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REACH

RESOURCES
FOR CHILD
HEALTH

Development of a Trial ARI Information System Philippines

August 10-22, 1992

**Development of a Trial ARI Information System
Philippines**

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2. Individual Treatment Record form
3. Target Client List form
4. "Data Cells" for reporting
5. Worksheet (for calculation of cumulative indicators)
6. Bar graph format for presentation of indicators

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Acronyms

ARI	Acute Respiratory Infections
CARI	Philippines Control of Acute Respiratory Infections
DOH	Department of Health
EPI	Expanded Programme on Immunization
FHSIS	Field Health Service Information System
ITR	Individual Treatment Record
MCHS	Maternal and Child Health Services
NCR	National Capital Region
REACH	Resources for Child Health Project
TCL	Target Client List
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WHO	World Health Organization

I. EXECUTIVE SUMMARY

As part of the United States Agency for International Development (USAID) support to the Philippines Department of Health (DOH), the REACH Project is providing technical assistance to the Philippines Control of Acute Respiratory Infection (CARI) program.

During the period of 10 to 22 August 1992, technical support was provided to assist development of a trial information system for the recording, reporting and monitoring of acute respiratory infections (ARI).

A DOH "working group" was formed to review the present information system procedures and recommend a comprehensive approach to ARI information management. A four-component system was drafted for testing. It includes:

- 1) An Individual Treatment Record specific to the CARI program
- 2) An abbreviated Target Client List for service management
- 3) A seven-cell report plus a drug inventory (on an existing form)
- 4) Output graphs--graphs for tracking six indicators of program performance

The DOH intends to field-test the ARI information system in three to five districts of the country. The trial will take three months. Results of the trial are expected to be reviewed in January/February 1993. After review and modifications, the system will be ready for national implementation by the second quarter of 1993.

II. PURPOSE OF VISIT

The scope of work for this visit was to assist the Department of Health's Control of Acute Respiratory Infections (CARI) program to:

- o Develop a system for standard pneumonia case reporting using the client list system;
- o Pretest the client list system for recording of pneumonia cases;
- o Recommend a final version of the client list that will be tested nationally; and
- o Develop health information system indicators for ARI program managers at local, provincial and national levels.

III. BACKGROUND

The Control of Acute Respiratory Infections (CARI) program, located within the Maternal and Child Health Services (MCHS) of the Department of Health

(DOH), was started in 1989. It is not a separate, vertical program, but is carried out within the broad framework of the integrated MCHS. Appropriate norms and policies have been adopted, and the program is in the process of a rapid expansion directed at full national coverage within five years.

In July 1992, REACH provided the technical services of Dr. Nils Daulaire who observed;

The CARI program is expanding on a phased basis, with early focus on the daunting task of training the thousands of health care providers working throughout the government health services. A set of formalized training materials for health workers down to the level of the midwife have been developed, based on WHO manuals, and an ARI standard case management chart has been widely distributed to health facilities among whose staff ARI training has taken place.

Discussions with DOH officials during the course of a December 1990 REACH consultancy determined that technical assistance could be of value to the CARI program in allowing it to move forward more rapidly and effectively. . . The initial REACH assessment concluded that the Philippines CARI program had potential not only to substantially decrease childhood pneumonia mortality in the Philippines, but also to serve as a model for national ARI programs throughout the world. Now, in 1992, REACH assistance to the CARI program is beginning with focus in the following areas;

- o Evaluation and strengthening of the CARI training program;
- o Formalization and strengthening of supervisory procedures;
- o Assessment of needs for a routine health information system and development of key tools and indicators;
- o General systems support and operational tools development;
- o Development and testing of health education and communication training and tools for front-line health workers;
- o Assessment of the role of private pharmacies in ARI treatment

The activities reported here come under the focus area of the development of an ARI health information system. The development of a CARI health information system is under the agreement of, and in collaboration with, the national Field Health Service Information System (FHSIS). This system, which is designed to provide the basic service data needed to monitor public health activities, expects to incorporate the final version of the CARI information management process into the national information system. A number of forms, already in use by the FHSIS, relate to ARI. These are the 1) Notifiable Diseases form 2) General Medical Services form 3) Drugs and Supply Quarterly Status Report.

It is expected that these forms will need future review and possible revision in light of the development of the CARI program with its special "classification" system and focus on specific antibiotics.

In addition to the FHSIS, the national Epidemic Sentinel Surveillance System presently collects disease incidence data (to include ARI-related data) from thirteen hospitals in the country. As use of the CARI classification system becomes widespread, the data collected through this system will become increasingly important.

IV. TRIP ACTIVITIES

The writer arrived in Manila on August 10th. After meeting with the CARI Program Manager, Dr. Maritel Costales, a small, informal, DOH "working group" was formed to review current CARI recording and reporting trials. Discussions were held with officials of the FHSIS and the Epidemic Sentinel Surveillance System. Visits were made to one city office, two district offices, one district hospital and four health centers to observe and discuss the trial ARI recording and reporting systems already in use. In addition, focus-group discussions were held with a district management team and with a group of ten midwives. Finally, information was solicited from ARI program coordinators and supervisors at various administrative levels (ANNEX 1).

Following this review, the working group held repeated discussions to develop a draft ARI (routine) information system that is to be tested during the last quarter of 1992.

Assignment debriefings were held with the UNICEF ARI Program Officer, the REACH ARI Technical Advisor and the DOH/CARI Program Manager. The writer left the country on 22 August 1992.

V. METHODOLOGY & APPROACHES

Rather than having the consultant review and produce recommendations, the writer proposed that a small working group be created for this purpose. Under the leadership of a national CARI program official (Dr. Emma Manalac), a working group was formed and sought answers to four questions:

- o What minimum information is needed for program management, at each administrative level, which can be obtained through a routine reporting system?
- o If information can be obtained, how should it be presented and what will it reveal?
- o What would be the best way to collect and report this information so as to reduce the time a service provider must spend in clerical tasks?

- o Could a way be found to assist the service provider to go through the steps of the ARI assessment, classification, treatment and follow-up process during the "recording" phase of the health information system?

In its review of the previous CARI trial recording and reporting systems, the working group found that these four questions had not been fully addressed. The group then attempted to draft a routine recording, reporting and monitoring system which would take these issues into account.

VI. RESULTS & CONCLUSIONS

The results of the working group review and discussions are as follows:

SYSTEM DEVELOPMENT

In line with the recommended components of the health information system as described in the Philippine's FHSIS manual, the working group proposes four parts to the CARI routine information system. They are the:

- Treatment Record
- Target Client List
- Report Form
- Output Forms

1) TREATMENT RECORD (ITR)

In concept and actual practice, FHSIS uses an "Individual Treatment Record"(ITR) as the data base for the health information system. It is in this record that all findings and services are recorded. In its present formulation, the ITR may be a specific program document (eg., for Tuberculosis), a form or a piece of blank paper on which the service provider jots down notes. The ITR is kept in a "Family Folder" which is accessed through a Family Serial Number.

The working group proposes the use of a special ARI assessment and treatment form for the management of ARI in children under five years of age (see ANNEX 2). This form will:

- Guide and order the complex assessment, classification and treatment steps essential for the appropriate management of ARI
- Bring together in one place a child's multiple episodes of ARI permitting better case management (presently episodes are often scattered over a number of pages)
- Reduce the amount of space and writing in the ITR dedicated to ARI

$$\begin{array}{l}
 4) \text{ NUMBER OF COTRIMOXAZOLE (ADULT)} \\
 \text{TABLETS GIVEN TO TOTAL PNEUMONIA} \\
 \text{CASES LAST MONTH} \\
 \hline
 \text{NUMBER OF PNEUMONIA CASES PLUS} \\
 \text{NUMBER OF "REFERRAL-REFUSED"} \\
 \text{CASES LAST MONTH}
 \end{array}
 =
 \begin{array}{l}
 / \text{Mean number of Cotrimoxazole} \\
 | \text{tablets given to "home-} \\
 \backslash \text{"treated" cases of pneumonia}
 \end{array}$$

$$\begin{array}{l}
 5) \text{ NUMBER OF TOTAL PNEUMONIA CASES} \\
 \text{FOLLOWED-UP LAST MONTH} \\
 \hline
 \text{NUMBER OF PNEUMONIA CASES PLUS} \\
 \text{NUMBER OF "REFERRAL-REFUSED"} \\
 \text{CASES LAST MONTH}
 \end{array}
 \times 100 =
 \begin{array}{l}
 / \text{Percent of cases that should} \\
 | \text{be followed-up that were} \\
 \backslash \text{actually followed up}
 \end{array}$$

Each indicator will be calculated every month. A standard worksheet (ANNEX 5) will be used at each administrative level to ease manual calculation. Results will be graphed monthly using a simple, ranked bar graph (ANNEX 6). The indicators for initial testing were selected to give insight at the local level into:

- Program impact
- Program coverage
- Practicability of referral (level of special support required)
- First-line drug availability
- Organization of follow-up

In addition to the five indicators listed above, the working group also proposed a sixth indicator which will use Cotrimoxazole "inventory" information expected to be collected on the existing FHSIS form Q-5:

$$\begin{array}{l}
 6) \text{ NUMBER OF ADULT COTRIMOXAZOLE} \\
 \text{TABLETS USED FOR TREATMENT OF} \\
 \text{TOTAL PNEUMONIA CASES} \\
 \hline
 \text{TOTAL NUMBER OF ADULT} \\
 \text{COTRIMOXAZOLE TABLETS DISPENSED}
 \end{array}
 \times 100 =
 \begin{array}{l}
 / \text{Percent of total Cotrimox-} \\
 | \text{azole tablets used in the} \\
 \backslash \text{treatment of pneumonia}
 \end{array}$$

VII. RECOMMENDATIONS

SYSTEM TESTING

A test of the proposed ARI information system is required. The steps leading up to, and including, the test are (at a minimum):

- Finalize the forms and develop a series of clear instruction sheets for each form and for the analysis/presentation of data as indicators
- Obtain consensus of program officials
- Obtain consensus of FHSIS staff
- Select three to five districts in at least three regions to implement testing phase (Note: test in urban, rural and remote rural areas)
- Calculate budget requirements for material production, training and test implementation (including travel and per diems)
- Obtain funds (DOH and REACH)
- Implement testing
 - .Produce materials
 - .Train regional and provincial coordinators
 - .Train district/municipality supervisory staff
 - .Train facility staff
 - .Begin test (Note: test period is to begin in October and should run for not less than three months)
- Supervise test and make adjustments in process as needed
- Review implementation process and system results in the five districts (JANUARY/FEBRUARY 1993)
 - .Form a "core" review team
 - .Prepare review guide and protocol (facility and supervisory level)
 - .Conduct site visits
 - .Hold group meetings (facility staff and supervisors) at district and Rural Health Unit level
 - .Hold working-meetings of "core" team plus selected test-area participants (identified during field visits) for system revision
- Modify and finalize the system

SUPERVISION

The implementation of a working and useful ARI information system will depend on the care and accuracy of staff at each operational level--this in turn depends on the quality of on-the-job training and supportive supervision. Objective supervision-with-checklist, the use of comparative "supervision summaries" and graphing of supervision results are essential supports of any recording, reporting, monitoring and use-of-monitoring system.

Care must be taken to develop the "companion" supervision system for implementation at the same time as the recording, reporting and monitoring system is being implemented in its final form. The field-process and timing for this development will need to be worked out in the near future.

FHSIS & EPIDEMIC SENTINEL SURVEILLANCE

In addition to the development of an information system for the CARI program, the Notifiable Diseases form, the General Medical Services form and the Drugs and Supply Quarterly Status Report (of the FHSIS) will need careful review. These forms must be seen as part of the information resource for CARI and integrated with current information system developments.

The Epidemic Sentinel Surveillance System data related to ARI will be another information source which will require review and integration.

VIII. FOLLOW-UP

- 1) Dr. Emma Manalac has been assigned by the CARI Program Manager (Dr. Maritel Costales) to be the national CARI officer responsible for the testing of the proposed ARI information system. Testing is to take place in the last quarter of 1992. Review of results and system modification is to take place in January/February 1993.
- 2) Dr. Costales intends to decide how and when to continue the development of a formal CARI supervision system that has, as one of its' objectives, the support of the CARI information system.
- 3) Dr. Nils Daulaire, REACH ARI Technical Advisor, will coordinate with Dr. Costales the need, if any, for further external technical assistance for development of the CARI information and supervision system. Technical support has been informally requested to assist the next review and modification of the test ARI information system.

Technical support is also included in the REACH plan of work for supervision-system development.

The appropriate time for this support appears to be January/February 1993 for a period of three to six weeks (depending on the inclusion or exclusion of the supervision component).

ANNEX 1

PERSONS MET & PLACES VISITED

DEPARTMENT OF HEALTH:

NATIONAL STAFF

- Dr. Maritel Costales, CARI Program Manager
- Dr. Emma Manalac, CARI Program Officer
- Dr. Isidore Nepomuceno, Medical Specialist, FHSIS
- Ms. Felilia White, Director, Epidemic Sentinel Surveillance System

REGIONAL STAFF

- Dr. Edmundo B. Lopez, National Capital Region ARI Coordinator

DISTRICT STAFF

- Dr. Teresita Novera, Queson City District II Health Officer and Queson City ARI Coordinator

- Ms. Carmela Victoriano, National Capital Region, District II, ARI Coordinator

HEALTH FACILITY STAFF

- Dr. Carmen Ramos, Pag Asa Health Center, Queson
- Dr. Aurora Sena, Bago Bantay Health Center, Queson
- Dr. E. Matibag, Malanday Health Center, District II, NCR
- Dr. Tonga, Santo Nino Health Center, District II, NCR

OTHER:

UNICEF

- Dr. Wilfredo Varona, Program Officer

THE CHILD SURVIVAL PROGRAM

- Dr. Benjamin Loevinsohn, Advisor for Evaluation

Annex 4

Monthly ARI Report

Reporting Period: _____ Date: _____
FHSIS Location Code: _____
Total Population under 5 years _____

- I. Number of new cases of ARI in children under five years of age last month;
- Number of VSD cases: _____ (TCL - 8)
 - Number of S Pn. cases: _____ (TCL - 9)
 - Number of Pn. cases: _____ (TCL-10)
- II. Referral of children under five years of age last month;
- Number who agreed to referral: _____ (TCL-12)
 - Number who refused referral: _____ (TCL-13)
- III. Number of cotrimoxazole tablets given last month to children under five with pneumonia: _____ (TCL-14)
- IV. Number of children under five years of age with pneumonia who were actually followed-up last month: _____ (TCL-16)

Inventory

- Number of adult cotrimoxazole tablets:
- on hand at beginning of last month: _____
 - received during last month: _____
 - dispensed during the month: _____
 - on hand at end of the month: _____

- 12 -

Annex 5
Worksheet (Monthly)

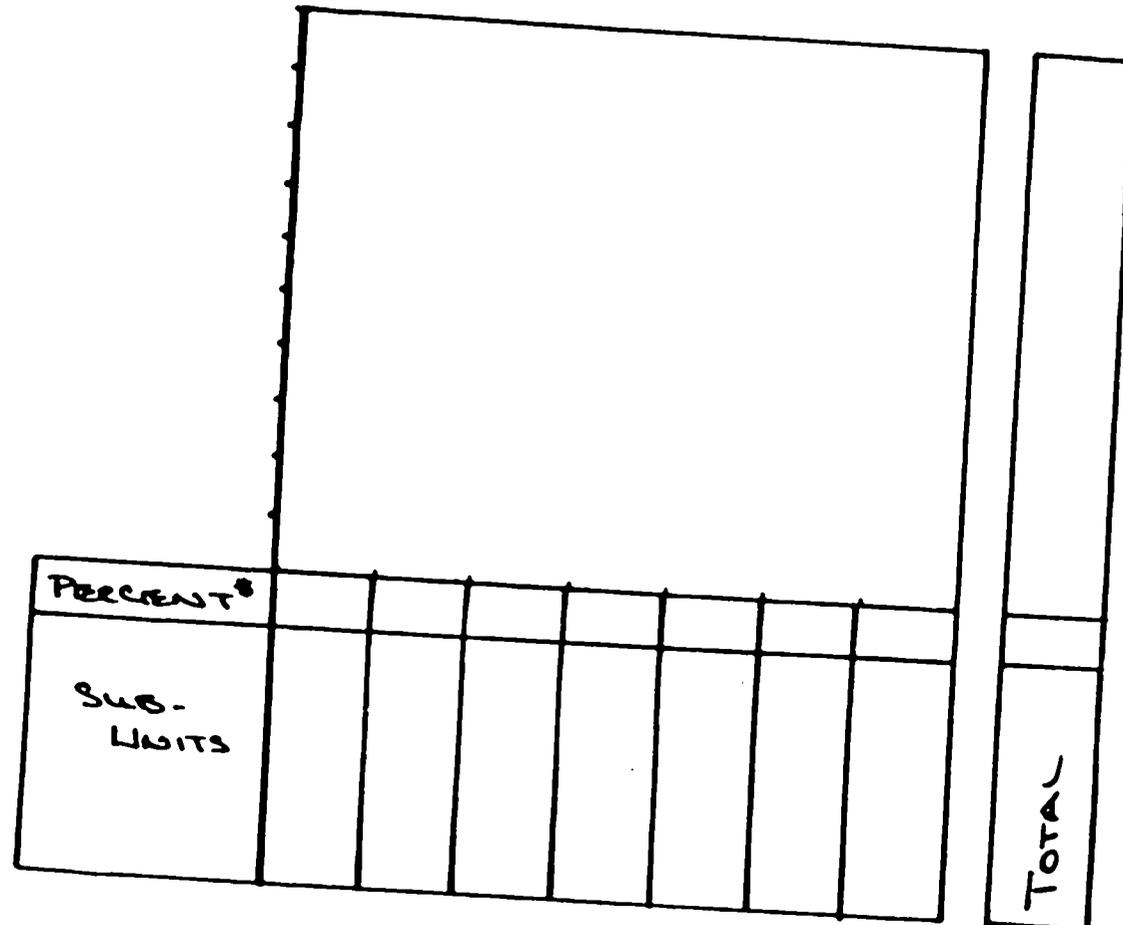
10/

Indicator: _____

Sub-Unit	Month of												
		Type of data	This month	Cumulative	This month								
	Percent*												
	Percent*												
	Percent*												
	Percent*												
	Percent*												
Total													
	Percent*												

* or rate

PRESENTATION
OF MONTHLY
ANALYSIS
(SELECTED
INDICATORS):
RANKED BAR
GRAPH



* OR RATE