PN-AAT-867

THE HEALTH COMMUNICATION ROLE IN CHILD SURVIVAL PROGRAMS

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A paper prepared for
The 114th Annual Meeting
of The American Public Health Association

Sept. 28 - Oct. 2, 1986
Las Vegas, Nevada

HEALTHCOM
Communication for Child Survival

is a program of the
Bureau for Science and Technology, Office of Health and Office of Education
Agency for International Development

through a contract with the
Academy for Educational Development

and subcontracts with the
University of Pennsylvania, Applied Communication Technology, Needham Porter Novelli and PATH

Contract #DPE-1018-C-00-5063-00

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I. HEALTH COMMUNICATION: WHAT IS IT?

Health education, motivation, behavior modification, patient education, patient counseling, community organization, in-service training, audiovisual materials--these are just some of the labels for many real activities carried out by trained professionals today which share a concern for and a focus on health behavior and communications. Health communication, as defined here, is a specialized discipline within this broad field which has emerged during the past ten years to refine and apply some of the most promising communication and behavior change technologies to public health problems. Health communication is broadly defined here as the systematic attempt to positively influence health behavior of large populations using principles and methods of mass communications, instructional design, social marketing, behavior analysis, and anthropology.

Since the early 1970's, the U.S. Agency for International Development has played a leading role among international donors in promoting the use of health communication and refining communication methodologies. Having pioneered the application of communication and social marketing techniques to ORT and family planning programs, AID is now encouraging its expansion to immunization, nutrition, ARI, and other child survival programs.

Health communication serves two primary functions in child survival programs. First, it creates a demand for the products and services required to make child survival a reality. Second health communication helps ensure that once products and services distributed are consumers and providers will use them in a safe and effective way. These two roles, demand creation and appropriate use, are fundamental to a successful child survival activity. Both of these roles place the consumer in a pivotal role. They move the child survival initiative out of the laboratory, out of the clinics and hospitals, and into the homes and minds of those people who need the service, who will decide to seek it out and who will use it properly. This statement is not an ideological one but rather a practical one. Child survival will not work if consumers do not know about, believe in, and use it products and services properly.

A. Demand Creation

Demand creation is more than simple publicity regarding product availability. As commercial marketers have shown, the consumer must know the relative advantages of the new product over more familiar ones. The consumers must believe that the new product is available and possible to use, and finally, that it will meet the product goals which consumers have defined.

In promoting a new perfume, demand creation can be quite straightforward, although not without difficulty. In designing child survival products and messages, however, it becomes complex. First, we often know little about what the marketplace is like. What are the other products, what do they "cost" and what are their perceived benefits? What constitutes acceptable levels of costs for a new behavior in a particular society and how can a product be "positioned" to meet the need that rural mothers define for themselves, that is, not traveling for hours to reach an immunization post or avoiding the public embarrassment of not knowing which end of the growth monitoring chart to read. Second, our ability to design new products is limited by the available technology.

In public health, we are often faced with the problem of "selling" mothers a "product" which we know has immediate, unpleasant consequences. Yet we are still technologically incapable of making an immunization painless or a condom comfortable.

But demand creation also means changing fundamental beliefs about life and one's own ability to affect life. It means changing fundamental beliefs about life and one's own ability to affect life. It means motivating individuals and communities from cultures which are often traditional and fatalistic to accept and then demand the possibility that their children can live and grow up healthy.

Viewed from this perspective, demand creation implies more than popularizing or even educating consumers about a product. It involves the mobilization of individuals and communities to take enthusiastic collective action in support of child survival initiatives, as several programs, such as the immunization programs in Columbia, Brazil, and Burkino Faso, have already done. Collective action, as applied to individual consumer decisions, raises a whole new arena of opportunities and obstacles for the communications planner.

B. Appropriate Use

Appropriate use is a much less well understood goal of public health communications. While seemingly obvious, many socially beneficial products focus almost exclusively on demand creation alone. If a consumer purchases a product, then it is assumed that he or she will also use it properly. Field evidence shows that this assumption is clearly unwarranted. Careful behavioral analysis, a fundamental part of the public health communications approach, is essential to ensure that products and services are used properly as well as purchased widely.

Research from a number of ORT programs has shown, for example, that while it was originally thought that mixing ORS was going to be the primary problem, ORS administration has in fact presented the main obstacle. Early research in Honduras, for example, showed that women gave far less volume of ORS than required to rehydrate a child, despite significant media messages to the contrary. The second and third phases of the program shifted emphasis to the need for replacement of fluid loss. This new emphasis was translated into rural vocabulary to say "to replace the liquid your child loses, give your child a glass or ORS everytime he has a movement." This message proved much more acceptable--first because there was a clear cue, second because the volume prescribed carried more face validity than "a litre a day," and third because the message explained why a glass per stool was advocated--to replace what was lost.

Use involves a number of variables. It suggests not only knowing what to do but also what sequence to do things in, when to begin them and when to end them. It may require learning what instruments or tools are needed to make an activity work.

Prevention behaviors will require a significantly different behavioral approach. As we move away from behaviors which are provoked by strong external stimuli, such as a bout of diarrhea, and into behaviors which have no external provocation, such as handwashing, then attention will shift away from tools and toward reinforcing associations. Training family members to remind each other of handwashing, or narrowing the message to stress handwashing before food preparation, may be much more effective. Whatever the solution, appropriate use, not only understanding and commitment to a behavior, is fundamental to success.

II. HEALTH COMMUNICATION FOR ORT

To date, the most significant health communication efforts for child survival have been made in support of ORT programs. Comprehensive ORT communication programs, using carefully focused and tested messages and multiple channels for delivering them, have been developed in a number of countries as part of the worldwide promotion of diarrheal disease control.

A. What ORT Communication Can Do

The experiences of these programs has demonstrated that health communication can:

1. **INCREASE DEMAND FOR ORS:**

   - o In Honduras, ORS use increased from zero to 48 percent in only one year of intensive communications.
   - o In Egypt, ORS use increased from one percent to 70 percent in two years.
   - o In Nicaragua, the use of ORS for diarrhea episodes in children below six years of age increased from 24 percent in 1980 to 43 percent after two years of communications efforts.

2. **TEACH CORRECT ORS MIXING AND ADMINISTRATION SKILL:**

   - o In the Gambia, after an intensive eight months of communications, 66 percent of rural mothers knew the correct formula for a complicated water-sugar-salt formula using locally available bottles and bottle caps.
   - o In Bangladesh, 90 percent of mothers could mix safe and effective water-sugar-salt solution several months after initial instruction.

3. **TEACH THE CONCEPT OF DEHYDRATION:**

   - o In Egypt knowledge of signs of dehydration rose from 32 percent to 90 percent between early 1983 and late 1984.

4. **TEACH MOTHERS TO IMPROVE DIETARY MANAGEMENT IN THE HOME:**

   - o In Swaziland, after eight months of intensive CDD communications, the number of mothers who reported that children should be fed more special foods after diarrhea episodes increased from 16 percent to 44 percent. Reported feeding during diarrhea episodes also increased.

5. **DEVELOP SUPPORT AMONG PHYSICIANS AND OTHER OPINION LEADERS:**

   - o In Egypt, after two years of communications, 90 percent of all physicians prescribe ORS.

These programs have also shown us that communications cannot compensate for poor service delivery, inadequate ORS supply, poorly trained service providers, or physician or other opinion leader resistance. These are aspects of ORT programs, in fact, which must be addressed before pursuing a vigorous public communication program.

B. Current Issues in ORT Communication

A number of issues remain to be addressed in the design and implementation of health communication activities for ORT programs. These include:

1. **DEMAND CREATION AND APPROPRIATE USE**

   - o Communication on appropriate ORT use must include ORS mixing, ORS administration, feeding, and referral.
   - o What institutional mixes and delivery systems, public and private, can be used or created to maximize ORT promotion?
   - o How do we move ORS consumers from trial use to repeated and effective use?

2. **EFFECTIVE HOME MANAGEMENT OF DIARRHEA**

   - o How can the teaching of water/sugar/salt solutions be improved?
   - o How much and when should we try to change traditional concepts of illness and teach modern concepts, such as dehydration?

3. **PRODUCT POSITIONING OF ORS**

   - o What do users expect a diarrhea treatment to do?
   - o Do users presently withhold food or fluid from a sick child?
   - o How can ORS be promoted to an audience which does not understand dehydration or wants a medicine that stops diarrhea?

4. **SUSTAINING NEW ORT KNOWLEDGE AND PRACTICE**

   - o How do we cope with falling learning curves?
   - o How may effective maintenance and reinforcement strategies be designed?
   - o How can such strategies be designed?
   - o How can such strategies be implemented and remain both cost-effective and realistic in terms of other competing health education priorities?

5. BEYOND ORT COMMUNICATIONS

- o How can appropriate feeding messages best be incorporated in ORT communications programming?
- o How can realistic and actionable prevention messages (e.g. personal hygiene and protection of water) be designed?

III. HEALTH COMMUNICATION FOR IMMUNIZATION

The public communication requirements of immunization programs are significantly different from those of ORT programs. The need is not to educate parents in a new skill, such as mixing and administering ORS, but to inform them when, where, and why immunizations are available and motivate them to complete a full schedule of immunizations for their children.

Priority issues currently being addressed in the health communication component of AID-supported immunization programs include:

1. Why mothers do not complete the full immunization schedule?
   - o Lack of information?
   - o Lack of motivation?
   - o Service delivery problems?
2. How can we improve the quality of immunization delivery?
   - o Do intensive immunization campaigns contribute to improved delivery? Do they exhaust the system?
   - o What kinds of institutional incentives are necessary to ensure that logistics, supervision, training, and communication segments work in a coordinated way?
   - o Are multi-institutional efforts sustainable?
3. Can intensive immunization phases be used effectively to deliver other child survival technologies, such as ORS?
   - o Do multi-themes create consumer confusion?
   - o Do multi-themes cause health worker resistance? Are they sustainable?
   - o Do they over-stress logistics and planning systems?

In one of AID's most ambitious and interesting immunization programs to date, the Agency since October 1985 has been assisting Ecuador's Child Survival Program, called PREMI. The Ecuador Program is the first in the world to combine three child survival activities--immunization, oral rehydration, and nutrition--in a single intensive program. It is the first to promote the mass distribution of ORS to all mothers who attend the mass vaccination days, and the first to carry out mass weighing of infants.

The consumer research carried out under the communication component of the program has already provided some important actionable findings.

A behavior observation study revealed that mothers have a surprisingly high level of understanding of immunization schedules despite very poor face-to-face counseling given by doctors in rural health clinics. The study suggests that the real problem lies in non-compliance by health workers of new immunization schedules--either not immunizing children with low grade fevers or turning them away because they have not waited for a three-month interval between shots, when in fact only a one-month interval is essential.

Despite these problems, the Ecuador program has demonstrated some remarkable successes. During the first three intensive phases, (October 1985, January 1986, June 1986), the following were obtained:

- **1,200,000 vaccines administered**
- **1,900,000 ORS packets in homes**
- **180,000 children weighed**
- **78% of population know about Suero Oral (ORS) product**
- **87% accuracy on 3 critical ORS mixing criteria**
- **75% mothers had Suero Oral packet in home at time of interview**
- **26.9% had used Suero Oral to treat diarrhea in last 2 weeks**
- **96% of mothers have vaccinated child at least once**
- **86% of mother report having taken their child for medical check-up.**

IV. Other Child Survival Interventions

In addition to ORT and immunization, AID's child survival program includes promotion of several other important interventions including: appropriate treatment of acute respiratory infections (ARI); breastfeeding; growth monitoring; Supplementation of material and infant diets, including vitamin A; child spacing; handwashing and related personal hygiene; and interventions to improve water and sanitation systems.

For each of these interventions, there are important roles for health communications to play. In the case of ARI for example:

- o Training programs and materials for health personnel must be developed based on standardized ARI treatment protocols.
- o Research must be conducted among target audiences to determine existing beliefs and practices on respiratory illnesses upon which educational message design may be based.
- o Public educational messages and materials must be developed on ARI danger signals (fast, hard breathing; whistling sounds in breathing; in-pulling chest; blue lips or fingernails; extreme restlessness) referral instruction, and other priority messages.

One of the first important contributions that health communications can make to the design of these educational programs is a determination of which related behaviors are most conducive to change through the process of behavior analysis.

In looking at what consumers are expected to do in applying one of the new health technologies, how does each potential behavior rate in the following domains?

- Antecedents/Prompts: Are these natural stimuli or prompts for the behavior? Is there some inherent characteristic of the behavior which presupposes an initiating event?

- Complexity/Accessibility: How complex is the behavior? How hard is it to learn or grasp, and how many aspects are needed to make it produce the intended result?

- Positive Consequences: Are there immediate payoffs inherent in the behavior or its immediate environment for practicing the behavior?

- Cost/Risk: Is the practice costly to the consumer in time, money, energy, or any precious resource? Is there a risk of physical harm, social stigma, embarrassment, or loss of privacy?

- Compatibility with existing practices: Are the new behaviors within the recognizable range of what people already do, or do they conflict with accepted practice?

- Observability: Is the practice or its immediate by-products readily observable by the individual, family members, peers, or influentials?

- Outside Service Delivery Requirements: Can the behavior be practiced with little or no outside resources, or does it require the delivery of new products and/or services?

- Socio/Religious/Political Sensitivity: Is the nature of the topic or practice inherently sensitive, or does it represent an area of social consensus?

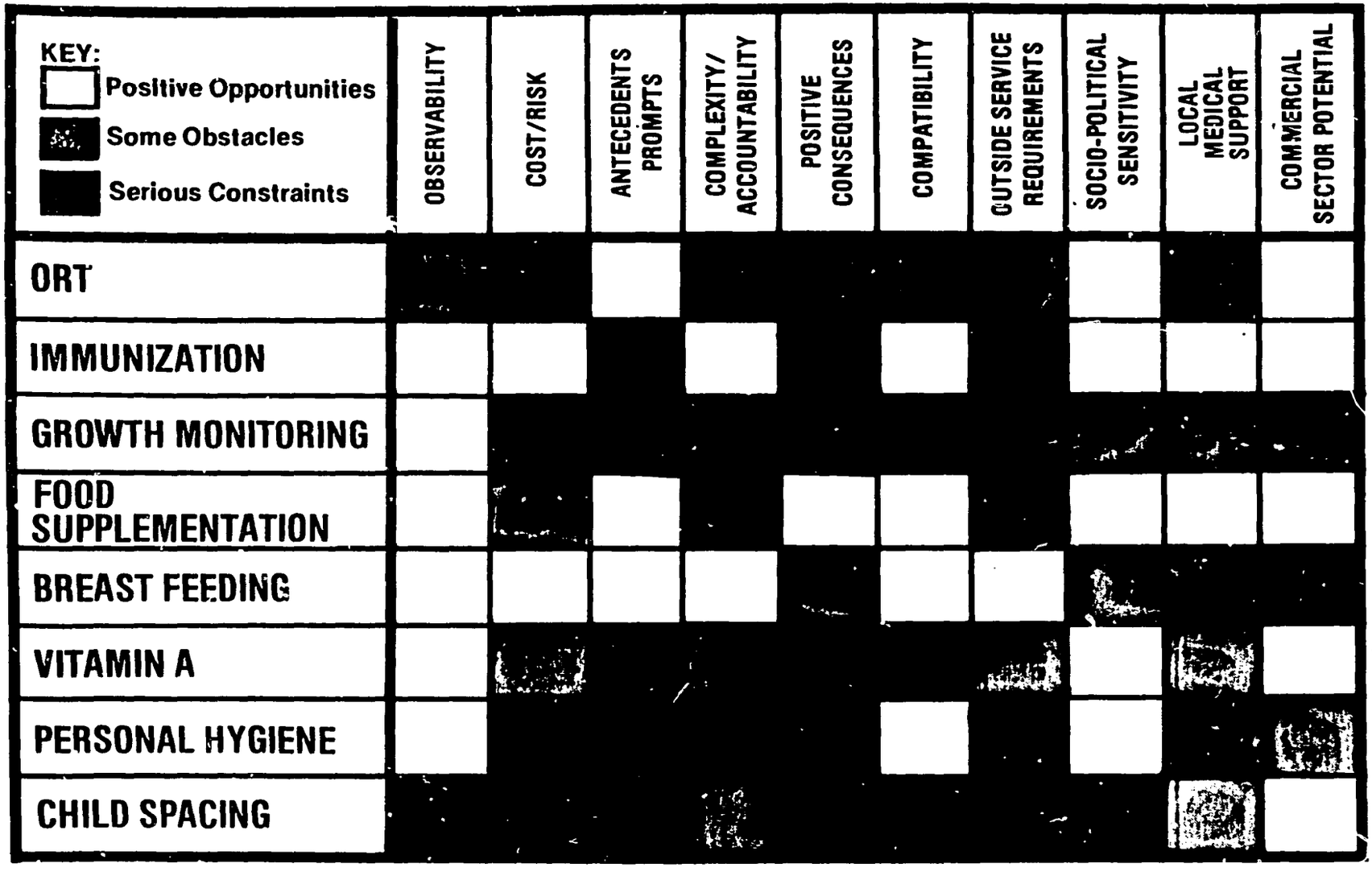
- Local Medical Support: Is the local medical community familiar with and disposed to support the technology?

- Commerical-Sector Potential: Is the technology particularly amenable to private or commercial-sector involvement? The implication is that a product or service exists which can be sold at a profit sufficient to stimulate investment.

Such an analysis provides the following insights on the various Child Survival technologies. (See Figure 1.)

ORT: Behaviorally, ORT is a difficult and complex technology despite some rhetoric to the contrary. Its great advantage is in the existence of a salient prompt (the episode of diarrhea and/or signs of dehydration) and a reinforcers (the child's recovery, particularly appetite recovery). ORT presents observability difficulties because it is infrequently and unpredictably applied. Outside delivery requirements can be high with

FIGURE 1


KEY:
Positive Opportunities
Some Obstacles
Serious Constraints
OBSERVABILITY
COST/RISK
ANTECEDENTS PROMPTS
COMPLEXITY/ ACCOUNTABILITY
POSITIVE CONSEQUENCES
COMPATIBILITY
OUTSIDE SERVICE REQUIREMENTS
SOCIO-POLITICAL SENSITIVITY
LOCAL MEDICAL SUPPORT
COMMERCIAL SECTOR POTENTIAL
ORT
IMMUNIZATION
GROWTH MONITORING
FOOD SUPPLEMENTATION
BREAST FEEDING
VITAMIN A
PERSONAL HYGIENE
CHILD SPACING

packaged solutions. Homemade sugar-salt solutions reduce commodity requirements considerably. Socio/religious/political sensitivity seems low. There is a growing consensus that ORT and reduced infant mortality are priorities. Local medical support varies considerably but presents an area of some concern. Commercial-sector potential is high for package ingredients offering a wide range of products and salable services.

IMMUNIZATION: Behaviorally, immunization presents almost the opposite picture from ORT. Antecedents and rewards are virtually nonexistent, but the complexity and cost are also low. Emphasis here clearly must be on creating effective antecedents or prompts, positive consequences, and minimal cost to the consumer.

VITAMIN A: Behaviorally, Vitamin A supplementation looks like many other prevention behaviors: no natural antecedent/prompt and no naturally occurring reinforcer/consequence. Behavioral complexity is probably manageable but subtle discriminations might be required. Full analysis of Vitamin A accessibility at the village level would need to be carried out, but observability is not a problem, and there appear to be no risks.

GROWTH MONITORING: Behaviorally, growth monitoring appears to be one of the more difficult and least understood technologies. It has almost everything going against it. It has no natural antecedents, requires persistence, has no inherent reinforcers, and is quite complex and unfamiliar (requiring health care workers trained in data collection and handling).

BREASTFEEDING: Behaviorally, breastfeeding is in the plus column. It is compatible with mothers' natural tendencies and existing practices. There are natural antecedents (breast milk production and child's suckling behavior), complexity is low, costs can be high for working women. Natural rewards can be high and immediate. The practice is readily observable.

FOOD SUPPLEMENTATION: Behaviorally, food supplementation looks quite positive. Hunger is a natural antecedent. Complexity is low, with positive consequences. Indeed, there are substantial costs, risks, and substantial contraindications in local beliefs and existing practices. Observability is a severe problem, as is contingent reinforcement.

HYGIENE AND HAND WASHING: Behaviorally, complexity will vary with local practices and logistics. Experience has shown that costs are high for access to clean water, soap, and adequate waste handling. Personal hygiene requires persistent, frequent behavior that may be substantially outside of current practice. Risks are low, but there are no salient prompts or immediate consequences. Observability is not a problem. Socio/religious factors are positive with support for cleanliness. Outside service delivery requirements will vary greatly from one locale to another. Local medical support is generally good, but ineffective. Commercial-sector potential is high with a wide range of products and services, but consumer motivation and potential profit are low.

V. HEALTH COMMUNICATIONS METHODOLOGY: HOW IT WORKS?

The success of health communications when applied to large-scale populations depends upon its ability to change what people do as well as what they think and believe. It must make an impact upon the consciousness of the intended audience by rising above the everyday clutter of advice and suggestions and become an important new priority in their lives. This cannot be achieved by the repetition of simple slogans, the mass exhortation to do the right thing, or the indiscriminate use of mass media alone. It

requires a sensitive understanding of how people are affected by specific health problems, articulate crafting of products and educational messages which are both useful and practical, and a coordinated distribution network which reaches each individual through various channels simultaneously.

Health communication requires a long-term commitment to change. It is often divided into sequential phases called "campaigns," which intensify activities during selected periods of time, but public health communication is not a single compaign. Campaigns have been shown to have important value as part of an overall change strategy but alone they have generally proven to have short-lived impact and burdensome administrative demands.

Health communication is a procedure for planning and conducting a long-term (three- to five-year) program of health education designed to produce sustainable changes in a large target population around a relatively narrow set of behaviors. It draws heavily on principles and procedures derived from social marketing, behavior analysis, instructional design, and anthropology. The **Health Communications Model** illustrates the basic stages and organization structure of the system and process (See Figure 2.).

The program structure reflects the importance of the cyclical and iterative process; planning leads to interventions which are monitored, which leads to subsequent changes in planning. The model has three sequential **stages** and each stage is divided into several **steps.**

Stage I, the Planning Stage, emphasizes the collection of critical information needed to prepare an effective program design. This information answers important questions such as: (a) Who in the total population should be selected as the principal audience? (b) What communication channels are most critical for these people? (c) What behaviors or products should be advocated? (d) What resources are needed to conduct the program? The final program planning, including budget and resource emphasis, is given to health practice studies, and to field tests of products, messages, and delivery systems.

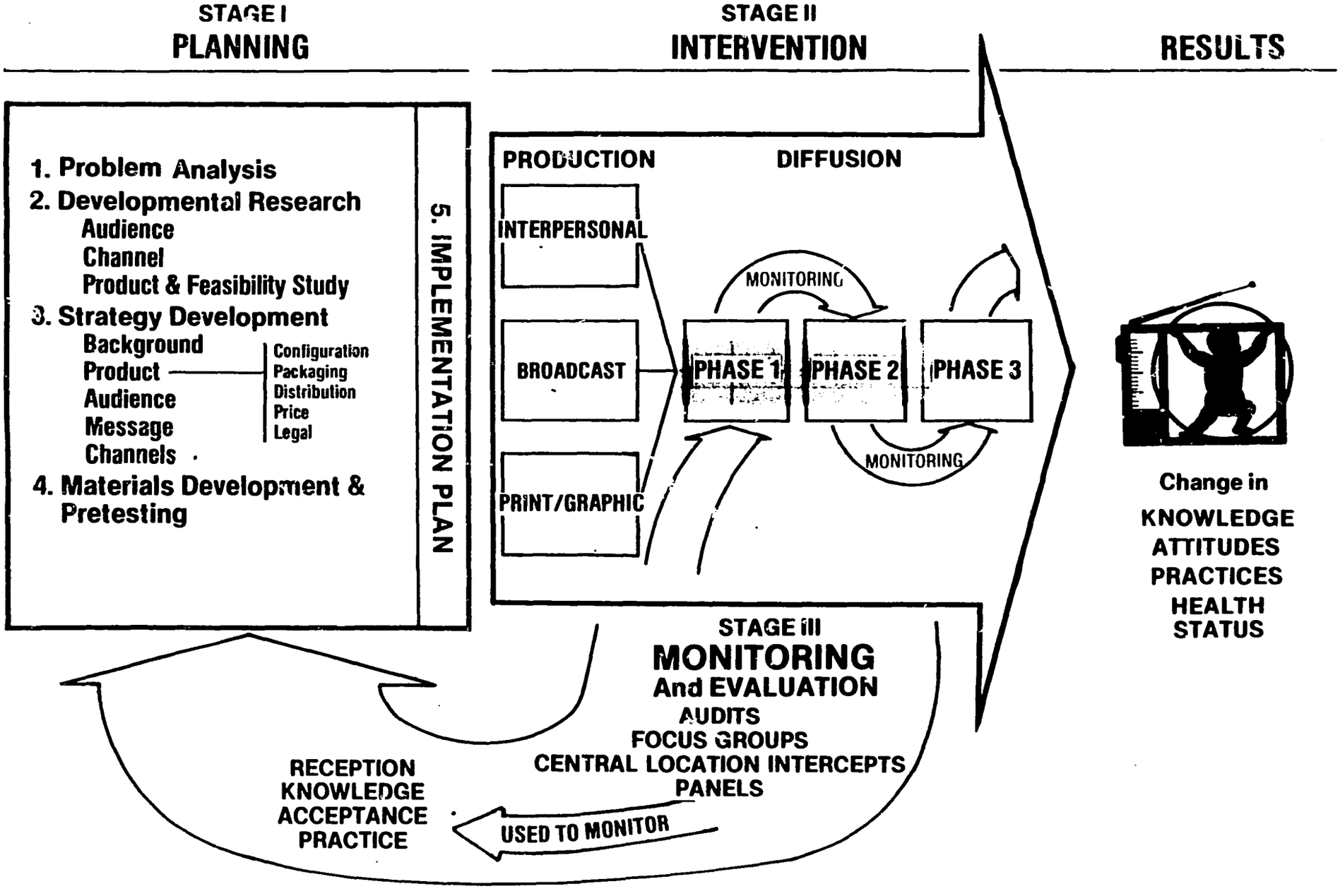
Stage II, the Intervention Stage, is divided into discrete message cycles. Each cycle covers similar information but with slightly different approaches adapted to the changing needs of the audience. These periodic changes reduce audience fatigue and permit a continual renewal of audience involvement. More importantly, they permit program planners to incorporate results of the earlier phases into the planning of subsequent phases. In essence, it permits the planner to make important iterative changes in educational strategy. These changes must be made in response to information on consumer acceptance and the actual efficacy of project activities.

Stage III, the Monitoring Stage, ensures that this information is available at relevant and timely intervals. A monitoring system which permits the random sampling of selected segments of the audience is developed. Planners know: (a) how a microcosm of their intended audience feels about the advice they are receiving; (b) whether they are taking that advice; and (c) what obstacles they are encountering. These monitoring devices can also point out important logistical problems such as a breakdown in delivery of printed matter or inappropriate placement of broadcast materials. This type of continuing evaluation is essential in making corrective changes in future cycles as well as in providing program administrators with a clear idea of their overall potential success.

An implementing agency (or agencies) is responsible for guiding this process. This agency may be either a private or public sector institution. Often it is a mix, bringing together the flexibility and professionalism of the private sector with the power and

FIGURE 2

THE HEALTH COMMUNICATIONS PROCESS



prestige of the public sector. Who coordinates these public health communications activities is critical to success. This decision, however, is frequently based on local political and practical realities, meaning that the lead agency lacks sufficient experience to provide the needed leadership.

An institutional analysis can help identify weaknesses of the principal implementation agency, whether it be public or private. These weaknesses must then be compensated for by including complementary institutions or specialized training programs to upgrade skills and administrative changes to introduce new norms.

The fields of social marketing, behavior analysis, and anthropology have significantly contributed to shaping this public health communiations model. The chart below illustrates how these paradigms influence activities at various stages of the process.

Social marketing provides an overall framework for the plan, ensuring that:

- The consumer is at the center of all planning decisions;
- Qualitative research techniques complement more traditional quantitative ones;
- All aspects of a successful program, product, place, price, and promotion are addressed in the program design;
- The diffusion process stresses integrated channels; and
- Simple, salient, attractive, and usable messages are repeated often.

Behavior analysis provides:

- A systematic means for measuring the potential practicality of new messages and products against existing behavioral patterns of the intended audience;
- A set of proven principles for effective face-to-face training of promoters, distributors, and providers; and
- Organizational principles to guide the sequencing of inputs to maximize not only the first trial but also continued correct use of new messages, services, and products.

Anthropology provides:

- In-depth understanding of how traditional beliefs and practices should affect program planning;
- A cultural context within which to place specific behavioral findings; and
- Research techniques that help monitor program impact, not just on immediate indicators, but also on long-range, sociocultural changes.