

## **16. Developing a focused ethnographic study for the who acute respiratory infection (ARI) control programme**

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**This paper describes the process of a thorough and systematic adaptation and testing of the original RAP guidelines and other field procedures to a specific primary health care area - Acute Respirator Infections. A number of specific methodological issues are emphasized, based on sequential field testing.**

**Tools used here but not emphasized in the original RAP guidelines include labelled cards for sorting and ranking activities and video tape. Both helped elicit reactions about signs of respiratory disease from the mothers. Subsequent studies identified the value of recording forms for the effective management of data collection. Adapting the structure of a study report to address answers to a set of questions predetermined as important to programme managers helped make the reports more understandable and useful to public health professionals.**

**This paper provides useful experience based suggestions for training in RAP, including the value of a workbook providing examples of data compilation and analysis. When fully developed, these guidelines for ARI will be a valuable addition to the specialized uses of RAP methods and will provide an example for those developing similar guides in other areas of primary health care. - Eds.**

THIS PAPER DESCRIBES the developmental process we used to construct and test a protocol for conducting community-based, focused ethnographic studies of acute respiratory infections (ARI) in children. The development of the FES (Focused Ethnographic Study) protocol is a component of the behavioural research activities of the Acute Respiratory infections Programme of the World Health Organization. The goal of the project is to create research guidelines that will enable investigators to "generate" descriptive ethnographic data on beliefs and practices related to pneumonia and other respiratory conditions that can be used in the implementation of national programmes" [1].

Specifically, the research is intended to assist the following programmatic activities:

1. The development of advice on home care of children with ARI that will be understandable to mothers and other child caretakers. (A basic premise of this goal is that effective communication with mothers of young children requires information on the signs, symptoms, and associated terms by which mothers recognize illness and which correspond, in whole or in part, to clinically diagnosed pneumonia.)

2. The identification of factors that facilitate or constrain prompt seeking of care from health care providers who are trained in the standard case management of pneumonia.
3. The identification of maternal expectations concerning antibiotic and other drug therapy that can be used to anticipate common problems related to compliance and satisfaction with services.
4. The identification of other relevant cultural and economic characteristics and conditions that are likely to influence community responses to programme activities.
5. The improvement of household morbidity and treatment surveys that are used to monitor programme effectiveness, including suggestions for questions and terminology that reflect local cultural perceptions and practices.

## **Background: The WHO ARI programme**

The main objective of the Programme for the Control of Acute Respiratory Infections is to reduce mortality from ARI in young children in developing countries. Most of this mortality is due to bacterial pneumonia, and it is estimated that half of pneumonia deaths could be prevented if children with pneumonia are treated early with oral antibiotics. WHO has developed guidelines and training materials to assist health workers at first level facilities and community-based practitioners to efficiently identify children with pneumonia from the larger group of children with coughs and breathing problems, most of whom have only a simple cough or cold and need only home care.

Reducing deaths from pneumonia requires that caretakers recognize the signs that indicate a child with an acute respiratory infection may have pneumonia and then take the appropriate action of immediately seeking care from a trained provider. Pneumonia can kill within a few days; delays that occur when families try home remedies or seek inappropriate care, can result in an infection becoming so severe that the child cannot be saved by oral antibiotics or by the care that can be delivered at a small hospital. Given the crucial importance of caretaker recognition and appropriate careseeking, the ARI Programme has given high priority to behavioural research. Specifically, the first behavioural research priority has been the development of guidelines for research that provide insights for national programmes on local cultural conditions.

## **Requirements for effective FES research on ARI**

The published literature in applied anthropology, as well as the informal lore among both social science and public health professionals, is replete with examples of the problems that are typically encountered in attempting to interface ethnographic studies with epidemiology and public health practice [2]. For example, anthropological reports are often seen by public health practitioners as too diffuse, overly long, and full of irrelevant detail, to which the anthropological response is that the behaviours in question cannot be understood without "the context" the report provides. Another common complaint is that anthropologists take too long to complete the

research and report writing. The anthropologists' counter that their reports molder away on a shelf, unused and gathering dust, so it is difficult to accept the demand for urgency. Yet another criticism, that the ethnographer's interpretation is medically naive, points to the need for better communication and collaboration between the social and biological scientists.

In the light of these and related problems, we generated a list of requirements for effective studies and attempted to address them in the developmental process of the FES:

1. The ethnographers have to understand the general goals of the WHO ARI Programme, and the specific goals of the country-level programme for whom the research is being conducted.
2. The ethnographers must understand how their results will be used to facilitate programme goals.
3. The ethnographers need to have some knowledge about the nature of the pathologies and symptomology that are classified under the rubric of "acute respiratory infections" and how these are manifest in sick children. Minimally, they need to understand the distinction between "lower" versus "upper" respiratory infections; the distinctions the WHO Programme makes between "severe pneumonia," "pneumonia," and "no pneumonia" (illness with cough or cold); and the observable clinical signs of pneumonia.
4. The research has to be completed in a relatively short period of time. The model of long-term participant observation research extending over many months in the field site, with many more months for analysis and write-up is not feasible. (It should be noted that this requirement is characteristic of much of applied anthropology and is not unique to applied research for the WHO ARI Programme.)
5. Ethnographers have to be able to communicate the results in a manner that is immediately intelligible and useful to ARI Programme Managers and other relevant administrative and training personnel.
6. Closely related to the preceding point, ethnographers must be willing to make concrete suggestions and put forth specific recommendations concerning the implications of their findings.

The best, most efficient mechanisms for achieving these outcomes were not immediately apparent at the beginning of the project. In fact, they are still evolving as we continue with the process of testing and refining the protocol and the training materials that accompany it. The protocol itself - the instructions on how to collect, analyze, and present the data - are the primary means for assisting ethnographers to meet project goals. Secondly, training materials (video and workbook exercises) and short training workshops are other means to support and facilitate projects.

### ***The format of the protocol***

The research guidelines are organized into six main parts, as follows:

1. Overview of the Project
2. Guidelines on Research Management
3. Specific Research Procedures
4. Preparing the Report
5. Next Steps: Using the Information From the Study
6. Adapting the ARI Household Morbidity and Mortality Treatment Survey.

In addition, a series of appendices provide materials and information on: (i) Training Ethnographers to Assess Signs of Pneumonia; (ii) A glossary of Terms; (iii) Logistics of Showing a Video in Field Conditions; (iv) Sample Drawings for Use in Card Sorting Tasks; and (v) Forms to help organize and monitor the research process.

The first part of the manual is aimed primarily at providing the ethnographer with the requisite background information described above. Thus, it includes sections on clinical and epidemiological features of pneumonia that are relevant for the ethnographic study, and a summary of the WHO/

ARI case management strategy. The expected uses for the study results are described, along with a description of the study design and an overview of the research procedures.

The most important piece in the first part of the manual is the section titled, "Programme Manager's Questions." These consist of 50 questions that have been derived from the ARI Programme Manager's Manual [3]. The structural organization of the WHO ARI Programme places primary responsibility for implementation of national ARI plans in a national ARI Programme Manager, who is usually (although not always) an individual with clinical background. The handbook and associated training programme for ARI Programme Managers include specific and detailed discussion about the importance of obtaining data on local cultural and social characteristics that influence care-seeking and communication.

The Programme Manager's Questions are organized into six sections, concerned with: (I) caretaker and household recognition and interpretation of ARI signs and symptoms; (II) ARI household management practices; (III) patterns of care seeking; (IV) maternal (caretaker) expectations concerning ARI treatment and compliance with treatment recommendations; (V) perspectives of practitioners on maternal recognition and care-seeking, and (VI) recommendations concerning communication with mothers.

Some of these questions are very pointed and specific. For example, the first question in Section I is "Do mothers recognize fast breathing (rapid respiratory rate)? Do they recognize only very fast breathing or all fast breathing?" However, other questions are more general, such as, "What is the sequence and timing of careseeking [for a child with ARI] and how does this vary with the perceived severity of illness and other characteristics of the child?" or "What are the factors that influence the likelihood that mothers will return to the health centre if the child's condition worsens?"

The Programme Manager's Questions provide the underlying framework for the study. In Part D, Preparing the Report, the ethnographer is requested to report the study findings in the form of

answers to these questions. Our intention, in placing the Programme Manager's Questions at the beginning of the manual as well as at the end in the section on report writing, is to orient the ethnographer to the critical sectors of information collection.

### ***Specific data-gathering techniques in the protocol***

The ethnographic methods detailed in the FES protocol are as follows:

1. Key informant interviewing as an exploratory phase
2. Free listing to elicit specific terms for illnesses, signs and symptoms
3. Eliciting narratives of past ARI events
4. Presentation of videotape showing children with ARI to assess the relationships of illness terminology to observable signs, and to assess ability to distinguish children with elevated respiration rates from children with normal rates
5. Presentation of hypothetical cases ("scenarios") to elicit careseeking and management practices
6. Card-sorting to link signs and symptoms to specific illnesses
7. Paired comparisons to examine choices among health providers and reasons for those choices
8. Rating of relative severity of ARI signs, symptoms, and illnesses
9. Inventory of medications in the homes
10. Interviews with mothers bringing children with ARI to health care providers
11. Interviews with providers concerning their perceptions of mothers' and other caretakers' management of ARI episodes
12. Eliciting of responses from pharmacists and other drug sellers

The steps in data-gathering in the protocol are intended to be completed in approximately five to six weeks, including the initial week of training and site selection. A longer period of research would be required if more than one cultural group were included in the study. Like the RAP protocol of Scrimshaw and Hurtado [3], the FES manual is intended for use by persons already trained in anthropological or related field methods.

### ***The sequence of field studies***

The first field study for the project was carried out in July-August, 1989 in Mindoro Oriente Province in the Philippines under the auspices of the Research Institute for Tropical Medicine

(RITM). The research in the rural field site was conducted by a medical anthropologist, Mark Nichter, with the assistance of Mimi Nichter, a communications specialist [4]. In the urban centre of Calapan, Maria Soccoro Sison-Castillo (anthropologist at RITM) undertook parallel data collection [5]. The purposes of the study were:

1. The development of a "first approximation" of a community-based description of the cultural and behavioural aspects of ARI, which would include data concerning five sectors of information:

- emic perceptions of acute respiratory infection, which was to be used to construct the explanatory model of ARI in the community
- the relationship between the emic model and the biomedical model
- identification of home-based therapies for ARI
- health care seeking behavior for ARIs
- relationship of ARI to other childhood diseases

2. The assessment of the utility of specific research procedures and community reactions to these procedures.

3. The identification of issues that required further investigation, modification and amplification in the next round of studies.

These initial studies provided critical insights into the nature of the issues and challenges that would confront researchers conducting focused ethnographic studies of ARI. Among the substantive findings of note that we expected would be likely to be of importance in the other parts of the world were: 1) the complexity of the explanatory models and extensiveness of terminology for ARI signs, symptoms and illness categories; 2) the importance of the sequencing in the appearance of signs and symptoms for parental interpretation of the illness; and 3) the importance of non-ARI signs (especially fever and rash) for the interpretation of ARI symptoms.

Methodologically, the summer research was also very instructive. For example, it confirmed the feasibility of using cards in sorting and ranking activities with literate informants and the tremendous value of the video for eliciting reactions about ARI signs from mothers. Of great importance to the next set of development activities was the recognition that data analysis was a major bottleneck for timely preparation of the report. As a result, we made the decision to include the guidelines for rapid methods of data analysis in the manual. The importance of establishing a system for coding and summarizing interview data in relation to a set of main questions was also reinforced.

Another issue that emerged from the summer research was the matter of consultants. Nichter suggested that regional workshops, or a short training programme in which a group of regional consultants was trained with the instrument, would probably need to be an integral part of the programme.

The next round of studies took place in Ankara and Ghana, the latter concerned mainly with techniques of eliciting terminology and interpreting terms in relation to observable physical

signs. The Ankara study demonstrated the value of recording forms for the effective management of data collection and analysis; it also underscored the importance of providing training for the ethnographers in the recognition of signs of pneumonia.

The study in Honduras provided the evidence that - in the hands of a skilled ethnographer fluent in the language of the community - the study could be completed, including preparation of the report, in five to six weeks. The Honduras work also demonstrated that structuring the report as a set of answers to the Programme Manager's Questions provided a solution to the problem of making the report understandable and useful to public health professionals, without a further "translation" from the language of anthropology to public health discourse.

In the next set of field studies in Haiti and Egypt, a number of issues of field management emerged, which led to the addition of more concrete detail concerning administration of the research modules.

The first training workshop on the use of the FES Manual was held in Solis, Mexico in October, 1990. Researchers from Bolivia, Indonesia, Guatemala, and Mexico were given five days of intensive demonstration and practice with the specific data-gathering procedures, including techniques of interviewing during viewing of the videotape of children with pneumonia. The workshop also provided a forum for discussion of the underlying theoretical and methodological assumptions on which the FES is based.

The workshop in Mexico demonstrated that the efficiency of training could be enhanced by means of a workbook, in which participants can work through concrete examples of data compilation and analysis. The data examples used in the workbook are drawn from the earlier FES studies. The workbook played a central role in the next training workshop, which took place in Thailand in the spring of 1991. This time the trainees were from Thailand, Pakistan, and Iran.

### **Some commonalities in the results of the ARI FES studies**

As previously stated, the primary purpose of the ARI ethnographic studies is to assist national programme development. At the same time, comparisons across projects that use a common methodology can provide additional insights of potential usefulness for a variety of purposes. The field studies to date have been undertaken to develop and test methodologies; however, keeping in mind the purpose of these early studies and their preliminary nature, some elements of commonality and contrast have already begun to emerge. These generalizations will almost certainly be modified as further studies are carried out.

1. In all areas studied this far, we find that peoples' explanatory models of respiratory illnesses are complex, often with considerable differentiation of signs and symptoms.
2. In a number of widely divergent cultural groups, respiratory illnesses are thought of as linked developmental sequences, in which milder conditions are likely to progress into successively more severe forms, particularly if not effectively treated. The sequence that begins with

symptoms of the "common cold" and progresses to more severe respiratory illnesses was identified in several of the studies.

3. Home remedies for ARI signs and symptoms are found in all the cultural groups studied thus far. When these are judged not to be working, people seek care outside the household, from either traditional or modern medical resources.

4. Studies in research sites in Africa, Asia, and Latin America all have found emic terms or phrases for common ARI signs and symptoms, such as kinds of "cough," "breathing difficulties," "fever," and "loss of appetite." However, specific signs of pneumonia - especially rapid breathing and chest indrawing - are not universally noted as such, and may be given widely different interpretations. For example, in some cultures chest indrawing is seen as a sign of an illness "in the stomach," or even as a sign of recovery because it indicates the muscles are strong.

5. In practically all cases, even in societies that use illness labels taken from modern medicine, the local terminology for illnesses does not correspond neatly with biomedical definitions of respiratory infections.

6. In all the areas studied, investigators have identified one or more illness terms that refer to severe respiratory illness. However, these illness terms (and the signs and symptoms associated with them) correspond only approximately to clinical pneumonia. Often more than one indigenous illness term can be found that refers to episodes that include the signs and symptoms of pneumonia.

7. The studies thus far suggest that cultures vary considerably in the extent to which attention is focused on specific illnesses (what Young, [6] refers to as "diagnoses") as contrasted with a focus on signs and symptoms. In some study areas, people appear to assess a child's condition and make decisions about treatment and care-seeking based on specific symptoms or combinations of symptoms, whereas in other cultures, parental judgments about the child's "illness" or "diagnosis" are more likely to influence household management.

## **Summary and conclusions**

The original RAP Manual [3] developed under the auspices of the UNU World Hunger Programme was aimed at the broad goal of assessing the impact of primary health care programmes. Subsequent developments, such as the RAP manual for epilepsy or AIDS, are like the WHO ARI protocol, in which the focus is much narrower and targeted to a delimited set of questions. Also, the emphasis is shifted from evaluation to programme planning. One of the hallmarks of public health-oriented ethnographic studies, such as those conducted with the aid of the RAP Manuals or the FES on ARI, which distinguish them from KAP surveys or formative research in communications, is the use of multiple methods. The ethnographic approach detailed in these manuals involves a progression of research methods from key informant interviewing to

more structured, quantifiable data-gathering. Moreover, both provide formats or "templates" for specific areas of data-gathering.

Like the RAP project, the development of the FES has been based on substantial field testing in several widely divergent cultural contexts. Thus, the utility of research guidelines such as these has emerged from an inductive, pragmatic approach.

The idea of developing guidelines for applied ethnographic research for health care and nutrition spread rapidly during the 1980s. The intent of all these efforts is to provide programmes with more effective tools for research and development. It is likely that these efforts will continue throughout the final decade of the century, with the production of research protocols for international health problems such as malaria and vitamin A.

A number of questions will need to be addressed concerning the conduct of the research. Are workshops the most cost-effective way to impart the needed training? How much of the complexities of ethnographic methodology can be transferred and effectively used by persons primarily involved in service activities? Will a new type of "applied social science researcher" emerge?

The next steps in these efforts must also include careful evaluation of the utility of such protocols for public health interventions. It seems likely that a number of different types of protocols and approaches will emerge, reflecting the wide variety of research contexts and needs in different parts of the world. More research and creative experimentation will be needed to establish the most effective means for communicating the results to intended users.

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