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Growth Monitoring: Techniques for Trainers

Marcia Griffiths.

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The experiences of hundreds of primary health care and nutrition projects have shown that a growth monitoring program can significantly improve the health of children. Yet growth monitoring — (the systematic, periodic measuring of children) is not practiced in the majority of health and nutrition programs. This paper was prepared to examine the major issues and problems of growth monitoring, and to provide practical information for establishing growth monitoring programs in the community. These topics are covered: why monitor growth; what to measure; defining adequate growth; choosing a recording system; tools for measuring; program organization; using monitoring results for family education; training primary health care workers; problem identification and program evaluation; sources for growth monitoring equipment and a protocol for weighing and measuring.

For growth monitoring to be successful, training is necessary at the central and local levels, for both health and nutrition professionals and community based workers. This article describes some techniques that can be used to train community workers to monitor growth.

Why Monitor Growth?

Many times each day health workers are asked the deceptively simple question — "Is this child healthy?" To answer it, the health worker needs to consider many factors affecting the child's health. Assessing the child's nutritional status should be one of the first steps to determine if a child is healthy. Is the child well nourished? Does the child look content and strong? Responses to these questions can vary significantly. For example, the mother of the child in the photograph (Figure 1) felt her daughter was well nourished because she was "easy to care for" and "liked to eat." The local community health worker knew that certain

physical signals indicate malnutrition and looked for skin lesions, a distended abdomen, light colored hair, apathy, and signs of illness (cough, cold, diarrhea). Since none of these were present, the health worker concluded that the child was healthy. The auxiliary nurse for the community, however, knew that children who are small or light for their age may be malnourished. She weighed the child and compared her weight to reference population values on a chart. The nurse found that the girl's weight, which was low the last time she was weighed, had decreased. The auxiliary nurse concluded that the child was moderately malnourished and her growth was retarded. The measurement indicated that a serious dietary or health problem was present. If this early warning sign of growth failure was overlooked, the child's condition could deteriorate, and if left untreated, could lead to death.

Such problems will not be overlooked if health workers are trained to monitor growth and detect growth retardation at an early stage.



PHOTO: MARCIA GRIFFITHS

Training Techniques for Growth Monitoring

The training has two purposes: 1. To provide knowledge and skills about growth monitoring. 2. To foster an understanding of the usefulness of growth monitoring and a commitment to community action.

Before beginning the training, determine the skills needed to meet your objectives. (Figure 2, page 2, shows sample Training Objectives.)

Educators must teach both technical growth monitoring skills as well as communication skills. Although the specific skills taught will vary according to program requirements and choice of measurements, here are some general guidelines to follow.

- The training techniques should use exemplary teaching and communication practices since the health workers will probably use the same techniques in their own communities.
- Instruction should be action-oriented, emphasize practical aspects, and avoid complicated theory.
- Training should include practice in the community.

Initially, students should learn to handle the equipment and plan a monitoring session. Later the trainees should have a chance to experience the entire process, from convincing local officials to support the program, weighing and measuring children, talking to mothers about changing dietary practices, to presenting the growth monitoring results at community meetings. If possible, each step of the community practice should be done on different days to allow time for discussion. If time does not permit this schedule, an entire day in the community should be planned for all activities.

Here are some suggested techniques for the different segments of a training session:

Explain the principle behind growth

To illustrate the relation between age and growth show the health workers pictures of healthy children of different ages. Ask them to arrange the pictures according

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Growth Monitoring

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Sample Training Objectives	
Responsibility	Skill Objective
1. Establishes a growth monitoring activity in the community.	1.1 Knows value of monitoring and can explain it to community members.
	1.2 Involves community leaders in the activity.
2. Weighs and measures children.	2.1 Structures monitoring procedure to minimize confusion.
	2.2 Sets up and uses tools correctly.
	2.3 Accurately weighs or measures children.
3. Completes growth chart.	3.1 Interviews the mother.
	3.2 Calculates child's age or birth date if required.
	3.3 Graphs or marks growth card correctly.
4. Offers advice or education to mothers.	4.1 Correctly interprets chart.
	4.2 Communicates effectively with mothers.
	4.3 Offers dietary advice for the child not growing adequately and refers the child in need of additional assistance.
5. Stimulates community to work together to help malnourished children.	5. Discusses the community nutrition profile from the monitoring results and recommends community actions.
6. Keeps information that will help evaluate the program or the progress of the community.	6. Compiles a community record for each session.

Figure 2

to the children's ages and explain how they made each decision. Next, ask health workers to compare pictures of children who have similar weights but who are different ages. This exercise illustrates the importance of knowing both age and body size.

To demonstrate the links between growth and food intake and between growth failure and illness, use a doll made out of a gourd or a clay pot with top and bottom openings that can be corked. The doll can be filled with water or objects to represent the intake of breast milk or food and then weighed to show that weight will be increased as more is added. Similarly, a diarrheal episode can be demonstrated by unstopping the full vessel, releasing the fluid it contains, and weighing it to show the rapid weight loss.

Illustrate why measurements are recorded

Again, pictures of children can be used to show the importance of following a child's growth over time. Show the health workers a series of pictures and ask them to determine if the children in the pictures are healthy. Then give the results based on the body measurements for each child. Some results will confirm and others will contradict the health workers' estimates. The health workers can then examine completed growth charts for these same children. Some charts will indicate children recovering from a long illness, others will indicate children just beginning to get sick. The growth charts will help explain why some

Editor: Gayle Gibbons
Design: James True
Carol Gerson

American Public Health Association;
International Health Programs; Director: Susi Kessler, MD;
1015 Fifteenth Street, N.W.; Washington, D.C. 20005, USA;
(202) 789-5712

Correspondents

- | | | |
|------------------------------------|-----------------------------------|---------------------------------|
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of the health workers made incorrect assessments of the child's health status, and emphasize the importance of completing serial growth records.

Teach health workers how to weigh and measure through practice

The steps the health workers will follow each time they weigh or measure should be specified clearly. One exercise (for small classes) is to have all the health workers weigh or measure the same child or object and write down the results. Their answers can be compared and the differences in results discussed in terms of commonly made errors. This same procedure should be used during supervision visits, when the supervisor and health worker weigh or measure the same child, and then compare results and discuss any errors.

Train health workers to complete the growth chart by example and practice

When explaining the growth chart for the first time or practicing its use in a small group, it is helpful to have an enlarged version of the chart with an erasable surface. One project used an enlarged weight graph coated with plastic. Marks were then made on the chart using erasable grease pencil.

Flannelgraphs and overhead transparencies are also useful. These can be ordered from Teaching Aids at Low-Cost (TALC), Institute of Child Health, 30 Guilford Street, London WC1N, 1EH United Kingdom. Project staff could also use their sewing skills to make a flannel-

graph identical to the chart used in their program.

For individual practice, health workers need cards to complete. Often it is too expensive to practice on the actual cards, but a stencil of the card can be made and reproduced on cheaper paper. (Stencils of the Road-to-Health card are also available from TALC for approximately \$3.50.)

Teach health workers how to interpret the chart by example

A large growth chart or the individual samples completed by the health workers can be used. The lessons should focus not only on the child's position on the chart but also on the child's growth pattern: Is the child's weight increasing, constant, or decreasing? The recommendations that the health worker suggests to the mother about her child depends on these observations. The two cases most often misinterpreted are: 1. the child who is within the normal range of the chart but whose growth has faltered or who is losing weight; 2. the child who is classified as undernourished on the chart, but who is gaining weight. In the first case, the health worker will often believe that the child is healthy because the child is still in the normal range on the chart. However, this child has a problem that needs attention. In the second case, because the child has remained in the same area on the chart (indicating malnutrition), the health worker may believe that the child is in danger and may fail to reinforce positive dietary changes made by the mother that have started the child on the

road to recovery. Figure 2 illustrates this.

Health workers should also be instructed to ask the mother a few basic questions about her child. Examples of questions include:

1. Has your child been eating normally or has the child claimed not to be hungry?
2. Have you noticed anything different about your child (cough, cold, fever, etc.)?
3. Does your child currently have or has your child had diarrhea or vomiting in the past few weeks?
4. Have you noticed any blood, mucous, or worms in your child's stools?

Note: Volume 1, #2 of Mothers and Children contains two articles about dietary advice for mothers of the weaning age child. The growth monitoring paper also includes a chapter on family education.

Use role playing to teach communications techniques

In one-to-one role playing, health workers can practice interviewing, discussing growth monitoring results, and planning dietary changes with other health workers (who play the role of mothers in the community). Any visual aids used with mothers should be tried during training. The ability of health workers to speak in front of groups or with community leaders can be greatly strengthened if they have the opportunity to practice during their training.

Copies of the complete Growth Monitoring Issues Paper are available from: American Public Health Association, 1015 15th Street, N.W., Washington, D.C. 20005 USA. (English only)

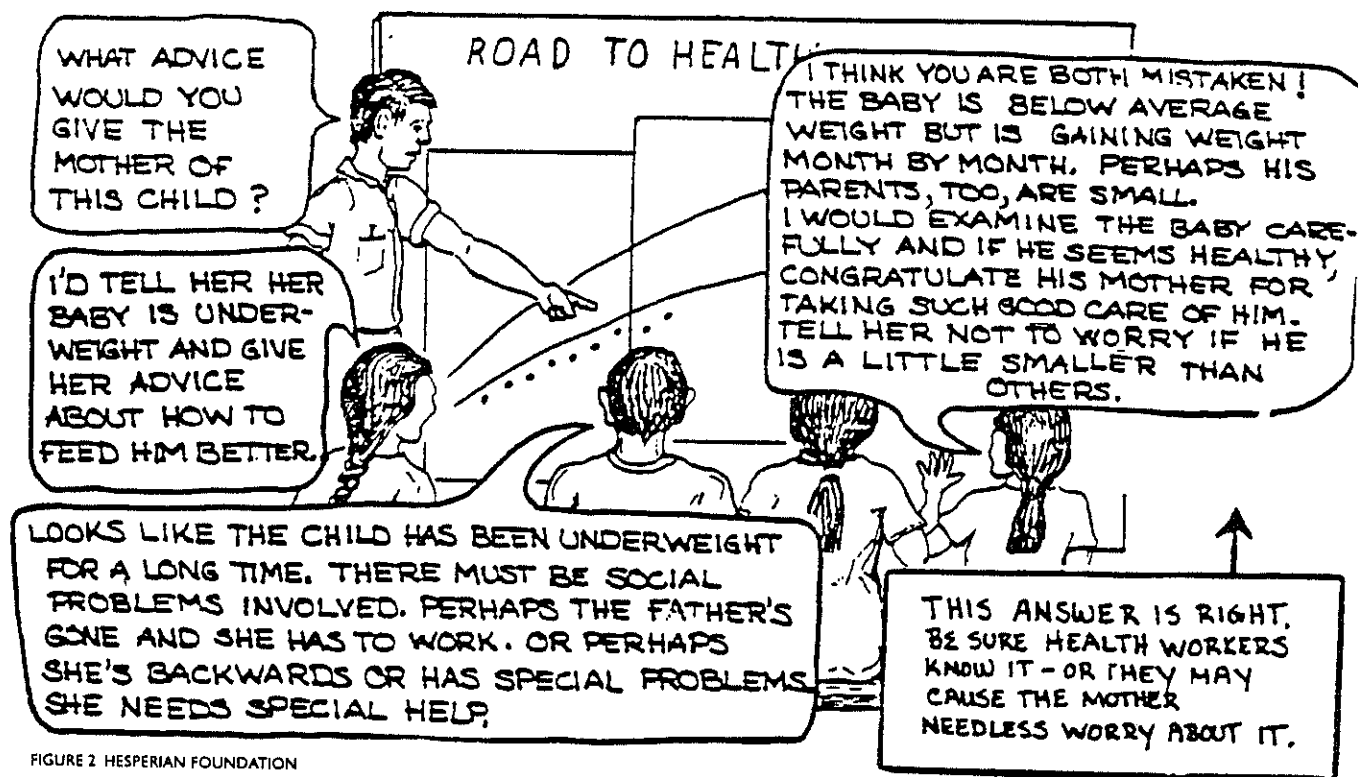


FIGURE 2 HESPERIAN FOUNDATION