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FIELD NOTE

**THE DEVELOPMENT OF COUNSELING CARDS
FOR COMMUNITY HEALTH WORKERS AS AN AID
TO TEACHING MOTHERS PROPER DIARRHEAL CASE MANAGEMENT
IN WEST JAVA PROVINCE, INDONESIA**

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Indonesia is fortunate to be able to draw on a long tradition of community participation to provide the basis for a new system of volunteer health workers at the village level. Religion is one of the primary contributing factors to this spirit. The Moslem faith encourages its adherents to help those who are unfortunate and to practice charity—either through financial or other assistance. The national principle of Pancasila also emphasizes tolerance and respect of other individuals. In addition, the classic hierarchy, known as Bapak, calls upon citizens to respond to the requests of a leader regardless of whether there exists a strict employer/employee relationship or a promise of remuneration. In recent decades, this spirit has encouraged the birth of numerous charitable and volunteer organizations and has motivated community service by many individuals.

THE ROLE OF KADER AT THE VILLAGE LEVEL

The role of the kader, or community volunteer, was first applied in modern times to a person engaged in development activities such as sanitation or economic or social assistance. In 1971, kader first became associated with public health efforts. These village workers, usually woman, provided nutrition education to their neighbors and sometimes were able to offer nutritional supplements to local children. The nutrition kader often came under the umbrella of PKK, or volunteer women's organization, (which exists on a national, regional, and even village level), and were usually chosen by the village chief. Then in 1983, the Department of Health in West Java Province decided to use the kader system as part of its movement to improve the health of its people and reduce infant mortality. The movement stressed primary health care and prevention; it was inaugurated by the Governor on National Health Day at a meeting in Pandeglang, one of the lesser developed regencies, and attended by senior health officials from regional health centers all over West Java.

HEALTH KADER AND THE POSYANDU SYSTEM

In 1984, with the start of the Government of Indonesia's fourth five-year plan, or Repalita IV, the provincial policy of Gerakan-Hidup-Sehat, (Movement for Life and Health) expanded to incorporate the national idea of the Posyandu, or integrated village health post. The Posyandu is a monthly event held at some central location such as the yard of the village chief or neighborhood leader. Its services are prevention oriented and

cover five integrated programs: nutrition, immunization, maternal and child health, family planning, and diarrheal disease control. The activities of the Posyandu include the registering of new babies, growth monitoring, vaccinations, nutrition education, and health counseling (including advice on family planning and diarrheal case management). In West Java, as well as in Indonesia generally, the incidence of death due to diarrheal dehydration is one of the major killers of children under the age of five. The role of kader in preventing such deaths is therefore a potentially powerful one. Although low-income rural and semi-urban families have access to a Puskesmas, or health center, where they can take children in emergencies, these centers are often quite a distance away and cannot play the same educational role that a local neighbor can.

West Java has been the center of several major training activities for kader, particularly in the area of diarrheal disease case management. Such training presents some unique challenges. Although kader are generally literate--almost all have had at least six years of school--their educational levels vary and are uniformly lower than those of their paid counterparts at the Puskesmas level. They have little experience in training others or in maintaining supplies such as educational material or packages of oral rehydration salts. Moreover, there is a high dropout rate among kader. Discovering ways of motivating continued involvement has been a high priority.

A NEW DIARRHEAL DISEASE CASE MANAGEMENT POLICY-- A NEW TRAINING PROGRAM

In West Java, kader have received diarrheal disease case management training since early 1986. The training system is a tiered one: master trainers conduct programs at the provincial, or Kabupaten level; subsequently, Kabupaten workers train those in the health centers (Puskesmas); Puskesmas workers then organize training programs for village kader. In late 1987, the Directorate for Control of Diarrheal Disease restated case management policy, prompting a revision of the kader training system. In West Java this new effort has been a collaboration of the CDD Program and the Directorate of Community Health Education (or PKM). In addition, the HEALTHCOM Project's resident advisor has provided assistance in communication planning.

The earlier program relied upon a manual, which kader were to use with mothers to explain proper case management, and a poster, which they were to display in their homes. Monitoring had uncovered problems with each of these. Many kader found the poster too graphic and distasteful (it featured a photo of a baby with diarrhea) and were unwilling to display it in their homes. They did not find the manual convenient to use,

and when asked about it in home interviews, were often unable to locate it. Since both items needed to be replaced, the West Java working group decided to design completely new materials.

The first challenge was to design something which kader would find attractive and convenient enough to keep in a prominent place. The team settled on the idea of a calendar--an item which is highly valued in village homes--with a large colorful picture of a mother and child and a detachable pad of months which can be replaced every year. The calendar is actually constructed as a huge envelope with a pocket at the top to contain training materials.

The second challenge was to design materials which were highly interactive. Kader are in need of a diagnostic device which can assist them very directly in counseling mothers. The new case management policy is fairly elaborate. It defines five different levels of diarrheal disease and designates treatment for each of these. One aspect of this treatment is the mixing and administration of oral rehydration salts, itself a complicated set of instructions. The five treatment steps in the CDD case management policy are as follows:

1. **Symptoms:** More than three loose stools daily

Diagnosis: diarrhea without dehydration (mencret)

Treatment:

- * extra breast milk
- * extra home fluids
- * extra food
- * Oralit

2. **Symptoms:** Loose stools plus lassitude--not wanting to eat or play, and wanting to drink often

Diagnosis: diarrhea with mild dehydration (mencret dan lemas)

Treatment:

- * extra breast milk
- * extra home fluids
- * extra food
- * Oralit

3. **Symptoms:** Many loose stools plus lassitude and presenting signs of sunken eyes, looseness of skin, dryness and/or blueness of lips, or sunken fontanelle
Diagnosis: diarrhea with moderate or severe dehydration (muntaber)

Treatment:

- * extra breast milk
- * extra home fluids
- * extra food
- * Oralit
- * Go to Puskesmas for help

4. **Symptoms:** Stools with blood
Diagnosis: dysentery

Treatment:

- * extra breast milk
- * extra home fluids
- * extra food
- * Oralit
- * Go to Puskesmas for help

5. **Symptoms:** Loose stools for more than 14 days
Diagnosis: chronic diarrhea

Treatment:

- * extra breast milk
- * extra home fluids
- * extra food
- * Oralit
- * Go to Puskesmas for help

The team decided to construct materials which would actually guide a conversation between a kader and a mother, and lead the kader by steps to a correct treatment recommendation. The form they chose was a series of cards--one with a flowchart to guide the kader's questioning, and several treatment cards. In a given case, the kader would use the flowchart to make a diagnosis and then select the correct card to help explain treatment. These cards could be easily stored in the calendar "pocket."

ADVANTAGES AND CHALLENGES OFFERED BY THE COUNSELING CARDS

In addition to being attractive and useful, the proposed counseling cards offered a number advantages over the previous materials. The cards are:

- **Specific**— Each counseling card is specific for one segment of the at-risk population, namely a type of diarrhea or an age group.
- **Simple**— Only two cards are needed for counseling a mother: one diagnostic or question-and-answer card, plus one treatment card.
- **Broad application**— Provincial trainers, Kabupaten trainers, health center workers, and kader coordinators can use the cards during training and when teaching mothers. No additional technical information is needed.
- **Concise**— The mother receives only the information needed. No extra and potentially time-consuming or confounding information is provided.
- **Inexpensive**— Each card is printed on a standard size paperboard. Individual cards can be replaced if necessary. The collection fits into a calendar display which is also reusable year after year.
- **Variable**— Additional cards can be added at low cost; for example, a card for hand washing, latrine use, clean water, and so forth.

On the other hand, the cards offered some challenges. The chief of these was to construct a flowchart which could be understood and used by people who were not highly educated and had probably never seen such a diagram before. This necessitated a careful, multiple-staged process of pretesting with several groups of kader. It also required the design of a training program which would effectively teach kader to use the new materials.

DEVELOPMENT OF THE CARDS

Step One—Three Drafts

The team began with three groups of draft cards. These received a careful review by the CDD staff, and technical revisions were made. The three sets consisted of the following:

Set A: (Five cards) One diagnostic card -- plus -- four treatment cards, which included Oralit mixing and feeding instructions.

Set B: (Six cards) One diagnostic card -- plus -- four treatment cards -- plus -- one card with Oralit mixing and feeding instructions.

Set C: (Three cards) Each card included both diagnostic, treatment, and Oralit mixing and feeding instructions. The design provided for the use of two cards based on the age of the child.

These cards were pretested in a village in Subang regency, among 15 kader. The pretest began with a mini-training session conducted by master trainers from CDD and PKM. All 15 kader first received basic instructions in the five types of diarrhea, their signs and symptoms, the case management for each of the five types, and how to mix and administer Oralit. They were then divided into three groups: five kader received Set A cards; five kader received Set B; and five kader received Set C. The trainers explained how the cards were to be used. Next, each kader participated in a one-on-one role-playing session with a trainer who acted as a mother. An additional trainer observed the kader's performance with the cards and recorded the results.

The test looked at four main actions of the kader. One was how the kader used the diagnostic card for decision making; the second was how the kader moved through the flowchart to select the correct treatment card; the third was how the kader used the treatment card to instruct the mother; and the fourth was how the kader actually demonstrated mixing and administration of Oralit to the mother. The results were as follows:

Table I
Percent Correct Usage of Test Cards

<u>Target Behavior</u>	<u>Type of Card</u>		
	<u>Set A</u>	<u>Set B</u>	<u>Set C</u>
Using diagnostic card	42	32	-
Moving to correct treatment card	80	60	60
Using treatment card	69	62	31
Mixing and Feeding of Oralit	65	53	50

These results were combined with those of in-depth interviews conducted with five of the kader, to probe kaders' opinions of the cards.

Although the table above seems to indicate that Set A was the "winner," but not a very impressive one, attributes of all three sets proved interesting. Kader found the diagnostic card in Set A hard to follow because the flowchart spread out like a pyramid from top to bottom. Set B led them from left to right--they found this more familiar, like reading across a page. Set C was found to be "too simple" and lacking in specific instructions for the five types of diarrhea. The next stage, then, combined sets A, B, and C into a single draft package.

Step Two—One Composite Draft

The new composite set combined the best attributes of Sets A, B, and C. This set consisted of one diagnostic "flowchart" and four treatment cards. The diagnostic card was color coded; questions and answers with mothers were provided in two shades of brown, and the five treatment squares were brightly colored to match the related treatment cards. In addition, the flowchart consisted of very small boxes with little text, and was laid out in a simple left to right fashion with the five treatment plans emphasized clearly on the far right. The two most serious forms of diarrhea (chronic and dysentery) followed the quickest "route" on the flow chart and led directly to a single treatment card: ("Give liquids and Oralit and take the child to the Puskesmas").

The composite was tested with a new group of 15 kader in the village of Sagalaherang. Ten of these kader had received the 1986 training in diarrhea case management; five of them had not. An additional 10 volunteers from similar socioeconomic and educational backgrounds participated as a control group. The control group were not kader but had the qualifications to be selected for kader training.

This pretest was somewhat different. The trainers gave the test group instructions in the new diarrhea case management treatment program. Participants were then taught how to use the cards. This was followed by two role-playing sessions among just the kader, who were critiqued by the other kader and by the trainers. The kader were then asked to use the cards in one-on-one role-playing with trainers who acted as mothers. A supervisor observed and scored each performance on a prepared evaluation form.

The ten control participants did not receive any of the above training. They were given the set of cards with no instructions, and then participated in the one-on-one role-playing test. The results of the role-playing were as follows:

Table II
Percent Correct Usage of Composite Cards

<u>Target Behavior</u>	<u>Group</u>		
	<u>Trained in ORT (N=10)</u>	<u>Untrained in ORT (N=5)</u>	<u>Untrained Participants (N=10)</u>
Using diagnostic card	51	67	39
Moving to correct treatment card	50	60	50
Using the treatment card	72	77	27
Mixing & Feeding Oralit	55	72	29

The 15 newly trained kader all performed significantly better than those in the control group, reflecting the importance of the training process. Interestingly, the five kader who had not received previous training in diarrhea case management performed

better than those who had been trained in 1986. This reflected some confusion in the latter group in trying to switch to the new treatment norms.

Additional valuable information was gained from the results of in-depth interviews with three kader who did not participate in the field test. The interviewers checked their comprehension of the diagnostic flowchart and looked for specific obstacles in their ability to follow the arrows. This led to some minor changes in the clinical language. Sentences were also shortened. The interviews revealed that larger lettering was necessary in selected lines and darker arrows were preferred. The brown color of the question and answer boxes on the flowchart was found to be distracting. An important observation during the field test was that, on the treatment cards, kader ignored any visuals which were separated from the text.

Step Three—Testing the Revised Draft with Two Training Methods

The revised draft included changes based on the observations above. The question-and-answer boxes on the flowchart were changed to two shades of gray. The four treatment cards combined the visuals with concise text. On the back of each are illustrated instructions on mixing and administration of Oralit.

This set of counseling cards was pretested in two villages, Curugrendeng and Bunihayu, with two batches of 21 kader each on two days, using two different teaching methodologies. The primary object of this last test was to refine the training process for teaching kader how to use the cards. In both methods, trainers used a set of posters to explain the new case management policy and to demonstrate the use of the counseling cards.

In the first training method, the trainers first explained the signs and symptoms of the five types of diarrhea. They then demonstrated how to use the diagnostic flowchart and explained how to move to the correct treatment card depending on the type of case. The training finished with role-playing. In the second method, the trainers moved directly to demonstrate the use of the diagnostic card, explaining the signs and symptoms of the five types of diarrhea. They repeated the demonstration with the assistance of a trainee who followed the arrows on the flowchart. The training finished with role-playing for each of the five types of cases.

The master trainers who monitored the two methodologies concluded that the first method was better received and more quickly understood. Kader found the second methodology tiresome and dull, and the repetitive demonstration process time

consuming. The supervisors also noted that slight corrections in the text of the counseling cards would be helpful. Generally, the cards were considered effective and useful by all of the kader.

THE TIERED TRAINING PROGRAM IS BEGUN

From first draft to the last pretest, the development process for the counseling cards took approximately 2 1/2 months. A total of 24,000 sets of card were then printed by a local private printing company. Each kader who completed training also received a certificate, an identification sign for her house, and a bag in which to keep supplies including Oralit packets. In addition, the team produced 1,200 sets of training posters and 1,200 sets of training manuals. These latter teaching devices also went through a rigorous design and pretesting process. The manuals provide detailed instructions on how to organize a training session--beginning with ice breakers, how to explain the case management policy, how to explain the cards, how to conduct role-playing, and so forth.

According to the tiered training system used by the West Java Department of Health, the master trainers from CDD and PKM designed an initial field test for the counseling cards at the Kabupaten (district), Puskesmas (health center), and kader levels. The training for each level was as follows:

Kabupaten level: Two days of training for three doctors and nine health assistants. The first day consisted of an overview of proper diarrhea case management, an explanation of how to use the counseling cards, and opportunities to role-play as mothers and kader. On day two, they were taught how to train others in the techniques, with the help of the training manual, and practiced training.

Puskesmas level: Two days of training for 13 health assistants. The two days of training were the same as those given to the Kabupaten workers.

Kader level: One day of training for a group of 20 kader. Participants received an overview of proper diarrhea case management, an explanation of how to use the counseling cards, and opportunities to role-play.

RESULTS TO DATE

The field test was completed and the results used to finalize the training plan for approximately 1,000 health workers and 23,000 kader. It is too early to predict whether the counseling cards will have an impact on mothers' knowledge and practice of diarrhea case management. However, training post-tests and initial evaluation activities carried out a week to a month after training have demonstrated that kader can learn to use the counseling cards effectively. When placed into role-playing situations for evaluation purposes, kader have made very few errors in using the cards, making an accurate diagnosis and prescribing proper treatment. Among those kader who had also received case management training in 1986, knowledge levels rose from five to ten percent. Among those who had received no previous training, knowledge levels rose from 20 to 30 percent. Observations also revealed that kader were able to use the counseling cards with 90 to 95 percent accuracy. (See appendix for behavioral evaluation criteria.) The card system has also been culturally acceptable to kader and mother alike, and the kader generally report that they are delighted to have such useful tools and visual aids at hand.

An interesting part of the spot tests following training was a follow-up to see whether kader actually contacted the number of mothers they were assigned to train within their own communities. The counseling card kader provided instruction to 100 percent of the mothers they had promised to see. The control group of kader (who had not yet been given cards) contacted less than 94 percent of their target group and had provided diarrhea counseling to 81 percent of those mothers. The evaluation did not collect data on the reasons the control group did not contact all of their mothers. Some staff had earlier hypothesized that the provision of a "tool" such as the counseling cards might provide kader with increased confidence in their ability to counsel mothers and thus make it more likely that they would carry out their responsibilities.

Validation interviews with mothers have provided even more positive support for the counseling card program. Mothers contacted by kader were asked which of five components of diarrhea management the kader instructed them in and were also asked to mix ORS while the interviewer watched. While there was no significant difference in the number of components mentioned by mothers counseled by the two groups, a substantial difference was noted in ability to mix ORS correctly.

It is apparent that the counseling cards are a useful, understandable device for kader to aid them in talking with mothers about their children's diarrhea. The importance of developing materials which the users themselves find attractive and convenient was demonstrated during the carefully monitored development stages. The

process of developing the new counseling cards and in refining the training module was a time-consuming one involving multiple stages of pretesting and revisions. However, the lessons learned through this process were critical in assuring the success of a training program of this magnitude. The results so far have been rewarding.

APPENDIX

**BEHAVIORAL EVALUATION FORM
FOR OBSERVATION OF KADER USING COUNSELING CARDS**

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FOR OBSERVATION OF KADER USING COUNSELING CARDS**

Diagnostic Phase

Each of the following questions that the Kader asked about the child's diarrhea must be answered either yes or no.

Kader asked about :

1. Duration of diarrhea ?

1.

YES

NO

2. Blood in stool ?

2.

3. Wanting to eat ?

3.

4. Wanting to play ?

4.

5. Wanting to drink often ?

5.

Kader asked about/observed:

6. Sunken eyes ?

6.

7. Loose skin ?

7.

8. Dryness and blueness of lips ?

8.

9. Sunken fontenels ?

9.

10. Did Kader ask only the questions in the diagnostic phase card.

10.

YES

NO

11. Which card should Kader turn to _____

12. Which card did Kader turn to _____

14

Treatment Phase.

Situation 1 - Mencret

Check each of the following case management recommendations made by the Kader.

	YES	NO
1. Did Kader tell mother the child has mencret, that body fluids will be lost and that fluids need to be replaced?	1.	
2. Did Kader recommend breast feeding?	2.	
3. Did Kader recommend specific extra home fluids?	3.	
4. Did Kader recommend specific extra soft foods?	4.	
5. Did Kader recommend giving Oralit?	5.	
6. Did Kader ask mother to feed the prepared Oralit ?	6.	
7. Did Kader give mother Oralit to take home?	7.	
8. Did Kader re-enforce breast feeding, giving extra fluids and soft foods to help the child stay strong?	8.	
9. Did Kader remind the mother to come back if the child gets more sick?	9.	

Situation 2 - Mencret dan Lemas

Check each of the following case management recommendations made by the Kader.

	YES	NO
1. Did Kader tell mother that the child has mencret dan lemas, has lost body fluids and as a result is weak and that the mother should be careful?		
2. Did Kader recommend breast feeding?		
3. Did Kader recommend specific extra home fluids?		
4. Did Kader recommend specific extra soft foods?		
5. Did Kader recommend giving Oralit?		
6. Did Kader ask mother to feed the prepared Oralit ?		
7. Did Kader give mother Oralit to take home?		
8. Did Kader re-enforce breast feeding, giving extra fluids and soft foods to make the child get better and strong		
9. Did Kader remind the mother to come back if the child gets more sick or if she needs more packs of Oralit?		

Situation 3 - Muntaber

Check each of the following case management recommendations made by the Kader.

	YES	NO
1. Did Kader tell mother that the child has muntaber, that it is dangerous because the child has lost a lot of body fluid, that the child is very sick and must be taken to the closest Puskesmas or hospital quickly for help?	1.	
2. Did Kader advise mother that on the way to the health post she should breast feed the child if the child is able to be fed?	2.	
3. Did Kader recommend giving the child Oralit, on the way to the health post, if the child is able to be fed?	3.	
4. Did Kader ask mother to feed the prepared Oralit?	4.	
5. Did Kader give mother Oralit for use on the way to the health post?	5.	
6. Did Kader advise mother not to feed the child if the child is unconscious as the child could choke?	6.	
7. Did Kader remind the mother to go to the health post as quickly as she could and that she would be willing to accompany her if necessary?	7.	

Situation 4 - Dysentery

Check each of the following case management recommendations made by the Kader.

	YES	NO
1. Did Kader tell mother that the child has dysentery as there is blood in stools and that she should take the child to the closest Puskesmas or hospital?	1.	
2. Did Kader recommend breast feeding?	2.	
3. Did Kader recommend specific extra home fluids?	3.	
4. Did Kader recommend specific extra soft foods?	4.	
5. Did Kader recommend giving Oralit?	5.	
6. Did Kader ask mother to feed the prepared Oralit?	6.	
7. Did Kader give mother Oralit for use until she gets to the health post?	7.	
8. Did Kader remind mother to take the child to the health post as soon as she could?	8.	

Situation 5 - Chronic Diarrhea

Check each of the following case management recommendations made by the Kader.

	YES	NO
1. Did Kader tell mother that the child has chronic diarrhea because the child has had loose stools for a long time and that she should take the child to the Puskesmas or hospital?		
2. Did Kader recommend breast feeding?		
3. Did Kader recommend specific extra home fluids?		
4. Did Kader recommend specific extra soft foods?		
5. Did Kader recommend giving Oralit?		
6. Did Kader ask mother to feed the prepared Oralit?		
7. Did Kader give mother Oralit for use until she gets to the health post?		
8. Did Kader remind mother to take the child to the health post as soon as she could?		

Oralit Mixing and Feeding

Check each of the following Oralit mixing and feeding steps recommended by the Kader.

Mixing

1. Did Kader show packet of Oralit 200? 1.
2. Did Kader take correct glass (belimbing)? 2.
3. Did Kader take boilt water for use? 3.
4. Did Kader recommend breast feeding? 4.
5. Did Kader shake the pack of Oralit? 5.
6. Did Kader tear the pack of Oralit? 6.
7. Did Kader pour Oralit into the glass and stir with a spoon? 7.

Feeding

8. Did the Kader tell the mother that for a child under 12 months she sould give 1 glass withing the next two hours? 8.
9. Did the Kader tell the mother that for a child under 12 months she should give $\frac{1}{2}$ a glass every time the child has a loose stool? 9.
10. Did the Kader tell the mother that for a child 1-5 years of age she should give 2 glasses of Oralit within the next two hours? 10.
11. Did the Kader tell the mother that for a child 1-5 years she should give one glass every time the child has a loose stool? 11.
12. Did Kader explain to mother how to feed the child? 12.

	YES	NO
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		