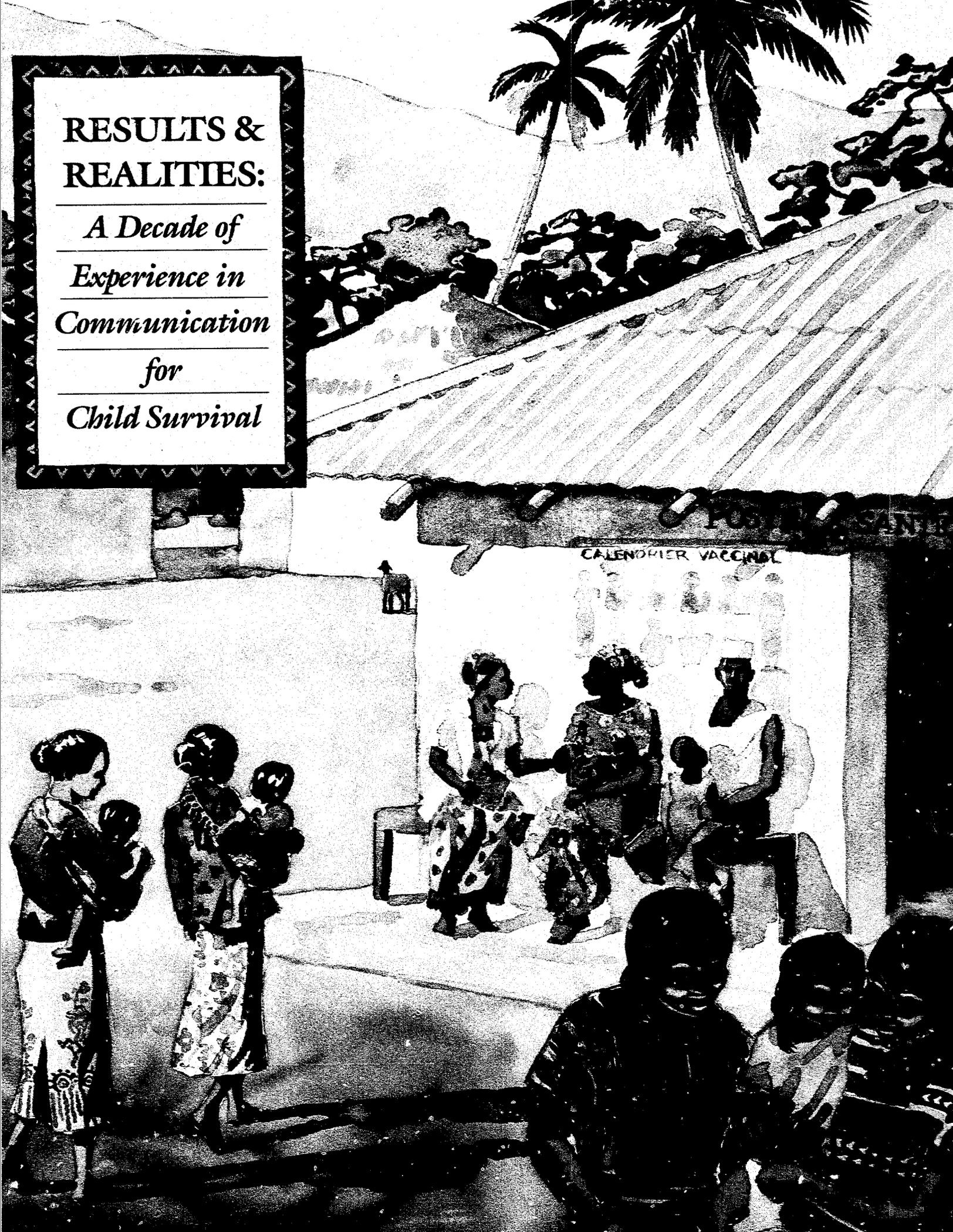


**RESULTS &
REALITIES:**

*A Decade of
Experience in
Communication
for
Child Survival*



Communication for
Child Survival

HealthCom

is a project designed to help developing countries and USAID missions increase the impact of their health and child survival programs through improved communication and social marketing activities. It targets those who can make the most immediate difference in the health of a child—the parents, the family, and the community.

HEALTHCOM, or Communication and Marketing for Child Survival, is a project of the Agency for International Development's Bureau for Research and Development, Office of Health. It is part of the Agency's overall strategy to reduce child and infant mortality and works with other A.I.D. projects such as PRITECH, CCCD, REACH, MotherCare, Nutrition Communication, WASH, the Quality Assurance Project, the Health Financing and Sustainability Project, as well as bilateral A.I.D. programs. HEALTHCOM coordinates its efforts with international agencies such as the World Health Organization and UNICEF to improve consumer education and to promote the appropriate use of child survival technologies including oral rehydration therapy, immunizations, birth spacing, nutrition (breastfeeding and vitamin A), and others.

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The cover illustrates activities within a global village that contribute to both the demand creation and service delivery sides of a successful public health program. The HEALTHCOM Project has helped synchronize these different elements: research into client needs, beliefs, and practices; delivery of messages through integrated media (broadcast, print, and face-to-face interaction); strengthening of health worker counseling skills; and improvement of health products to promote beneficial health-related practices.



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**RESULTS &
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*A Decade of
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Child Survival*

A SUMMARY REPORT

of the Communication for Child Survival or HEALTHCOM Project

conducted by the

Academy for Educational Development

with

The Annenberg School for Communication, University of Pennsylvania

Applied Communication Technology

Porter/Novelli

PATH/PIACT

for the

U.S. Agency for International Development

Bureau for Research and Development, Office of Health

January 1992

Washington, D.C.

Not So Very Long Ago...

The public health community no longer has to prove to skeptics that social marketing and communication “work.” It no longer has to prove that communication is more than just advertising; that a systematic consumer focus is the key to successful health care delivery; or that research into current beliefs and practices is indispensable to health care strategies. It no longer has to prove that carefully designed messages delivered by appropriate media can significantly change behavior.

But the memory of that skepticism is fresh. Not long ago, the suggestion that commercial marketing techniques could be used to promote socially beneficial products or practices seemed suspect. The use of behavior analysis to observe parents’ or health workers’ behaviors seemed esoteric or even intrusive. What once sounded like a complex approach to improving the health status of children now seems simple and essential largely because the U.S. Agency for International Development (A.I.D.) has made an investment over more than a decade to refine and demonstrate the impact of this methodology on the major threats to children’s health.

Breaking Bureaucratic Barriers

Even within A.I.D., the earliest pilot efforts took the form of a bureaucratic marriage that crossed traditional development lines. In the mid-1970s, the Office of Education and the Office of Health in (what was then) the Bureau for Science and Technology joined together to design a project based upon the assumption that those who can make the most difference in the health of a child—the parents, the family, and the community—are central to the design and

delivery of solutions. It was a simple idea requiring a major change in how we approach public health planning.

The title of this project, Mass Media and Health Practices (MMHP), quickly became a misnomer. Certainly a major goal was to apply the powerful reach and frequency of broadcast media to the task of introducing positive health practices among large populations. In 1978, when the project was inaugurated in Honduras and later in The Gambia, Swaziland, Ecuador, Peru, and Indonesia, the systematic use of radio or television for delivering health messages had not been extensively applied or evaluated in Third World environments.

But the interventions owed their success to much more than simply the use of mass media. **Audience research**—to investigate the needs and perspectives of those at risk—was at the heart of a multidisciplinary approach to empower rural populations in the fight against one of the major child killers, diarrheal dehydration. Strategies arising from this

Community activities, as well as broadcast and print media, were integrated in A.I.D.’s early communications strategies. (ORS “mixing contest” in The Gambia)



research emphasized the **integration of media**, and especially, **face-to-face interaction and community-oriented promotional activities**. The accomplishments of these projects have been well documented.

Longitudinal studies by Stanford University, conducted under an independent contract with A.I.D., revealed the magnitude of the project's successes. By investing in periodic waves of research over more than ten years in Honduras and The Gambia, A.I.D. also learned much about the **complexity of behavior change** and the importance of **sustaining communication efforts** in order to maintain practices. The studies also confirmed the critical need to **institutionalize a systematic health communication methodology** within local organizations to assure that short-term gains are part of long-term strategies.

Early Demonstrations of Results

Results from the Mass Media and Health Practices Project (1978 to 1985) provided early evidence that health communication can produce dramatic changes in practices among large populations.

- **In Swaziland**, the project relied upon anthropological insights into explanations of disease to design health education messages relevant to Swazi beliefs. Traditional healers received training and began promoting oral rehydration therapy. Mothers learned how to improve dietary management of diarrhea in the home. After eight months, the number of mothers who reported children should be fed special foods after an episode of diarrhea increased from 16 to 44 percent.
- **In Honduras**, the project worked with the Ministry of Health to analyze prevalent beliefs about diarrhea; to design and market its own oral rehydration salts (ORS) product; to train health workers and village outreach workers in the proper administration of ORS and associated diarrheal prevention behaviors; and to teach mothers these practices. The combined health worker, print, and radio promotion led to 60 percent trial of the new ORS product among rural women. Over the two-year period, diarrhea-related mortality in children under five dropped from 40 to 24 percent in the target area.
- **In The Gambia**, where much of the rural target group was not literate, the project designed a village-level educational lottery to motivate learning of a home-mixed rehydration solution. Radio messages reinforced instructions on the graphic mixing-flyer and village volunteers were trained to provide support to their neighbors. After two years, 62 percent of women surveyed reported treating recent cases of diarrhea with the solution.

After more than a decade of lessons in countries throughout the developing world, these discoveries remain the abiding issues of A.I.D.'s health communication projects.

Beyond Experimentation

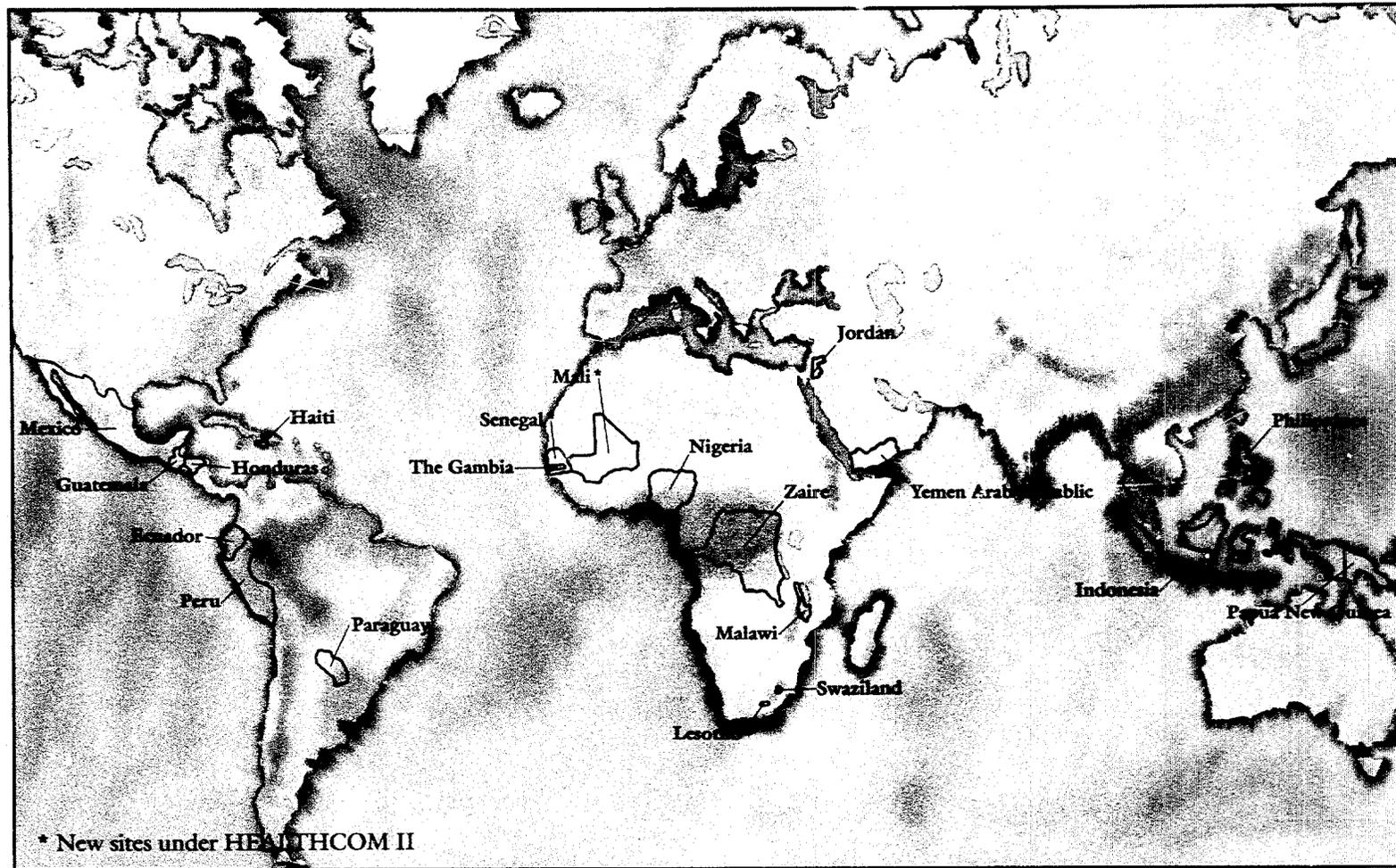
Since this early trial and development stage, communication and behavioral strategies have become potent forces in the Agency's fight against AIDS, malnutrition, drug abuse, environmental degradation, and agricultural unproductivity. Communication is being increasingly embraced by international donors including the World Health Organization and UNICEF, by universities and epidemiological research organizations such as the U.S. Centers for Disease Control, and by governments and private voluntary organizations throughout the world.

It has been within the area of child survival, however, that A.I.D. has continued to demonstrate the broad applicability of health communication principles to different technologies and varied settings. The Communication for Child Survival, or HEALTHCOM I Project, was designed precisely to conduct results-oriented programs that would both improve health practices throughout the Third World and distill health communication into a state-of-the-art discipline.

HEALTHCOM I, like the Mass Media and Health Practices Project, was carried out under a contract with the Academy for Educational Development. From 1985 through 1990, HEALTHCOM focused on a range of child survival interventions in 15 countries in Africa, Asia, Latin America and the Caribbean, and the Middle East. Technologies included:

- Diarrheal disease control
- Immunizations
- Child nutrition (breastfeeding, vitamin A)
- Maternal health and birth spacing
- Control of acute respiratory infections
- Malaria and other vector-borne disease control.

Figure 1— Long-term Countries



The map on this page shows the sites in which the HEALTHCOM and MMHP Projects worked for periods of from two to five years. In addition to these long-term sites, the projects provided short-term technical assistance to Bangladesh, Burma, Burundi, Côte d'Ivoire, Liberia, Mauritius, and Rwanda.

This phase has shown clearly the applicability of the methodology in vastly different environments. HEALTHCOM's mandate has usually been to work directly with the health education unit of a ministry of health on child survival issues of national priority. Institutional resources, selected health targets, primary and secondary audiences, health systems, and program budgets, have run the gamut.

In these varied settings, two goals have been constant:

- to adapt, refine, and transfer a systematic communication methodology to local institutions; and
- to examine and evaluate program impact upon actual behavior.

Seven project sites participated in full-scale evaluations. These included baseline knowledge, attitude, and practice surveys among caretakers as well as health workers, followed by post-intervention surveys and extensive analysis of results.

This document reports on those results—both the achievements and the lessons learned. It also outlines from this new perspective what health communication is and is not, and what it can and cannot do.

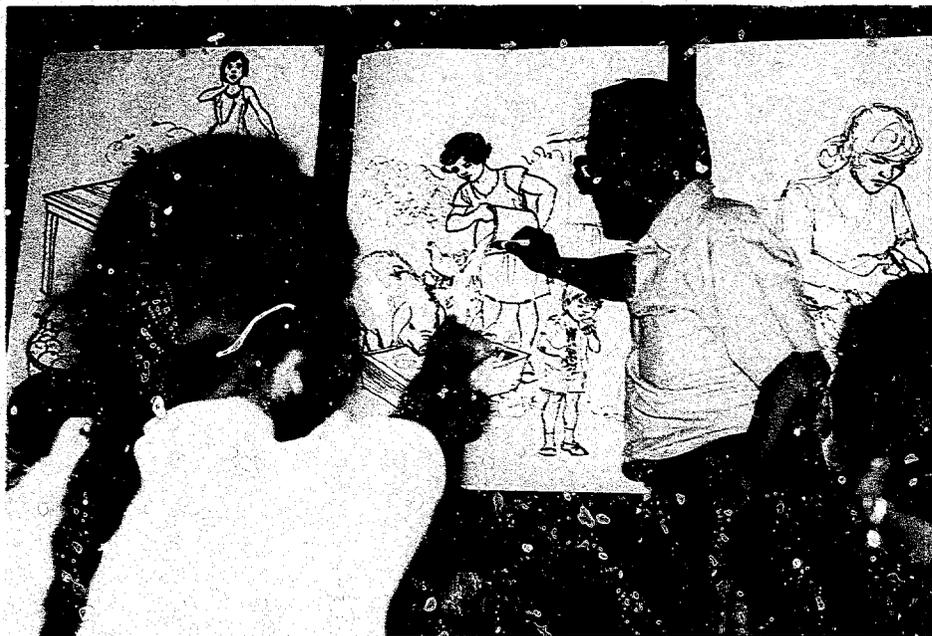
Expanding the Boundaries

A Management Tool— Not a Miracle Drug

Health communication *per se* is no miracle drug. It does not overcome the economic and social limits of a target population's environment. But it assesses the implications of those realities and builds programs that address them. It does not create health policies or protocols. But it investigates the vocabulary, concerns, and obstacles faced by a given audience and translates public health goals into community-based strategies. Communication cannot, by itself, increase the number of paid health workers or produce more vaccines or ORS packets—but it makes it possible to analyze the effectiveness and reach of these services and helps illuminate directions for change.

Health communication links consumers with the seemingly disparate fibers of better health: the policy, the product, and the provider. All at a “cost” geared to that particular consumer who is most in need. The approach is therefore first and

Health communication is a two-way process focusing on the needs and perceptions of the client. (Pretesting materials in Honduras)



foremost a management tool. It sees the child, the parent, the problem, and the solution as a coherent whole. It assesses them and the institutions designed to help them and formulates step-by-measured-step an integrated path toward sustainable change.

A Method—Not a Medium

Communication is not synonymous with either media or social marketing, although it has links to each. It is the element of a public health program that both listens to and talks to those at greatest risk. Health communication is a two-way process that investigates client perceptions, values, and needs and uses these to design programs which in turn inform and motivate positive changes in behavior. The approach consists of a series of stages to:

Assess the problem, the population's present behaviors, knowledge, and attitudes toward the problem, and the health technologies and delivery mechanisms available to them;

Plan a communication program that brings messages and support to a specific audience segment through various channels in ways that are convincing and provide repeated exposure;

Develop and pretest materials and tactics for appropriate channels, whether face-to-face, community, print, or mass media;

Deliver materials, messages, and support needed to complement service delivery timing;

Monitor and alter tactics, messages, materials, and channels as needed to meet evolving audience needs.

This process is delineated variously in three steps, four steps, circles, letters, arrows, and wheels by those working in different development technologies. No matter what the rubric, however, its major feature is feedback. At each step, planners listen to consumers. And the final step of an intervention is to feed evaluation results back into the planning cycle.¹

A Mix of Science and Art

Effective communication, much like good medicine, is a mix of science and art. This fact has often been a surprise to both ministries (who may fear data) and assorted critics (who may distrust “advertising”). A solid empirical base inspires every creative consumer strategy. Developmental research focuses on segmenting audiences; analyzing the needs, beliefs, and practices of target groups; and pretesting promotional elements. Monitoring of both processes and actual behavior change during and after an



Lucine Tamimian

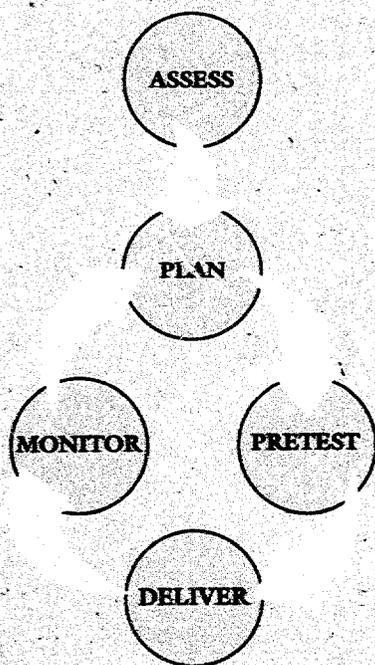
intervention provides feedback for midcourse adjustments as well as concrete evidence of a project’s success.

Rapid, locally-carried out research is therefore essential to institutionalizing communication capacities in appropriate organizations. It is also perhaps the most difficult step in the methodology to transfer. HEALTHCOM and its evaluation subcontractors, the Annenberg School for Communication of the University of Pennsylvania and Applied Communication Technology, have collaborated whenever possible with local research companies and universities in designing and conducting both quantitative and qualitative studies. Counterparts have received formal and on-the-job training in focus group discussions, indepth interviews, behavioral observations, ethnographic assessments, and large-scale knowledge/attitude/practice studies. They have also learned how to contract for such services from private groups.

In many countries, HEALTHCOM has literally introduced the idea of talking to mothers and health workers about their perceptions and practices. In Yemen, HEALTHCOM helped conduct some of the country’s first focus groups and trained its first women interviewers, who carried out studies in 16 villages with mothers, midwives, health workers, and physicians. The magnitude of this accomplishment is especially poignant in light of

One of Yemen’s first female field researchers interviews a mother about her needs, knowledge, attitudes, and health practices.

Figure 2—Five-Step Methodology



¹ A complete description of the HEALTHCOM methodology is available in the project manual: Rasmuson M., Seidel, R., Smith, W., and Booth, E., *Communication for Child Survival*, Washington, D.C.: Academy for Educational Development, 1988.

prevailing customs. Most of the interviewers, although well educated, had never traveled outside the capital or eaten in a restaurant; approval to participate was secured from male family members.

More often HEALTHCOM has assisted ministries that routinely gather information but are unused to basing decisions on these data. In Nigeria, communication researchers and a medical anthropologist conducted a workshop for health planners to compare baseline measurements of immunization behavior with participants' personal impressions of practices and discuss the implications of these before outlining interventions. One of HEALTHCOM's chief tasks has been to help ministries view data as a promising tool for planning, rather than a punishing measurement of failure.

The elements of this research come from an eclectic background. Social marketing provides a framework for investigating the benefits and barriers to adoption of proposed products and services. Behavior analysis supplies methods for investigating current practices, defining and teaching new ones, and motivating change. Anthropology reveals perceptions and values that underlie existing practices and can help sanction new ones. Principles of instructional design help improve training programs. Communication research helps investigate channels for reaching audiences.

Only direct observation can reveal important aspects of some health behaviors, such as the amount of ORS mothers actually give children with diarrhea.



The Behavioral Imperative

The fundamental goal of health communication is to influence behavior. The underlying assumption is that positive changes in health-related practices will lead to improvements in morbidity and mortality. One of HEALTHCOM's unique contributions has been its 12 health practice studies designed to address behavioral issues related to different child survival technologies. The project used a behavioral microscope to *observe* what people are presently doing (rather than rely on self-reports), to *compare* these practices with potentially more effective ones in the given environment, and to *motivate* change.

Studies were carried out in eight countries in Africa, Central America, and Asia. Several gathered information to aid in planning interventions. Others served a monitoring function, showing planners to what extent their efforts were producing changes in behavior. All were small in scope and closely integrated into ongoing health communication activities.

Many of the studies looked at the practices of mothers—how they administer ORT (oral rehydration therapy), what they recognize as symptoms of acute respiratory infection. For example, HEALTHCOM carried out groundbreaking research into the *amount* of ORS a mother actually gives a child at home during diarrhea. In Lesotho, researchers found that mothers gave more liquid to children who were moderately as opposed to mildly dehydrated but that the amount given per weight of child went down with a child's increasing age. In Mexico, researchers found that the mean dosage given to children was well below the recommendation of the World Health Organization. These findings gave planners rare behavioral data upon which to refine messages to both parents and health workers.

Other studies focused on the practices of health care providers and volunteers,

especially in their interactions with mothers. In Ecuador, the project looked at events occurring in health centers to try to learn why parents of children under the age of one failed to complete the immunization series. For ten days, observers kept track of specific reasons eligible children did not receive their vaccinations. Contrary to expectations, mothers' knowledge about the vaccination calendar was high, but health workers were not following several vaccination guidelines. The study produced a set of recommendations for a health worker intervention.

In Nigeria and Indonesia, the studies were designed to improve training strategies and encourage more effective communication between health workers and mothers. HEALTHCOM introduced both new interactive teaching aids and participatory techniques in Nigeria to help health workers do a more effective job of educating mothers about immunization. The study showed an improvement in both health care workers' delivery of information and mothers' knowledge about important immunization behaviors. The Indonesian study focused on the high drop-out rate from service among village health volunteers. Recommendations led to a series of radio spots designed to motivate deeper commitment among volunteers and greater recognition of their role by the community.

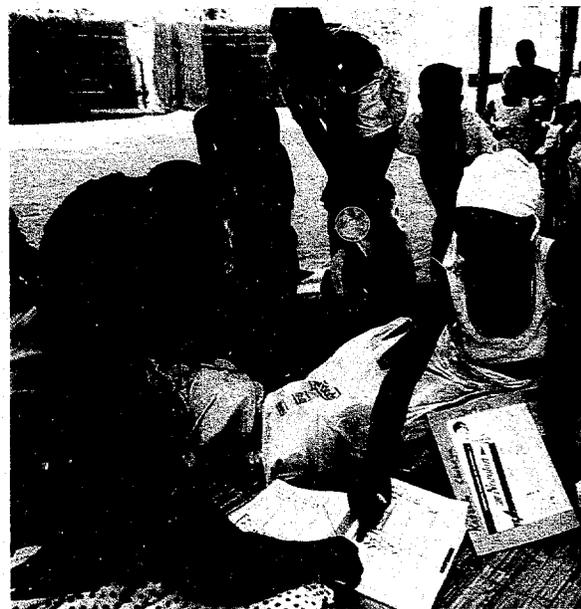
Synchronizing Supply and Demand

HEALTHCOM's experiences have demonstrated that communication can contribute more than its conventionally understood task of *creating consumer demand* for products or services. A program that investigates *what motivates consumers* generally reveals that every perceived benefit and every barrier to a new behavior is linked to some aspect of the environment. Links may be to providers (are they really supportive?) to products (are they both appropriate and available?) to policies (are they consistent?) and to social systems (do they motivate change?)

been to synchronize the *balance* between consumer and provider issues, supply and demand processes. The slick sell often associated with commercial advertising is supplanted by an effort to examine how basic elements of the marketing mix can be improved to meet consumer needs.

For example, low compliance to malaria chemoprophylaxis among pregnant women in Malawi was traced to two supply-side problems. Research revealed that women thought the chloroquine phosphate pills distributed free at antenatal clinics tasted like bitter herbs believed to cause miscarriage. They were also confused by the clinic health messages. HEALTHCOM assisted the Ministry of Health in conducting a pilot study to test the effectiveness of both an alternate pill and a new educational process. Sterling Pharmaceutical Company donated coated, nonbitter pills for the intervention clinics; HEALTHCOM designed refresher training for the health workers. Pilot results showed that compliance was highest (and also most cost effective) when new message and new product were combined.

Frequently, HEALTHCOM has helped evaluate and redesign packaging or distribution systems for products. In Mexico, the project assisted in developing a new ORS product identity. An attractive and colorful package, an effective name, carefully tested mixing instructions,



In Malawi, the project trained traditional birth attendants to distribute anti-malaria tablets and keep track of their work on a specially designed form.

and point-of-purchase display materials assured that the product would be commercially competitive. *Vida Suero* was launched in cooperative grocery stores at a price aimed to meet the requirements of both producer and target audience.

Delivering Powerful Messages

Both the science and the art of communication culminate in the *message*. What “works” requires both thorough understanding and boundless imagination. HEALTHCOM has paid special attention to helping audiences surpass the KAP/gap—the leap from simple *knowledge* and *awareness* of a new behavior to an actual change in *practice*.

Sometimes this means planners must know what stage of readiness an audience has reached so that messages can target a group’s particular concerns. Sometimes the simpler message is the better one. Research at a number of sites (including Ecuador and the Philippines) demonstrated that if parents know the basics about immunization—where to go, how often, and when—they don’t need detailed information about diseases or arguments countering traditional beliefs.

HEALTHCOM has shown numerous ways in which creative use of media can overcome seeming obstacles. In the Philippines, the concept of dehydration didn’t exist in local languages. So

In Mexico, HEALTHCOM promoted a new ORS product among the medical community, who profoundly influence mothers’ practices.

animators created a television and radio monster named Dehydration who could become the target of an intervention. In Guatemala, planners knew that messages associated with any government office would be suspect—so their spokespeople became groups of ethnically diverse children appealing through song to their parents. The children sang on radio and television and appeared in colorful illustrations on posters and pamphlets.

The reach of broadcast messages combined with the detail and relative permanence of print provide opportunities to reinforce complicated messages. HEALTHCOM has also demonstrated that the most powerful medium is often the voice of a single person. This may be a woman’s mother or mother-in-law. It may be a traditional herbalist or a private physician. It may also be the weight of perceived community opinion.

In Mexico and the Philippines, HEALTHCOM targeted an influential secondary audience—the private physician—who had to be convinced of the efficacy of ORS before mothers could be expected to try the product. A breastfeeding intervention in Jordan focused on the mother but also upon several influential forces in her decision making. A series of television spots highlighted the family and the cultural legitimacy of breastfeeding. Messages to “eat better” showed the husband and the older son encouraging the mother to take care of herself. The mother-in-law provided advice on how she could increase her breast milk and reminded her to feed the infant on demand. One television spot also quoted the Koran’s recommendation of breastfeeding, thus establishing the religious authority behind these messages.

Always, the message must be more than the medium. It must be consistent across media and the elements of different channels must be mutually reinforcing. And finally, the use of any channel is wise only to the extent that its quality can be monitored and its cost sustained over time.



Promoting Partnerships

Communication programs are by nature cooperative ventures. Even if a ministry of health has primary responsibility for a communication program, its success will depend upon the involvement, interest, and support of other ministries, health professionals, auxiliaries, private firms, the media, international donors, popular opinion leaders, and volunteers.

Institutionalizing communication as a systematic methodology does not require training a single group of people to carry out Herculean tasks. One of HEALTHCOM's primary goals has been to show governments how to tap the resources necessary to mobilize both consumers and providers and how to coordinate multiple actors supporting a health intervention.

For many ministries, the most challenging aspect of this collaboration is working with the private sector—whether universities, radio stations, or research companies. Few health education units have experience contracting these organizations and may even think private sector goals or methods are inimical to theirs. Similarly, few developing country firms are familiar with the sensitivities of promoting socially beneficial products. But their skills can prove invaluable.

HEALTHCOM has assisted ministries in briefing market research companies and advertising firms on child survival technologies and goals, and also in going through the complex process of writing

mutually agreeable contracts. In Guatemala and Paraguay, HEALTHCOM helped officials write their first contracts with advertising agencies for assistance in producing materials on diarrheal disease and breastfeeding. The Ministry of Health in Indonesia contracted AdForce to create a control of diarrheal disease (CDD) campaign combining radio spots, a mobile film, posters, leaflets, bill boards, and other media. The campaign received a gold prize from the Annual Indonesian Advertising Awards for imaginative use of local symbols and themes to support community involvement.

Sometimes the most powerful partners are not even professionals. They are the groups who have the most contact—and the most in common—with a target audience. Private voluntary organizations and other community networks can supply such links. Volunteers recruited from the target audience can be helpful as both channels for exchange of information and as providers of simple services. The Ruashi health zone team in Zaire created a new category of health workers, the *Maman Tengeneza*, or mothers for improvement. These local mothers received two days of initial training followed by an additional day each month as a basis for visiting women in their homes and encouraging positive health practices. In a region fraught with enormous logistic obstacles and political instability, the enthusiasm of these *Maman Tengeneza* has been more effective and more sustainable than any mechanical medium could be.

Getting Measurable Results

HEALTHCOM programs have demonstrated definitively that health communication can work in the broadest sense: to increase immunization coverage, use of oral rehydration salts, consumption of vitamin A capsules, and improve breastfeeding and other practices.

Two subcontractors responsible for conducting impact evaluations of HEALTHCOM sites examined such variables as message effectiveness, behavior trial and sustainability, and community influences. Applied Communication Technology continued its longitudinal studies of target groups in both The Gambia and Honduras. The Annenberg School for Communication at the University of Pennsylvania conducted comprehensive before- and after-surveys in seven additional sites.²

The magnitude of changes reported is important. Expectations regarding health behavior change are often unrealistic. While commercial marketers are usually happy with 3 to 5 percent gains in market share, public health planners often (unrealistically) set goals of 60 to 80 percent adoption of new behavior. The following section presents selected individual program results demonstrating both the successes and the lessons learned from impact evaluations of activities conducted by ministries of health and other collaborating organizations through HEALTHCOM assistance.

Ecuador— Immunization Intervention

The Ecuador PREMI Program (Plan to Reduce Childhood Disease and Mortality) was one of the first attempts in the world to carry out a large-scale mass mobilization strategy combining multiple child survival themes in a single coherent attack on infant mortality. It was the first to distribute ORS to all mothers who attended mass vaccination days (*jornadas*) and the first to carry out mass weighing of infants.

HEALTHCOM assisted communication activities from 1985 to 1987. The strategy was to intensify mass media efforts and use of interpersonal channels focused on the *jornadas*, together with shifts in clinic policies and supplies. This was complemented by continuous promotion of child survival themes during the rest of the period, through innovative communication and education approaches.

Efforts of the many PREMI collaborators produced a substantial increase in on-time vaccination coverage for children. Estimates from all sources suggested that complete coverage rates doubled. In addition, the system achieved an increasingly early age for that coverage.

² The Annenberg School for Communication conducted extensive evaluations in Ecuador, Indonesia (Central and West Java), Jordan, Lesotho, the Philippines, and Zaire. The first five descriptions which follow are summarized from those reports. Case study reports were completed for Guatemala, Nigeria, Paraguay, and Papua New Guinea. The evaluation reports, the *Final Report on Evaluation Activities for HEALTHCOM I*, and other publications regarding results in these countries are available from the Academy or from the Center for International, Health, and Development Communication, Annenberg School for Communication, University of Pennsylvania, 3620 Walnut Street, Philadelphia, P.A. 19104-6220.

From pre-intervention to post-intervention 18 months later, the percent of children under one who had card-verified evidence of complete immunization rose from 15 to 35 percent. This on-time vaccination improvement was exceeded by coverage for somewhat older children. By 1987, 55 percent of 18-month olds had card-verified evidence of complete vaccination, compared to 25 percent before PREMI. Of children over 27 months of age, 80 to 90 percent were completely covered (according to card-verified and self-report data).

Especially notable was the equity of PREMI's impact on the population. Prior immunization programs had left poorer Ecuadorans with a much lower rate of coverage than better-off groups. The substantial increases of PREMI were shared at least equally among social groups and possibly were relatively larger among those less fortunate. (See figure 3.)

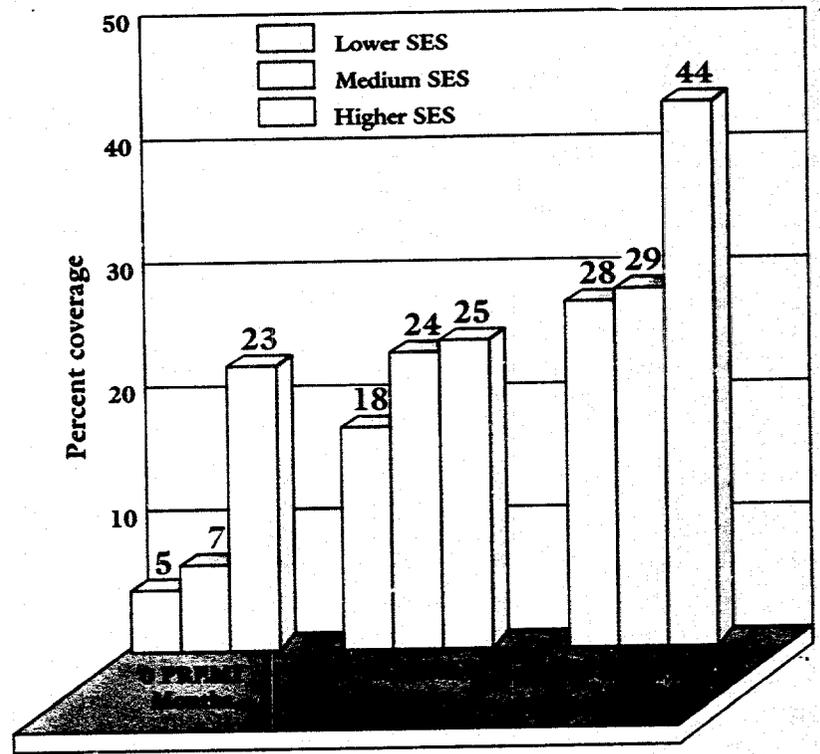
In analyzing the three waves of data, HEALTHCOM's evaluation subcontractor, the Annenberg School for Communication at the University of Pennsylvania, also posited an important hypothesis regarding the social influence of community vaccination behavior upon individual practices. The probability that a mother would vaccinate her child was linked more strongly to the behavior of her peers than to any other variable—including her level of education, wealth of the family, or even her knowledge about vaccination. This discovery has important implications for the design of future immunization strategies.

Philippines— Immunization Intervention

HEALTHCOM worked with the Ministry of Health in the Philippines to conduct successful interventions at both the pilot and national levels to increase measles immunization and improve coverage of all antigens. Measles, the last

Figure 3 — Ecuador

Card-verified Vaccination Coverage of 12-month Olds by Socioeconomic Level and Months Under PREMI Before First Birthday (1987)



n=1497

Vaccination coverage differed according to both months under PREMI and socioeconomic status at $p < .01$.

Source: Annenberg School for Communication, University of Pennsylvania

in the vaccination series, was used as a hook to bring children into the health system who were potentially missing other vaccinations.

The strategy included promotion of a weekly vaccination day, radio and television spots, clinic display materials, and newspaper announcements. In addition, "sales conferences" for clinics helped prepare, instruct, and motivate health worker involvement.

The three-month metro Manila pilot intervention in 1988 demonstrated the strategy's effectiveness. Post-campaign measures showed that reported measles immunization rates for 12- to 23-month olds rose from 42 to 65 percent and complete coverage rates rose substantially. The number of mothers who had visited a health center within the preceding three

HEALTHCOM is... Messages and Media

Both the message and the media materials are created on the basis of information about how a specific group of people think, through what channels they communicate, and by whom they are influenced. The communication strategy brings these together into a coherent plan.

The message should reach families from their neighbors, their health care providers, their policy makers and leaders—as well as from their radios, comic books, or calendars—so that community norms help shape and motivate individual behavior change.

PHILIPPINES

A measles campaign in the **Philippines** was designed as a “hook” to vaccinate children who might be missing a number of immunizations. Thus media materials, including this cartoon-poster and television spot, emphasized the dangers of measles to the under-one-year old, while health center workers were instructed to examine the records of all children and give other missing vaccinations as well. Special banners, bumper stickers, umbrellas, and T-shirts for the health workers focused attention on the weekly vaccination days.



TV spot: “It only started as measles.”



Poster: “Before it's too late.”

ZAIRE



An artist paints the vaccination calendar on a Ruashi health center.

In **Zaire**, a calendar painted on the wall of the local health center reminds mothers about the vaccination schedule against the major diseases. In a poor and spare environment, this piece of art not only conveys important information but is cause for pride among mothers and health workers alike.

JORDAN



TV spot: "You should breastfeed him every time he wants to."

An intervention in Jordan relied upon several media to convey the ten golden rules of breastfeeding that would improve the health of both mother and child. The television spots highlighted the basic messages with a catchy tune, tasteful images, and a mini-drama approach. Radio spots featured the fictional Dr. Huda (an older woman and also a mother) who provided both encouragement and intimate, more detailed advice on all of the messages. The popular Dr. Huda received letters from listeners soon after broadcasts began.

RADIO SPOT 7: ASK DR. HUDA

(At the hospital on the delivery table)

Dr. Huda: Thank God for your safe delivery. You must now begin to breastfeed him.

Mother: Breastfeed him? There is no milk yet in my breast.

Dr. Huda: (Laughing) There is first milk, which is the most important for the child.

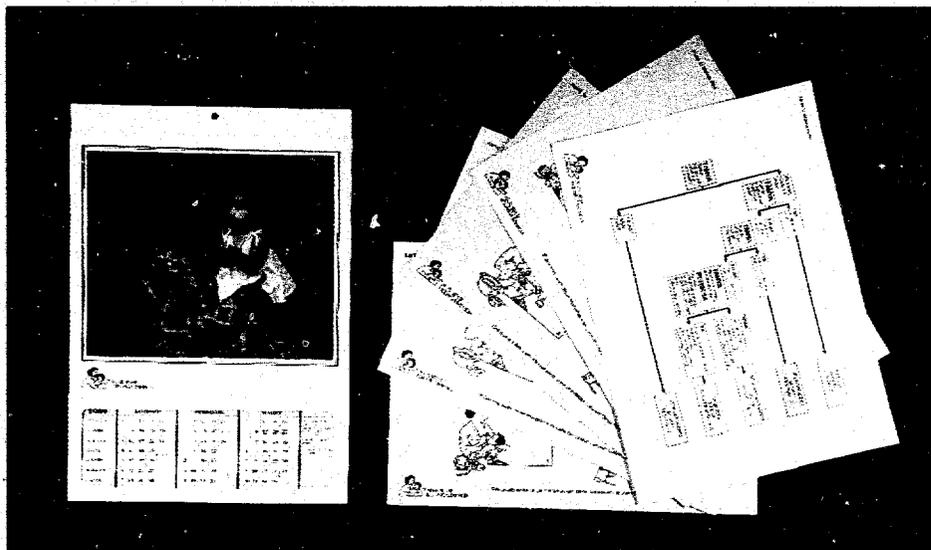
Mother: First milk...

Dr. Huda: Yes, first milk, which God Almighty granted to your child to cleanse his stomach and give him immunity against many diseases.

Mother: Will the baby accept this milk?

Dr. Huda: Of course he will. Come on, put him to your breast and try once, twice. Let him benefit from the first milk.

INDONESIA



Kader counseling cards and calendar/holder

HEALTHCOM helped design a set of five counseling cards for Indonesian volunteers who visit homes and help diagnose and recommend treatment for children's diarrhea. Careful pretesting assured that the cards communicated the complex five-stage national diarrhea protocol, but could be understood by these less educated users. The handsome calendar-holder was considerably more popular than the previous poster, which featured a distressed child.

HONDURAS



ARI comic-brochure for mothers.

Ethnographic research in six Honduran communities helped planners develop basic messages about acute respiratory infections that were relevant to both clients and health workers. The array of educational materials included this flipchart and comic book. An educational lottery event at several clinics was part of a pilot program to introduce and test the messages.



ARI flipchart for health centers.

Special buddies learn to cook nutritious foods for those children identified in the community as malnourished.



PAPUA NEW GUINEA

A nutrition intervention in Papua New Guinea used a buddy system in which young girls (for the most part sisters or sisters-in-law) became helpers for mothers of severely malnourished children. Their role was to encourage the mothers to cook a balanced meal for their children several times a day. HEALTHCOM helped identify malnourished children through screening with the MUAC method (middle upper arm circumference measurement) and taught the importance of cooking nutritious foods and to feed children during illness.

ANG HUSTO NGA PAGTIMPLA SANG

Instant
ORESOL

Kag pun-on gid sang tubi
hasta sa bibig

Ini ang husto nga sulobhan nga base

PAAGI:



Poster showing actual size of the ORS measuring glass.

PHILIPPINES

A television spot in the Philippines created a monster named Dehydration to help mothers understand the concept and its connection to the monster they were more worried about—Diarrhea. After this concept-setting stage, the intervention promoted specific products. The poster reminds mothers which local glass will help them measure the proper amount of water for mixing the standard ORS product.



TV spot: Dehydration wreaking his havoc.



Vaccination brochure for families.

NIGERIA

HEALTHCOM has included fathers as part of a generic caretaker target audience or as a support to the mother in a wide range of interventions. The Nigeria immunization campaign used the slogan "Be a good parent" and featured illustrations of the "Happy Family"—a mother, father, and young child—in all of its

ZAIRE

"Mothers for Improvement," or *Maman Tengeneza* in Zaire are enthusiastic liaisons between their local health centers and neighborhood women. These volunteers receive two days of basic primary health care training. They have been particularly effective in bringing children to the health centers when mothers are unable to do so.



HONDURAS

In Honduras, puppets help health workers educate, entertain, and interact with audiences on such subjects as diarrheal disease control and acute respiratory infections. Clients are often more willing to discuss difficult topics with these fictional characters than to seek the same kind of feedback during didactic lectures.



Puppets can be credible and communicative.



"He asked the woman if she could understand."

PAPUA NEW GUINEA

A 15-minute video made in Papua New Guinea on a very low budget used only three actors (a health worker, a mother, and her sick child) and some low-key humor to demonstrate effective and not-so-effective communication skills.

INDONESIA

Distribution of vitamin A capsules in Central Java, Indonesia, takes place every six months at the *posyandu*, or local health post. Large banners advertising the time, place, and price (free) are hung across roads in the traditional style. Radio spots tell mothers how to find the *posyandu* and elaborate on who and what the pills are for. Local volunteers explain the issues in more detail and also visit mothers in their homes.

RADIO SPOT: VITAMIN A

Kader I: Hello, how are you doing, Bu Kader? Are you ready? Today is the *posyandu* day.

Kader II: Wait...wait a minute, Bu. I have to get the vitamin A capsules and the children's register.

Kader I: Oohh...you're right, it's August, it's the time to give out vitamin A capsules to the under-fives at the *posyandu*.

Kader II: Yes, vitamin A capsules are truly good for the health of the eyes of sick children as well as healthy children.

Kader I: Right, we can see now that our children are healthy, happy, and lively.

Kader II: That's a reward for our hard work as volunteers who give them vitamin A capsules every August and February, isn't it?

Kader I: So that they are healthy and their eyes are bright.

Kader II: Come on, let's go, let's not be late.

Announcer: Right!! Vitamin A protects the health of the eyes of children under five, so that they become healthy and cheerful... Get a vitamin A capsule at the *posyandu* every August and February!!



**DELE SU PECHO
DESDE QUE NACE.
Y EL MAYOR TIEMPO POSIBLE.**

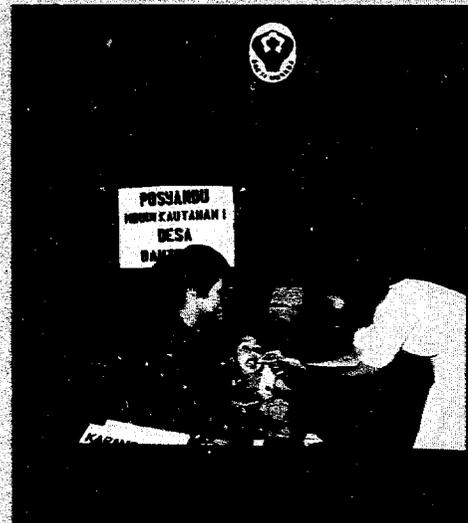
Breastfeeding brochure for the new mother.

PARAGUAY

In Paraguay, print materials encouraged mothers to initiate breastfeeding immediately after delivery and to adopt other important practices. Television spots promoted a series of beneficial behaviors and featured both full-time and working mothers.



TV spot: "Even the working mother can breastfeed."



Vitamin A manual for the kader.



In the Philippines, a print and broadcast strategy combined with well-prepared and festive health centers improved immunization rates substantially.

months increased from 37 to 51 percent and the number of mothers who could show a vaccination card for their youngest child increased from 40 to 57 percent.

The six-month 1990 nationwide urban measles intervention produced some dramatic results. Measles coverage of

9- to 23-month olds increased significantly from 54 to 68 percent. Complete immunization coverage for 9- to 11-month olds increased significantly from 33 to more than 56 percent. These rates of improvement during the intervention were not associated with gender of the child or education of the parent. Timeliness of coverage increased sharply. Figure 4 shows an increase in complete coverage for all age groups but the greatest amount of increase for children between about 8 and 18 months of age.

Much of the success of the campaign was due to improved knowledge among the population, particularly about when to finish the vaccination series. That increase reflects the wide exposure and effectiveness of the media campaign. Of mothers surveyed, 84 percent recalled seeing a measles ad and 72 percent could complete the last word of the catch phrase.

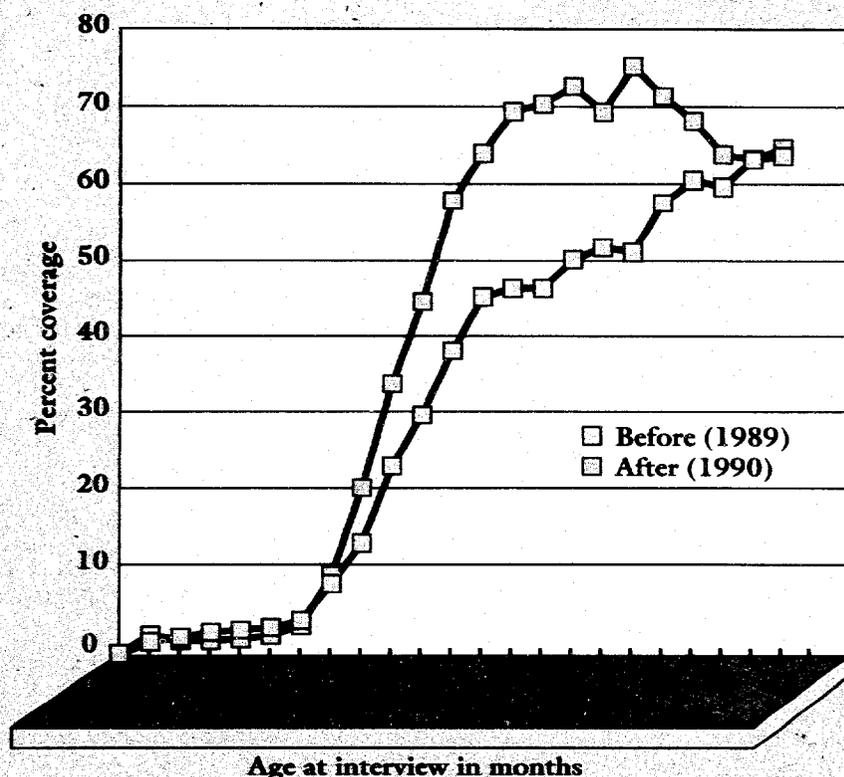
The success of the campaign reflected substantial demand for vaccinations promoted by the mass media. However, the increased rates would not have been possible if the service delivery system was not well-supplied, well-organized, and supportive of both the campaign messages and the intensified workload created by the intervention.

Another element of the intervention's success was the visible support of high government officials (the secretary of health launched the campaign via multiple media), the recruitment of local political support (20 mayors received extensive briefings by the secretary himself), and substantial coverage by the national press.

Jordan—Breastfeeding Intervention

In Jordan, HEALTHCOM worked with the Queen Noor al Hussein Foundation (NHF) from 1988 to 1990 to promote effective breastfeeding and child spacing under the umbrella theme, "the health of the mother and the child." Although most women in Jordan said they breastfed their children, both mothers and medical

Figure 4 — Philippines
Percent of Fully Immunized Children by Age and Survey



n (1989) = 1200
n (1990) = 1195

Source: Annenberg School for Communication, University of Pennsylvania

personnel had adopted a number of behaviors that jeopardize the enhanced immunity breastfeeding can offer the child and the protection from conception it can offer the mother.

The intervention targeted ten golden rules of breastfeeding, including two particularly important behaviors: early initiation of breastfeeding (within six hours) and delayed supplementation (until four-to-six months of age). Communication activities included a series of television spots broadcast three times an evening and longer instructive radio programs broadcast twice a day between May 15 and July 15, 1989, and again in April of 1990. The project also sponsored a national seminar for professionals and community and religious leaders in order to position breastfeeding as an important technology deserving medical attention and supported by the Koran.

Exposure to the mass media intervention was high. Of more than 900 mothers interviewed in 1990, 94 percent recognized the song that accompanied the radio and television spots. Of these, 79 percent could correctly describe the

visuals that accompanied it in television spots. Approximately 55 percent of mothers had heard a radio program with Dr. Huda, who gave advice on breastfeeding.

Project impact evaluation findings showed substantial positive changes in both knowledge and practice. Mothers' knowledge about the appropriate timing of initiation and the importance of colostrum (or first milk) increased significantly, from 41 to 74 percent. Correct knowledge about the appropriate time to supplement breast milk increased significantly, from 36 to 61 percent; however supplementation behavior did not change.

Initiation of breastfeeding within six hours after birth increased significantly from 43 to 69 percent among mothers who delivered in public hospitals and from 42 to 67 percent among those who delivered at home. (See table 1.)

This variation in behavior according to place of birth indicates that mothers are likely heavily influenced by those present at the birth and during the following days and suggests important targets for future interventions.

Table 1— Jordan
Breastfeeding Initiation Behavior by Location of Birth

	Place of Birth			
	Private Hospital 1988/1990	Public Hospital 1988/1990	Home 1988/1990	All Births 1988/1990
<i>1-6 hours after birth</i>	17.2/24.5	43.4/68.6	41.4/67.1	37.6/56.0
<i>7-24 hours</i>	51.9/32.5	26.8/14.6	22.2/14.2	31.0/19.6
<i>25 hours or more</i>	30.8/43.0	29.8/16.8	36.4/18.7	31.4/24.4
<i>n's</i>	107/139	300/291	86/84	500/525

All differences are significant at $p < .01$

Note: In 1988, 7 births and in 1990 11 births did not fall into the three categories indicated.

Source: Annenberg School for Communication, University of Pennsylvania

Lesotho—Diarrheal Disease Control Intervention

Among HEALTHCOM's goals in assisting the Health Education Unit of the Ministry of Health in Lesotho was to increase appropriate treatment—both in the home and in the clinic—of childhood diarrheal disease. During the three-year project, government policy recommended both packaged ORS when available and sugar-salt-solution (SSS) for prevention of diarrheal dehydration.

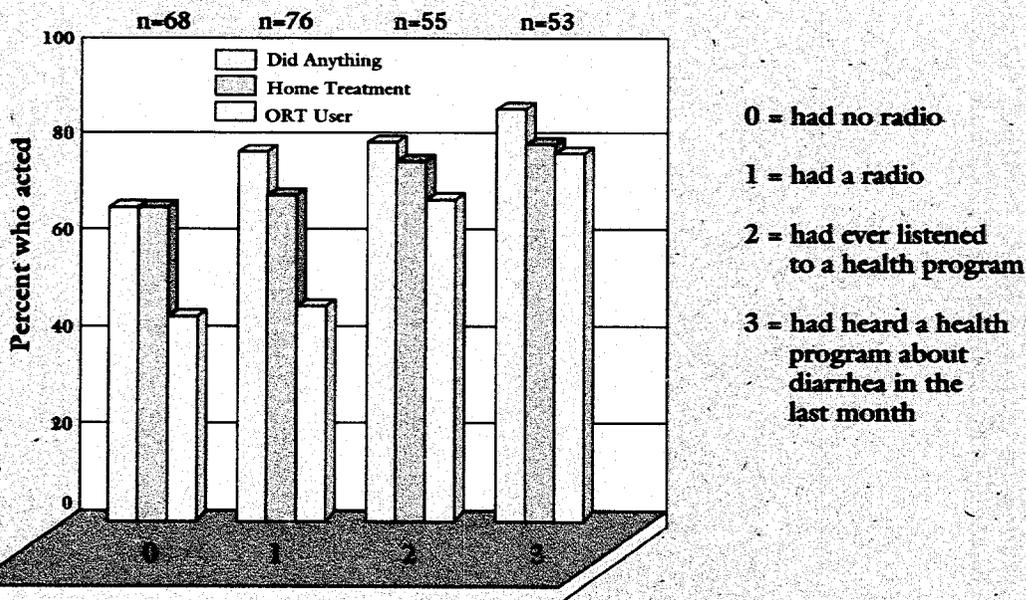
The communication strategy aimed not only to promote specific products but to improve understanding of the danger of dehydration and increase the number of cases that were recognized and treated. HEALTHCOM and the Ministry's Health Education Unit assisted radio producers to develop a series of ten programs on the importance of oral rehydration therapy; helped produce a brochure showing the causes of diarrhea and instructions for mixing ORS packets

and SSS; and helped with the training of health workers.

By 1990, appropriate treatment of diarrhea increased both in the home and in health centers. The percent of cases treated at all rose from 58 to 75 percent, and the proportion of cases treated at home rose from 48 to 72 percent. Although the percent of those treated at home who received SSS or ORS remained constant during this time at about 80 percent, the *number* receiving appropriate treatment thus increased. In 1987, 32 percent of cases brought to health centers were given ORS or SSS, while in 1990 that number increased to 64 percent.

Evaluators believe these changes were due to increased knowledge in the population about the dangers of diarrhea and dehydration and improved performance among health workers. Previously, many mothers had chosen not to treat it at all. Mass media contributed to this shift. Of those mothers surveyed, 75 percent listened to the radio and 27 percent had heard a health program in the past

Figure 5—Lesotho
Home Treatment of Recent Cases of Diarrhea by Level of Radio Exposure



The relationships between the levels of radio exposure and each of the three actions are significant at $p < .05$.

Source: Annenberg School for Communication, University of Pennsylvania

month. Their decision to treat a diarrheal episode, and to treat at home, were significantly related to exposure to radio and to the ORT mixing brochure developed and distributed by the Ministry's Health Education Unit. Figure 5 shows that those mothers with higher levels of exposure to the radio were more likely to treat a recent case at all, more likely to treat at home, and more likely to give ORT.

Indonesia—Vitamin A Capsule Intervention

As part of its child survival program, the Indonesian Ministry of Health has targeted elimination of vitamin A deficiency, which can cause eye diseases and blindness and is thought to increase children's susceptibility to other debilitating conditions. The Ministry's approach includes nutrition education regarding vitamin A rich foods, fortification of food products, and distribution of megadose vitamin A capsules. HEALTHCOM worked with Helen Keller International and other

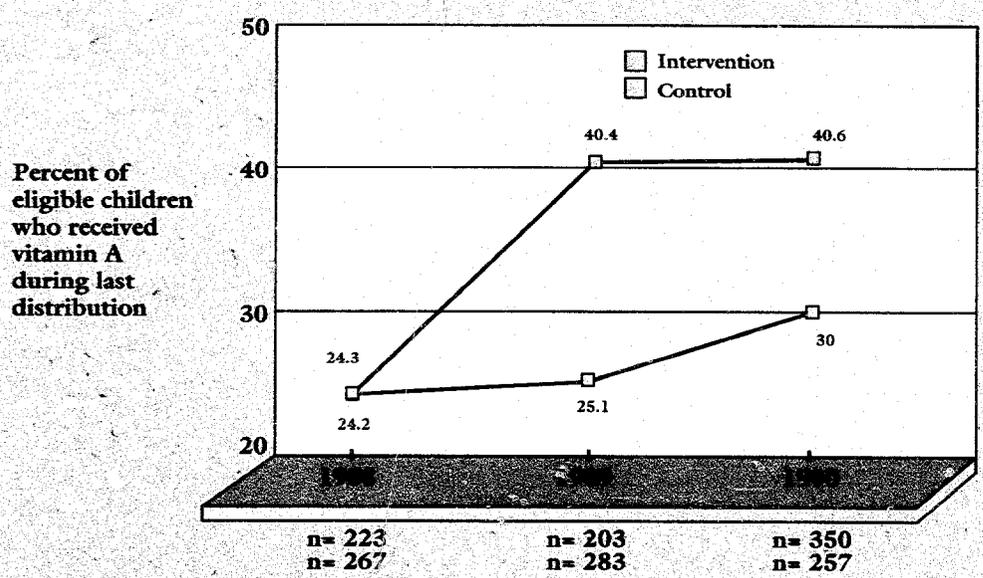


collaborators in assisting social marketing activities of a pilot program in Central Java that distributes these capsules every six months to children one to five years old—a target group of 150,000.

Success of the vitamin A capsule program in Central Java was linked to accessibility of a local health post.

The strategy combined radio spots with large cloth banners for each village and training of health workers and volunteers,

Figure 6 — Indonesia
Vitamin A Coverage in Communities with a Health Post



Difference in intervention area between 1988 and 1989 is significant at $p < .001$. Changes in the control area were not significant and in 1990 may have been influenced by side effects of the intervention.

Source: Annenberg School for Communication, University of Pennsylvania

centered around special capsule distribution days at the local health post, or *posyandu*. Intensified communication activities began in 1988 and the project conducted three waves of evaluation.

Despite a modest communication budget, the province made significant progress in expanding coverage. After one year, consumption of capsules by eligible children increased from 24 to 41 percent in precincts with a *posyandu*. (See figure 6.) Awareness of capsules increased from 57 to 69 percent among all mothers within the intervention area, with the largest increases among those living near a health post. Awareness among the latter increased beyond 80 percent during the second year. Capsule consumption in villages with a *posyandu* remained near 40 percent, although the number of *posyandu* (and therefore children reached) may have greatly increased during that time. No significant changes in awareness or capsule coverage were recorded in the control area.

Interpersonal channels (volunteers and health care workers) were the most effective means of reaching mothers. Reliance on the *posyandu* system limited the project's reach because these volunteer health posts were only active in 50 percent of the intervention area and were only open for three to four hours on the designated distribution days. As expected, coverage of eligible children was highest for those living close to a *posyandu* and for those children who were brought regularly (for immunization or weighing).

Building on the project results and lessons learned, the Indonesian Ministry of Health is designing a nationwide program, initially targeting the 13 provinces with the highest incidence of vitamin A deficiency. Television spots will be added and a greater emphasis will be placed on social mobilization through local leadership structures and volunteer groups such as the PKK (national women's organization). Continued expansion of the *posyandu* system should also contribute to greater coverage rates.

Honduras—Diarrheal Disease Control Intervention

HEALTHCOM and its predecessor project have assisted the Ministry of Health in Honduras for almost a decade—longer than in any other site. This has afforded an unusual opportunity to conduct longitudinal analyses of practices within a target audience, particularly in the area of diarrheal disease control.³

A pilot communication project (from 1981 to 1983) in Health Region 1 focused on promoting widespread use of oral rehydration salts in the home, together with appropriate feeding and breastfeeding behaviors. The intervention integrated extensive training of health workers and community activities with radio and print dissemination. Village health workers, or *guardians*, played a major role in distributing over 300,000 packets of Litrosol—the government's new ORS product.

The Ministry of Health subsequently expanded its program to the national level and shifted the focus of information and package dissemination to the health center itself.

Longitudinal data from several waves of research show a significant and substantial rise in ORS use after the initial pilot intervention and additional increases nationwide after the Ministry shifted its emphasis. Figure 7 shows the magnitude of this achievement.

Although the product was introduced first in 1981, within two years 62 percent of mothers in Region 1 indicated that they

³ Applied Communication Technology conducted large panel studies in The Gambia and Honduras in 1980-1981 and 1987-1988. (A third survey is planned in Honduras.) Information presented here on CDD in Honduras is summarized from the resurvey. Longitudinal studies and other publications regarding The Gambia and Honduras are available from the Academy or from Applied Communication Technology (ACT), 1010 Doyle Street, Suite 17, Menlo Park, C.A. 94015.

had used Litrosol. By 1987, nearly universal awareness of Litrosol nationwide fostered an exceptionally high rate of trial use. Of those mothers interviewed, virtually all (99 percent) said they had heard of Litrosol and the great majority (85 percent) reported having used it at least once. Moreover, the probability of treatment increased with the severity of a child's illness. Litrosol was administered most frequently among children under two years old and more often among rural children. Treatment was not related to the sex of the child or to the mother's age or education.

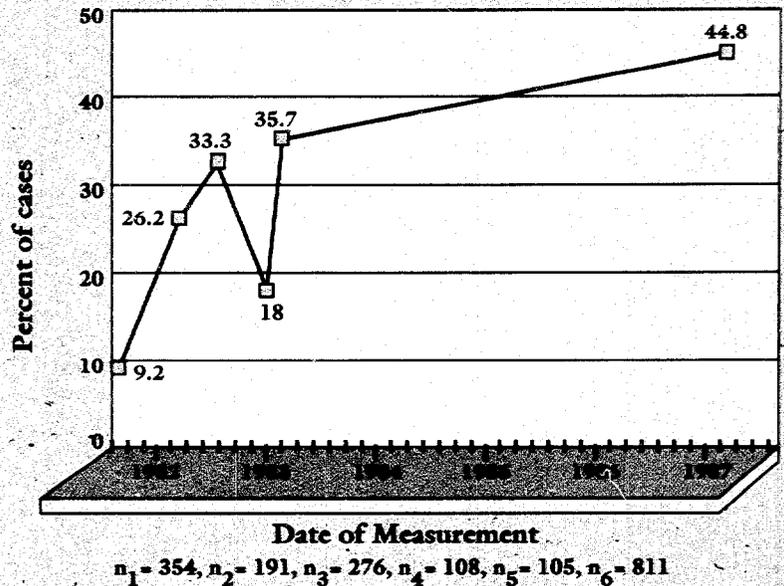
Health worker training exerted a positive influence upon practices. Highest treatment rates were found among women who consulted the community health worker, health center, or a public hospital. (Lower rates were found among women who went to a traditional healer or a private physician.)

HEALTHCOM's assistance to Honduras demonstrated the importance of radio and community-based information and distribution systems, as well as the importance of service provider training. Access has remained a challenge. In the 1987 survey, half of those mothers who had a child with a recent case of diarrhea who did not treat with ORS gave as their reason that they did not have a packet. Recently HEALTHCOM has assisted the Ministry in collaborating with the private sector to promote commercial production and distribution of ORS to increase its availability.

Honduras—Acute Respiratory Infection Intervention

In 1983, the Government of Honduras initiated plans for an evaluation and control program for one of the most challenging threats to child survival: acute respiratory infections (especially pneumonia). However, the absence of a coherent diagnosis and treatment protocol and a lack of understanding about how mothers

Figure 7 — Honduras
Litrosol Treatment Rates for Diarrhea Cases in Last Two Weeks



Source: *Applied Communication Technology*

perceive acute respiratory infections (ARI) made it difficult to develop a communication program.

Beginning in 1986, HEALTHCOM assisted the Ministry of Health both in conducting applied research as a basis for developing messages and conducting a pilot intervention in preparation for nationwide expansion. Through ethnographic research and focus groups, the project developed a popular taxonomy of mothers' own diagnostic and treatment cues and vocabulary. Researchers studied what symptoms mothers recognize and the severity they attribute to them, how they feed ill children, and whom they consult.

Researchers also conducted interviews and focus groups with health care providers in both the formal and nonformal health sectors, representing the range of services used by the target audience.

Building upon this foundation, the Health Education Unit developed a series of messages to assist mothers in providing appropriate treatment to a mildly ill child and helping them determine when to seek

help. It also designed a pilot intervention relying upon print materials, radio broadcasts, health worker training, and a clinic educational lottery to teach the new messages.

The Ministry of Health selected four rural areas and two health centers in each to participate in the intervention. Health workers in these clinics received special training in participatory teaching techniques (including demonstrations and skills practice) to help improve mothers' understanding and ability to manage ARI in their children. Researchers visited the participating clinics before and after training to observe health worker communication skills and to measure changes in mothers' knowledge of ARI through a brief interview before and after health education sessions⁴. They also conducted interviews with 20 women in the community to assess whether information had spread informally to others who had not attended the clinic sessions.

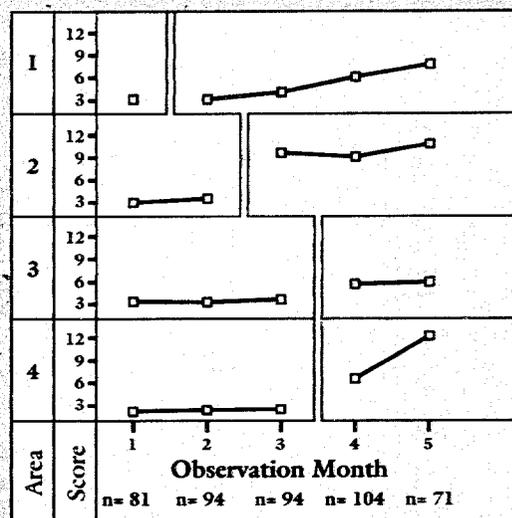
Measurements of 15 teaching techniques showed marked increases in health worker communication skills as a result of training. In addition, results of pre- and post-tests with a total of 444 mothers suggested that the new health talks were delivering more information on ARI in a more interactive way than had previous sessions at the clinics. Mothers' knowledge of targeted messages increased in the four areas, as indicated in figure 8.

The other intended result of the communication strategy was for information on ARI to reach mothers in the community. The project did not expect a dramatic jump between baseline and post-intervention measurements within this secondary

⁴ These activities were conducted under HEALTHCOM's mandate to carry out ten health practice studies as part of field activities in given long-term sites.

Figure 8 — Honduras (ARI)

Average Improvements Between Pre- and Post-test Scores of Mothers' Knowledge of ARI Messages Among Those Attending Educational Presentations (1988)



□ Average pre-post-test/improvements
 || Initiation of intervention

Source: Reprinted with permission from Elder, J., Boddy P., Aguilar A. y Espinal H., "La Experiencia Hondureña en el Control de las Infecciones Respiratorias Agudas Infantiles," Boletín de la Oficina Sanitaria Panamericana, 110(5)91. Copyright—Pan American Health Organization, Washington, D.C., 1991.

audience because word takes time to spread. However, community awareness of ARI symptoms and management did in fact show an increasing trend during the observation period. This suggested that mothers coming from the clinics were talking about what they had learned and perhaps were showing neighbors the print materials distributed at the ARI education session.

Cross-Cutting Lessons

The opportunity to reflect on results obtained across numerous sites has allowed HEALTHCOM and its evaluation subcontractors to investigate the principles of successful communication specific to—or shared by—different technologies and countries. Some of the emerging issues are methodological, some institutional, and some pertain to the individual and social variables of health behavior change.

Sustaining Behavior Change

The major challenge for public health communication programs is to maintain positive health practices over the long term. The overriding principle for influencing and reinforcing behavior is sustained attention to all areas of the marketing mix—both costs and benefits, demand and supply.

People's reward systems are not always logical or even obvious to outsiders, but they are always important. Communication programs must identify satisfying consequences, or benefits, of a new behavior that are meaningful to clients and deliver those benefits in a culturally sensitive way. Education by itself is not enough to bring about most behavior change.

Although a health communication project necessarily focuses on the creation of consumer demand, planners must also coordinate with the supply structure to assure demands are not frustrated and programs undermined. While this may seem obvious, many communication interventions are planned without considering major obstacles. Little can be accomplished in the absence of a steady

and ample supply of vaccines or ORS packets and without accessible health centers and motivated providers. Perhaps most important—health care workers should be an integral part of communication activities, supporting consistent messages and practices.

Improving Consumer Research

Experience has shown that research among both clients and service providers is fundamental to the success of public health communication programs. But most governments cannot afford the array nor the depth of research conducted by donor-funded projects. Communication planners must make use of the latest user-friendly rapid assessment techniques and seek out appropriate local partners. Counterpart training must include both research and management skills.

*Increases in consumer demand must be coordinated with adequate provision of supplies and services.
(Honduras)*



To provide an effective base for planning, research should focus increasingly on consumer *attitudes* towards health problems (e.g., perceived seriousness of an illness and susceptibility) as well as the nature and context of current behaviors. Measuring the *prevalence* of health practices is essential to evaluation, but does not give sufficient information for designing interventions.

Selecting Media

Communication channels have characteristic strengths and weaknesses. Although broadcast media may have the greatest frequency and reach among a particular audience, print materials can provide detailed information and can be kept in the home to be used when needed. Face-to-face interaction can provide personal reinforcement not available through other media. Community networks can provide extensive and deep support. Selection of channels, however, should always be made on the basis of audience research rather than on assumptions about conventional usefulness. To design a communication strategy, the planner must know what channels are available and their potential reach, and what the messages will be expected to achieve (provide mothers with information, motivate health workers, influence husbands' attitudes).

Family members have a powerful influence on child-health practices and must be part of communication strategies. (Mali)



Changes in communication technology are also offering new opportunities. The most immediate benefits will likely be to training programs for health personnel and community workers. Videos and interactive audio-conferencing via telecommunication networks allow training to be at once more consistent and more individualized.

Focusing on the Community

The great majority of people will not adopt a new behavior until they perceive it as the *accepted norm*. Research has shown, for example, that immunization is a *community behavior*—the behavior of one's neighbors is a very good predictor of one's own. To a certain extent, peer pressure can influence even the most private of practices, such as the spacing of births.

Communication programs must give profound attention to the role of communities in shaping health practices. Involvement of local groups in health promotion is indispensable in sustaining behavior change over the long term. The influence of community leaders and family members on the adoption of new behaviors should be presumed and carefully targeted.

Reaching the Hard to-Reach

The initial effects of a communication program may be dramatic, as those segments of a population that are eager to act receive the information they need. Subsequent levels of adoption are always more difficult to achieve.

Late or nonadoptors are by definition *hard to reach* because they face special barriers. Physical access might be a problem; exposure to media and adequate information might be another. Barriers might also include conflicting cultural beliefs or poor social support systems. Qualitative research methods (such as focus group discussions and in-depth

interviews) can be helpful for probing the nature of these barriers. Constant and careful reanalysis of target audiences can help tailor strategies to address specific needs.

Structuring Interventions

Massive "bursts" of communication activities to reach interim health objectives can be tempting to planners. Intensive campaigns mobilize populations as well as political support. Pilot interventions are useful for testing strategies. However, short-lived communication campaigns are often ineffective and can be harmful. They can exhaust the regular service delivery system and divert resources and energy from other programs. The most successful communication efforts are geared to sustainability: mass media that support routine services, face-to-face training that enhances it, and mini-campaigns that do not derail basic systems.

Integration of child survival themes in a communication intervention is another structural short-cut that may be attractive in principle but difficult in practice. Each technology has its own communication needs. Oral rehydration therapy requires skills training as well as attitude change. Immunization focuses on time-point compliance. Water and sanitation require community changes. Good health is more than the sum of technologies and many programs have successfully used an "umbrella" theme to focus concern on the child. But there is no substitute for delivering appropriately detailed information.

Shifting to Prevention Messages

As child survival programs such as diarrheal disease control mature and begin to achieve their immediate mortality reduction objectives, increasing emphasis will be given to reduction of morbidity, or

to preventing disease *per se*. From a communication point of view, prevention behaviors are more complicated and difficult to affect than treatment behaviors. Treatment is usually prompted by a salient event (e.g., an episode of diarrhea), is limited in time, and produces visible effects. However, prevention behaviors (hand washing, latrine use, environmental sanitation) often require changes in routine everyday practices and have no immediate visible impact. These practices will present complex challenges to communication programs.

Pursuing New Technologies and Policies

Medical technology is constantly evolving. A new era in immunization technology, for example, will be inaugurated with the availability of disposable syringes and the

More Than Demand Creation

Field experiences have demonstrated that health communication programs can increase demand for services and, in combination with good service delivery, augment service coverage rates. Data from HEALTHCOM's evaluations show that well-designed communication programs can also:

- help increase the equity of program effects;
- successfully segment audiences and target hard-to-reach groups;
- help improve the timeliness of immunization;
- help reduce missed opportunities to vaccinate;
- when focused on one specific intervention (e.g., measles), produce positive side-effects for other interventions (e.g., complete immunization coverage);
- help increase the accuracy of consumer skills (e.g., mixing of oral rehydration solutions);
- help health workers communicate more effectively with parents about complex interventions such as ARI;
- help sustain new behaviors over time by adjusting to changing audiences and markets;
- assist policy makers design new interventions (e.g., for ARI) investigating parents' vocabulary and practices;
- improve the performance of multi-tiered training systems through careful design of training methods and materials.

potential of vaccines against malaria and diarrheal disease. Simpler technologies such as water filters and permeated bed nets will be part of expanded control programs for guinea worm, malaria, and other diseases. Super-ORS is a tantalizing possibility for diarrheal disease control. New communication strategies will have to be developed for these promising technologies.

Even tried-and-true therapies require continuing analysis. Planners and policy makers, for example, need to think more about what is "correct treatment" of diarrhea. Some programs promote ORS for all cases of diarrhea. Others encourage mothers to pay more attention to milder cases or emphasize the value of home liquids.

The medical profession continues to refine its protocols for some diseases such as acute respiratory infections. In such instances, a communication program can contribute insights into consumer practices but should not step beyond agreed upon policies. Each new technology and each health challenge poses practical and ethical issues for health communication planners.

Communication Programs Have Revealed Challenges

- Behavior change requires long-term continuity of resources and support.
- Integration of child survival themes in a communication program may be attractive in principle but difficult in practice.
- Health workers must be an integral part of communication efforts and convey consistent messages to audiences.
- Interpersonal networks can be effective communication channels but they have limited outreach and are challenging to manage.
- Short-lived campaigns are ultimately ineffective and can be harmful.
- Audiences and choices available to them change over time and strategies must adjust to a constantly fluid "market."
- Many health practices (particularly vaccination) are community behaviors and community norms must be changed to influence individual behavior.

Expanding Linkages

Many models of collaboration with the private commercial sector have already been developed by A.I.D.'s programs in health communication: private sector firms help upgrade research and advertising capacities; commercial firms expand production and distribution of products like ORS with the encouragement of deregulation and tax incentives; local businesses such as contraceptive marketing agencies complement public programs.

Potential partners also abound at the community level. Local leaders and social networks exert powerful influence upon the decisions and behavior of individuals. Women's private voluntary organizations, for example, offer deep and long-standing roots in many communities. Other local groups and networks afford opportunities to increase local participation in communication program planning. Cooperating with these groups can be the key to a project's credibility and influence within a community.

Building Institutional Capacity

Strategies for institutionalizing public health communication must be initiated at the outset of a project. Communication programs involve many partners who should be knowledgeable and committed to the approach. They will learn through experience and collaboration and be reinforced through a sense of ownership in project achievements.

Training is the most basic institutionalization strategy. For long-term impact, training efforts in formative research, strategy development, message design, and project monitoring must go beyond the immediate circle of project counterparts. Priority groups also include national and regional health education training institutions, public health schools, other public health training institutions such as schools for allied health personnel, and primary and secondary teachers' training schools.

Planning for the Long Term

Even health programs which have produced spectacular results have foundered over the long run because governments have been unable or unwilling to take over once donor funding ends.

Addressing the challenge of financial sustainability requires working with counterpart institutions to create new positions, budgets, and career tracks to support health communication as a routine activity. Donor project managers must address long-term staffing and recurrent cost issues with senior officials when the project is being negotiated.

Decision makers must then be aggressively targeted with data demonstrating program results to convince them



UNICEF

of the value of communication investments in terms of resources expended. Measurement of cost effectiveness is therefore a difficult but essential part of the institutionalization process.

Policy makers are interested in the cost effectiveness of both communication activities and changes in health practices.

Looking Toward The Future

In 1990, A.I.D. initiated a new five-year HEALTHCOM II Project designed to go beyond demonstrating that communication works. The challenge now is not just to introduce helpful new behaviors. It is to sustain positive health practices over the long term. The goal is not merely to demonstrate that health communication works. It is to transfer crucial skills and a comprehensive methodology to host country institutions. Assistance is provided to host country governments through both short-term consultancies and long-term advisers (up to two advisers in a country for up to five years).

Multiple Interventions

HEALTHCOM II is helping country planners coordinate communication activities across multiple disease programs to avoid contradictory messages, save research and programming costs, and link

consumer benefits. Primary targets for integrated planning include:

- Immunization
- Diarrheal disease control
- Nutrition (breastfeeding, vitamin A)
- Maternal health and birth spacing
- Control of acute respiratory infections
- Malaria and other vector-borne disease control
- Cholera control
- Water and sanitation.

At the same time, HEALTHCOM II is involved in country and regional efforts to combat emergency disease threats—especially measles and cholera. In 1991, the project assisted the Pan American Health Organization and a number of local governments carry out a Caribbean-wide “Make Measles History” campaign. Full-scale country interventions will also be undertaken in three African countries in collaboration with the REACH and Quality Assurance Projects. Initial work to fight the re-emergence of cholera in Latin America includes a case management video in Honduras and a community-based cholera education program using solar-powered slide projectors in Panama.

Another area of increasing concern to many governments is urban health. Statistics show alarming imbalances of services and concentrations of maternal and child morbidity/mortality in the world’s urban slums. HEALTHCOM is looking at the unique obstacles and opportunities for improving knowledge and practices in these environments. The project’s first site is Ixtapalapa, a district in Mexico City that claims 18 percent of its population and 40 percent of its annual infant deaths.

Urban environments provide complex challenges for health communication programs. (Bangladesh)



Training, Curriculum Development

As part of its focus on the transfer of a systematic communication methodology to host country institutions, HEALTHCOM II offers training materials and workshops to upgrade counterparts' skills in:

- Communication planning and management
- Audience research
- Materials and message design
- Monitoring/evaluation
- Counseling/interpersonal communication
- Use of private sector resources.

In addition, the project is developing a formal health communication curriculum for health professionals and community health workers. HEALTHCOM is working on a national and regional basis to incorporate health communication into the regular offerings of public health schools and other appropriate institutions.

Private Sector Opportunities

Studies in developing as well as developed countries have shown the value to both employer and employee of expanding health communication and other maternal and child health activities within the workplace. HEALTHCOM offers

host governments and private industry (transportation, mining, and manufacturing) the expertise necessary to initiate these services.

The project is also assisting service providers who are introducing new health financing systems to their clients. In Cairo, HEALTHCOM is collaborating with A.I.D.'s Health Financing and Sustainability Project to help the Embaba Hospital develop information and marketing strategies for potential clients as the hospital converts to a new cost recovery program.

Impact and Cost Studies

By conducting studies of communication program impact and cost, HEALTHCOM is helping decision makers examine their own resources and goals, assess necessary levels of effort, and make appropriate investments in communication activities. An initial study in the Philippines is comparing the costs and impact of a metro Manila measles campaign with those of a nationwide urban intervention.

The project is also showing communication managers how to use innovative reporting methods to keep policy makers informed and committed to child survival goals. A program must identify the right vehicles and the meaningful measures for this target group, to assure that health behavior issues remain compelling at the highest levels.

Communication for
Child Survival

HealthCom

is a project of the Academy for Educational Development. The Academy is a nonprofit service organization with 30 years of experience in development assistance in more than 100 countries. The Academy has been the prime contractor for A.I.D. communication for child survival activities since 1978. In carrying out the current five-year project (contract no. DPE-5984-Z-00-9018-00) the Academy joins with six subcontractors: the Annenberg School for Communication at the University of Pennsylvania (applied research), Applied Communication Technology (applied research), Birch & Davis International (cost studies), The Futures Group (policy maker and private sector support); The Johns Hopkins University (curriculum development), and Porter/Novelli (social marketing).

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