _____
Any improvement or change in the child? _____

Reasons for going there (including triggering symptoms):

Been there before? What happened then?

Who did you consult about taking the child? Who disagreed with taking child here?

Cost: Taka: _____ Who paid? (need to borrow?): _____

CARE RESORT 4: Place: _____ Treatment: _____
Any improvement or change in the child? _____

Reasons for going there (including triggering symptoms):

Been there before? What happened then?

Who did you consult about taking the child? Who disagreed with taking child here?

Cost: Taka: _____ Who paid? (need to borrow?): _____

USE OF OTC: Did anyone give you or did you buy any medicines without consulting a doctor? What were they? Where did you get them? How much did they cost?

CAUSE: What do you think caused this illness?

PREVIOUS EXPERIENCE: Have any of your children ever had this type of illness before? What happened? What did you do then?

HOUSEHOLD CHARACTERISTICS

Mother's age: _____

Mother's education: _____ (Class)

of children _____

Father's occup _____

Mother's occup _____

Grandmother lives with child

Religion

Yes.....1

Sunni1

No.....2

Shiite.....2

DK.....9

Hindu.....3

FAMILY HISTORY

Were any other ill children in the house at the time? 1=yes 2=no

IF YES, FILL ANOTHER FORM WITH THE SAME INFORMATION

Are any of the children listed on disposition form, no longer living at home?

Are there any new children living in this house since last month/last two weeks?

Was there a child born here, even if it lived for only a short time, in the last month/2 weeks?

IF YES TO ANY OF THE ABOVE, FILL ADDENDUM TO CENSUS FORM. IF THE "NEW CHILD" IS ANEONATE, THEN FILL IN THE NEONATAL FORM. MAKE SURE THIS CHILD IS NOW LIVING THERE OR WAS OF A WOMAN OF THAT HOUSEHOLD AND NOT OF A VISITOR OR OF A VISITING DAUGHTER. REMEMBER TO EXAMINE THE CHILD FOR CURRENT HEALTH STATUS

AFTER INTERVIEW IS OVER - CODE:

Place of ID:

Date of ID: __/__/__

Age: ____ (mths)

Sex: Male.....1

Female.....2

Nutritional Status

1st.....1

2nd.....2

3rd.....3

Normal.....4

DK.....9

Respiratory Rate:

High.....1

Normal.....2

DK.....9

Indrawing:

Yes.....1

No.....2

DK.....9

WHO Classification

No pneumonia.....1

Pneumonia.....2

Severe pneumonia...3

Lay Fast Breathing:

Yes.....1

No.....2

DK.....9

If yes, term(s) used:

Lay Indrawing:

Yes.....1

No.....2

DK.....9

If yes, term(s) used:

Use of OTC:

Yes.....1

No.....2

DK.....9

TOTAL EXPENDITURE: Taka. ____

DAYS ILL BEFORE TREATMENT

_____ DAYS

OF CARE RESORTS: _____

APPENDIX G
SURVEY TRAINING (from Bhattacharya 1993)

9:30-1:00

Overview of the survey: We have selected a few households of the one which have children under 4. You will not be visiting every household that has a child under 4 and if anyone asks why you are not going to their house, you should tell them that only certain households were chosen through a lottery. Be sure that this has nothing to do with any treatments and is only an interview to get mother's opinions.

SURVEY OBJECTIVES: 1) Identify what treatments are given for childhood illnesses
2) Identify how families decide on the treatment for their children
3) Identify where families go for treatment?

OVERALL OBJECTIVE: Learn what people know about childhood illnesses.

Since we are working as a team, you must be on time because if one person is late, it holds up everyone else. If some emergency comes up try to get in touch with someone else to let them know so that we do not wait for you. But you cannot be paid for days that you don't work.

Job responsibility and expectations: You have been asked to fill out the census forms which we think will take 3-4 weeks. We expect you to fill the forms properly -- writing down what the respondent tells you. If you fill the forms without going to the house, you will be dismissed. That is not acceptable since the purpose of the study is to find out what they think, not what you think!

The survey is designed to take about 20 minutes. It might take longer if the respondent talks a lot or it might take less than 20 minutes. During your introduction, you should explain that it will take 15-20 minutes. If at all possible, you should sit with the respondent in a place away from onlookers and any children. As much as possible, this should be conducted in private. Right now, we are only interested on what mothers think, not grandmothers or fathers or anyone else. If anyone else tries to answer the questions for you, you should explain that right now we are only interviewing mothers and later we may come back to interview other people.

The questions must be read exactly as written. If a respondent does not understand the question, repeat it. Do not suggest answers or try to explain questions to them. Respondents will not always give an answer that is one of the choices. If you are unsure how to code a response, write it in the margin and ask one of us later.

The answers are all confidential and should not be discussed with anyone. Each and every question should be asked except where specifically instructed to skip a question. Never read the responses categories unless the instructions say [READ LIST]. Some questions are pre-coded where you should circle the appropriate response. Other questions are open-ended and you should write down the exact words of the respondents.

Distribute the survey forms and read it aloud:

Q29b: write the respondents' exact words.
Q30-36: you can repeat the story as needed.
Q41: do not suggest any answers.
Q42: circle the first two items the respondent says

Q43: if a respondent says 2-3 days write the larger number
Q67-68: read out the whole list and circle only 2
Q71: is to be answered by you before you leave the house.

Explain how each question is to be coded.

Practice with coding of questions 36, 56, 63, 65, 66 which follow a different format.

1:00-2:00 LUNCH

2:00-5:00

Break into 2 teams and practice interviewing each other while we observe, keeping track of time. Then exchange team partners.

NEXT DAY:

MORNING: Practice on each other

AFTERNOON: Practice in WV clinic.

After that, you will keep the census data updated for a few houses selected by lottery. This is to make sure that the correct number of children and earning members is reported. You will collect this data along with any illnesses that may have occurred between visits in these households. At the end of six months, you will conduct the survey again for any new information that the women from these households can give us.

DISPOSITION FORM

The Household Management of ARI

WARD:

Community Volunteer:

Interviewer

ID_NUM

HOUSE

IDENTIFIERS

ID NUMBER	HOUSE	NOTES (APPOINTMENTS)

APPENDIX H
FES GUIDELINES (ADAPTED FROM WHO FES 1991)

C-1

GUIDE FOR FREELISTING

LIST EACH TERM ON A SEPARATE CARD

PRIMARY QUESTION

1. What are the various illnesses that you see in your community?
2. What are some adults' illnesses?
3. What are some illnesses of children between birth and 2 month of age?
4. What are some illnesses of children over 2 months?
5. I have been told that kashi, sardi, jor, khajli-pachra are some of the illnesses that children have. What other illnesses do children have?

FURTHER PROBING

1. What kinds of coughs do children have?
2. What are the illnesses that are related to sas-proshash, bukh, peth (only use these distinctions if made in the primary answers)?

SYMPTOMS

PLACING ONE CARD AT A TIME ON THE SURFACE ASK:

1. How can you tell that someone has [illness]?
2. What are the other symptoms of [illness]?
3. What other illnesses have these symptoms?
4. What other illnesses could I have with [illness]?

DIFFERENCES (If you find that some illnesses share the same symptoms)

You said that [illness] has these symptoms and so does [other illness] have these symptoms. How do you know when it is [illness] or [other illness]?

OR

What are the main differences between [illness] and [other illness]?

CAUSES and TREATMENTS (on each card list)

1. How can one get [illness]?
2. How else can one get [illness]?
3. How can one treat [illness]?
4. How else can one treat [illness]? (get name of practitioner/type of treatment if possible: eg. haspitālar/clinicar/ oshudher dokhaner purdah pichane/oshudher dokhaner je oshudh bikri kore/hakim/ kobiraj/fakir....)

C-2 Eliciting a narrative of a past ARI episode

FIELD GUIDE

Child's name:

Age at episode:

Age now:

Initial Question:

As I explained, I'm trying to understand more about the illnesses of babies and young children in [] especially about serious illnesses (pneumonia terms). Has anyone in your house had [pneumonia]? Tell me everything that happened during that time.

Probing:

1. Other than (read symptoms, signs and illnesses name reported), did the child have anything else?
2. Why do you think the child had these problems?
3. Other than (home cures), what other things did you do at home? (if used medicines already at home, find out what earlier illness they were for) [give eg.]
4. Who all did you speak to about the illness?
5. When did you decide to seek outside help?

Who did you go to first?

Why?

Who decided?

6. Who took the child?
7. How much did it cost? (other constraints eg. time, distance)
8. Which other provider did you consult?
9. What changes were there in child's health?
10. What combination (allopathic/homeopathic and/or herbal, traditional, hakimi or home treatments all together) of medicines were you using by the end?
11. Who's treatment for [this illness] did you like the best? Why?
12. What was the child eating while the child was sick?

C-3 Relationship of local terms of physical signs and symptoms using a video tape

1. [INTRODUCING THE VIDEO]

You have taught us a lot about children's illnesses in your community. I have a video of ill children with me, but I do not have the words with which to explain their problem to others. It would help me by looking at the video with me and telling me what problems that child has so that I can use the same words later.

2. [EXPLAIN HOW YOU WILL SHOW THE VIDEO]

Please look at each child in the video and tell me if it suffers from any problems. Although all the children in this video have a cough, you can not always see or hear it on the film. However, the illnesses that they have may be different in nature or severity.

3. [SHOWING THE FILM]

Unprompted responses

This child has been coughing for __days. What do you think the problem might be?
How would you describe the child's problem?

Prompted responses

What illness do you think this child might have?

What should be done for this child?

4. [SHOWING THE CHILDREN A 2nd TIME]

I am going to show you the children again but for a shorter time.

[FOR EACH CHILD ASK]

Is the breathing normal or fast?

[IF ANY OTHER SIGNS ARE PRESENT, ASK IF THEY ARE PRESENT OR NOT].

5. [FOR KEY INFORMANTS, IF THERE ARE TERMS THAT THEY HAVE MENTIONED BEFORE BUT NOT DURING THE FILM, THEN ASK THEM]

You mentioned [] before. Did you see it anywhere in the film? Where?

[IF NOT, THEN ASK]

Could you describe it?

OR

How is it different from []?

C-6 Illness names, Signs and symptoms sorting task

To understand more about illnesses, I would like to play a short game with you. I have cards of two different colours. The red ones have the names of some illnesses or problems I would like to know more about.
[SHOW THESE CARDS AND SAY THE NAMES ALOUD].

On the blue cards, I have written the names of some signs or problems. For eg. Kashi.

I will read each blue card to you. As I read each card, can you tell me which of them go with this red card which reads (whatever the first red card reads).

[THEN TAKING EACH OF THE SYMPTOM CARDS PLACED UNDER AN ILLNESS]

Of these symptoms, which are the most likely to be with this illness.

[READ EACH OF THE SYMPTOMS OUT TO THE RESPONDENT]

[NOW SHUFFLE ALL THE BLUE CARDS. REPEAT EXERCISE WITH THE 2ND RED CARD AND SO ON].

C-7. SEVERITY RATING TASK

I may have shown these cards to you previously. I have added a few more cards to it and want to know from you about the seriousness of these problems. I am putting down 10p, 25p, 50p and 100p (1 tk) on the floor. 10 p is the least serious and 1 tk the most. As I read out the names on the red and blue cards, tell me under how many paisa they belong. If you think that fever is 10 p, then we will put it under 10p. If you think it is 25, then we will put it under 25. But if you think it is 15, we will put it in between 10 and 25.

How serious do you think [illness/sign] is, usually?

[AND SO ON]

PRACTITIONER INTERVIEW (adapted from the WHO FES manual 1991)
(also in APPENDIX B)

Practitioner: _____

Date of interview: _____

Training: _____

1. What are the days and your timings when you see patients?

DAYS HOURS

FEES

_____	_____
_____	_____
_____	_____

2. Would you say that you see more adults or more children?

3. What is the most common complaint of the children that you see? Other common complaints?

4. About how many cases of respiratory problems (ARI) do you see in infants and small children per week/day?

5. Which facility or provider do most people take their small children when suffering from Respiratory problems (ARI)?

6. What are the types of respiratory problems you see most often in children under 5?

7. In this community, which of these respiratory problems causes death in children?

8. What are the main signs and symptoms that mothers pay attention to -- that they consider to be serious?

9. Specifically for pneumonia, what are signs and symptoms that mothers recognize and pay attention to?

10. Are these the same terms used by the people who come to see you?
11. Are there other terms that they might use for these Respiratory problems (ARI)?
12. Are there signs and symptoms of pneumonia that mothers should recognize, but do not seem to notice or pay attention to?
13. How does their complaint compare to what you find when you examine the child?
14. Do you think that people sometimes bring their small children too late for treatment when they have pneumonia?

How often does this happen?

What are the causes of the delay? Are neonates brought less frequently?

15. How do you usually treat children with pneumonia? What are the signs and symptoms that you associate with pneumonia?

16. How do you usually treat children with bronchitis? What are the signs and symptoms that you associate with bronchitis?
17. When you prescribe medicines, do most mothers complete the full dosage? If no, why not?
18. What do you think could be done to reduce the numbers of deaths from pneumonia and other Respiratory problems (ARIs)?

APPENDIX I INFORMED CONSENT

INFORMED CONSENT FORM FOR INTERVIEWEES

TITLE OF RESEARCH PROJECT:

Improving Care-seeking Behavior for Children's Illnesses:
An intervention trial in Urban Bangladesh

Instructions for Interviewer/data collector:

This disclosure statement should be read to your interviewees before beginning your interview. If your interviewee indicates that s/he understands the disclosure information and agrees to proceed, the interview may be conducted. A copy of this statement, signed by the interviewer should be given to the interviewee.

Explanation of Research Project:

PURPOSE OF THE STUDY:

Urban Health Extension Project, International Center for Diarrhoeal Disease Research, Bangladesh is conducting a special study on the health of children who are under five. This research is being done with the help of World Vision Bangladesh.

The purpose of this research is to know more about the health of the children in this community. We want to do this by asking a few questions today and then once more after 6 months. The questions will be about the health of the children in your community. If you have any particular concerns about your child, we will be able to tell you where to go for help.

You and some other mothers have been chosen by a lottery to be part of this study. With the information that you give, we might be able to recommend changes in the services offered here. We want these changes to be practical and suited to your needs. That is why we want to talk to mothers.

PROCEDURES:

If you agree to participate in this research, then we would like to ask some questions today about your household to know how many children live here and what their health has been like in the past two weeks. This will take about twenty minutes. We will then ask you questions about the health practices in your community. This will take about another twenty minutes. After that we will come again every month for six months to ask about the health of your child. These visits will help us understand the illnesses that the child has had and what choices you had for its care. There will be a separate team that will come to talk to you about how you can take care of your child. This will help you see the illnesses for which you can do something at home and those for which the health facility or the hospital does have medicines. After six months, we will again ask you some questions about what people do for health in your community.

RISKS:

There is no possibility of any harm to you or your family from answering our questions except for

the loss of time spent in answering. You have the right not to answer any question if you do not want to.

BENEFITS:

If your child is ill at any time that we visit you, we will help you seek treatment at a nearby health care facility or hospital. Also we will be telling you some ways of taking care of your children when they are only a little sick to prevent further sickness. If what we do proves useful for you, then we will know to offer the same services to other families. The researchers will let you know if anything new is found from the research study.

ALTERNATIVES TO PARTICIPATION:

Whether you take part in this study depends on your wishes. You have the right to withdraw at any time. If you do not take part or do withdraw from the study, no harm will come to you. You can still use the health facilities or hospitals that you currently use.

CONFIDENTIALITY:

The questionnaires do not have your name on it, only a number. Your name, address and the number on the questionnaire will be kept locked in our office, so that no one else is able to know who gave the answers. Although, there is some risk of your answers being known to others, we will, on our part, make every effort to keep your answers confidential.

Signature of the interviewer:

Date:

Copy given to interviewee: Y/N

উত্তরদাতীর জন্য সম্মতিপত্র

গবেষণা শিরোনাম :

অসুস্থতা হেতু শিশুদের স্বাস্থ্য পরিচর্যা গ্রহণের অভ্যাসের উন্নতি :
বাংলাদেশের শহর এলাকায় একটি প্রতিরোধ প্রচেষ্টা

গবেষণা প্রকল্পের উপর আলোকপাত :

গবেষণার উদ্দেশ্য :

আরবান হেলথ এক্সটেনশন প্রজেক্ট, আই সি ডি ডি আর, বি বাংলাদেশের পাঁচ বছরের নীচের বয়সী শিশুদের স্বাস্থ্যের উপর একটি বিশেষ গবেষণা চালাচ্ছে। এই গবেষণাটি পরিচালিত হচ্ছে যুক্তরাষ্ট্রের জনস হপকিন্স স্কুল অব পাবলিক হেলথের সাথে যৌথ উদ্যোগে।

এই গবেষণার উদ্দেশ্য হচ্ছে এই এলাকার শিশুদের স্বাস্থ্য সম্পর্কে আরো কিছু জানা। এজন্য আমরা আজকে কিছু প্রশ্ন জিজ্ঞাসা করতে চাই এবং এরপর কয়েকমাস নিয়মিতভাবে আমরা আসবো আরো কিছু জানার জন্য। আপনার এলাকার শিশুদের স্বাস্থ্য ও খাবার দাবারের উপর এ প্রশ্নগুলো করা হবে। যদি আপনার বাচ্চার বিশেষ কোন শারীরিক অসুবিধা থাকে, তবে আমরা বলতে পারবো সাহায্যের জন্য কোথায় যেতে হবে।

আপনাকে এবং আরো কিছু মাকে এই গবেষণায় অংশগ্রহণের জন্য লটারী করে বেছে নেওয়া হয়েছে। আপনাদের দেওয়া তথ্য নিয়ে আমরা এ এলাকায় যে স্বাস্থ্য সেবা দেওয়া হয় তা পরিবর্তনের জন্য সুপারিশ করতে পারবো। আমরা চাই স্বাস্থ্য সেবা প্রদানের ক্ষেত্রে এ পরিবর্তন যেন আপনাদের কাজে আসে। সেজন্যই আমরা মাদের সাথে কথা বলতে চাই।

পদ্ধতি :

যদি আপনি গবেষণায় অংশ নিতে রাজী হন, তবে আজ আমি আপনার বাড়ি, কতজন বাচ্চা এখানে থাকে, গত দু সপ্তাহের মধ্যে তাদের শারীরিক অবস্থা - এসব নিয়ে কিছু প্রশ্ন জিজ্ঞাসা করবো। এতে বিশ মিনিট সময় লাগবে। তারপর আমি আপনাকে আপনার এলাকার স্বাস্থ্য ব্যবস্থা নিয়ে কিছু প্রশ্ন জিজ্ঞাসা করবো। এতে আরো বিশ মিনিট সময় লাগবে। এরপর ছয়মাস ধরে আমরা আপনার শিশুর স্বাস্থ্য সম্পর্কে খবর নেবার জন্য প্রতিমাসে একবার করে আসবো। এই ভিজিটগুলো আপনার শিশুর অসুস্থতা এবং তা কাটাবার জন্য আপনি কি কি করেছেন সে সম্পর্কে আমাদের ধারণা দেবে। আমাদের আরেকটি আলাদা টীম আছে যারা আপনার বাচ্চাকে কিভাবে যত্ন নেওয়া যায়, সে সম্পর্কে আপনার সাথে কথা বলবে। এতে আপনার বুঝতে সুবিধা হবে বাচ্চাকে বাড়ীতে কতটুকু যত্ন নিতে পারেন এবং স্বাস্থ্য সেবা এজেন্সী বা হাসপাতাল থেকে কখন ঔষধ নিতে হবে। ছয়মাস পরে আমরা আপনাকে আবার আপনার এলাকার স্বাস্থ্য ব্যবস্থা সম্পর্কে কিছু প্রশ্ন জিজ্ঞাসা করবো।

ঝুঁকির সম্ভাবনা :

আমাদের প্রশ্নের উত্তর দেওয়াতে আপনার বা পরিবারের অন্য কারো কোন ক্ষতির সম্ভাবনা নেই, কিছু সময় ব্যয় হওয়া ছাড়া। কোন প্রশ্নের উত্তর না দিতে চাইলে কোন অসুবিধা নেই।

উপকারিতা :

যদি আমাদের কোন ভিজিটের সময় আপনার বাচ্চা অসুস্থ হয়, তবে আমরা আপনাকে নিকটবর্তী স্বাস্থ্য সেবা কেন্দ্রে বা হাসপাতালে চিকিৎসা পেতে সাহায্য করবো। এছাড়া আপনার বাচ্চা একটু অসুস্থ হলে তা আর যেন বেশী না হয়, সে জন্য কিছু ধারণা আমরা আপনাকে দেবো। যদি আমরা যা করছি, তা আপনার উপকারে আসে, তাহলে অন্যান্য পরিবারকে একই সেবা দিতে আমরা চেষ্টা করবো। গবেষণাতে নতুন কিছু পাওয়া গেলে গবেষকরা তা আপনাকে জানাবে।

গবেষণায় অংশ না নিলে :

আপনি গবেষণায় অংশ নেবেন কিনা সেটা আপনার ইচ্ছার উপর নির্ভর করে। যেকোন সময় আপনি চাইলে না বলতে পারেন। আপনি যদি একেবারেই অংশ না নেন বা যেকোন সময় অসম্মত হন, তাতে কোন অসুবিধা নেই। আপনি স্বাস্থ্য সুবিধাদি বা হাসপাতালের সেবা বরাবরের মতই ব্যবহার করতে পারবেন।

গোপনীয়তা :

প্রশ্নমালাতে আপনার নাম থাকবে না। শুধু একটি নম্বর থাকবে। আপনার নাম, ঠিকানা ও প্রশ্নমালার নম্বরটি আমাদের অফিসে তালাবদ্ধ অবস্থায় থাকবে, উত্তরগুলো অন্য কেউ জানতে না পারে উত্তরগুলো কে দিয়েছে। যদি (ও) আপনার উত্তরগুলো অন্য কেউ জানলে কিছু সমস্যা হতে পারে, তাই আমাদের পক্ষ থেকে এগুলো গোপন রাখার জন্য সর্বকম চেষ্টা করবো।

CONSENT FORM FOR KEY INFORMANTS

TITLE OF RESEARCH PROJECT:

Improving Care-seeking Behavior for Children's Illnesses:
An intervention trial in Urban Bangladesh

Instructions for Interviewer/data collector:

This disclosure statement should be read to your key informants before beginning your interview. If your key informants indicates that s/he understands the disclosure information and agrees to proceed, the interview may be conducted. A copy of this statement, signed by the interviewer should be given to the key informants.

Explanation of Research Project:

PURPOSE OF THE STUDY:

Urban Health Extension Project, International Center for Diarrhoeal Disease Research, Bangladesh is conducting a special study on the health of children who are under five. This research is being done with the help of World Vision Bangladesh.

The purpose of this research is to know more about the health of the children in this community and what parents do when their children are sick. We want to do this by asking you a few questions today and then as we talk to more people, twice or thrice more to clarify what you have said or to see if we have understood other people correctly.

[Recommender] suggested that we talk to you as you have a lot of knowledge about children's health problems and what parents do for it. We will also talk to others such as doctors, health workers and grandmothers. With the information that you give, we might be able to understand the needs of the community better and recommend changes that are practical and suited to your needs. That is why we want to talk to you.

PROCEDURES:

If you agree to participate in this research, then we would like to ask some questions today about the illnesses that children have, what their signs and symptoms are, what causes them and where care is sought for them. May be we can talk about what happened the last time that you saw a sick child. We might use some pictures to help me see what you are saying to me about illnesses. I may ask you to arrange these in order of seriousness.

We will also ask you to once come with us to a clinic to see a video on children. If you think that some of the children in the video are ill, then the names of the illnesses that you tell us will help us when we talk to parents of ill children. You may bring a friend or someone you trust with you, if you wish. We will help with the transportation costs for this.

At another time we would also like for you to sort signs and symptoms into illness categories and tell us which of these are considered serious.

When we have enough information, we will try to meet the needs that you have expressed. We

would like to involve you in the planning stage for this intervention.

RISKS:

There is no possibility of any harm to you or your family from answering our questions except for the loss of time spent in answering. You have the right not to answer any question if you do not want to.

BENEFITS:

This study has no direct benefit for you. However, what you tell us can help us provide better education and/or services for households with children under five. If what we do proves useful for your community, then we will know to offer the same services to other communities. You will be informed of any new developments in the study.

ALTERNATIVES TO PARTICIPATION:

Whether you take part in this study depends on your wishes. You have the right to withdraw at any time. If you do not take part or do withdraw from the study, no harm will come to you. You can still use the health facilities, hospitals or services that you currently use and/or can continue your practice as before.

CONFIDENTIALITY:

The notes we take will not have your name on it, only a number. Your name, address and the number on the notes will be kept locked in our office, so that no one else is able to know who gave the answers. Although, there is some risk of your answers being known to others, we will, on our part, make every effort to keep your answers confidential.

Signature of the interviewer:

Date:

Copy given to key informant: Y/N

প্রধান তথ্যদানকারীর (Key informants) সম্মতি পত্র

গবেষণা শিরোনামঃ

অসুস্থতা হেতু শিশুদের স্বাস্থ্য পরিচর্যা গ্রহণের অভ্যাসের উন্নতি :
বাংলাদেশের শহর এলাকায় একটি প্রতিরোধ প্রচেষ্টা

গবেষণা প্রকল্পের উপর আলোকপাতঃ

গবেষণার উদ্দেশ্যঃ

আরবান হেলথ এক্সটেনশন প্রজেক্ট, আই সি ডি ডি আর, বি বাংলাদেশের পাঁচ বছরের নীচের বয়সী শিশুদের স্বাস্থ্যের উপর একটি বিশেষ গবেষণা চালাচ্ছে। এই গবেষণাটি পরিচালিত হচ্ছে যুক্তরাষ্ট্রের জনস হপকিন্স স্কুল অব পাবলিক হেলথের সাথে যৌথ উদ্যোগে।

এই গবেষণার উদ্দেশ্য হচ্ছে এ এলাকার শিশুস্বাস্থ্য সম্পর্কে আরো কিছু জানা এবং তারা যখন অসুস্থ থাকে তখন তাদের মা বাবারা কি করেন সেটা জানা। আজ আমরা আপনাকে কিছু প্রশ্ন জিজ্ঞাসা করতে চাই। তারপর আপনার সাথে ও দুই, তিন এবং আরো বেশী বার কথা বলতে চাই, আপনি যা বলেছেন তা ভালোভাবে বুঝবার জন্য।

যে আপনার কথা আমাকে বলেছে সে এ জন্যেই আপনার সাথে কথা বলতে বলেছে যে, শিশুদের বিভিন্ন স্বাস্থ্য সমস্যা এবং অভিযাবকরা এসময়ে যা করেন সে সম্পর্কে আপনি অনেক কিছু জানেন। আমরা ডাক্তার, স্বাস্থ্য কর্মী, নানী-দাদীদের সাথেও কথা বলবো। আপনাদের তথ্য থেকে এ এলাকায় কি কি স্বাস্থ্য সুবিধা দরকার তা ভালো করে বুঝতে পারবো। স্বাস্থ্য সেবা প্রদানের ক্ষেত্রে পরিবর্তনের জন্য সুপারিশ করতে পারবো, যেন তা আপনাদের কাজে আসে। সেজন্যেই আমরা আপনাদের সাথে কথা বলতে চাই।

পদ্ধতিঃ

যদি আপনি এ গবেষণায় অংশ নিতে রাজী থাকেন, তাহলে আপনার কাছে জানতে চাব বাচ্চাদের কি কি অসুখ হয় এবং এসবের লক্ষণ/উপসর্গগুলি কি কি, কি কি কারণে এ অসুখগুলি হয়। কিসের থেকে এই রোগগুলি হয় এবং সুস্থ হওয়ার জন্য কোথায় তারা চিকিৎসার জন্য যায় - এসবের উপর আজ আপনার কাছে কিছু জানতে চাইবো। একটি অসুস্থ বাচ্চাকে শেষবার আপনি যেমনটি দেখেছিলেন হয়তো সে সম্পর্কেও আপনার সাথে কথা বলতে পারি।

একটি ক্লিনিকে শিশুদের উপর একটি ভিডিও ছবি দেখার জন্য একবার আমাদের সাথে আসার জন্য আমরা আপনাকে বলবো। আপনি যদি মনে করেন ছবিতে দেখানো বাচ্চাদের কেউ কেউ অসুস্থ, তখন তাদের অসুখের নামগুলো বললে বাচ্চাদের বাবা মাদের সাথে আমাদের কথা বলতে সুবিধা হবে। আপনি চাইলে সাথে কোন একজন বন্ধু বা অন্য একজন কাউকে নিয়ে আসতে পারেন। আমরা আপনাকে যাতায়াতের খরচ দেবো।

অন্য আরেক সময় আমরা আপনার কাছে বিভিন্ন অসুখের জন্য বিভিন্ন লক্ষণ/উপসর্গের কথা এবং এগুলোর মধ্যে কোন কোনগুলো বেশী গুরুতর মনে করেন তা জানতে চাইবো।

যখন আমরা পর্যাপ্ত তথ্য পাবো, তখন আমরা আপনি যেসব প্রয়োজনের কথা বলেছেন, তা মেটাবার চেষ্টা করবো। স্বাস্থ্য ব্যবস্থা উন্নতির জন্য আমরা যে পরিকল্পনা করবো, তাতে আমরা আপনাকে জড়িত করতে চাই।

ঝুঁকির সম্ভাবনাঃ

আমাদের প্রশ্নের উত্তর দেওয়াতে আপনার বা পরিবারের অন্য কারো কোন ক্ষতির সম্ভাবনা নেই, কিছু সময় ব্যয় হওয়া ছাড়া। কোন প্রশ্নের উত্তর না দিতে চাইলেও কোন অসুবিধা নেই।

উপকারিতাঃ

এই গবেষণার দ্বারা সরাসরি আপনি উপকৃত হবেন না। আপনি আমাদের যে তথ্য দেবেন পাঁচ বছরের নীচের বয়সী বাচ্চারা যেসব বাড়ীতে আছে সেসব বাড়ীতে স্বাস্থ্য শিক্ষা এবং সেবা পৌঁছে দিতে আমাদের সাহায্য করবে। যদি আমরা যা করছি, তা আপনার কাজে আসে, তাহলে অন্যান্য এলাকায় একই সেবা দিতে আমরা চেষ্টা করবো। গবেষণাতে নতুন কিছু পাওয়া গেলে আপনাকে বলবো।

গবেষণায় অংশ না নিলেঃ

আপনি গবেষণায় অংশ নেবেন কিনা সেটা আপনার ইচ্ছার উপর নির্ভর করে। যেকোন সময় আপনি চাইলে না বলতে পারেন। আপনি যদি একেবারেই অংশ না নেন বা যেকোন সম অসম্মত হন, তাতে কোন অসুবিধা নাই। আপনি স্বাস্থ্য সুবিধাদি বা হাসপাতালের সেবা বরাবরের মতই ব্যবহার করতে পারবেন এবং আগের মতই আপনার প্রচলিত স্বাস্থ্য ব্যবস্থা চালিয়ে যেতে পারবেন।

গোপনীয়তাঃ

প্রশ্নমালাতে আপনার নাম থাকবে না। শুধু একটি নম্বর থাকবে। আপনার নাম, ঠিকানা ও প্রশ্নমালার নম্বরটি আমাদের অফিসে তালাবদ্ধ অবস্থায় থাকবে, উত্তরগুলো অন্য কেউ জানতে না পারে উত্তরগুলো কে দিয়েছে। যদি আপনার উত্তরগুলো অন্য কেউ জানলে কিছু সমস্যা হতে পারে, তাই আমাদের পক্ষ থেকে এগুলো রাখার জন্য সবরকম চেষ্টা করবো।

INFORMED CONSENT FORM FOR RESPONDENTS

TITLE OF RESEARCH PROJECT:

Improving Care-seeking Behavior for Children's Illnesses:
An intervention trial in Urban Bangladesh

Instructions for Interviewer/data collector:

This disclosure statement should be read to your respondents before beginning your interview. If your respondent indicates that s/he understands the disclosure information and agrees to proceed, the interview may be conducted. A copy of this statement, signed by the interviewer should be given to the respondent.

Explanation of Research Project:

PURPOSE OF THE STUDY:

Urban Health Extension Project, International Center for Diarrhoeal Disease Research, Bangladesh is conducting a special study on the health of children who are under five. This research is being done with the help of World Vision.

The purpose of this research is to know more about the health of the children in this community and what parents do when their children are sick. We want to do this by talking a little bit about this with you today.

[Recommender] suggested that we talk to you because you have at least one child under five and so know of their health problems and what parents do for it. We will also talk to other mothers. With the information that you give, we might be able to understand the needs of the community better and recommend changes that are practical and suited to your needs. That is why we want to talk to you mothers like you who have young children.

PROCEDURES:

If you agree to participate in this research, then we would like to ask some questions today about the illnesses that children have, what their signs and symptoms are, what causes them and where care is sought for them. May be we can talk about what happened the last time that you saw a sick child.

OR

We would like you to once come with us to a clinic to see a video on children. If you think that some of the children in the video are ill, then the names of the illnesses that you tell us will help us when we talk to parents of ill children. You may bring a friend or someone you trust with you, if you wish. We will help with the transportation costs for this.

OR

We would like for you to sort signs and symptoms into illness categories and tell us which of these are considered serious.

When we have enough information, we will try to meet the needs that you have expressed.

RISKS:

There is no possibility of any harm to you or your family from answering our questions except for the loss of time spent in answering. You have the right not to answer any question if you do not want to.

BENEFITS:

This study has no direct benefit for you. However, what you tell us can help us provide better education and/or services for households with children under five. If what we do proves useful for your community, then we will know to offer the same services to other communities. You will be informed of any new developments in the study.

ALTERNATIVES TO PARTICIPATION:

Whether you take part in this study depends on your wishes. You have the right to withdraw at any time. If you do not take part or do withdraw from the study, no harm will come to you. You can still use the health facilities, hospitals or services that you currently use and/or can continue your practice as before.

CONFIDENTIALITY:

The notes we take will not have your name on it, only a number. Your name, address and the number on the notes will be kept locked in our office, so that no one else is able to know who gave the answers. Although, there is some risk of your answers being known to others, we will, on our part, make every effort to keep your answers confidential.

Signature of the interviewer:

Date:

Copy given to respondent: Y/N

উত্তরদাত্রীর (Respondants) সম্মতিপত্র

গবেষণা শিরোনাম :

অসুস্থতা হেতু শিশুদের স্বাস্থ্য পরিচর্যা গ্রহণের অভ্যাসের উন্নতিঃ

বাংলাদেশের শহর এলাকায় একটি প্রতিরোধ প্রচেষ্টা

গবেষণা প্রকল্পের উপর আলোকপাত :

গবেষণার উদ্দেশ্যঃ

আরবান হেলথ এক্সটেনশন প্রজেক্ট, আই সি ডি ডি আর, বি বাংলাদেশের পাঁচ বছরের নীচের বয়সী শিশুদের স্বাস্থ্যের উপর একটি বিশেষ গবেষণা চালাচ্ছে। এই গবেষণাটি পরিচালিত হচ্ছে যুক্তরাষ্ট্রের জনস হপকিন্স স্কুল অব পাবলিক হেলথের সাথে যৌথ উদ্যোগে।

এই গবেষণার উদ্দেশ্য হচ্ছে এ এলাকার শিশুস্বাস্থ্য সম্পর্কে আরো কিছু জানা এবং তারা যখন অসুস্থ থাকে তখন তাদের মা বাবারা কি করেন সেটা জানা। আমি এসব নিয়ে আপনার সাথে কিছু কথা বলতে চাই। যে আপনার কথা আমাকে বলেছে সে এজন্যই আপনার সাথে কথা বলতে বলেছে যে আপনার অন্ততঃ পক্ষে একটি পাঁচ বছরের নীচের বয়সের বাচ্চা আছে। আপনি এ বয়সের বাচ্চাদের স্বাস্থ্য সমস্যা এবং এ সমস্যা নিতে তাদের মা বাবারা কি করেন তা জানেন। আমরা অন্যান্য মায়েদের সাথে ও কথা বলবো। আপনাদের দেওয়া তথ্য থেকে এ এলাকায় কি কি স্বাস্থ্য সেবা দরকার আমরা তা ভালো করে বুঝতে পারবো। স্বাস্থ্য সেবা পরিবর্তনের জন্য সুপারিশ করতে পারবো, যেন তা আপনাদের কাজে আসে। সে জন্যই আমরা মায়েদের সাথে কথা বলতে চাই যাদের অল্প বয়সী বাচ্চা আছে।

পদ্ধতিঃ

যদি আপনি এ গবেষণায় অংশ নিতে রাজী থাকেন, তাহলে আপনার কাছে জানতে চাব বাচ্চাদের কি কি অসুস্থ হয় এবং সবেল লক্ষণ/উপসর্গগুলি কি কি, কি কি কারণে এ অসুবিধাগুলি হয়। কিসের থেকে এই রোগগুলি হয় এবং সুস্থ হওয়ার জন্য কোথায় চিকিৎসার জন্য যায় - এসবের উপর আজ আপনার কাছে কিছু জানতে চাইবো। একটি অসুস্থ বাচ্চাকে শেষবার আপনি যেমনটি দেখেছিলেন হয়তো সে সম্পর্কেও আপনার সাথে কথা বলতে পারি।

অথবা,

একটি ক্লিনিকে শিশুদের উপর একটি ভিডিও ছবি দেখার জন্য একবার আমাদের সাথে আসার জন্য আমরা আপনাকে বলবো। আপনি যদি মনে করেন ছবিতে দেখানো বাচ্চাদের কেউ কেউ অসুস্থ, তখন তাদের অসুখের নামগুলো বললে বাচ্চাদের বাবা মাদের সাথে আমাদের কথা বলতে সুবিধা হবে। আপনি চাইলে সাথে কোন একজন বন্ধু বা অন্য একজন কাউকে নিয়ে আসতে পারেন। আমরা আপনাকে যাতায়াতের খরচ দেবো।

অথবা,

আমরা আপনার কাছে বিভিন্ন অসুখের জন্য বিভিন্ন লক্ষণ/উপসর্গের কথা এবং এ গুলোর মধ্যে কোন কোনগুলো বেশী গুরুতর মনে করেন তা জানতে চাইবো ।

যখন আমরা পর্যাণ্ড তথ্য পাবো, তখন আমরা আপনি যেসব প্রয়োজনের কথা বলেছেন, তা মেটাবার চেষ্টা করবো ।

ঝাঁকির সম্ভবনাঃ

আমাদের প্রশ্নের উত্তর দেওয়াতে আপনার বা পরিবারের অন্য কারো কোন ক্ষতির সম্ভবনা নেই, কিছু সময় ব্যয় হওয়া ছাড়া । কোন প্রশ্নের উত্তর না দিতে চাইলেও কোন অসুবিধা নেই ।

উপকারিতাঃ

এই গবেষণার দ্বারা সরাসরি আপনি উপকৃত হবেন না । আপনি আমাদের যে তথ্য দেবেন তার সাহায্যে পাঁচ বছরের নীচের বয়সী বাচ্চারা যেসব বাড়ীতে আছে সেসব বাড়ীতে স্বাস্থ্য শিক্ষা এবং সেবা পৌছে দিতে সাহায্য করবে । যদি আমরা যা করছি, তা আপনার উপকারে আসে, তাহলে অন্যান্য এলাকায় একই সেবা দিতে আমরা চেষ্টা করবো । গবেষণাতে নতুন কিছু পাওয়া গেলে আপনাকে বলবো ।

গবেষণায় অংশ না নিলেঃ

আপনি গবেষণায় অংশ নেবেন কিনা সেটা আপনার ইচ্ছার উপর নির্ভর করে । যেকোন সময় আপনি চাইলে না বলতে পারেন । আপনি যদি একেবারেই অংশ না নেন বা যেকোন সময় অসম্মত হন, তাতে কোন অসুবিধা নেই । আপনি স্বাস্থ্য সুবিধাদি বা হাসপাতালের সেবা বরাবরের মতই ব্যবহার করতে পারবেন এবং আগের মত আপনার প্রচলিত স্বাস্থ্য ব্যবস্থা চালিয়ে যেতে পারবেন ।

গোপনীয়তাঃ

প্রশ্নমালাতে আপনার নাম থাকবে না । শুধু একটি নম্বর থাকবে । আপনার নাম, ঠিকানা ও প্রশ্নমালার নম্বরটি আমাদের অফিসে তালাবদ্ধ অবস্থায় থাকবে, উত্তরগুলো অন্য কেউ জানতে না পারে উত্তরগুলো কে দিয়েছে । যদি আপনার উত্তরগুলো অন্য কেউ জানলে কিছু সমস্যা হতে পারে, তাই আমাদের পক্ষ থেকে এগুলো রাখার জন্য সবরকম চেষ্টা করবো ।