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PROMISING PVO STRATEGIES IN GROWTH MONITORING AND PROMOTION

*A report on a workshop sponsored by
the Nutrition Communication Project of
the Academy for Educational
Development in coordination with the
Office of Nutrition of A.I.D.*

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*June 15-17, 1989
Washington, D.C.*

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EXECUTIVE SUMMARY

INTRODUCTION

A Workshop on Promising PVO Strategies in Growth Monitoring/Promotion (GM/P) was sponsored by the Office of Nutrition, U.S. Agency for International Development (A.I.D.). The workshop was designed and conducted by the Academy for Educational Development's (AED's) Nutrition Communication Project (NCP) in collaboration with Logical Technical Services (LTS), a partner in the NCP. The workshop was held in Washington, D.C., June 15 – 17, 1989, at One Washington Circle Hotel, just prior to the annual National Council for International Health (NCIH) conference.

This workshop grew out of a series of four informal meetings held in 1988 with Private Voluntary Organizations (PVOs) active in promoting nutrition in child survival. There were 19 participants from five different PVOs and the Peace Corps, selected on the basis of having extensive experience in GM/P. Both field staff (12 participants) as well as headquarters personnel (7 participants) attended. Staff from AED and LTS and selected consultants participated in the planning and implementation of the workshop.

WORKSHOP OBJECTIVES AND DESIGN

The major objective of this workshop was to provide an opportunity for PVO country programs to document promising strategies for improving GM/P and to share them with each other. The workshop focused on how problems encountered in the field have been identified and solved. Three major topics were selected for the workshop based on the expressed needs of PVOs: Program Design; Communications; and Techniques and Tools. The workshop used a mixed format in which participants explored and discussed the issues within each topic area. The format included 1) formal introductions to the topic areas, 2) case study presentations, 3) small-group discussions, and 4) informal exchanges. The workshop was conducted both in English and Spanish with simultaneous translation so that the Latin American field staff could directly present their field studies and participate actively in the discussions.

CONCLUSIONS AND RECOMMENDATIONS

The following is a summary of the major conclusions drawn by the PVOs participating in the workshop:

- The involvement of the mother is vital to the success of GM/P, i.e., her understanding of the reasons for her child's growth or growth failure, and her active participation in the entire GM/P process.

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- GM/P is not a good entry point for working with a community that has had no previous primary health care or child survival programs. Ideally, a PVO will establish itself in a community and develop a rapport with its members before a GM/P program is designed and introduced. When the time is right, a GM/P plan can be developed with the community as a logical next step in the protection of its children's health.
- While the main GM/P issues have been addressed repeatedly in manuals and workshops, program staff worldwide are still struggling with how to operationalize recommendations related to Program Design, Techniques and Tools, and Communications. This is a vivid reminder that GM/P is not easy to do well.
- The emphasis of GM/P has shifted in recent years from a curative to a preventative approach, largely due to the growing recognition that malnourishment is not a disease but a social problem with a complexity of underlying causes.
- There is a need to develop a simple and direct information system to collect the minimum data to meet the needs of a variety of users. A strong infrastructure within a PVO is required to develop an effective information system.
- Counseling is one of the weak points of GM/P. Health promoters are not adequately trained to serve as facilitators who can listen and engage in problem-solving dialogue. Better motivation, training, and reinforcement of health promoters is critical to the success of GM/P.
- PVO programs have found that there is not enough time in the GM/P session to provide adequate, one-on-one counseling to mothers with problems. Home visits have proven especially effective in providing such follow-up to growth-faltering children. Interactive group sessions led by mothers also show promise in changing child care practices.
- GM/P programs have made little use of proven communications techniques. PVOs need assistance to research the beliefs and practices of caretakers and other community members, such as fathers regarding child health and growth. Program field staff also need to be trained to adapt feeding and child care messages to the cultural and economic realities of the communities in which they work.
- A question left unresolved at the workshop was, "What are the minimum data required to make decisions?" There is a need for assistance in how to identify what data to collect, and how to analyze and present information in a way that provides a basis for deciding which interventions are appropriate.
- There should be a more systematic and wider dissemination of information, especially regarding new GM/P instruments and successful implementation strategies, so that PVOs can build on each others' experiences and improve GM/P activities. Strategies for providing such a service to PVOs need to be explored.
- While PVOs have made great strides in GM/P, there has been little critical analysis of the implementation and impact of GM/P programs. Research

RECOMMENDATIONS FOR A.I.D.

is needed in the areas of program impact evaluation, data handling, and methods for conducting cost-benefit analyses of GM/P activities.

- More research is needed on the limitations of GM/P activities in the field. For example, participants agreed that there is insufficient documentation of health promoters' case loads and of what can reasonably be expected of them in terms of dialogue, observation, and demonstration.

THE WORKSHOP

A Workshop on PVO Strategies in Growth Monitoring and Promotion (GM/P) was sponsored by the Office of Nutrition, U.S. Agency for International Development (A.I.D.). The workshop was designed and conducted by the Academy for Educational Development's (AED's) Nutrition Communication Project (NCP) in collaboration with Logical Technical Services (LTS), a partner in the NCP. The workshop was held in Washington, D.C., June 15 - 17, 1989, at One Washington Circle Hotel, just prior to the National Council for International Health (NCIH) annual conference.

This workshop grew out of a series of four informal meetings held in 1988 with Private Voluntary Organizations (PVOs) active in promoting nutrition in child survival. During one of these meetings, held in Boston in November, prior to the American Public Health Association's annual meeting, a small group of PVO representatives, dubbed "The Boston 10,"¹ discussed common problems related to GM/P and possible steps that would move them further along in addressing these problems. The consensus of the "Boston 10"¹ was that informal and small group meetings were a valuable forum in which to discuss ideas and that presentations of case studies from the field would be the most useful approach for information sharing.

Attendance at the workshop was limited to organizations with extensive experience in GM/P and in fact to just a sample of these. In all, there were nineteen participants from five different PVOs [CARE, Catholic Relief Services (CRS), Foster Parents Plan International (FPP), Freedom From Hunger (FFH), and Save the Children Federation (SCF)] and the Peace Corps. Both field staff (12 participants), including project directors, GM/P organizers, and program implementors, as well as headquarters personnel (7 participants) representing a variety of disciplines, took part in the workshop. Staff from AED and LTS and selected consultants participated in the planning and implementation. A list of participants and their affiliations is included in the Annex.

This report summarizes workshop presentations, case studies, and discussions and presents the main conclusions of the participants.

BACKGROUND

GM/P has great potential as a child survival strategy. It offers an opportunity to improve child health through early detection of growth faltering and through reinforcement of adequate growth. The GM/P session

¹W. A. Berggren, Boston, Massachusetts, November 1988

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provides a forum in which health promoters can learn about child care beliefs and practices and periodically exchange information with caretakers. The potential of GM/P has not been fully realized, however. PVOs, like MOHs and NGOs, recognize that GM/P is difficult to implement and its benefits difficult to document. Compared with other interventions, GM/P is more challenging for several reasons: it depends on the preventative concept that poor growth means poor health; it uses a tool (the growth chart) that is still widely misread and misused; its messages must be built on an in-depth understanding of health beliefs, practices, and resources; it usually does not provide a product such as a vaccine or an ORS packet; and the difficulty of detecting behavioral changes makes its cost efficiency hard to document.

PVOs play a prominent role in the implementation of GM/P programs worldwide. Many PVO child survival programs have included GM/P for years, while others have only recently added it to established interventions such as EPI or ORT. In order to realize the potential of GM/P, PVO programs are actively testing new approaches and seeking input from each other. Motivated and committed field personnel have striven to create an environment conducive to positive behavior change among participants. As a result of their initiative, enthusiasm, and persistence in seeking solutions to problems, GM/P has worked well in many settings. Their successes and frustrations through hands-on experience provide valuable lessons.

There appears to be a general consensus among PVOs about the types of problems they encounter in designing and implementing a GM/P program. Different programs have dealt with these common problems in ways which reflect the local setting. While such variation among country programs is logical and necessary, it is also important to bear in mind that a strategy successful in one setting can often be adapted to another setting. Exchange of information among PVOs through training manuals, meetings, advisory groups, and workshops has greatly helped to define issues and approaches for the future of GM/P.

WORKSHOP OBJECTIVES

The major objective of this workshop was to provide an opportunity for PVOs to document promising strategies from field programs in a variety of countries and to share them with each other. The specific focus was on ways in which problems in GM/P have been identified and solved.

Participants had the opportunity to discuss whether a tested solution from one setting would be suitable for their country programs. The workshop thus served as an initial step in instituting channels through which PVO staff could communicate among themselves and with other PVOs on barriers to and successes of GM/P.

Three major topics were selected for the workshop based on the expressed needs of PVGs:

1. Program Design;
2. Communications; and
3. GM/P Techniques and Tools.

WORKSHOP DESIGN

The workshop used a mixed format in which participants explored and discussed the issues within each topic area. The format included 1) formal introductions to the topic areas, 2) case study presentations, 3) small-group discussions, and 4) informal exchanges. The workshop was conducted both in English and Spanish with simultaneous translation so that the Latin American field staff could present their field studies directly and participate actively in discussions.

The workshop began with a forum in which headquarters staff from the six participating organizations gave initial presentations on the current state and direction of GM/P in their organization. Half-day sessions consisting of an introduction to each topic, presentations of related case studies, and brief analyses of the case studies by technical resource people, were then held on each of the three major topics. On two occasions, participants broke into small groups to discuss selected issues within the topic areas. Finally, each PVO gave presentations on the implications of the proceedings for its own GM/P action plans.

Two of the formats selected for the workshop proved invaluable to its success. These were the case study presentations by field staff and the small group sessions. The value of the field presentations was that they focused on concrete examples of problems and solutions conveyed with enthusiasm and commitment by people directly involved in the GM/P program. The appeal of small group sessions was that they allowed geographic, professional, and organizational perspectives to be exchanged informally on one priority GM/P topic at a time. Participants welcomed the opportunity to discuss their thoughts and frustrations as well as to seek advice and give it in loosely guided sessions.

Case Study Presentations

Participants were asked to prepare written case studies, present them orally, and bring materials and tools from their projects. Guidelines and checklists for the case studies were sent to the PVOs to assist in case study preparation. The case studies describe specific GM/P projects, intended implementation plans for a project, or data from a compilation of existing projects in one country. Successful strategies as well as stumbling blocks and unresolved issues were presented. Some PVOs conducted pilot studies in order to collect data to present at the workshop. Technical assistance for the development of the written case studies and oral presentations was provided by the NCP. Case

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studies are summarized in a separate section of this report. Complete copies of the case studies can be obtained through the NCP.

Informal Exchanges

A room was set aside for informal information exchanges during which PVOs displayed the materials they had brought. There was a display of state-of-the-art measuring instruments including infant, child, and adult scales, arm circumference tapes, height measuring boards, charts, etc. Photos were taken of all displays and workshop participants. A video player was available to show GM/P videotapes from different PVOs. A reception was held the evening before the workshop began, and a scheduled informal gathering of participants for information exchange took place at the end of the first day. At the latter, reports and bibliographies of selected GM/P topics were prepared and distributed. Information about distributors of measuring instruments was also provided.

THE TOPICS

Charles Teller introduced the case studies on Program Design by giving an overview of GM/P and of some major issues to be considered in developing a program. Some of the key points raised are summarized here.

GM/P is often incorrectly defined as the regular measurement, recording, and interpretation of growth change in preschool-age children. What is missing from this definition? The action that caretakers and the larger community take as a result of this process. GM/P programs should maintain a lively pulse, driven by the continued involvement of a mother in the campaign to improve her child's health. The mother's understanding of the relationship between her child's growth and her own actions is vital.

Because it brings children to a central service point, GM/P can facilitate the delivery of other child survival services such as ORT and immunizations. GM/P is also an assessment/action strategy to help target individuals or communities so that program resources can be directed toward at-risk children.

Within all types of GM/P projects, there are some common design issues that must be considered if program planning is to be effective. These include the need to clearly define both process and outcome objectives; address early the organizational concerns relating to activities before, during, and after the GM/P session, such as the number of health workers responsible for the GM/P program; consider the needs and involvement not only of the targeted child at risk but of the overall population, including community leaders and mothers; include an intervention and a follow-up component in each GM/P activity; decide whether to use local or international growth references in each setting for assessment and interpretation; and periodically evaluate the effectiveness of the GM/P program in meeting its stated objectives.

The case studies written for this workshop illustrate that a variety of strategies has been employed to tackle these program design issues. Some of these promising strategies include

- Targeting of children for food supplementation;
- Involvement of the community in GM/P planning and implementation;

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- Home visits and outreach to the community; and
- Mechanisms to integrate GM/P programs into primary health care activities.

COMMUNICATIONS Introduction to the Issues

Claudia Fishman introduced the case studies on communications and some of the major issues to be considered. The following is a summary of the key points.

A popular musician was asked the secret of his charisma. He said that for him, the charismatic performer was not the one who got up on stage and jumped around, making a lot of noise. In his view, this performer pushed the audience away. What he tried to do was to create a space for the audience, to create a void that begged to be filled. The audience would scream and reach out because they could not bear this empty space.

While GM/P programs might have little in common with rock concerts, the lesson to be learned from this expert communicator is that the audience must be inspired to respond. A barrage of one-way communication is less likely to provoke a response than a subtler approach of inviting a reaction, providing time, and actively listening.

It might also be useful to shift away from a view of GM/P program beneficiaries as *passive audience members* to *active performers* who need good lines and inspiration to act out their desired roles.

For example, the mother has long been the focal point of message development. But messages to her are often vague, and may fail to account for the factors defining her current role when suggesting new behaviors. Family size and demands, work load, her view of herself and her ability to make decisions, her sense of resources available within the household and community—these and other factors should be considered when developing messages about infant feeding or participation in regular weighing and counseling sessions.

The questioning and listening side of counseling is the opportunity to tailor the general message to specific circumstances. Therefore, GM/P staff who encounter the mother one-on-one must be trained in interpersonal communication: they must be coached in how to ask questions, how to listen, and how to respond, and not be merely given a set of prefabricated messages. It is important to stress that this training, too, must leave space for GM/P worker input, inspiring them in their role as counselor.

By focusing on the weighing and counseling session alone, many GM/P programs neglect critical target audiences. For example, fathers' opinions and behaviors are crucial in child nutrition. While fathers rarely prepare food for children, they often dictate family spending and eating patterns. In many parts of the world, men feel responsible for certain elements of the diet, while women are expected to provide the rest. Their level of involvement in daily

family life is highly variable, and the extent to which they look to the community and its leaders for judgment and validation varies from culture to culture. These factors should be considered when developing GM/P messages for men, and in determining how and where to reach them.

A complete strategy would link messages given to women during a weighing session to messages directed at men through outreach media (such as radio or a public forum). There are probably suitable messages for everyone in a given community that will enhance participation in GM/P programs and lead to improved feeding practices. It is important to stress that these messages should be as different as the individuals they address. However, research allows for the combination of individuals into groups according to social, psychological, and emotional factors—not merely age and sex categories—helping to inspire performance of the behaviors requested of each group. If the GM/P worker will be the primary source of “technical” information, and the mother will be the only conduit of this information into the home, then it is important to inspire trust and respect for the GM/P worker through other channels, and reinforcement and validation of what the mother remembers through additional communication with household and community gatekeepers.

Finally, many GM/P programs function in isolation, neither extending GM/P through other child survival areas nor reinforcing these other interventions with growth monitoring. An ORT consultation is a critical time to address infant feeding and the need for regular monitoring of the child’s recovery. Weight gain can be a clear indicator for birth spacing, signaling when the youngest is big enough to safely permit a new sibling. With creativity, GM/P offers many inroads for maternal and child health. The trick is to focus on the behaviors or performances that must be inspired, seek the appropriate arena, and “clap wildly” for great performance at all levels.

Small Group Session: Message Development

In this session, facilitated by Claudia Fishman, participants expressed a wide range of interests on the topic of GM/P communications. These include

- “Nuts and bolts” of developing an “appropriate” communications program aimed at several audiences: mothers, communities, health providers, volunteers, etc.;
- Ways to produce training materials for community volunteers who do counseling; and,
- How to determine the reason why a seemingly sound program fails.

Discussion focused initially on audience identification, audience research, and the goals of communication campaigns. Examples were cited of programs in different phases of planning and implementation.

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Discussion then switched to technical issues of growth monitoring and the behavioral/social aspects of malnutrition, such as content of weaning foods, maternal antibodies, and social perceptions of malnourished children, as well as gender issues related to child care and malnutrition. This discussion served as a learning forum in which participants exchanged experiences of dealing with these problems in diverse settings. The discussion also provided a framework for designing communications projects and for thinking about how health communications might help resolve technical and social problems.

Conclusions and recommendations were as follows:

1. There is a need to clearly define the audience and strategy before beginning any project or campaign. To reach a particular audience, specific materials must be developed for that audience.
2. Effective communication is difficult. Even a good strategy will take time to develop and implement and may not always bring about the change desired. Message testing and community involvement are essential to the success of a project. A realistic time frame for evaluating the desired behavioral change is necessary.
3. Audiences can be effectively reached through the use of "models" which demonstrate the effects of growth monitoring, good feeding, and health practices on children (e.g., a sketch depicting a "happy" or "sick" child).
4. More emphasis should be placed on communicating directly with fathers about GM/P. Too many programs rely on a trickling down of information from the health provider to the mother and finally to the father. Fathers cannot be reached effectively in this way.
5. Communication strategies are more effectively developed in the field rather than in central offices (i.e., bottom up rather than top down).

Small Group Session: Counseling

In this session, facilitated by Virginia Yee and José Mora, the four main topics discussed were as follows:

- Counseling is often one of the weak points of GM/P. Why?
- What should be the focus (content) of counseling? How should the mother be counseled about her anorectic child?
- How to enable mothers to deal with their own problems?
- What are the ingredients of a successful counseling experience? Is there a link between counseling and growth cards? If so, which card is the best for this purpose?

The following were identified as the weaknesses in counseling most often found in GM/P programs:

- Counseling often is perceived as giving advice, a one-way transmission of messages rather than as a problem-solving dialogue with the mother.

A common difficulty is that the counselor simply provides messages rather than serving as a facilitator.

- Counseling is a complex task. For counseling to be effective, more information is required than weight change from a growth card.
- Health promoters are not given adequate training as counselors. Counselors often lack motivation and are usually not equipped to deal with unexpected questions and problems raised by the mother. Promoters can learn much in this regard by listening to “successful mother(s)” living in the community.
- Effective counseling requires time that may not be available during the actual weighing session of a growth monitoring program. Follow-up home visits are necessary.
- Timing of counseling may not fit mothers’ needs. Where and how often counseling should take place are important issues that each program should decide after a careful study of local preferences.
- The immediacy and relevance of the counseling to the mother are problematic. Counseling should be related to the current child and family situation.
- Targeting certain mothers for counseling may not be appropriate. Should counseling be for all mothers or just those with growth-faltering children? Should there be preventative counseling to the mother with children who are growing well? Should counseling be linked to the growth chart? Selective counseling may be useful, i.e., individual counseling through home visits for mothers with growth-faltering children versus group counseling for those with children who are growing well.
- Mothers themselves are dissatisfied with unrealistic advice provided during counseling and are also unhappy with inadequate counseling.
- There is confusion between individual and group messages in counseling. There are specific constraints associated with both types of counseling.
- GM/P programs afford mothers few opportunities to learn by doing. This cannot be done in a growth monitoring session. Experiential learning with follow-up is necessary.

Participants arrived at the following conclusions and recommendations:

The focus of counseling must be the mother or child caretaker. The purpose of counseling is to enable the mother to deal with her problems. The mother must be made an active participant in the counseling by encouraging her to talk about her child’s health as well as her problems and her concerns in this regard. She must be respected and made to feel that she has something to contribute. The mother’s perception of the health of her child should precede explanations about her child’s growth status. She should be given opportunities to learn from her own experiences and from those of other mothers. The use of decision trees might be helpful to define the content of counseling, but more research is needed to determine if counseling trees are useful tools for health promotion.

Small Group Session:
Community Feedback
and Community
Participation

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In this session, facilitated by Valerie Uccellani and Jim Becht, the main topics discussed were as follows:

- The PVO's obligation of "negotiating" with the community in order to determine the latter's priority needs and interests before introducing a GM/P program;
- The collection and feedback of GM/P-related information to meet a community's needs and requests;
- The infrastructure, attitudes, and services that must exist before a community can desire and sustain a GM/P program for itself; and
- Assessment and securing of resources and support that the PVOs and ministries will have to provide to make the GM/P program successful and sustainable.

Participants cited a variety of GM/P projects in a wide-ranging discussion on community involvement, project "ownership," and acceptable "entry points" to the community. It was observed that requests for GM/P often occur after other child survival project components are introduced—hence the usefulness of comprehensive development programs that can address a variety of problems other than health.

The CRS project in Ecuador, in which a gradual process of building a GM/P program and community ownership was achieved, is worth noting. A "natural" organization, including a food supplementation program, already existed in the community. When asked what they wanted, community members replied, "...a church...." After discussions, CRS guided the community toward their first child survival component, the dietary management of diarrhea. This component paved the way for women participating in the program to ask for a growth monitoring program. Careful discussions and counseling with the mothers is an essential component of this GM/P program, in which changes take place through community consensus. For example, the mothers requested that a large community growth chart be made so they could see how all of their children were progressing.

Similarly, CARE Bangladesh found that GM/P activities are best preceded by other child survival activities, such as Vitamin A capsule distribution, which produces very visible results quickly in a population with high incidence of manifest eye problems.

It is often necessary to identify problems before presenting possible child survival program components as solutions. A community simply may not realize it has a problem or understand its magnitude or relationships to preventable approaches. It is common for people to be more concerned with "curative" rather than "preventative" approaches to child health. In some

settings (e.g., SCF experience), mothers were eager and ready for preventative approaches to their infant and child mortality problems, but only after careful and guided discussions and negotiations.

There was discussion concerning community involvement in determining what types of data should be collected. CRS Ecuador suggested that no research be conducted prior to GM/P activities. After a GM/P program has begun and is well underway, community members will make their own needs for information obvious. The types of information collected will change over time in response to changes in community perspective, knowledge, and interests.

Participants agreed on the following conclusions and recommendations:

1. The term "community involvement" should be changed to "community ownership."
2. GM/P is not a good entry point to a community that lacks other child survival program components. Initial activities/interventions must be determined by the community, because its involvement in program planning and design is crucial. GM/P programs can be introduced only if and when the community feels it is ready and the activity is appropriate; good timing is thus essential. To ensure success and increase the likelihood of a sustainable project, the program must evolve out of a process of "negotiation."
3. PVOs can be instrumental in laying the necessary foundation for a successful GM/P program. The challenge includes creating a sense of self-worth in mothers, fostering community awareness of the link between nutrition and health (e.g., the CRS Ecuador program slogan, "buena alimentación es buena salud"), and convincing mothers that a preventative health program can make a difference in the quality of their child's life.
4. Information collection and feedback must be guided by the community from the beginning and throughout the GM/P program. New needs for data will emerge once the program is underway.
5. No real conclusion was drawn on how a PVO can predict what local resources will be available to support and sustain a GM/P program. However, participants all agreed that the need for supportive resources is essential.

TECHNIQUES AND TOOLS

Introduction to the Issues

José Mora introduced the case studies on GM/P Techniques and Tools and some of the major issues to be considered. The following is a summary of the key points.

There is a disproportionate emphasis on GM/P tools and techniques, i.e., on the design and development of tools such as charts. More emphasis should be placed on interpreting results and on post-measurement action, counseling, and follow-up.

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The traditional emphasis on tools and techniques in GM/P programs has been due to the latter's heavy dependence on a curative "ideology," which is concerned with identifying malnourished children and hence with the accuracy and validity of measuring instruments. The more recent orientation has been to view growth retardation as a social problem rather than as a disease. Social problems are more amenable to prevention. GM/P programs should focus on the motivational and educational functions of tools and techniques and their role in decision-making. Arm circumference, for example, can serve as a screening tool, while growth charts can be used to generate community awareness and participation.

GM/P is a dynamic process that embraces far more than the assessment of nutritional status. There is a difference between cross-sectional group assessment and GM/P, the latter emphasizing education, motivation, and behavior change.

Small Group Session: Growth Charts

Participants of this small group discussion facilitated by José Mora reviewed several growth charts from different countries.

Growth Chart Design

There was general agreement that mothers in the programs liked the use of colors on a chart. In Ecuador (CRS), a study was conducted to determine the choice of colors on the growth chart. The results were contrary to the use of the standard colors and interpretation, i.e., green for well-nourished, yellow for borderline, and red for malnourished. The mothers of the Ecuador study felt that red should be the well-nourished category, since a child's face is bright and red and rosy when healthy; yellow should be used for borderline cases, since a child's face will appear yellow when ill; and green should be used for the malnourished, since a child's face will appear green when very sick.

Growth charts with "multichannels" were discussed (i.e., those with several lines representing different percentiles of the growth references). Participants considered the 5-line WHO chart acceptable but judged a 10-line chart too complicated and possibly threatening to the mother. The group favored the 2-line Road to Health Chart. The group was not familiar with the "Bubble Chart" that is designed to help accurately plot weight data and decrease recording errors, since it is not currently in use in many countries.

The Growth Chart as a Communications Tool

Participants were not as concerned with the design of the chart as they were with its motivational and educational value in organizing mothers and participants and in serving as a counseling tool during the growth monitoring session.

The impact of two GM/P techniques on communicating with the caretaker was discussed. The two approaches—nutritional status classifications using the colors on a chart, and measurement of growth trends using weight data plotted on a chart—were found to be in conflict: classification is “curative” and static, while incremental growth is “promotional” and dynamic. For example, in the nutritional status approach a child, despite a gain in weight, may continue to be classified as “malnourished” over successive weighings, whereas in the growth trend approach a gain in weight will always be interpreted as “improving.”

The experience of CRS Ecuador is worth noting, since both approaches were used in its program. Mothers were first introduced to the concept of the interpretation of the colors (i.e., nutritional status classification), which is the policy of the Ministry of Health. Subsequently, CRS introduced the concept of incremental growth and trends to the mothers. CRS concluded that the mothers were able to grasp both concepts without difficulty.

Conclusions and recommendations on growth charts were as follows:

1. It was generally agreed that the use of colors on a growth chart was acceptable and that the mothers should decide which colors are appropriate.
2. Multichannel growth charts with five or fewer channels were acceptable. Charts with more than five channels were deemed confusing and too complicated.
3. There should be a wider dissemination of state-of-the-art growth card technology (e.g., the Bubble Chart), so that new tools can be adequately field-tested and evaluated.
4. GM/P tools and techniques should be used as motivational and educational tools for decision-making with a focus on the mother and counseling provided to her about the health and well-being of her child.

Small Group Session: Scales, Tapes, and Other Measuring Instruments

This session, facilitated by Irwin J. Shorr, generated lively discussion. Nearly 30 state-of-the-art measuring instruments were shown, tested, and discussed in relation to the participants' GM/P programs. The project director of the CARE Bangladesh GM/P program brought examples of bangles already used for arm circumference in the program as well as an insertion arm circumference tape whose use is imminent. A report on a comparison of hanging spring dial scales was distributed as well as fliers on sources of weighing instruments.

There were lengthy discussions concerning the use of arm circumference, particularly by illiterate workers, for monitoring purposes and about the cost and availability of scales.

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The main points and recommendations are summarized as follows:

Best Scales Produced Outside the U.S.

The best hanging spring dial scales for weighing preschool-age children are produced in the U.K., where minimal standards set by the government must be met. The U.S. government, by contrast, places no control over the production of scales by private firms. There have been reports from the field of breakages of U.S.-made hanging spring dial scales. The best stand-on scales are currently produced in West Germany. However, it is difficult to obtain non-U.S.-produced scales for GM/P projects funded by A.I.D., which follows a "buy American" policy. Even the two new scales—a hanging solar-powered scale and a stand-on floor model solar-powered scale—being researched by PATH of Seattle, Washington, may have to be produced outside the U.S. because of their very low target price.

There is also a gap between what the scale companies design and produce and the needs of the field. For example, a new plastic hanging spring dial scale has removable hooks that can easily be lost. Further, because the tare mechanism (which is used to adjust the scale to zero) is hidden in the back of the scale, its use, which is obviously crucial to weighing, may be omitted.

Scale Cost and Availability

Even though hanging spring dial scales are available from in-country UNICEF offices, these scales, like other equipment, are generally available only to local government projects such as those coordinated through ministries of health. Very often, PVO child survival projects do not fall into this category. Although hanging spring dial scales are relatively low-cost (approximately U.S.\$40-\$50 for those produced in the U.K., approximately U.S.\$75 for those produced in the U.S.), this is prohibitively high for some projects.

The Use of Mid-Upper Arm Circumference

The use of mid-upper arm circumference (MUAC) as a monitoring tool for individual children versus a nutritional status assessment tool for groups of children was discussed, as well as whether MUAC could replace weight in GM/P programs. Bangles are used in the CARE Bangladesh program to classify children into two categories, "well-nourished" (>12.5 cm.) and "malnourished" (<12.5 cm.). However, the data collected are cross-sectional nutritional status data and hence are unsuitable for monitoring.

MUAC is probably not useful for monitoring purposes since arm circumference changes slowly between the ages of 1 and 5, as opposed to weight, which continues to increase with age. There is an exception to this: if a child is either experiencing or recovering from an acute bout of malnutrition, both the child's arm circumference and weight will change rapidly.

After recovery, however, the arm circumference will change slowly and will not be useful for monitoring. The experiences of FFP support this hypothesis. FFP has researched the use of MUAC in its programs and has determined that it is useful for screening but not monitoring.

The Nabarro weight-for-height chart is not useful for monitoring for similar reasons. Weight will decrease quickly in malnourished children and will increase quickly in children recovering from malnutrition. The Nabarro chart is useful for detecting sudden weight changes. However, once a child has recovered from malnutrition and attains an adequate weight for his/her height, there is a dramatic decrease in appetite. The child's requirements for growth have been achieved. The child will then stay in the same weight-for-height category and there will be little observable change. The Nabarro chart is thus useful as a screening tool to identify children at greatest risk, but not as a monitoring tool, since it cannot detect changes over time in children recovered from malnutrition or in those who are growing adequately. In addition, despite attempts to adapt it to recumbent length boards, the Nabarro chart remains a vertical instrument that cannot accurately measure recumbent length or the length of children too sick or weak to stand. In Guatemala (CARE), health workers intentionally reported incorrect categorical results so that a child could be misclassified into malnourished categories and so be eligible for food rations.

Weighing Issues

Participants cited cases in which mothers felt that the act of weighing caused their children to become sick and malnourished (CARE, Bangladesh). In Bolivia (FFP), mothers actually weighed their own children successfully with supervision. Concern was expressed over mothers' perceptions of unsanitary weighing pants that accompany hanging spring dial scales and their consequent reluctance to undress their children for weighing (i.e., to remove undergarments). Plans on how to make an infant sling and child pants were distributed. Sometimes, mothers are simply reluctant to undress their children completely. In such cases, a "resident blanket" can be used: the scale is adjusted to zero with the blanket on it and then the child is undressed and wrapped in the blanket before being placed on the scale, thus eliminating the weight of the blanket from the child's recorded weight.

Participants arrived at the following conclusions and recommendations:

1. In light of the inadequacy of U.S.-produced scales, the "buy American" clause should be discussed with appropriate A.I.D. Washington personnel with a view to examining the feasibility of purchasing scales produced outside the United States. Some larger A.I.D.-funded projects have had the clause waived to allow them to purchase specialized items.

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2. There should be more research into simplified scale technology with a view toward in-country production of scales (e.g., bar scales such as those produced in Thailand).
3. More research is needed into the use of arm circumference for monitoring purposes; it is premature to suggest substituting weight with arm circumference. Arm circumference is a useful screening tool, but is less valuable for monitoring. The CARE Bangladesh GM/P project should consider reintroducing weight on a small scale together with the current use of arm circumference with bangles.

Small Group Session: Information Systems and Indicators of Success

The purpose of this session, facilitated by Jim Becht, was to discuss information system issues arising out of the case study presentations and related field experiences. The basic elements of an information system were presented and included Source of Data, Recording of Data (i.e., forms, methods, etc.), Processing (both manual and computer), Storage of Data and Reports, User of Information, and Transfer of Data and Reports.

The participants identified four areas of concerns and unresolved problems that are summarized as follows:

Information Needs

It is difficult to determine essential information needs given the constraints of time, abilities, and resources. The collection of too much data and the lack of data needed for decision-making or for responding to requests for specific information were cited as problems. A question left unresolved was, "What is needed to measure the impact, effectiveness, and success of a GM/P program?"

Information Exchange

There are problems in obtaining and sharing information with counterparts and collaborators. Concerns included the need to identify whether it is appropriate to use incentives to obtain needed information, as well as what methods are effective in obtaining and sharing information.

Impact Analysis

Concerns were expressed regarding the best methods to analyze and interpret information (both quantitative and qualitative) so that GM/P program impact can be assessed. One of the problems raised regarding impact evaluation was the difficulty of measuring GM/P program effects while controlling for effects not due to the program.

Multiple Demands for Data

Requests for data from a variety of potential users creates pressures, frustration, and confusion regarding the determination of the type and presentation of data that would be useful and appropriate for stated purposes.

Participants in the small group session arrived at the following conclusions and recommendations:

1. Each country program should develop a single information system to meet the needs of all users (i.e., the program managers, the donor, the community). Only essential data that can be analyzed and used to answer specific questions should be collected.
2. An efficient and worthwhile information system requires careful planning. The country GM/P program manager should take the lead in this area, prioritizing and balancing information needs and requests and determining what is feasible within the constraints and abilities of the PVO in providing the information.
3. Developing an information system requires tactful negotiations with those requesting information. A GM/P program manager should limit demands without alienating the requestor.
4. Community members should be involved in the various stages of developing an information system. They should have a role in determining not only the types of information to be collected, but also in interpreting the information, e.g., through support groups. There should be rapid feedback to the community where information was collected.
5. A good and reliable information system should be as simple as possible. This will require careful training, particularly of community health workers. Methods should be developed to convey information to illiterate people in the community.

CASE STUDY SUMMARIES

The following are summaries of the complete case studies that were written and presented by each PVO field representative.

SAVE THE CHILDREN FOUNDATION (SCF), THE GAMBIA, MR. EBRIMA JARJUE, COORDINATOR

Promoting Growth Through Nutrition Demonstrations

Background

SCF's Upper Baddibu High Impact Area Project (UBHIP) covers 10 villages (population 9,928) in the western Northbank of The Gambia. The Northbank is one of the least accessible regions of the country and its only government health center is seriously understaffed. Here, SCF collaborates closely with the government to implement an intensive health intervention that has monitored childrens' growth since 1984 and has searched for an appropriate weaning food since 1985. The focus of the GM/P program is to bridge the gap in existing services in order to reduce the rate of malnutrition among children under five and to enhance community participation in GM/P.

Two types of assessments are conducted to document the changing nutritional status of UBHIP children. Biannual nutritional surveillances (once during the rainy season and once during the dry season) are conducted using the Naborro Thinness (weight-for-height) Chart and hanging spring dial scale. Monthly nutritional monitoring is done only for those children who have been identified as malnourished and are being rehabilitated. Rehabilitation is accomplished using a locally-developed solution of sugar, oil, and dried skim milk.

The problems that SCF encountered in implementing this two-pronged GM/P program included the following: 1) Mothers did not understand the purposes or benefits of growth monitoring; 2) Health centers did not have the resources, staff, or space to treat all malnourished children; and 3) Community members were involved passively, if at all, in growth monitoring and were therefore unable to solve their own problems.

Promising Strategy

To address these problems, many innovative strategies have been developed and tested. Four strategies have proven extremely successful:

Community meetings

SCF health team and communities meet to discuss the problem of malnutrition and the inability of district health centers to meet the needs of all chil-

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dren. In these meetings it was agreed that only those children who fail to gain weight after three months of rehabilitation will be referred for clinical care.

Health boards

Women representatives, typically of traditional extended family networks, are elected as health board members. Together with a Health Recorder (trained Public Health Nurse), they conduct the monthly monitoring in small groups at a village "rally post," usually the home of a volunteer. They are also responsible for supervising mothers to monitor the rehabilitation of their malnourished children, an approach that has proven very satisfactory.

Models

Women whose children have been successfully rehabilitated act as motivators for other mothers. To quote Mr. Jarjue: "I am not convinced that educational devices presupposing literacy skills in this population, such as posters, books, and charts, will impart any quick positive impact to address the plight of the victims. The direct involvement of mothers and/or health board members is ... a hands-on strategy of practical education."

Nutrition demonstrations

SCF has worked with communities to develop a local weaning mixture, called Futu Kanya, that was presented at the workshop (Figure 1, SCF). Its attraction to mothers is that it is a dried preparation, requiring no cooking. Mothers and caretakers, who supply all the ingredients, can mix food many times during the day without lighting a fire or worrying about storage of leftovers. SCF trains mothers to prepare Futu Kanya for nutritionally vulnerable children who have not yet received a breastmilk complement by age 6 months. Because the mix is precooked, it allows mothers to feed these children five times per day, while in other parts of the region, even where nutritious weaning foods are available, this recommended frequency of feeding is rarely met due to tight constraints on women's time. A special mix for malnourished children has also been developed. Project children suffering weight loss now may begin rehabilitation with an enriched mix of skim milk (widely available through charity programs), oil, and sugar (Figure 2, SCF).

Positive effects of these innovative strategies on the nutritional and health status of UBHIP children is implied from Nabarro board (weight-for-height) classification data, collected over a two-year period, on project children 0–5 years of age (Figure 3, SCF). Seasonal trends in the distribution of undernutrition are suggested in the graphed data. SCF believes that the overall reduction of malnutrition in the project area has contributed to lower mortality rates. In the area, a documented IMR of 83/1000 was compared to a national documented IMR of 167/1000.

SCF now hopes to work out a scheme to integrate Health Boards fully into the MOH system. The Gambian government has already made plans to train their

workers in the formation and use of Health Boards. Another priority for the project is to identify more locally-available sources to substitute for imported food items that are still used in some weaning recipes.

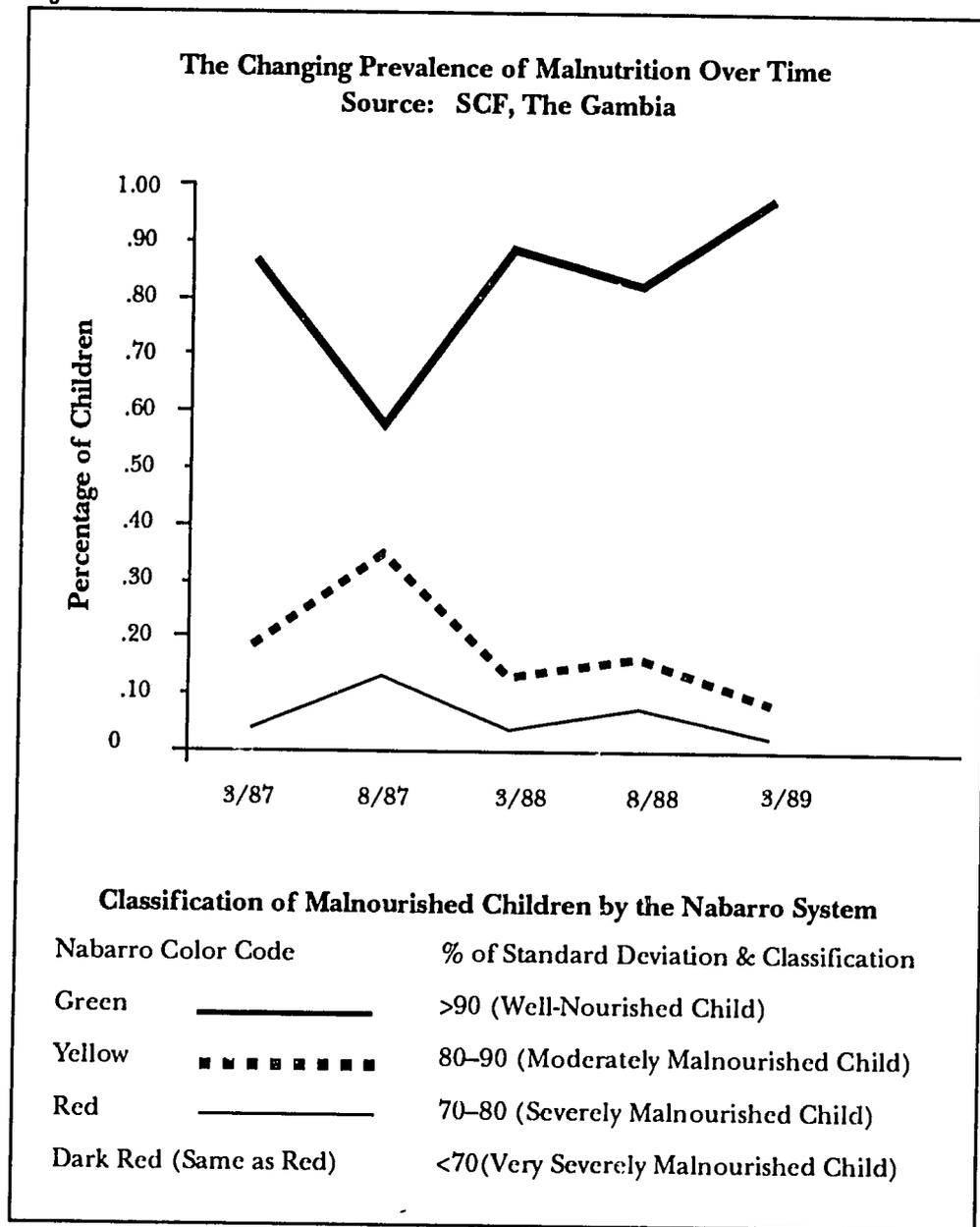
Figure 1

SCF, The Gambia	
FUTU KANYA WEANING MIXTURE	
Ingredient	Quantity
Toasted millet semolina	3 parts
Toasted ground nuts	2 parts
Crude sugar	1 part

Figure 2

SCF, The Gambia					
REHABILITATION FORMULA					
Ingredient	Capacity (Tbbs.)	Weight (gms.)	Protein (gms.)	Energy (Kcal)	Vit. A (I.U.)
Sugar	3	50	0	200	0
Cooking Oil	7	60	0	540	0
Dried Skim Milk	6	80	28.8	280	1,200
TOTAL			28.8	1,020	1,200

Figure 3



SAVE THE CHILDREN FOUNDATION (SCF), DOMINICAN REPUBLIC, LIC. JUANA MARIA MENDEZ,
TECHNICAL RESOURCE PERSON/TRAINER

Background

Sustaining Motivation of Volunteer Health Promoters*

In 1986, with implementation of the National Child Survival Plan, the government of the Dominican Republic expanded the GM/P component of its child survival program to a national level. GM/P, targeting nearly 1 million children under the age of 5 in three regions, receives technical support from SCF. When GM/P was first implemented, motivation among volunteer health promoters (HP) was low and community participation was weak. Possible causes for the situation were proposed: HPs were not involved in the planning of GM/P activities; HPs received no financial incentive; there was no sharing of information among HPs; and, in general, HPs felt a lack of control. Lic. Mendez believes that a major problem was a lack of "dialogo humano" between HPs and program planners.

Promising Strategy

Various strategies have been implemented over the last five years by the CARITAS Dominicana's Applied Nutrition Education Program (ANEP) to improve the quality and value of GM/P. Innovative approaches include: 1) monthly weighings of high-risk children (all children under 2 years old); 2) education of the mother using individual growth charts; 3) community weighings of all under-fives every 6 months using both individual and community growth charts; 4) distribution of posters, bulletins, and photos to promoters to acknowledge the value of the promoter's work (e.g., a poster showing a HP with the text "Do you know if your child is healthy? Ask your promoter.") 5) "mini-workshops" for mothers that focus on the five specific child survival actions and expressed community needs; 6) bimonthly supervisory field visits that stress support and respect over punishment; 7) development of educational materials for counseling sessions (e.g., illustrated counseling cards) and home reminders (e.g., calendars); 8) feedback of information on community growth charts for community decision-making; and 9) verbal motivation to show promoters the social impact of their work (e.g., HPs share achievements and failures in quarterly meetings).

ANEP was evaluated in 1987. A comparison of the level of HP involvement in GM/P before and after the institution of these program changes showed striking results: home visits rose from 50 to 90 percent, HP turnover fell from 33 to 5 percent, frequency of successful weighings rose from 50 to 90 percent, submission of trimestral reports rose from 30 to 95 percent, and submission of monthly reports rose from 10 to 95 percent.

Due to this documented success, SCF and other PVOs, as well as the MOH, have begun to adopt many of the innovative strategies tested in the last five years. GM/P is now the "integrating axis" for all PVO community development programs in the region. The model presented at the workshop is a

*Complete case study in Spanish

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strong demonstration of how GM/P can generate motivation. Motivation occurs in three realms: *the intellectual*, through team participation in planning and developing educational materials; *the social*, a community diagnostic that asks "How can we increase motivation?" and "What do you see as the goal of this program?"; and *the emotional*, through meetings, individual contacts, and access to information. The purpose of nutritional surveillance, as stated in this case study, is largely to promote community education, which in turn leads to community development. "Decentralization—this is the secret of the program...I'll share this with you. Why do all community programs fail? Because they don't take into consideration 'el pueblo' (the community)."

CARE, BANGLADESH, MS. ANNE GODDARD, PROJECT MANAGER

Monitoring With Upper Arm Circumference

Background

The Women's Development Project (WDP) of CARE International began in 1980. Its goals are to introduce improved health and nutrition practices to rural families and to enhance the economic well-being of village women and their children. An income generation component, the Savings and Loan Associations, comprises 40 percent of WDP activities, while the health component, which addresses malnutrition, family planning, weaning foods, ORT, immunization, and Vitamin A, comprises 60 percent. CARE trains women volunteers as health workers and Para Committee Members (PCs) who assume responsibility for project interventions, allowing CARE to withdraw from the village after three years.

Growth monitoring plays a major role in the project's Primary Health Care activities. The goals and objectives that relate to GM/P are to improve the health of 100,000 women and their families and increase the income of 10,700 of the poorest women among them in 428 villages of Dhaka, Tangail, Dinajpur, Gaibandha, and Rajshahi Districts by June 1992. Indicators that will be used to measure achievement of this goal include a decrease in infant and child mortality rates by 25 percent from the national levels (IMR = 117/1000, CMR = 13/1000 in 1986) and a greater decrease in the rates of malnutrition of children whose mothers are members of the Savings and Loan Association in comparison to children whose mothers are not members. An additional indicator is a decrease in the percentage of 1–3-year-old malnourished children to 18 percent by the end of three years.

Interventions to reduce malnutrition include quarterly growth monitoring sessions, follow-up of at-risk children, nutrition education, promotion of kitchen gardens, and poultry rearing. Severely malnourished children are referred to the nearest government health facility. Mild and moderately malnourished children are enrolled for a follow-up visit at least once a month by a PC member. Mothers of malnourished children are given priority for inclusion in the village-based Savings and Loan Associations.

From 1986 to 1987, children were weighed during the growth monitoring sessions. Several problems were encountered, however. Illiterate women found the weighing scales (Kumundini Bar Scale) difficult to manage and read and also felt that the actual weighing of their children caused them to lose weight and become sick. Also, the scales were expensive (\$20 each) and often broke within a short time or could not be calibrated properly.

Promising Strategy

Because of the problems associated with taking weight, the WDP replaced weight with mid-upper arm circumference (MUAC) using a bangle (a 4 cm. diameter, 12.5 cm. circumference, bracelet) made of brass or plastic. MUAC is taken on children 1–3 years old. CARE recognizes that arm circumference, particularly using a bangle to classify children either above or below a cut-off point (i.e., 12.5 cm.), is normally used as a screening tool, but decided to use it for monitoring purposes. Culturally, bangles are very acceptable since they are worn by women throughout the country. Also, use of a bangle is a more sustainable tool since it is very low-cost and easy to use, even for illiterate workers, and has a greater likelihood of being used after CARE withdraws from the project area.

Results using the bangle for measuring MUAC showed that there was a decrease in the number of children 1–3 years old in the project villages with low arm circumference. In a group of 52 villages, the low arm circumference rate decreased from 8 percent in June 1987 to 6.8 percent in March 1989. In another group of 89 villages, the rate decreased from 9.8 percent in June 1988 to 6 percent in March 1989. CARE considered, then discarded, the idea of introducing a slotted-insertion arm circumference tape into their GM/P activity. The tape's ability to measure more accurately than the bangle is outweighed by the increased difficulty illiterate rural women would experience in sustaining the GM/P activity. As an alternative, CARE has decided to continue training health workers to use MUAC as well as to monitor weight in a 20 percent sample of children and to use the latter data for monitoring and evaluation purposes.

It is not known if growth monitoring sessions occur regularly in villages where CARE support has ended ("graduated villages"); however, it is less likely that there would have been monitoring had weight not been replaced by arm circumference. WDP has found MUAC to be a sustainable methodology for use by illiterate village women.

CARE, GUATEMALA, MS. BARBARA JACKSON, PROJECT MANAGER

Training and Supervising Government Health Workers

Background

The Maternal Child Health (MCH) Program of CARE-Guatemala works with the Ministry of Health (MOH) to distribute PL 480 commodities to 280,000 participants (all under-fives with regular attendance at MCH clinics) at 650 government health centers and posts throughout the country. MCH program

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components include: nutritional risk assessment to target children for inclusion into the PL 480 program, growth monitoring, and provision of primary health care services such as immunizations, diarrheal treatment, and referral for pre- and post-natal care. MOH personnel are responsible for these activities.

From 1986 to 1988, after 25 years of involvement in the logistical administration of the PL 480 program, CARE received Title II Enhancement monies to establish a monitoring and supervision system for the PL 480 program. Through its activities under the grant, CARE discovered two outstanding problems with the existing program: inappropriate selection of participants and the use of inappropriate techniques to track participants' nutritional status. Children are screened for entry into the PL 480 program using the Nabarro Board, which identifies acute malnutrition by measuring weight-for-height. This MOH-established screening strategy has often been confused at the local and regional level with a system of growth monitoring. As a result, there is wide discontent with its application; health personnel cannot reconcile the low levels of malnutrition identified by the Board with what they see in reality as very high levels of chronic malnutrition. Although the MOH implemented use of the Nabarro Board in virtually all of its health sites country-wide, little training of local-level MOH personnel took place. As a result, these personnel consistently misuse the chart. For example, many health workers intentionally lower the Board below the 40-cm. wall placement level so that a greater number of the children measured fall in yellow or red, thus using the Board as a growth monitoring gauge, a purpose for which it is not suited. Furthermore, selection of children to receive commodities has traditionally favored those who live nearest to the health center and request entrance into the program rather than those most at risk. Ms. Jackson of CARE proposes that the Nabarro Board can be used as a tool to accurately assess current nutritional risk of a child and can serve as a readily intelligible basis for selecting beneficiaries and geographically targeting nutritional supplementation programs. However, it can only function as such if MOH personnel receive adequate training and can use the Board as it was intended to be used. According to Ms. Jackson, however, the MOH does not have the resources to provide this training and supervision.

Promising Strategy

For the past year and a half, CARE-MCH field staff have tested a strategy to help resolve these problems by training and orienting MOH personnel in the *appropriate* use of the Nabarro Board and *appropriate* methods of GM/P. Each CARE supervisor visits twenty health sites per month and also meets with the departmental and district level medical chiefs in the area of coverage. All health centers in the MCH program receive a full supervision twice a year. During site visits, CARE supervisors are responsible for noting the presence of a Nabarro Board, reviewing the methods of participant selection and keeping records of participants' nutritional status. The CARE team is trained in the

appropriate use of the Nabarro system and in growth monitoring requirements and issues. They also attend workshops on educational techniques and human relations skills to enhance their ability to transfer knowledge to MOH food program administrators.

Two recent evaluations noted the positive response of MOH personnel to CARE Guatemala's new supervisory/educational strategy in GM/P. Ms. Jackson pointed out that MOH local-, regional-, and national-level personnel, though regarding CARE as a "policeman" in regard to community management, generally perceive its technical advisory role favorably. Improved targeting has not yet been documented, but the basis for establishing a targeting mechanism is in place and is being implemented. Ms. Jackson observed that MOH personnel do respond positively to CARE supervision, which may be the only support that they receive, a factor that is crucial to worker morale and incentive. CARE is in the process of redefining its role with the MOH by improving communication and by sharing decision-making at the central and regional levels.

FREEDOM FROM HUNGER (FFH), BOLIVIA, SRA. MARTA CLAVIJO, PROGRAM DIRECTOR

Tracking Hidden Malnutrition*

Background

"El Programa de Autogestión Comunitaria" (Program of Community Self-Reliance) serves 12,000 people of Aymara origin in two northern provinces of the Bolivian altiplano. The program was launched by FFH in 1986 to reduce the high rates of malnutrition (47% of under-fives in 1986) and infant mortality (167/1000 in 1981) on the altiplano. The two major GM/P activities are periodic weaning food demonstrations and bimonthly weighing of all children under five, conducted jointly by FFH personnel and local volunteer health promoters.

Local participation on three levels (the promoter, the mother, and the community) is the major strategy used to achieve GM/P success. The participatory process has come slowly to the project area, but "(the process) must occur gradually through concrete channels established by the community to allow all persons to participate." The role of the project is two-fold: to strengthen community channels (e.g., women's groups, adolescent groups, income-generation projects), and to encourage decision-making through feedback of child survival data to the community.

Promising Strategy

Strategies to track hidden malnutrition at both the individual and community levels have been tested. In order to select individual malnourished children for follow-up home visits, promoters have been trained to use an FFH-designed matrix. The matrix is based on the Bolivian system, in which colored yarn is attached to growth charts to show how a child's weight has changed over a given interval: green indicates weight gain; yellow, no weight gain or loss; and red, weight loss. The term "peligro disfrazado" (disguised danger) has been coined to describe those "green" children whose

*Complete case study in Spanish

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weight gain has been inadequate. Promoters track these children for follow-up even though their weight at a single weighing is within the Road to Health chart. Forty-six percent of study children fell into this newly created risk category.

On the community level, FFH has developed a system to assess the nutritional status of all program children. The data are fed back to the community twice a year in group meetings that promoters, mothers, and all interested members are encouraged to attend. The purpose of these meetings is to facilitate two-way information exchange. The data are also used by FFH for program management and evaluation. The case study presented data collected in 1987 and 1988 in one program community (Figueroa 4, FFH). The data were drawn from analyses of all growth charts of children who had enrolled in the program before age six months and who had been weighed at least three times. Several indicators were developed to help analyze the data. For example, a preventative index was developed to show the percentage of children within the Road to Health, and a recuperative index reports the percent of children who have moved from below to within the Road to Health. Substantial improvement was documented by comparing 1987 and 1988 indicators. In 1988 nearly two-thirds of the 510 children entering the program were less than 6 months old, nearly 60 percent of the 510 showed adequate weight gain, and over half of the latter were included in the recuperation category. Overall, growth retardation was delayed by seven months.

A project evaluation took place to determine the effect that analysis and feedback of these indicators had on the success of the project. Interviews with mothers, promoters, and community leaders were completed in April 1989 in preparation of this case study. They revealed a substantial improvement in the ability of promoters to understand the meaning of the growth chart, to convey that meaning to mothers, and to select children for follow-up home visits based on growth. Furthermore, all of the study communities had begun collection and biannual feedback of child nutritional/survival information to community members.

Figure 4

NUTRITION PROGRAM-MONITORING INDICATORS Freedom From Hunger Manko Kapac, Bolivia, 1987-1988 (N=510)		
Indicators	1987	1988
1. AGE AT ENTRY		
Mean age	2 mo.	2 mo.
Percent under 6 months of age	65%	43%
2. FREQUENCY OF GM/P SESSIONS		
Mean interval between sessions	2.3 mo.	2.5 mo.
3. MALNUTRITION AT FIRST SESSION		
<80% (Wt/Age) upon entry into program	8.7%	8.0%
4. GROWTH PATTERN		
Adequate weight increment	35.4%	59.0%
Inadequate weight increment	56.9%	52.0%
5. NUTRITIONAL STATUS INDICES		
Preventative (began and remained normal)	65.4%	71.0%
Recuperative (improved from malnourished to normal)	38.5%	54.0%
6. AGE AT GROWTH RETARDATION		
Mean age began retardation	6 mo.	6 mo.
Mean age fell below 80% median	9 mo.	16 mo.

Background

Refining Community Mobilization Strategies

Since 1987, FFH has collaborated with Ghana's Ministry of Health (MOH) to bring its Applied Nutrition Program (ANP) to the agricultural district of Kintampo. Population in the 12 targeted Kintampo communities totals 32,000 and is growing at a rate of 6.1 percent due to migration. Prior to ANP, the MOH operated GM/P sessions irregularly out of the district's only health center and four outreach clinics. FFH currently supervises and trains community volunteers (CV) but these responsibilities will be ultimately assumed by MOH field staff. The program, which currently includes GM/P, immunization, ORT, family planning, sanitation, and construction activities, is expanding and is slated to incorporate adult literacy, income generation for women, gardening, and livestock production activities. The role of the GM/P component of ANP is to serve as the "main entry point" for community members to participate in the program through contact with chiefs/elders, revolutionary groups, and trained volunteers.

The core of the GM/P component is a monthly weighing session held in each Kintampo target community for children 0-59 months. Community Mobilization Teams (CMTs), composed of village volunteers including chiefs, elders, members of Town Development Committees (TDC) and Committees for Defense of the Revolution (CDR), community clinic attendants, and health inspectors, collaborate with the District Health Management Team/Freedom from Hunger Foundation (DHMT/FFHF) field team to increase participation at the GM/P sessions. Together, they visit communities the day before each session and make home visits to "defaulters" (mothers who missed the last weighing). CMTs utilize traditional "gong-gong beaters" in each community who lead them from house to house to alert everyone of the weighing event. Children's cards are collected at this time and mothers must attend the session to retrieve them.

In October 1987, the project began to document monthly attendance at GM/P sessions in all communities within five project zones. FFH believes that the turnout for sessions was low in most communities primarily for the following reasons: 1) gong-gong beaters did not cover the entire area due to their age and tribal/familial favoritism; 2) in some communities, food supplementation was no longer available to attract participants; 3) families in remote farm settlements could not be reached by CMTs; 4) funerals and annual festivals conflicted with weighing events; 5) drop-out rates of CVs in some areas were high; and 6) ethnic group leaders did not cooperate in some communities.

Promising Strategies

Poor attendance prompted FFH and MOH staff to study factors in community mobilization and implement new mobilization strategies. One change

that has been implemented is the collection and circulation of monthly reports containing GM/P session data. The DHMT/FFHF team collects and organizes the GM/P session data. Monthly reports are written by the Program Coordinator and the Program Director. These are circulated to the program committee (which includes health and political leaders in the district), the field staff, and regional and national collaborators such as the MOH. Monthly reports are also distributed to the communities, providing feedback and informing each community of its level of participation relative to the other communities. Discussion and decision-making prompted by the reports allow communities to improve their position on the "competition list."

Another change made to improve attendance at GM/P sessions was to formalize the CMT schedule and field team supervisory visits the day before each session. In the morning, gong-gong beaters travel at dawn and make home visits throughout the day to encourage attendance. At night, the field team and CMTs list the names of "stubborn" defaulters, which are given to local authorities. TDCs and CDRs, partly to improve the community's standing on the participation list, have imposed fines on people who do not participate. For example, last quarter, the TDCs and CDRs in Anyima fined non-participants 400.00 cedis (about US\$1.50), or four head-pan loads of sand, for the construction of community projects on non-participants.

In agricultural locales like the Kintampo district of Ghana, participation in GM/P sessions varies highly in accordance with farming seasons and practices. Using monthly attendance data, the program has examined the seasonal and community factors that account for this variability. The following conclusions were drawn in regard to factors that promote or hinder GM/P success in a community: 1) Community mobilization is maximized when responsibility for it is shared by community volunteers and field staff; 2) Feedback reports to community boosts competitive spirit; 3) Women's groups encourage and support community competition; 4) A homogenous population makes mobilization simple and effective; 5) Imposition of fines on defaulters improves attendance levels; 6) Farm settlements draw families away from communities and from GM/P sessions during labor-intensive seasons; 7) Some community groups refuse to participate if no food supplements are offered (in these cases intensive community education is needed); and 8) Parents duly report to weighing sessions if their child's growth charts have been collected the night before.

In response to the factors held largely accountable for poor attendance in some areas, specific adaptations of the GM/P program have been made. The general strategy of these adaptations has been to promote competition among the communities by publicizing each community's attendance rate and by providing recognition (certificates) to those communities with the highest attendance rates. The CMTs have proven a useful adaptation in some multi-tribal communities. For example, in Jema, two distinct ethnic groups, the

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Brongs and members of northern tribes, co-exist. Lack of participation on the part of the members of the northern tribes has been dealt with by including members of those tribes in the community mobilization teams (CMTs) and by setting up a GM/P station in the northern chief's compound. Similar strategies have been used in other communities.

The program's long-term plan is to transfer responsibility for activities to MOH and DHMT personnel throughout Brong Ahafo Region. Within Kintampo District, the DHMT/FFHF field team will train health post staffs to carry out the intensive community mobilization (including the training of community volunteers to carry out GM/P activities), education, and follow-up, which the field team is currently implementing. Eventually, the DHMT in the other 12 Districts of Brong Ahafo region will be trained by the DHMT/FFH team to train health post personnel.

FOSTER PARENTS PLAN (PLAN), BOLIVIA, MR. ZACHARY MACY, DIRECTOR

Working with Madres Vigilantes

Background

The population that PLAN works with in Sucre in southern Bolivia is primarily rural (67 percent). Most of this population (about 38,600) is involved in subsistence farming. The infant mortality rate is reported at over 200/1000, higher than the reported national average of 167/1000. Although GM/P is one of several official programs of the MOH, it has not been effectively implemented in the area except to a limited extent by a few other PVOs.

PLAN/Sucre implemented a nutritional status survey in the project area and reported low weight-for-age among 44 percent of the sample children aged 6–24 months. Further analysis of the PLAN/Sucre target population suggested that insufficient weight gain during pregnancy, inadequate breastfeeding practices, insufficient complementary feeding practices, and infections (diarrheal and respiratory) are strongly associated with child malnutrition. Findings indicate a need for effective education and primary health care services.

PLAN/Sucre will focus their efforts on effective education, integrating GM/P with other child survival interventions. GM/P will be implemented in 19 rural communities the first year (July 1989 to June 1990), targeting children 0–24 months and pregnant women. There will be a strong emphasis on participation by the community, including community leaders (CL), Mothers' Clubs (MC), Community Health Committees (CHC), community health workers (CHW) and the newly-formed "Madres Vigilantes" (MVs), ("Watchful Mothers" or "Guardian Mothers"), women from the community responsible for managing GM/P.

Promising Strategy

The MVs will be a vital component in the implementation of GM/P. Initially, they will receive one week of training in the community where they will work, plus additional days of training over several months as they serve as assistants to PLAN or MOH rural health professionals at the bi-monthly GM/P weighing sessions. The MVs will learn management of the weighing sessions, operation of the scale, record keeping, interpretation of weight, and message delivery. These activities will be transferred to the MVs by PLAN or MOH field staff according to the absorptive capabilities of the MVs, until all that is required is simple supervision from the health professional (who will continue to provide follow-up assistance in the event that severe malnutrition, or signs thereof, are exhibited).

Initial efforts using this strategy have been very promising. The MVs, who are volunteers from their community and have community backing, are enthusiastic about their leadership role in the community. Participating mothers also seem encouraged when they see their friends and neighbors learning to manage the program.

It is expected that the introduction of GM/P will tie all the child survival interventions together, e.g., maternal health, EPI, ORT, and ARI management, plus GM/P. Beginning with the topic of maternal health, pregnant women will be educated and encouraged to give better attention to themselves and the unborn. The newborn will be immediately targeted for vaccinations and the mother will be encouraged to participate in GM/P. As part of the GM/P activities, education concerning the treatment of diarrhea and dehydration with ORT will be strongly emphasized, drawing attention to the link between nutritional status and diarrhea. The same will occur for respiratory infection.

FOSTER PARENTS PLAN (PLAN), HAITI, LIC. M.J. CASTERA, NUTRITIONIST

Using Survey Data for GM/P Planning**Background**

The PLAN Child Survival project covers the Jacmel area in southeastern Haiti. The project is preventative in nature, emphasizing health education, GM/P, ORT, breastfeeding, immunization, vitamin A supplementation, and family planning as well as construction of potable water systems and latrines. PLAN has an intensive outreach program in which each of 58 promoters works with approximately 150–200 families. In addition, there are 47 preschool Monitors who have received health training.

Promising Strategy

PLAN decided that a population-based survey was the most appropriate method to obtain necessary information for their Child Survival project. The primary purpose of the survey was to obtain information on women 15–49 years of age and mothers/guardians of children 0–4 years of age regarding mothers' knowledge of child survival interventions and the availability, accessibility, and utilization of the interventions enumerated above. Weight and arm

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circumference were taken on preschool-age children selected in the sample, which was based on the 1982 National Nutrition Survey. The prevalence of diarrhea among these children was also assessed. The U.S. National Center for Health Statistics growth references, also used by WHO, were used for anthropometric data comparisons. Also, the Gomez Classification was used to classify children 0–59 months of age and to further disaggregate children 12–23 months of age.

On the basis of weight-for-age, 2.1 percent of the children in the 0–59 age group were classified as severely malnourished (<60 percent weight-for-age) and 14.3 percent were classified as low weight-for-age (i.e., –2 Standard Deviations below reference median weight-for-age). On the basis of arm circumference and using 14 cm. as the cutoff point, 74.1 percent were classified as normal, 23.0 percent as malnourished (i.e., 12.5–14 cm.), and 2.9 percent as severely malnourished (i.e., <12.5 cm.).

Only 19 percent of the mothers/guardians were able to correctly explain the meaning of the growth curve on the Road to Health Chart. Almost 74 percent of the mothers stated that children should be weighed every month, while 3.8 percent felt that every two months was sufficient. In a survey of PLAN mothers and non-PLAN mothers, a greater proportion of PLAN mothers stated that a child should be weighed every month. Nearly 98 percent of mothers/guardians were able to name a site where they could take their children for growth monitoring. Approximately 87.2 percent of mothers stated that services are either near or not very far; 27.3 percent of all children 0–59 months had at least one recorded weight. Several other associations between survey variables were made.

Results of the survey were used to evaluate the PLAN project at the local level, provide information for project policy and program decisions, respond to requirements of PLAN International, and meet U.S.A.I.D. Child Survival reporting criteria. Rates of malnutrition were used to target health education and services to at-risk groups. In summary, the PLAN survey results showed that:

- Of those children monitored, malnourished children are weighed as frequently as but not more than children who are not malnourished.
- Few mothers understand the Road to Health Card.
- The majority of mothers think the growth monitoring centers are either very near or not far from them.
- Mothers do not bring their children for growth monitoring.

The data show that mothers think services are available and accessible, identify target areas for health education programs, and identify target ages for preventing malnutrition. These findings suggest the need to develop a better case-finding system to identify and refer the malnourished child for care.

Further investigation, perhaps through focus groups, is needed to answer the question as to why mothers do not use PLAN services.

In conclusion, a well-planned survey can provide valuable information for policy decisions and program planning. PLAN can now design a meaningful, focused, and targeted GM/P program using the survey results.

CATHOLIC RELIEF SERVICES (CRS), ECUADOR, LIC. SUSANA LARREA, PROJECT DIRECTOR

Background

Using the Growth Chart for Participatory Learning*

GM/P is one component of the CRS child survival program, which also includes diarrheal disease control and income-generation components. The program, which has functioned in three provinces of Ecuador since 1984, covers over 70 communities, each with approximately 1,000 mothers and 2,000 children. In each community, one "Madre nucleo" (core mother) and 5 support mothers are chosen to detect growth-faltering children and refer them to two trained health promoters (HPs). The GM/P program is built on two primary strategies: 1) active, critical, voluntary participation of mothers; and 2) ongoing, reciprocal exchanges between mothers and field technical staff. Within the upcoming final two years of CRS involvement, the program will strive to achieve lasting changes in regard to child care practices, mothers' demand for GM/P activities, and the exchange of information within communities on the nutritional status of their children.

Promising Strategy

Interaction of mothers and promoters in group meetings is the heart of the program. A series of community-instigated innovations has gradually emerged from these meetings and will allow the program to continue after CRS departs. The groundwork for the program, which began among mothers attending Maternal and Child Health Centers (CMI) for PL 480 foods, has been built up slowly. Each month, mothers and promoters meet to jointly evaluate and discuss the nutritional status of individual children as well as the total number of the community's children in each nutritional category. At these participatory sessions, the link between nutrition and growth is reinforced in the slogan "good food = good health." Mothers help to weigh children, record weight, evaluate nutritional status, identify causes of malnutrition, and decide what action to take. The participatory nature of these meetings leads to community examination of other child survival issues such as disease and diarrhea and helps promoters target children for home visits based on the history of growth faltering and diarrhea.

Since the program's inception, the growth chart has undergone many innovative revisions to maximize its usefulness and value in the community. The growth chart is the fundamental tool for assessing the nutritional status of individuals and of the community at large; it is the basis for joint decision-making by mothers and promoters and motivates mothers to make changes in preventative health practices.

*Complete case study in Spanish

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Based on the results of an MOH study, the conventional order of colors in the Ecuadorean growth chart was inverted to reflect local color associations: white = dead, green = sickly, yellow = pale, and pink = healthy. In GM/P group sessions, brainstorming by mothers led to the development of a large community version of the Ecuadorean chart, identical to the individual growth chart. To motivate and encourage those mothers whose children maintain their weight in one color segment of the curve, the group decided to categorize children according to *both* current weight and weight change since the previous month. In this way, mothers can look at the slope of the line connecting two points to judge a child's nutritional progress.

Mothers participate in recording weights on the curve, and feel a greater interest and commitment to the growth of their children because they understand the meaning of the card and because they keep their own copy of it with them at home between community sessions. In a survey conducted for this case study, CRS compared the knowledge of 66 project mothers with that of 66 non-project mothers in the same community to evaluate understanding of the revised growth chart. Results suggested that project women have a much greater understanding of the link between growth and health of a child and can use the curve to judge how well a child is growing. For example, 85–100 percent of project mothers as compared with only 24–30 percent of non-project mothers knew the meaning of the three lines on the growth chart.

CATHOLIC RELIEF SERVICES (CRS), INDIA, MS. RAJALAKSHMI NAIR, NUTRITIONIST

Focusing on Maternal Nutrition

Background

CRS-assisted Maternal and Child Health (MCH) programs are implemented in four regions of India: Bombay, Calcutta, Madras, and Cochin. The programs serve populations outside of the one-third of India's 5,000 geographic blocks in which the government-sponsored Integrated Child Development Scheme (ICDS) currently serves India's poor. CRS-assisted MCH programs concentrate on the rural poor, with priority given to women of child-bearing age, especially adolescent girls, as well as to children up to 60 months of age, with special emphasis on 0–36-month-old children. Landless and marginal farmers are also program priorities. In CRS-assisted MCH programs, GM/P is considered the focal point of health promotion activities.

Despite its intended central role in mobilizing MCH efforts, GM/P has faced several difficulties. Growth monitoring is limited to weighing and plotting and basic interpretation of the data. Little counseling takes place since there is a lack of understanding of GM/P and a lack of trained local health workers to implement the program. Local health workers lack motivation, receive low pay, and are not recognized for their work. There is a lack of skill-oriented training. Effective follow-up and supervision by health center staff are also lacking. There is also a serious lack of durable scales. Geographically, effec-

tive management of the program is difficult, since the distances between project areas are vast.

An additional major problem is that the mothers who are targeted for GM/P participation belong to very low socio-economic groups. They often work during the day and so are not available for involvement in GM/P activities. There is also no community involvement.

Promising Strategy

Bearing these obstacles in mind, CRS has proposed an alternative strategy for implementing GM/P. This strategy places a heavy emphasis on women of child-bearing age, particularly those who are malnourished or have small body size (i.e., those less than 145 cm. tall and less than 40 kg. in weight) and adolescent girls who are experiencing their first pregnancy. Therefore, CRS proposes to address the needs of the mothers, including young girls reaching puberty, as a primary strategy to reduce low birth weight babies. These women will be weighed on a quarterly basis. A food supplement will be provided to young girls as part of this effort to raise their level of health and well-being. Children 0–12 months will be another targeted group, but first priority will be given to the women.

The GM/P program will address the problem of motivation of health workers by providing incentives, recognition of their work, and skill-oriented training. The program will also seek to involve the community and will be integrated with nutrition and health education, health checkups for mothers and their children, immunizations, and income generation projects. Therefore, this will be an integrated approach in a supportive environment with a monitoring system. There are also plans to provide GM/P training in the "Drahini Program," in which illiterate young girls live with and are educated by missionaries.

PEACE CORPS, DOMINICAN REPUBLIC, MR. MIGUEL LEON, ASSOCIATE DIRECTOR

Combining Home Visits with Community Projects

Background

As part of a Peace Corps GM/P initiative begun early in 1988, PC volunteers working in rural areas of the Dominican Republic have begun monitoring the growth of malnourished children. Currently, there is a government project to weigh all under-fives twice yearly in the Peace Corps' rural target area. The goal of the PC program is to complement this nutritional surveillance activity with ongoing growth monitoring activities conducted by PCVs in rural areas. The government project's coverage has been estimated at 35 percent.

There are two important assumptions underlying the Peace Corps program: 1) that incoming volunteers can be trained to be both technically effective and socioculturally sensitive; and 2) that there are sufficient food resources at the home level to improve the diet of malnourished children.

Promising Strategy

GROWTH MONITORING AND PROMOTION

The Peace Corps has set its program goals for incoming volunteers: in a period of 18 months, each volunteer will improve the nutritional status of undernourished children in 30 rural families. In order to achieve this goal, each PCV is given the following responsibilities: 1) monitor the growth of undernourished children monthly for 18 months during home visits; 2) train mothers in nutritional rehabilitation over the same time period, and 3) conduct a community project related to the causes of malnutrition. In the three months prior to initiating their GM/P responsibilities, every PCV is expected to visit 150 homes, weigh children 0-5 years, and use a questionnaire to collect basic health information. Afterward, the information is to be discussed with the community and an action plan devised. In all cases, the strategy combines PCV home visits with community projects.

A preliminary program evaluation was conducted for this case study in order to offer some quantitative perspective on what seems to be a promising strategy for PCV involvement in GM/P. The evaluation documented weight gain of individual malnourished children over time. Results suggest that the monthly interaction of PCVs with program mothers improves the growth of malnourished children. Mr. Leon interviewed volunteers to obtain their assessment of the program's apparently positive effect on the weight of malnourished children. PCVs suggest that the effect may be due to heightened awareness and concern among mothers that their children's weight is low, to the greater amounts of food being given to children, to improvement in sanitary practices, and to the participation in community projects. The implications are that home visits effectively expose program implementors to real community needs and that community projects enhance the impact of monthly visits.

LESSONS LEARNED/IMPLICATIONS FOR THE PVOs

The PVOs met separately to discuss how the lessons learned from the workshop might apply to their own GM/P programs. Each PVO later reported back to the group on their conclusions. The following presents highlights from these presentations.

CARE

CARE participants reported the following:

1. CARE will focus more on promotion and counseling in their GM/P programs with special emphasis on supporting the mother and encouraging her to participate.
2. The workshop confirmed CARE's current orientation and emphasis on maternal nutrition during pregnancy and lactation and on the need to develop local weaning foods.
3. CARE will explore new methods in their GM/P programs, such as the effective use of arm circumference. In developing GM/P programs, they will be more alert to ways in which the community can participate in growth monitoring.
4. Since many of CARE's GM/P projects are integrated with diarrheal disease control efforts, more attention will be paid to the problem of catch-up growth after episodes of illness.
5. CARE is reviewing the methods used to communicate with the community and to introduce new child feeding habits. The feeling is these methods should be as flexible as possible. Different methods are appropriate at different times during the project cycle. Occasionally, "canned" messages (e.g., recipe cards, etc.) are appropriate.

CATHOLIC RELIEF SERVICES (CRS)

The CRS participants listed the following as the most important lessons learned for their GM/P program:

1. Good programs do not need food as an incentive. Mothers already have other incentives. If food is included in a program, it should be targeted to nutritionally "at risk" children.

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2. Programs are generally broad rather than specifically focused and should be tailored to local needs and conditions.
3. All programs should have mid-term progress evaluations (after 6–12 months in operation).
4. Programs should promote income-generation activities.
5. There must be a greater effort to provide job satisfaction and security to GM/P workers. Too many capable and competent people are lost, to the detriment of program continuity and staff morale.
6. There should be more in-country linkages that identify local human and institutional resources for GM/P.
7. Information systems should use simple indicators and collect information that will prove useful first and foremost for community members, and then to program managers and decision-makers at all levels. Reporting should be simple and streamlined.
8. There should be clear criteria and guidelines for health.
9. The role played by the central office vis-à-vis the sub-regional or country office should be clearly described.
10. Communication with regions should be improved through improved reporting.
11. Projects should be extended in length so that they can contribute to local institution building.

The following “action plans” were proposed for two of the CRS country projects:

India

- Reduce programs to those that are more focused geographically and programmatically.
- Adjust targeting of the program and provide incentives.
- Focus on counseling and behavioral change.
- Concentrate on and enhance the adolescent program.
- Develop an information system that can be computerized.

Ecuador

- Increase “non-food” recipients.
- Improve computerization of the information system.

FOSTER PARENTS PLAN INTERNATIONAL (FPP)

Lessons learned for application at several levels of FPP included the following:

1. The Policy Level
 - Reinforce FPP perspective to allocate sufficient resources for implementing comprehensive programs.
 - GM/P is a consequence of a process, not a point of entry for health interventions.
 - Strive for uniformity via organizational memory.
2. The Technical Level
 - Review complexity of programs and simplify.
 - Provide technical information and assistance for information systems and design of programs.
 - Focus mainly on animation and sensitization.
3. The Program Level
 - GM/P and Child Survival Projects should be considered components of integrated programs, not as isolated projects.
 - FPP recognizes GM/P as a human and intense activity; there is a need for qualified people.
 - There should be a sharing of experiences among PVOs.

Specific recommendations for one country program were shared:

Haiti (Jacmel)

- Collaborate with MOH to refocus current national GM/P program.
- Integrate GM/P activities with current PLAN/Jacmel health and development project.
- Collaborate with local MOH to improve GM/P activities in the area.

FREEDOM FROM HUNGER (FFH)

Conclusions drawn by FFH participants at the workshop included:

- PVOs have common program designs but strategies and solutions for implementation seem to be different.
- The workshop allowed PVOs to discuss common problems and tested solutions that could be considered for application by other PVOs.
- The workshop has exposed FFH to a wider perspective in GM/P.

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THE PEACE CORPS

Several lines of action for the Peace Corps were identified:

- GM/P is never an effective entry point to a community. Therefore, the Peace Corps has to search for appropriate ways to start GM/P activities in new communities.
- There is a need to think about the possibility of using tools other than the growth chart for monitoring.
- The Peace Corps will review and devise appropriate information systems for different levels.

SAVE THE CHILDREN (SCF)

Lessons learned for application at the SCF headquarters level were as follow:

- Annually provide all field officers with updated information on anthropometric methods and instruments. This information will cover instrument standardizations, cut-off points, utilization of instruments for screening, the use of weight-for-height as a survey tool, the best way to measure height, and the use and misuse of the Nabarro Chart.
- Further develop and disseminate a written protocol for GM/P (including use of decision tree).
- Renew determination to develop and utilize information systems based on needs of the family and community; document feedback and utilization methods.

Lessons learned for general field applications include:

- Clarify and standardize the best method for weighing, measuring, and recording the growth of the individual child.
- Share experiences with other PVOs in country.
- Develop a plan for national and local GM/P boards that involves local leaders.

The Gambia

- Share information with colleagues in The Gambia (specifically with TANGO, the Association of NGOs, and the Nutrition Unit of MOH).
- Conduct a GM/P workshop in The Gambia involving various organizations such as GAFNA (The Gambia Food and Nutrition Association) and The British Medical Research Council.
- Determine which home-based weight-for-age record is best.

CONCLUSIONS AND RECOMMENDATIONS

GENERAL CONCLUSIONS AND RECOMMENDATIONS FOR PVO PROGRAMS

Preventative and developmental approaches to GM/P

There has been a shift in the design and planning of GM/P from a curative approach focused on detecting the malnourished child to a preventative approach focused on identifying the growth-faltering child and improving the family's child care practices. The recent orientation has primarily been a response to the growing recognition that growth retardation is not a disease but a social problem with many underlying causes that surface in the diet. For example, anorexia brought on by diarrhea or respiratory illness is perhaps the greatest immediate cause of growth retardation; it will only be prevented by improving the knowledge, resources, and behaviors needed to lower morbidity. The workshop case studies all emphasized the need for a holistic approach to prevention in community-oriented programs. GM/P should never stand alone and should always be integrated with other project components such as maternal literacy, income generation, and child survival.

Phasing in of GM/P activities

GM/P is not a good entry point for working with a community that has had no previous primary health care or child survival programs. This point was made very clear in the small group discussion on "Community Involvement/Feedback," where several examples were given. According to workshop participants, community leaders in "new" PVO communities rarely request GM/P; when asked what they need or want from the PVO program, they often request a concrete addition like a church, a clinic, or product-oriented "curative" services. However, once a PVO has established itself in a community and has developed a rapport with it, the subject of GM/P can be broached, usually in reference to preventing infant and child deaths or as a component of an existing health/child survival program. It is at this stage that GM/P can serve as an entry point to other curative and preventative services.

Community participation in planning GM/P

GM/P cannot be imposed on the community. Rather, PVOs must plan the program together with the community, beginning with an assessment of the community's needs. Problem identification, strategic options, information needs, message development—all must be discussed and "negotiated" with the community. Communities, in short, must be integrally involved in planning and implementing their own GM/P programs. The term "community involvement" should be replaced by "community ownership," which more accurately conveys the community's central role.

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Careful assessment and planning

The workshop case studies emphasized the need for careful assessment and planning before initiating GM/P programs. Careful study of existing program resources is needed to determine how best to build in all of the program elements that experience has shown to be necessary. The many complexities of GM/P must be considered from the beginning of program planning, even if this means delaying commencement of the program.

Simple information systems and strong infrastructure

There is a need to develop a simple and direct information system that can collect a minimum of data to meet the specific needs of a maximum of users—first of all the communities themselves, then donor, ministry, and PVO headquarter staff. Useless data should be identified and eliminated from the system. Community members should be involved in planning the system and in determining the types of information to be collected and the uses to which the information will be put. An effective information system requires both a strong infrastructure within a PVO and a well-established delivery system comprising planning, data collection, communication, decision-making, and feedback as essential components.

Involvement of the mother

The involvement of the mother is vital to the success of GM/P, i.e., her understanding of the reasons for the child's growth or growth failure and her active participation in the entire GM/P process. Of particular importance is the action taken after the child is measured: the continued dialogue with and counseling of the mother, the actions she takes as a result of this process, and the follow-up, i.e., the pulse that is kept on her actions and on her child's growth.

Motivation of the health worker

The workshop case studies emphasized the importance of training, motivating, and positively reinforcing the health worker. It is these committed and dedicated people who actually conduct the GM/P sessions and so are responsible for its success in the field.

The expanded role of counseling

Counseling for GM/P requires skill and time and is frequently one of the weakest elements of the program. All too often, counseling is a one-way transmission of messages rather than a problem-solving dialogue with the mother.

There are several reasons for this inadequacy that demand attention. For example, health promoters are not given the training needed to enable them to serve as facilitators who listen and are truly involved rather than as mere purveyors of messages. It must also be recognized that the demands made on health promoters during GM/P sessions in the clinic are great, and that the setting is not conducive to a relaxed exchange of information with caretakers.

PVO programs took different approaches to increase opportunities for counseling. Home visits and follow-up have proven especially rewarding. Follow-up for mothers whose children are growth faltering is of particular impor-

tance, since there is generally insufficient time in GM/P sessions to reach out and involve the mother in need of extra attention. Group counseling sessions, often led by model mothers, have also proven successful. This group approach to counseling is most productive with mothers whose children are growing well; it fosters a preventative approach and boosts the sense of solidarity and control among the mothers.

Targeted communication strategies

Communications is the essence of GM/P as it is required to motivate mothers and fathers to participate in growth monitoring activities; to educate them as to the meaning and implications of growth faltering and successful child feeding; to train and motivate health workers; and to inspire interaction among various members of the community. Workshop participants were frustrated with some of the results they had achieved from communications efforts, although it was acknowledged that indicators for measuring success had not been developed, and it was perhaps premature to conclude that initial efforts were unsuccessful.

In fact, case studies of workshop participants provided conclusive evidence that growth faltering, and the actions necessary to prevent and reverse it, are amenable to change. However, change must be prompted by appropriate communications on many levels, i.e., PVO/field workers; PVO/community; field workers/community. Communications efforts must include community participation, research, and preparation. Potential audience(s) for each kind of message (motivational, educational, reinforcing) must be identified, as well as specific goal actions for each target group. Many of the programs have achieved a high degree of success in reaching several target audiences (e.g., mothers, fathers, community decision-makers), and it would be unrealistic to expect further reaching results than these in the short period of time efforts have been in progress.

The usefulness of arm circumference

The usefulness of arm circumference for monitoring child growth was discussed at length. Despite notable advances in the use of arm circumference, its major use is for screening or population assessment (i.e., for group statistics in cross-sectional surveys). Most participants agreed that arm circumference should not be substituted for weight in a monitoring situation. Although arm circumference drops rapidly in malnourished preschool-age children and increases rapidly in children recovering from malnutrition, it will remain approximately the same in preschool-age children 1–5 years of age. In children who are growing, weight will increase but arm circumferences will remain the same. The value of arm circumference as a monitoring tool is therefore limited. The Nabarro weight-for-height chart is similarly limited and so should not be used as a monitoring tool.

Need for additional field personnel

There is need for intermediary GM/P personnel to serve as a link between health workers and the community. Examples were presented in case studies of successful strategies using volunteers, “*madres vigilantes*,” “*model mothers*,”

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“madres nucleo,” “madre promotora,” “success mothers,” etc. These volunteers have been responsible for “watching over” a small, manageable number of families in their respective neighborhoods, for promoting participation, for carrying out some of the weighing and charting tasks, and for conducting home visits and engaging in dialogue and counseling with the mother.

The inappropriateness of food as an incentive

Food supplements are usually not a good incentive for participating in GM/P programs. As one participant put it, “A good GM/P component doesn’t need food.” When mothers attend GM/P sessions primarily for food, GM/P often loses its preventative and educational effectiveness. Since the availability of food is often irregular, attendance is likewise irregular—the antithesis of a good GM/P activity. The provision of food as part of a time-limited, targeted rehabilitative intervention within a nutrition education “foyer” mode is more appropriate, but much harder to implement.

GM/P tools and techniques for education, motivation, and decision making

Workshop participants found the 5-channel WHO growth chart acceptable but deemed charts having more lines too complicated. The preferred growth chart was the 2-line Road to Health Chart. It was agreed that colors on a growth chart are acceptable and should vary among different countries in order to reflect local associations with different colors. Participants of the small group session on growth chart issues were interested less in the design of the chart than in its use as a motivational and educational aid for decision-making.

The difficulty of implementing GM/P

The main issues related to “Program Design,” “Communications,” and “Techniques and Tools” have been addressed repeatedly in GM/P guidelines, workshops, and discussions. Yet PVOs are still struggling with how to operationalize recommendations in their programs. *This is a vivid reminder that GM/P is not easy to do well.*

GM/P programs vary widely. Strategies successful in one setting may not necessarily work in the same way and with the same degree of success in different settings. No single effective strategy for implementing GM/P exists. As one PVO representative concluded, “We have shared common program designs, but strategies and solutions for implementation seem to be different.” Presentations of case studies, i.e., examples of different GM/P activities in different countries and in different contexts within each country, may be one of the few effective ways of dealing with common problems when establishing GM/P. The potential application of tested solutions to new settings must be carefully tested, however.

Costs of GM/P

Although not addressed directly at the workshop, the issue of GM/P costs is very important. Cost can be high and outcomes difficult to measure. PVOs need to examine the costs of their GM/P programs and clearly define measurable outcomes so that cost-benefit analyses can be conducted.

RECOMMENDATIONS FOR A.I.D.

Data for
decision-making

A question left unresolved at the workshop and one of concern to the PVO representatives was, "What are the minimum data required to make decisions?" Additionally, results from some of the case studies demonstrated the need for help in identifying what data should be collected and how to analyze and present information in a way that answers the questions being asked and provides a basis for deciding which actions/interventions are appropriate. This issue could initially be addressed by identifying PVO's actual information needs, e.g., through mail-in questionnaires coupled with site visits and telephone interviews. Simple guidelines on what data to collect and how to collect it could then be developed.

Research needs

While PVOs have made great strides in GM/P, there has been little critical analysis of the implementation and impact of GM/P programs. Research is needed in the areas of program impact evaluation, data handling (see recommendation above), and methods for conducting cost-benefit analyses of GM/P activities.

More research is needed on the limitations of GM/P activities in the field. For example, participants agreed that there is insufficient documentation of health promoters' case loads and of what can reasonably be expected of them in terms of dialogue, observation, and demonstration. More research needs to be done to identify acceptable and meaningful indicators of successful behavioral change. Frustrations experienced by PVO programs in evaluating communication program components parallel the broader issue of how to measure the real impact of GM/P on child survival overall.

Limited availability and
high cost of U.S. scales

Some PVOs pointed out that the lack of good scales in some countries prevented them from implementing GM/P. Scale availability remains an unresolved problem. One barrier is the difficulty of purchasing British-made scales with A.I.D. funds because of the "Buy American" clause ("...source and origin...").

U.S.-produced scales were judged to be far inferior to their British counterparts. There have been several reports of breakage of U.S.-made scales in the field, and some of the latest innovations, such as the new solar-powered scales, might not be produced in the States since the target prices are too low for U.S. companies to produce. The cost of the more conventional hanging spring dial is prohibitively high for some projects.

The "Buy American" policy is difficult to waive, but should be reexamined in light of the inferiority of the scales produced in the United States. More research should be promoted into simplified scale technology with a view toward local production of scales such as the bar scales produced in Thailand.

GROWTH MONITORING AND PROMOTION

Regular dissemination of GM/P tools and approaches

Many workshop participants were unaware of some new GM/P tools, such as measuring instruments and growth charts, as well as of what other PVOs are doing in the area of GM/P. To further the GM/P component of child survival programs, PVOs should have a forum in which to share individual advances, e.g., a resource center with a specific mandate to address GM/P. Such a service would enable PVOs to exchange successful strategies among themselves and share them with government and NGO program planners. Strategies should be explored to provide a regular flow of information on the latest GM/P tools and techniques that may not be readily available to all PVOs.

ANNEX

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GROWTH MONITORING AND PROMOTION

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