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FIELD NOTE

**COLLECTING INFORMATION IN THE FIELD:
AN EXPERIENCE IN DESIGNING RECORD FORMS
FOR TRADITIONAL BIRTH ATTENDANTS IN MALAWI**

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INTRODUCTION

Malaria is a significant health problem in Malawi. During 1986, malaria was responsible for 33 percent of all outpatient visits and in 1983 for at least 10.4 percent of hospital deaths, not including those associated with anemia.¹ It is estimated that incidence of fever/malaria in children under five is 13.5 episodes per annum as measured during the dry season, at the beginning and the end of the wet season.² The economic impact of malaria as well as the human suffering associated with both morbidity and mortality are significant, and have made malaria control a high priority within the Ministry of Health.

Primary Health Care objectives for malaria have recently been clarified. Government health policy in Malawi recommends that during the next five years, communities should play an increasing role in malaria control by selecting community volunteers to distribute anti-malarials, supervise local vector-control activities, and report to local health authorities cases of malaria not responsive to routine treatment.³

In late 1986, the Ministry of Health in Malawi directed funds and technical assistance from the HEALTHCOM Project on health practice research to learn about the feasibility, safety, and logistics of training village volunteers to distribute chloroquine. The volunteers were to dispense the anti-malarials to children under five with malaria, and to pregnant women for prevention of malaria.

In order to evaluate the program, it was necessary to collect information on quantities of commodities distributed by the village providers. This proved to be a difficult task requiring many iterations of the record forms which the volunteers used. We eventually came up with a simple and easy-to-use record form which we believe reflected accurately the distribution of chloroquine by each provider to patients.

¹Ministry of Health Outpatient Records, 1986 and 1983; Lilongwe, Malawi

²Ministry of Health Serosurveys, August 1986, December 1986, and April 1987; Karonga and Salima Districts, Malawi.

³Ministry of Health Five-Year Implementation Plan for Malaria, 1985-1989; Lilongwe, Malawi.

STUDY DESIGN

Village headmen in 18 villages selected a total of 38 Traditional Birth Attendants (TBAs) to be trained to diagnose and treat malaria in their respective villages. The TBAs, who were between the ages of 20 and 60, were provided with chloroquine for distribution during the study period.

The Health Education Unit of the Ministry of Health specially designed training curricula for the TBAs on the treatment and prevention of malaria. A malaria treatment chart, developed by Sterling Products International in conjunction with the Ministry of Health, (see Figure One) and the first iteration of the record form were used in the initial training course for the TBAs, most of whom were not literate. A significant portion of the training was concentrated on how to fill out the record forms which the study team had designed for the volunteers.

Once monthly, a team of female members of the Health Education Unit and the Salima Agricultural Development District (SLADD) Public Health Unit visited each TBA. The supervisory visits continued for ten successive months on approximately the same day each month. The TBAs were told when to expect the team and to have their record forms and chloroquine stocks available for inspection. At the time of the supervision, the team discussed the record forms in detail with each volunteer, and asked questions about treatment dosages for different age groups, environmental protection, prophylaxis for pregnant women, and community beliefs and practices about malaria.

Most of the TBAs needed and wanted help from a literate family member (either husband or child) to fill out the forms. To help insure that forms would be filled out correctly, the team spent time during the supervisory sessions training and reviewing with the recorder the correct dosages, how to use the treatment chart, and how to fill out the record forms. Finally, the team counted remaining chloroquine stocks, calculated the number of tablets dispensed, and compared this to the number of tablets which were accounted for on the record forms.

Over the ten month period, these monthly visits helped the team assess the usefulness and clarity of both the treatment chart and the record form, and guided them in making several revisions of the latter.

Figure One

MALAWI MALARIA TREATMENT GUIDE

Chloroquine 150mg Base Tablets

AGE	DOSAGE			
	1st DAY	2nd DAY	3rd DAY	Total
 Birth to 11 months	 $\frac{1}{2}$ tablet	 $\frac{1}{2}$ tablet	 $\frac{1}{2}$ tablet	 $\frac{1}{2}$ Tablets
 Walking 1 to 3 years	 1 tablet	 1 tablet	 1 tablet	 3 Tablets
 School age 4 to 6 years	 $1\frac{1}{2}$ tablets	 $1\frac{1}{2}$ tablets	 1 tablet	 4 Tablets
 7 to 11 years	 $2\frac{1}{2}$ tablets	 $2\frac{1}{2}$ tablets	 1 tablet	 6 Tablets
 Adults 12 years & over	 4 tablets	 4 tablets	 2 tablets	 10 Tablets

ITERATIONS OF THE RECORD FORM

An initial census conducted before the training program helped planners estimate the total number of patients to be covered by each TBA per month. From these figures and estimates of fever incidence in children under five, they were able to estimate the expected number of patients (and therefore the number of record forms) and the approximate chloroquine supply required by each TBA.

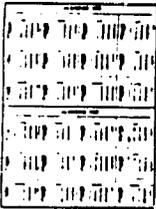
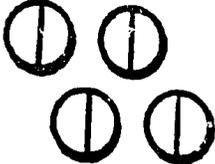
Evaluators were interested in the date of each visit made by a TBA, the name of the patient, the age of the patient, whether the patient was pregnant, whether the patient was suffering from malaria, and how many tablets the patient received. The first record form (Figure Two) was designed so that the TBA would record each patient on one line. A single form had enough room for four patient visits.

Figure Two

LEMBANI PA FOLOMU IYI, ODWALA MALUNGO ALIYENSE AMENE MWAMUONA

CATCHMENT AREA: _____
 VILLAGE: _____
 NAME OF TBA: _____
 ID OF TBA: _____

INTERVIEWER ID: _____
 DATE OF SUPERVISORY VISIT: _____

TSIKU DATE	DZINA LA O. WALA NAME OF PATIENT	ZAKA AGE	WAPAKATI KAPENA AYI? PREGNANT?	MALUNGO? MALARIA?	PROPHYLAXIS OR TREATMENT DOSE (OF PILLS)? MIBULU INGATI?
					

The supervisory visits revealed that there were several problems with this initial form. The most important of these was that it was not an effective reminder to the TBA that each patient had to return on three successive days to get his or her full treatment.

In Malawi, a complete treatment dose of 150 mg. base (25 mg. per kilogram) chloroquine is given over three days. The TBAs were instructed to give out only one day's dosage at a time to each patient. The health workers at the nearby clinics and the training team had reason to believe that a patient would not take the full dose if it was provided all at once, but would stop as soon as the symptoms disappeared, hoarding the remaining tablets for the next attack.

The records showed that few patients received the full dose. Patients were apparently not returning to get their tablets once the symptoms disappeared. One of the problems, we surmised, was that the forms were not assisting the TBAs in tracking their patients. We decided that, to be a more effective health education as well as data collection tool, each form should be limited to one patient. While this was a more expensive endeavor (a ream of duplicating paper in Malawi costs the equivalent of U.S.\$10.00), we believed it would also help to improve the performance of the TBAs.

A related problem with the form was that it did not provide an easy way to track individual patient treatment histories; to gather this information one had to look through many pages of a TBA's forms to find the patient's second and third visits. The form was therefore not fulfilling its function as a useful data collection tool.

The second record form was designed to solve both of these problems. (See Figure Three.) The new form provided a complete treatment history on each page. An incomplete form meant incomplete treatment--thus reminding a volunteer that a patient had not yet received the full dosage.

Figure Three

LEMBANI PA FOLOMU IYI, ODWALA MALUNGO ALIYENSE AMENE MWAMUONA

CATCHMENT AREA: _____ NAME OF TBA: _____ INTERVIEWER TO: _____
 VILLAGE: _____ ID OF TBA: _____ DATE OF SUPERVISORY VISIT: _____

DZINA LA ODWALA
 NAME OF PATIENT _____



ZAKA
 AGE _____

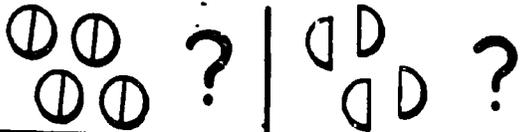


WAPAKATI KAPENA AYI?
 PREGNANT? _____



MALUNGO?
 MALARIA? _____



	TSIKU DATE 	PILLS MIBULU INGATI? 	
VISIT 1			
VISIT 2			
VISIT 3			

However, a month after the second record form had been instituted, it became clear that the TBAs could not control or significantly influence their patients to return for the second and third dosages. This study coincided with the planting season, when community members are normally busy in their fields and cannot take time out to perform any unnecessary tasks. Going back to the TBA for more medicine after the symptoms had disappeared was, understandably, one of those time-consuming activities which had little relevance to the now "healthy" patient. The supervisory team was concerned about contributing to chloroquine resistance, and soon changed treatment policy so that TBAs began to fill out the full course of treatment of each patient right away. While we still believed that compliance would be a problem, we hoped that more people would take the full dose if it were given to them on the first day, along with instructions.

The change in policy necessitated a third iteration in the record forms. (See Figure Four.) Two significant changes were made in this third iteration. During our discussions with TBAs in the first few supervisory visits, we noticed that they were just guessing the ages of the children they were treating. We decided that, for programmatic purposes, if we could not get the exact age of the child, it was more important to know whether the TBA was giving the correct dose for the age group within which she guessed the child fell. The new form emphasized the correspondence between a child's age and the appropriate dose.

By this time we had also observed that the completed forms did not accurately reflect the treatment dosages given out by many TBAs, because the recorders (usually family members) were not always around when treatment was dispensed. We decided to simplify the forms even more, so that a TBA could simply identify a picture of an age category corresponding to that of the child being treated, and then put a check in the box. We also asked her to draw in the adjacent box the number of tablets she had dispensed. The pictures indicating the different age groups were the same as those used on the treatment chart developed by Sterling Products International and the Ministry of Health (Figure One). We hoped that this change would allow more of the TBAs to fill out the forms on their own.

Figure Four

LEMBANI PA FOLOMU IYI, ODWALA MALUNGO ALIYENSE AMENE MWAMUONA

CATCHMENT AREA: _____
 VILLAGE: _____
 NAME OF TBA: _____
 ID OF TBA: _____

NAME _____ CHCNGANI BOKOSI LOYENERA. ✓

<p>Birth to 11 months</p>  <p>Ana osaposela miyezi khumi ndi umodzi.</p>	<p>PILLS MIBULU INGATI?</p>
<p>Walking 1 to 3 years</p>  <p>Woyenda, osachepera zaka zitatu</p>	<p>PILLS MIBULU INGATI?</p>
<p>School age 4 to 6 years</p>  <p>Wnyamba sukulu azaka zina mpaka zisanu ndi chimodzi.</p>	<p>PILLS MIBULU INGATI?</p>

<p>WAPAKATIKAPENA AYI? PREGNANT?</p> 	<p>PILLS MIBULU INGATI?</p>
<p>7 to 11 years</p>  <p>Azaka zisanu ndi ziwiri mpaka khumi ndi chimodzi.</p>	<p>PILLS MIBULU INGATI?</p>
<p>Adults 12 years & over</p>  <p>Zaka khumi ndi ziwiri mpaka kupitilira.</p>	<p>PILLS MIBULU INGATI?</p>

This simplification seemed to work well, and the new form in combination with the new policy for distributing the full course of treatment on the first day helped to increase the accuracy of treatment dosage recorded by the TBA and/or her record keeper (as reflected in the supervisory team's calculating of tablets remaining vs. tablets recorded as dispensed).

However, during the fourth supervisory visit, the TBAs complained that the ages as represented on the forms were not easy for them to read. They also complained of having to write the name of the child "on the baby's head." For those who were used to looking at forms, there seemed to be adequate distance between the place for the name of the child and the first age category. But for women who were not accustomed to using forms, these two parts of the form seemed to be placed uncomfortably close. A second concern for the volunteers was that treatment for pregnant women was still confusing. They were unable to differentiate between a pregnant woman receiving prophylaxis and a pregnant woman being treated for malaria. Therefore, the form went through yet another iteration.

The final form (Figure Five) depicts the age groups in a more obvious way, although the pictures remain the familiar ones used on the treatment chart. The line for the name of the child has been lifted away from the baby's head and put in a box of its own. Pregnant women are divided into two categories. The first, including a mosquito, is for a woman being treated for malaria. The second box is for a pregnant woman receiving prophylaxis. These forms were distributed during the fifth month of the experiment, and were successful--from the perspective of the TBA, her recorder, and for our evaluation purposes.

VALIDATING RESULTS FROM RECORD FORMS

After the changes in the policy and four separate iterations of the record form, the data showed that more than 90 percent of patients treated by TBAs were recorded as having been given accurate dosages. However, as evaluators, we had to ask the following questions: Were the records accurately depicting the dosages that the TBAs were distributing? Were the recorders present at the time of treatment? Was the recorder writing down what the TBA distributed, or did he or she merely look at the treatment chart and write down the correct corresponding dose, irrespective of what the TBA actually gave out? When the recorder changed (as many of them had during the ten month period) did the data reflect treatment dosages or the recorder's individual understanding of what was appropriate according to the treatment chart?

Figure Five

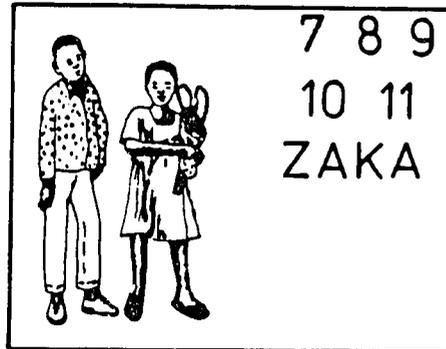
LEMBANI PA FOLOMU IYI ODWALA MALUNGO
ALYENSE AMENE MWAMUONA

NAME of TBA _____

ID of TBA _____

MONTH _____

DZINA LA ODWALA



Conversations with the volunteers revealed that most of them did in fact know the correct dose for each age group. When supervisors tested TBAs on the treatment for a random age, 85 percent of responses were correct. After initial training, 100 percent of responses by recorders were correct. But since these individuals changed frequently during the course of the supervisory visits, the recording efforts of this group were inconsistent. On the other hand, the longer we worked with each TBA, the more likely she was to fill in the form on her own.

CONCLUSION

This experience in training volunteers, and in designing materials for them to use in the field, revealed the special difficulties of relying upon a group of inexperienced and nonliterate people to collect precise information. Our study demonstrated that nonliterate people can be taught to record information in ways which are appropriate to them. Our new instrument put data in a form which could be used in the supervisory process, and was easy for evaluators to analyze. However, confirmation of the validity of that information was important, and was accomplished through a combination of methods (including in-depth interviews and a running inventory of medical stocks).

The iteration process used in this pilot study was much like pretesting exercises conducted in designing questionnaires. The process of creating and designing the form improved the TBAs' ability to work with it. Reinforcement during the supervisory period was particularly important. Such forms are indispensable for use by community health providers and clinic supervisors to track drug distribution and patient care, and can be developed in other countries using the process described above.