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Mass Media and Health Practices

IMPLEMENTATION

Focus Group Research

PROJECT DESCRIPTION

Marketing Technique

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PNAAP966

MASS MEDIA & HEALTH PRACTICES

PROJECT IMPLEMENTATION

Academy for Educational Development, Inc.

Sponsored by the Office of Health and Office of Education
Development Support Bureau
UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT

PROJECT DESCRIPTION

Project Director

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Project Field Coordinators

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SECTION I.

PROJECT OVERVIEW

A. PROJECT OBJECTIVES

On September 30, 1978, the Academy for Educational Development was contracted by the United States Agency for International Development (AID) to implement a five-year mass communication project. The project, which is a joint initiative of the Office of Education and Office of Health within the AID Development Support Bureau, seeks to develop a methodology for the application of mass communication to the prevention and treatment of acute infant diarrhea in the rural areas of two developing countries. The long-term development goal of the project is to strengthen the health education capacity of the cooperating ministries of health. The overall project is divided into three sequential phases: Phase One - a public education campaign in each of the two host countries using radio, graphic material, and face-to-face support; Phase Two - analysis of project results; and Phase Three - dissemination of those results to the world community of development communication professionals. Stanford University was contracted by AID to evaluate the project.

B. PROJECT ADMINISTRATION AND OPERATION

The field project in Honduras is a three-year portion of the overall project. Corresponding to Phase One, it is subdivided into two distinct activities: a nine month pre-program research activity and the actual execution, monitoring, and revision of the public education campaign itself. The project has modest financial resources to develop and produce the radio, graphic, and in-service training materials, and fund one-half of the radio broadcast costs. The Ministry of Health is funding three full-time counterparts, office space, and the remaining broadcast costs.

The Mass Media and Health Practices Project (MM&HP) is also providing two expatriate technical assistants to the Health Education Unit of the Ministry of Health (MOH) in Honduras. This unit has been expanded to include two specialists assigned full-time to the MM&HP Project. A third position assigned to the project has yet to be filled. These individuals coordinate project activity with several other MOH offices, including the Director General, Maternal Child Care, Training and Human Resource Development, Epidemiology, and Environmental Sanitation. A coordinating committee has been established to review project activities and to ensure that the project is consistent with the overall health priorities of the MOH.

The project operates in Health Region No. 1 of Honduras. This region was selected after careful study and provides a representative population of approximately 400,000 individuals.*

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* Background information on the region is available in MM&HP Project Document #6.

C. PRINCIPAL COMPONENTS

The MM&HP Project has three principal components: the specific health problem; a defined set of basic instructional tools; and a systematic instructional development process. Each of these elements contributes to the overall organization of the health campaign and is consequently reflected in this implementation plan.

The health problem being addressed involves both prevention and treatment behaviors associated with acute infant diarrhea in primarily rural areas. The range of appropriate treatment behaviors is relatively small, and there remains a significant controversy among medical experts as to the exact way in which these few treatment alternatives should be promoted at the rural community level. The MM&HP Project will seek to reduce infant mortality by promoting pre-packaged, WHO formula, oral rehydration therapy through existing health facilities, primary health care workers, and home administration.*

Selecting prevention behaviors presents a somewhat different problem. There are so many potential sources of contamination in a rural community that the number of necessary intervention points is overwhelming. The problem is compounded by a general skepticism that health education alone is sufficient to convince rural people to make the kind and number of changes needed to produce any measurable reduction in diarrheal morbidity. Project staff have determined that prevention behaviors should be included however, because they provide an opportunity to investigate media's potential to affect behaviors which represent areas of special interest to the health community. Three clusters have been choosen: breastfeeding, food preparation, and personal hygiene. We believe that if the project is able to demonstate that critical behaviors in each of these clusters have been changed by the program, even in the absence of any demonstrated reduction in diarrheal morbidity, the project will have made an important contribution to health education.

The basic instructional tools as defined in the project contract include radio combined with graphic materials and some face-to-face support of health workers and local opinion leaders. Radio will be emphasized because of its capacity to reach large audiences efficiently. In Honduras this emphasis is consistent with the existing rural communication system and the MOH's own health education priorities.

The instructional development process relies upon past experience in mass communication and combines systematic pre-program research with experience drawn from such fields as social marketing and behavioral analysis. This process rests upon a clear understanding of three principal areas: the behaviors to be promoted; the personal, family, and community context in which these behaviors are elicited; and the ability of the instructional tools to promote the widespread adoption of the selected behaviors.

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* The full reasoning for this decision is discussed in MM&HP Project Document #8.

The working premise which makes these principles relevant is that prevention and treatment of infant diarrhea can be positively affected by altering the way in which rural people now behave. Improvement does not necessarily require significant new investments in health infrastructures such as water systems, latrines, or new health centers. This project is not attempting to install new mechanical technologies, nor promote sophisticated cognitive conceptualizations. Our task is to alter the likelihood of people doing things which are well within their capacities, but currently unlikely. The emphasis is on behavior. Attitudes, even those which may contribute to what people do, are of secondary interest.

From a behavioralist point of view, there are five circumstances which singly or in combination, account for absent behavior. First, necessary materials or implements like ORT packets may be unavailable. Second, prerequisite skills, discriminations, or knowledge may be lacking. For example, rural mothers may know that boiling water is good but not understand that it actually kills the parasites they fear. Third, there may be no incentives like immediate improvement in their child's health to engage in the behavior. Fourth, there may be incentives to engage in incompatible behavior like giving kaolin or purges. And fifth, there may be punishing consequences which discourage the desired pattern. A child may vomit, for example, or his diarrhea may actually appear to increase. An understanding of these factors is absolutely critical in the development of an effective instructional intervention.

Behavioral analysis also makes an important contribution to our understanding of how to change behavior patterns, whether it be altering an existing pattern, or creating a new one. Many health messages, for example, carry an implicit or explicit threat. This approach has been shown to be less effective than providing rewards to approximations of the desired behavior. Use of approximations require that we identify a relevant existing behavior to reinforce and may mean including a few behaviors in the instructional campaign which we know rural mothers are now doing correctly. Rather than telling mothers to stop bottle-feeding, we may want to reward mothers when they do breastfeed.

Another important point to emphasize is effective delivery of positive consequences or rewards. Behavior does not change unless rewards are actually applied to the desired behavior pattern or some reasonable approximation. It is not sufficient, for example, for nurses to tell outsiders how important it is that rural mothers be praised for administering ORT. We must be certain that the nurses are in fact praising mothers, and that the mothers perceive the nurse's action as praise or support. This project may be one of the first efforts to use mass communication primarily to support positive existing behaviors rather than extinguishing negative patterns or creating entirely new ones. Behavioral information in these areas was collected as part of a nine-month pre-program effort we called a developmental investigation.

Based upon an analysis of the medical problem (infant diarrhea) and the communication and instructional requirements of the media to be used, specific investigation topics were established as follows: (1) rural understanding of and response to diarrheal episodes in children under five; (2) general rural child care practices; (3) infant feeding patterns with special emphasis on breastfeeding; (4) home-based mixing trials of WHO oral therapy solution; (5) potential sources of bacterial contamination in rural homes; (6) existing distribution systems for commercial medicines; (7) health system outreach; (8) rural media habits and preferences; and (9) rural opinion leadership.

The nine-month investigation used four general strategies to collect information on each of these topics: the collection and analysis of existing information (statistical, anthropological, and anecdotal); individual interviews with 175 rural people; 62 focus group interviews with approximately 402 rural individuals; direct observation in 24 rural homes; visits to 5 rural clinics; plus interviews with pharmacy and rural store owners as well as leading physicians and nurses.*

D. SUMMARY OF THE DEVELOPMENTAL INVESTIGATION

Because the results of the developmental investigation are so central to the design decisions reflected in this implementation plan, a brief summary of the most critical findings is presented here. Readers are referred to MM&HP Project Document #14 for more detail on any of these findings and cautioned that the statements below are highly generalized. Many constitute hypothesis still to be tested rather than facts to be accepted.

The investigation showed that rural mothers/grandmothers play the principal child care role during illness. Siblings did not play as critical a role as expected during illness. Fathers were involved, but in many cases, mothers felt at liberty to diagnose, prescribe remedies, and seek outside help without the father's permission. In the face of overt opposition from fathers, mothers would often lose confidence in these areas.

Diarrhea was clearly seen as a major problem, particularly after appetite loss and general physical activity declined. Most mothers knew that severe diarrhea could kill. Rural mothers generally proved keen observers of diarrheal states and were perfectly capable of distinguishing mild, moderate, and severe cases of diarrhea. In their terms, mild diarrhea is associated with the number and consistency of stools, moderate with loss of appetite and activity, and severe with a depressed physical state, skin texture and dryness. Factors such as vomiting were particularly worrisome. Diarrhea was often seen as both an illness in itself, and the result of some other illness. Treatment was often related to perceived cause. If it was thought, for example, that empacho (a local description of general stomach upset) caused diarrhea, than a sobador (masseuse) was used. If breastmilk was thought to be the cause, breastfeeding was stopped. If parasites were involved, medication was sought. Mothers

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* The design and execution of these investigation activities has been described in MM&HP Project Document #12, and the detailed results are presented in MM&HP Project Document #14.

generally tried to treat the diarrhea at home and only sought medical help as it became clear that the child was becoming more seriously ill. Many mothers would wait until very late in the episode before seeking medical help.

The large number of diarrheal remedies, many including commonly available antibiotics, coupled with the mother's expressed skepticism about their effectiveness, leads us to believe that diarrhea is probably a disease so common and so difficult to affect, that mothers see their control over it to be limited. In essence they may be looking for a remedy that works, and at the same time, be prepared to accept a remedy that doesn't do all they hope for.

Rural health concepts proved to be highly influenced by modern medical practices. There was a clear preference for shots over pills, pills over liquids, and commercial medicines over herbal teas. The association of sophistication with effectiveness seemed apparent in most mother's responses to questioning.

Rural mothers can generally recite the basic concepts of personal hygiene, water boiling, and germ theory. Germ theory is integrated with traditional beliefs related to spirits over which mothers feel they have limited power. The integration of modern and traditional beliefs is expressed in terms of animalitos (tiny, visible animals which have different names such as worms, parasites, etc.). It is not clear that rural people feel they have reliable control over these animalitos.

Mothers related the rainy season to the diarrhea season, but did not seem to have any widespread explanation for the two occurring together. Bad water was mentioned as a frequent reason for illness.

Breastfeeding was widely practiced, but supplemental bottle feeding was also common, particularly after three months. Bottle feeding is more common in urban areas but is penetrating rural areas as well. Many mothers clearly recognized the benefits of breastmilk and stated with great confidence that "breast is best." But these same mothers were using supplemental bottle feeding and, when asked why, reluctantly indicated that convenience was their principal motivation. Honduran women do not generally carry their children on their backs, and consequently, spend a great deal of their day holding small children in their arms. This presents a serious inconvenience, and the opportunity to put the child down with a bottle is enticing.

The expected extent of purging behavior did not show up in the investigation. Caveat taboos against breastfeeding during mild to moderate bouts of diarrhea were not widely expressed. Vomiting was a common motivation to stop feeding and local doctors do recommend fasting and withdrawal of breastmilk during bouts of diarrhea.

Most mothers simply did not believe interviewers when told that a child should consume a liter of solution a day. Many were not open to the suggestion. It seemed simply impossible to them.

Sources of contamination were widespread and numerous. Efforts to find a single key cause were futile without being able to consider major infrastructural changes like water supply, functional latrines, and refrigeration. Priority attention was given to analyzing food preparation and feeding practices. The highest potential sources of bacterial contamination seem to be water, watery cereals, teas, tortillas, and possibly beans--although beans are not given in large quantities to small children. Handwashing among mothers was relatively common. Some mothers wash their hands as often as 10 to 15 times a morning. Frequent hand washing is generally within the context of making tortillas which consumes most of the morning and is interrupted by changing children, cleaning up, etc. Handwashing is actually hand rinsing in a pot of water which is infrequently changed.

Storage of weaning foods for several hours and even up to three days is common. Reheating is not a common practice. Constraints to widespread reheating include fuel costs and additional time required. This was clearly demonstrated in the dissonance between the widely accepted importance of boiling water and the very limited water boiling practice found in rural homes.

Indeed the concept of regular compliance may be an important issue. Rural people do not appear to give importance to specific degrees of compliance. If they breastfeed once a day, but bottle feed four or five times, for example, they feel they "breastfeed regularly." If they give a medicine once a day which should be given three times a day, they say they are "giving the medicine." Compliance with lengthy ORT administration instructions may be difficult, not only because the administration is tedious and time-consuming but also because mothers may define a much lower level of regularity as compliance and genuinely feel they are complying.

Radio ownership seems to include about 60 percent of the rural families. It is possible, however, that as many as 20 percent of these radios are not working. Most rural homes do not listen to radio all day. The cost of batteries and involvement in other activities mitigates against radio as a constant companion. Evenings and early mornings seem common listening times; regular news broadcasts are reported as the most popular radio programs. Attention to radio during listening times is high. People do seem to comprehend the programs that they listen to.

Graphic materials are scarce. Calendars are popular, but this is because they are given away free as commercial promotion.

The health system is very hierarchical. Lower levels tend to mimic higher levels. Any treatment suggested for rural clinics which is not practiced in central facilities is considered second class medicine, and the word quickly spreads to the patients.

Health facilities are not highly regarded by the rural people. Common complaints include that centers are often closed and that they lack medicines. Kaolin is widespread and highly promoted by the medical community. Its basic purpose seems to be satisfying the patient's need to stop, or firm-up the consistency of stools. The kaolin being used contains niomicin which is known to cause diarrhea and is definitely counter-indicated in most cases.

Auxiliary nurses are overburdened and generally do not see themselves as health educators. They resist this role in most cases and generally do very poor jobs of teaching or explaining to mothers.

The primary health care worker (guardiane) program is suffering from high desertion rates and poor support. MOH midwives are more stable largely because they are able to charge for their services. But midwives are not regarded as credible sources of information about diarrheal treatment.

The generalizations provided here represent conclusions drawn from the initial pre-program research. Stanford will be conducting a baseline study which will explore several of these areas in more depth. For the moment, this is the best information available to us.

E. CAMPAIGN SUMMARY

1. The Problem

Honduras reported that 1,030 infants died from diarrheal dehydration in 1977. This accounts for 24 percent of all infant deaths and represents the single greatest cause of infant mortality in Honduras. The most commonly available treatment for diarrheal dehydration in Honduras is intravenous (IV) therapy. Intravenous therapy is expensive, requires trained medical personnel and a relatively sterile environment, and is presently available only in fixed health facilities which serve a small portion of the country's rural population.

2. Communication Objectives

a. Substantially reduce the number of deaths from diarrheal dehydration among children below the age of five.

b. Extend rehydration therapy to isolated rural areas where it is not now available.

c. Substantially reduce the per-patient cost of rehydration therapy in Honduras.

d. Introduce several diarrhea-related prevention behaviors to a significant number of rural people living in isolated areas.

3. Audience Definition

a. Primary audience is rural mothers/grandmothers with children under the age of five and primary health care workers called guardianes.

b. Secondary audiences include physicians, nurses, auxiliary nurses, midwives, fathers of children under five, rural school teachers and school-children, and regional health promoters.

4. Communication Strategies

a. Teach the primary audience:

1) To properly prepare and administer pre-packaged WHO formula oral rehydration salts to:

- infants, (less than one year) as soon as the child gets diarrhea, and

- toddlers, (older than one year) as soon as the child loses appetite or becomes listless.

2) To seek outside assistance if the child does not improve after administering the above regimen.

3) A cluster of behaviors associated with breastfeeding, infant food preparation, and personal hygiene.

b. Teach secondary audiences to support the primary audience through:

1) Physicians and nurses using oral therapy in all fixed facilities.

2) Fathers and midwives understanding and approving oral therapy.

3) Rural schools teaching prevention measures.

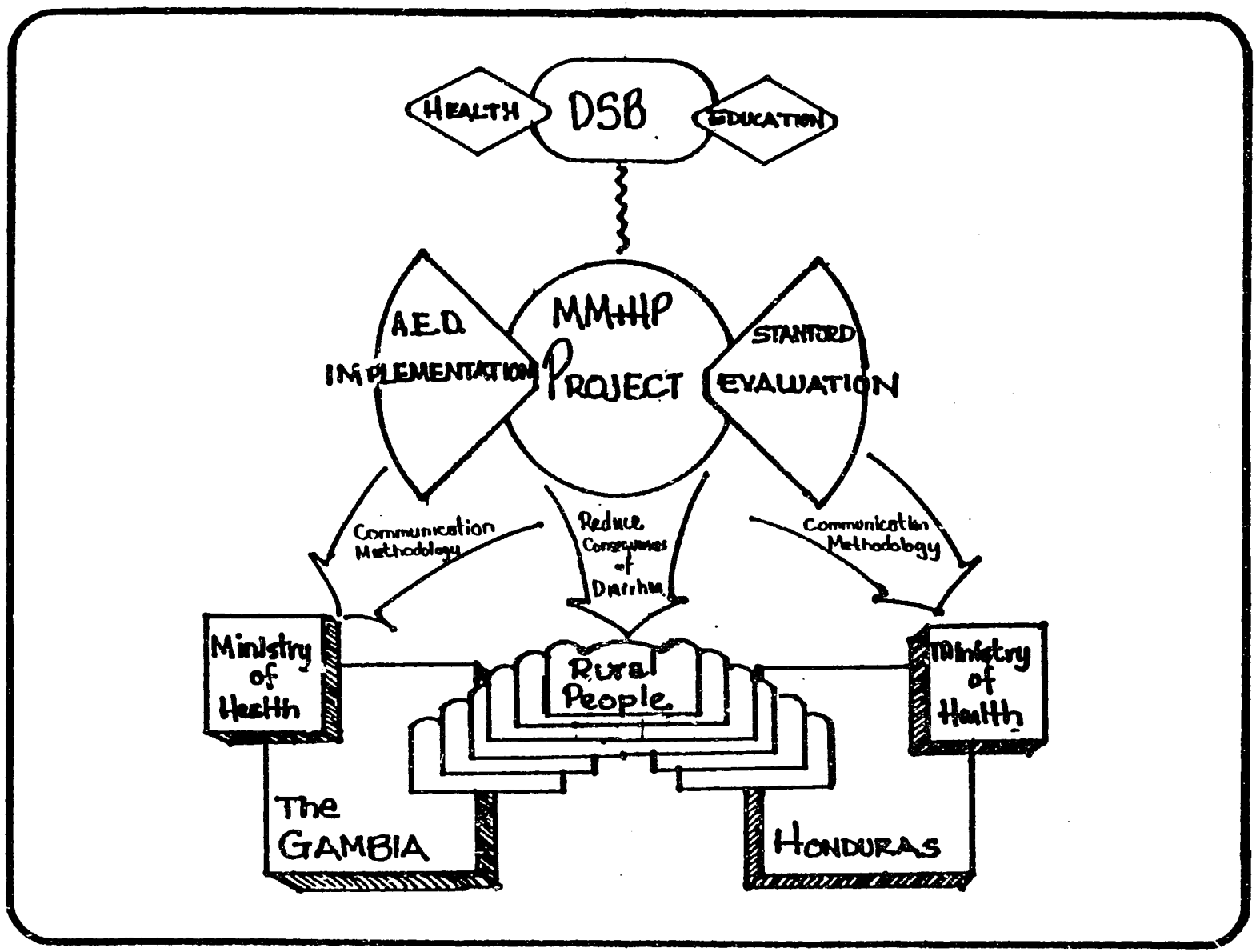
4) Regional health promoters distributing ORT packets.

5. Message Tone

The tone of the campaign will be serious and straightforward. It will seek to promote a mother-craft concept which supports what mothers are already doing and adds several new components to "being a good mother." ORT will be presented as the latest achievement of modern science: a remedy for lost appetite and an aid to recovery. ORT will not be presented as a remedy for diarrhea.

6. Execution

TV, radio, print materials, and health worker training will be used. Public service spots and mini-programs on radio will be stressed for rural mothers and health workers. These will be supported by news features on both radio and TV for medical practitioners. Support materials including posters, photonovels/pamphlets, and mailings will supplement the broadcast media. Health worker training, including physicians, nurses, auxiliary nurses, and guardianes will be the primary vehicle for introducing oral therapy to the medical establishment.



OPERATIONAL STRUCTURE OF THE MASS MEDIA AND HEALTH PRACTICES PROJECT

PROJECT GOAL

Produce a positive impact on the

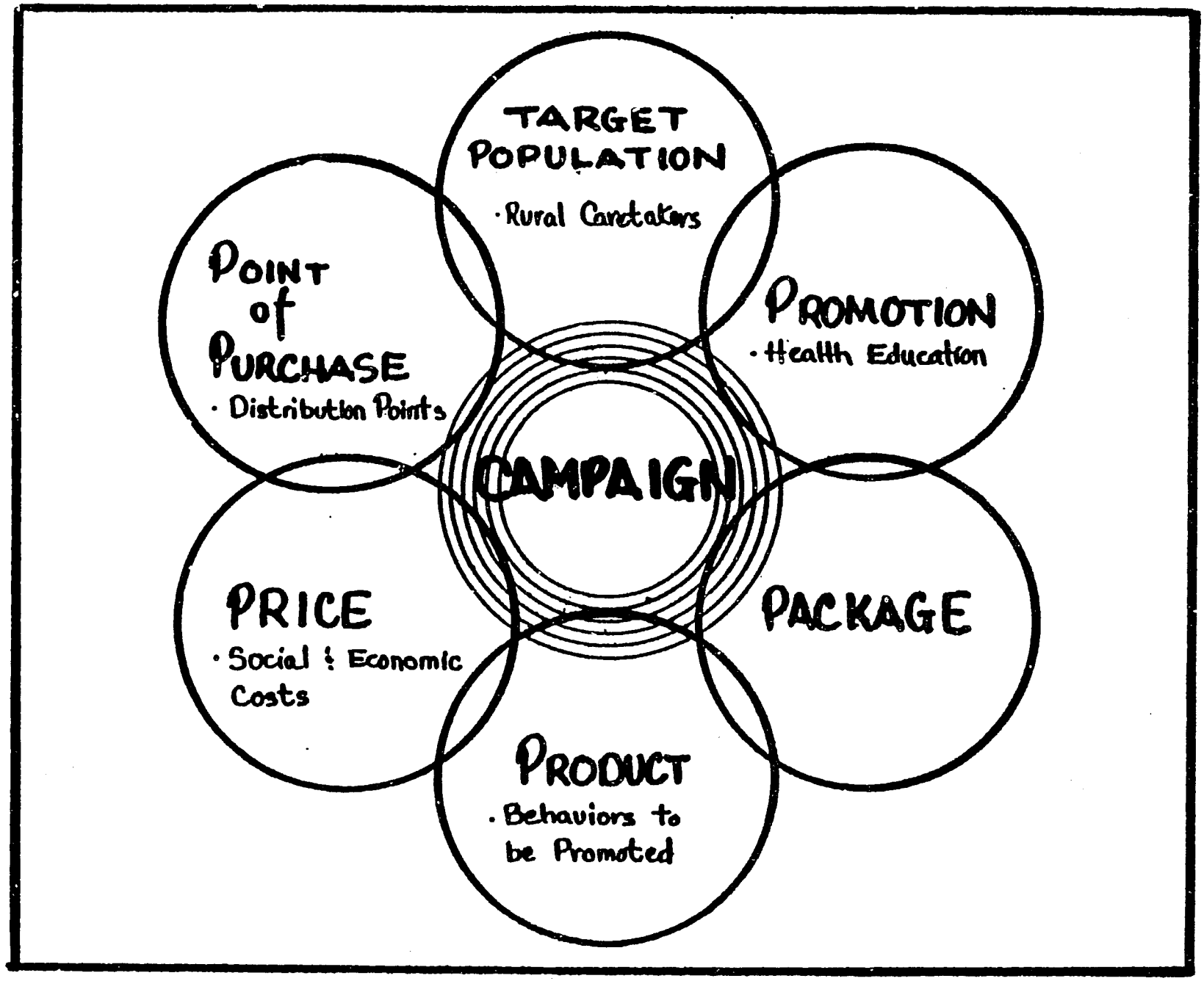
PREVENTION & TREATMENT of ACUTE INFANT DIARRHEA

in rural populations of 2 different developing nations

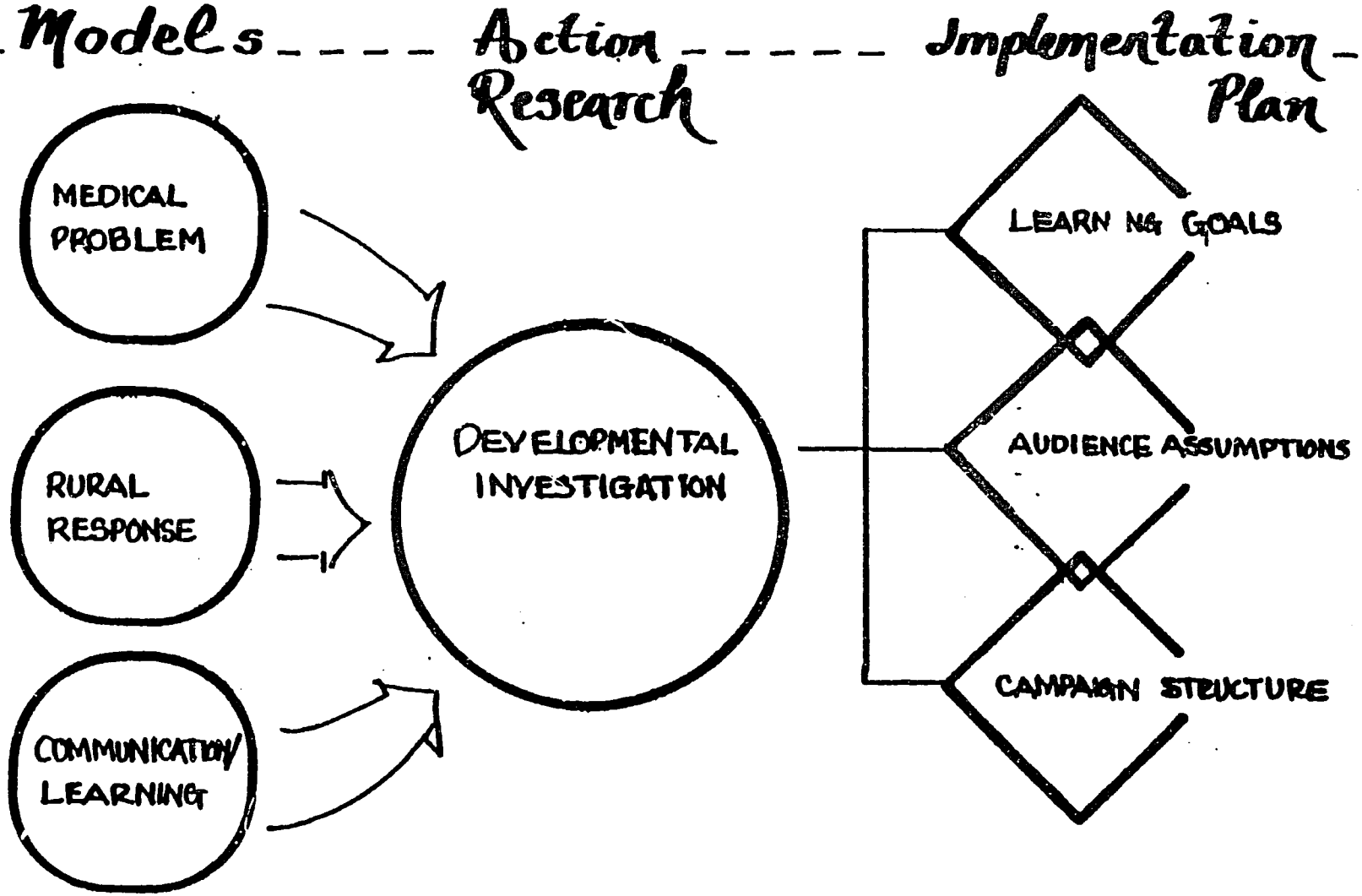
using

- BROADCAST RADIO
- GRAPHIC MATERIAL &
- INTERPERSONAL SUPPORT
  (HEALTH WORKERS · OPINION LEADERS)

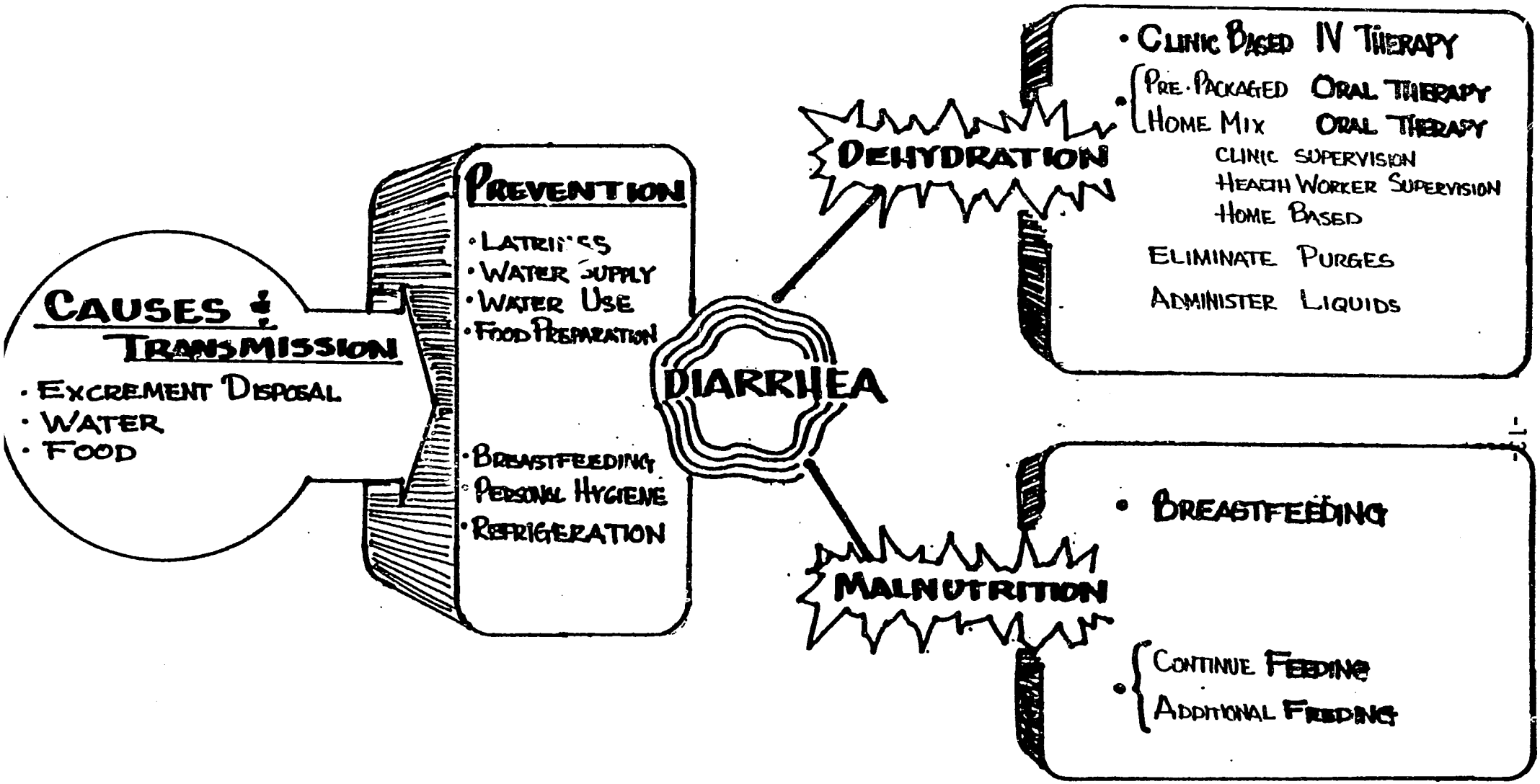
} MASS CAMPAIGN

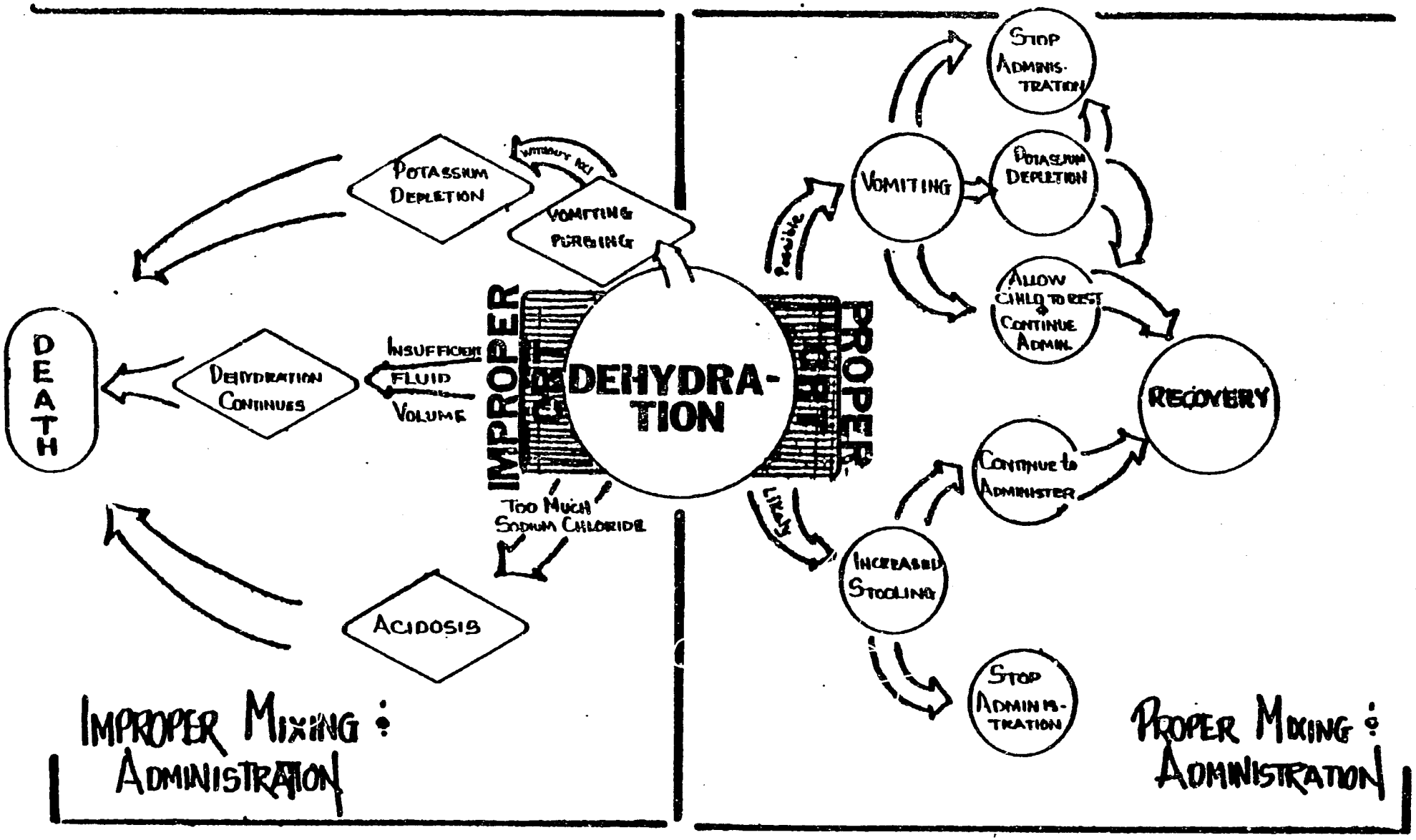


COMPONENTS OF A MASS PUBLIC EDUCATION CAMPAIGN


Models
Action Research
Implementation Plan
MEDICAL PROBLEM
RURAL RESPONSE
COMMUNICATION/ LEARNING
DEVELOPMENTAL INVESTIGATION
LEARNING GOALS
AUDIENCE ASSUMPTIONS
CAMPAIGN STRUCTURE

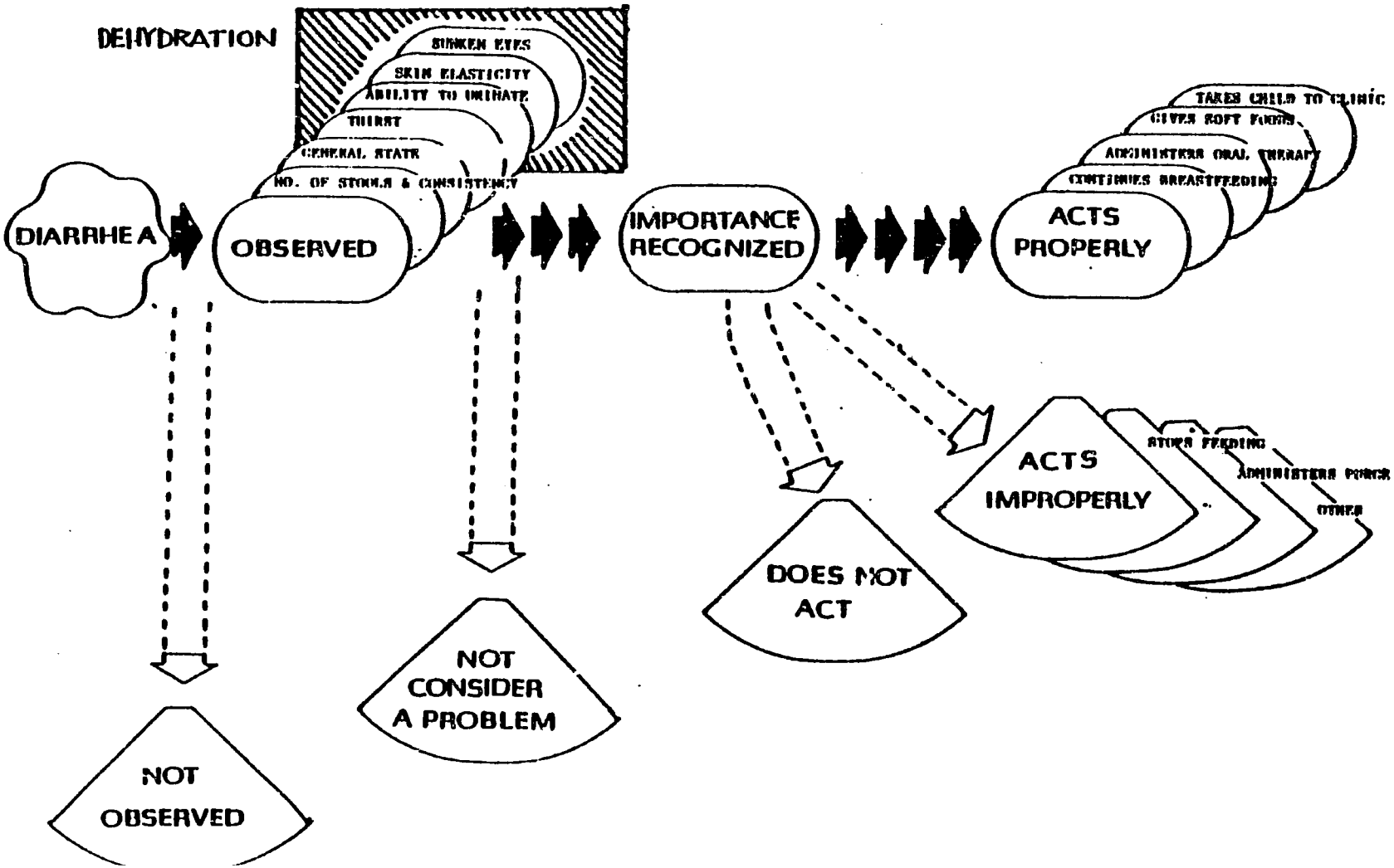
DIARRHEAL CONTROL MODEL





O.R.T. CONSEQUENCE MODEL

MATERNAL RESPONSE TO INFANT DIARRHEA



CRITICAL ISSUES

SAFETY

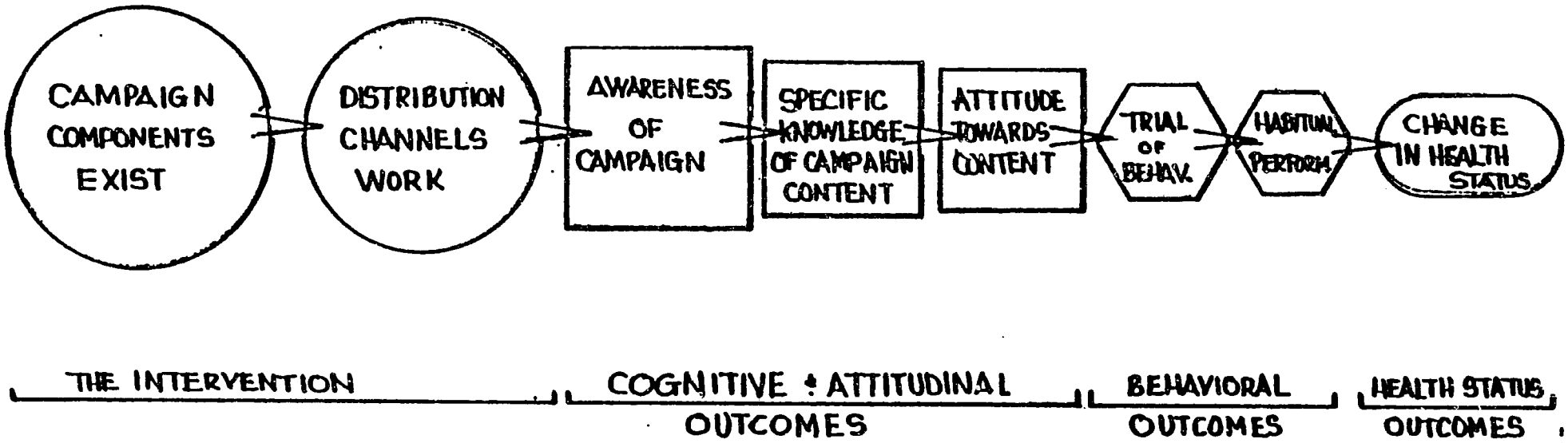
- MIXING
- FLUID VOLUME
- POTASSIUM
- VOMITING
- BICARBONATE

ACCEPTABILITY

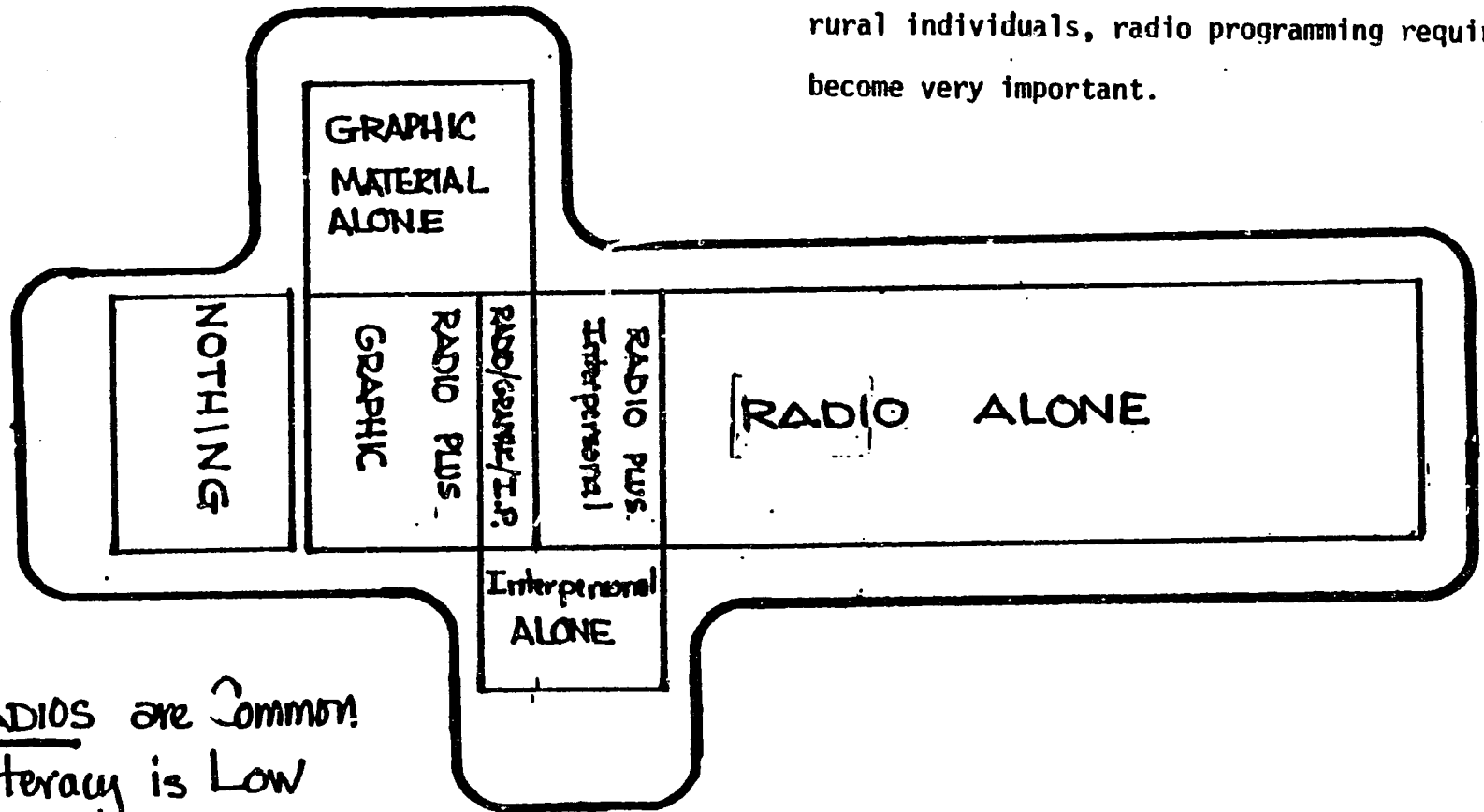
- INCREASED STOOL VOL.

Reduce the COMPLEXITY & ACTUAL NUMBER of Messages to be Transmitted

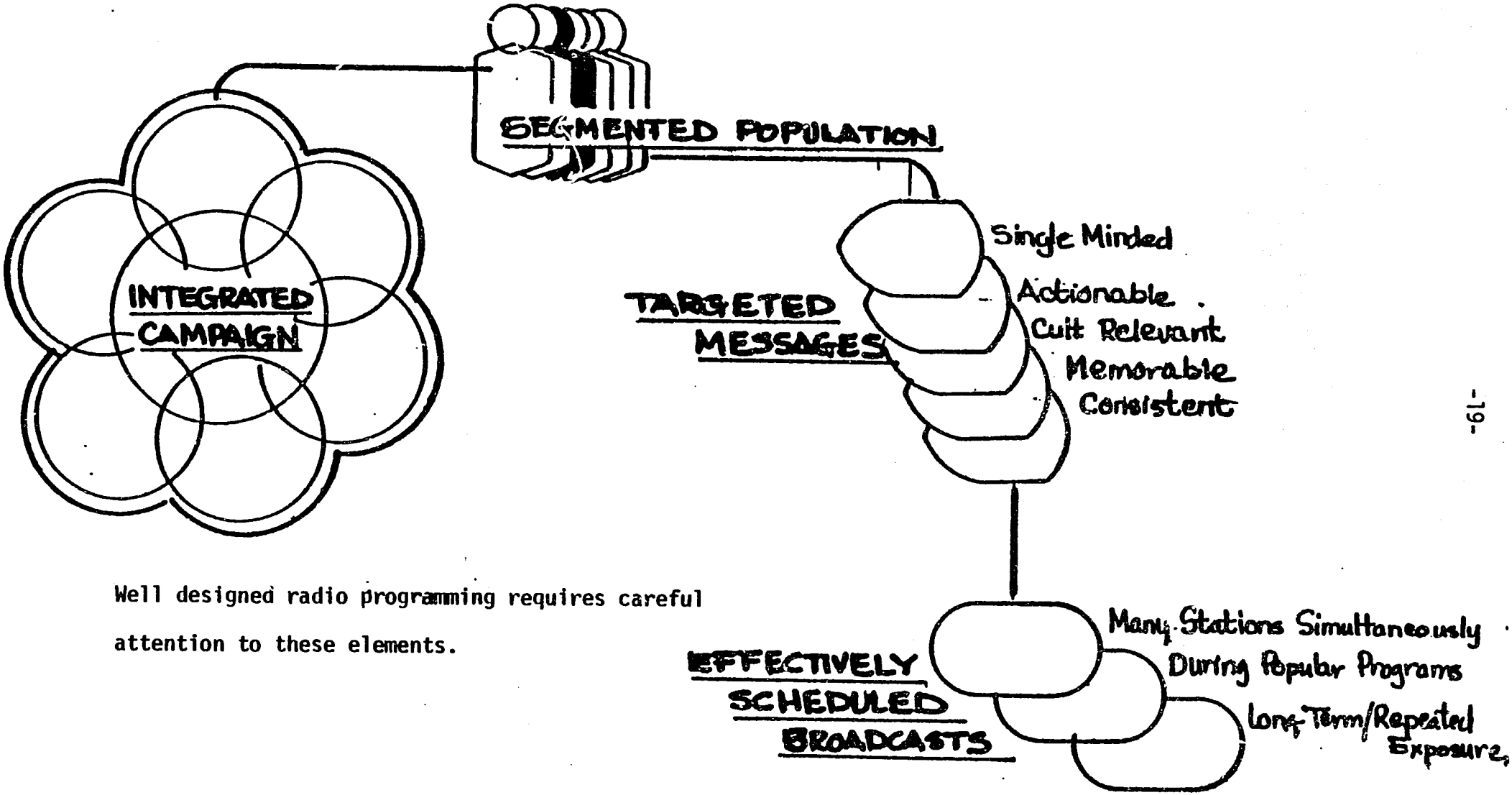
CHAIN of LOGICAL OUTCOMES



Because Radio will necessarily reach so many rural individuals, radio programming requirements become very important.



- RADIOS are Common!
- Literacy is Low
- Health Infrastructure is LIMITED



Well designed radio programming requires careful attention to these elements.

Questions To Be Answered

PRODUCT

1. What prevention, treatment, and recovery behaviors should be advocated?

Existing
- Rural understanding of diarrhea
- Remedies and expectations for remedies, e.g., purges
- Feeding practices/breastfeeding/weaning food preparation
- Who are caretakers/opinion leaders/audience definition
- Personal hygiene/environmental sanitation
- Self-medication

- Sugar and salt availability
- Mixing and administrative skills

PACKAGE AND PRICE

2. What physical objects are needed to make adoption possible?

- Size of population
- Availability of ORT ingredients
- Cost constraints among rural population
- Preferred medications
- Resources available for infrastructural improvement

POINT OF PURCHASE

3. How can these objects be delivered?

- What is now present? Commerically?
- What does MOH now use?

PROMOTION

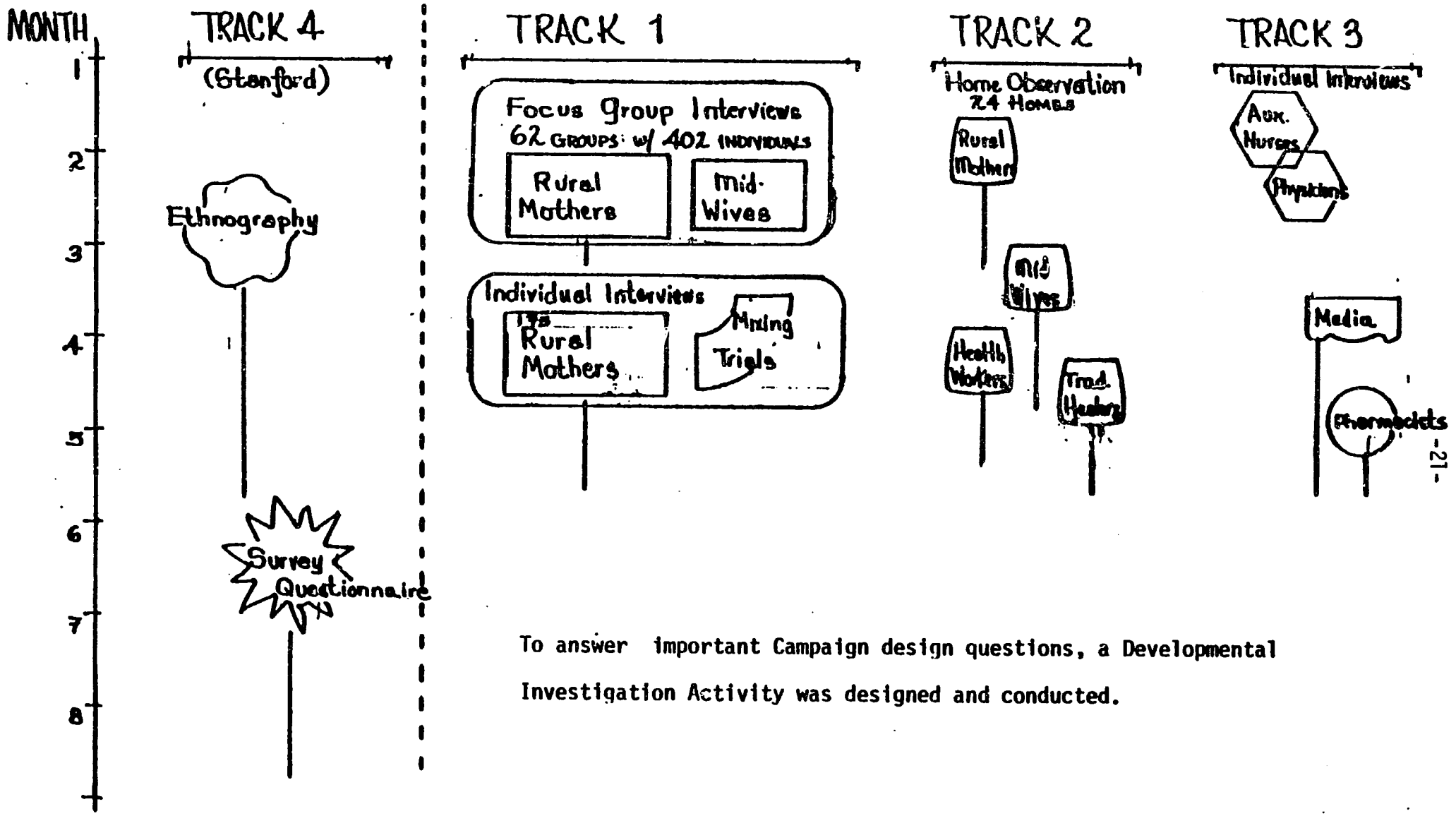
4. How should communication channels be integrated?

- Acceptance levels of stations/programs
- Availability of radio
- Access of caretakers and radios
- Broadcast costs
- Literacy levels
- Quality of reception

5. How to craft media messages?

- Perceived benefits of behaviors to caretakers
- Perceived benefits of competing remedies
- Perceived disadvantages of advocated behaviors
- Credible sources of healing information
- Popular media characters plus preferred programs
- Relative buying influences of family roles

DEVELOPMENTAL INVESTIGATION ACTIVITY



To answer important Campaign design questions, a Developmental Investigation Activity was designed and conducted.

What We Learned From The Investigation

ABOUT CARETAKERS

Mothers take over during illness

ABOUT RURAL DISCRIMINATIONS OF SEVERITY

Change in stool patterns	- Do nothing
Loss of appetite & listlessness	- Traditional remedies
Sunken eyes/skin dryness	- Seek Help

ABOUT ATTITUDES TOWARD MEDICINE

Modern is preferred - Reject sugar and salt
Self-administration common, but not rigorous

ABOUT ATTITUDES TOWARD TRADITIONAL HEALERS

Clear role distinction between midwives and *curanderos*

ABOUT PACKAGE DESIGN

Need for funnel-shaped perforation - Nurses

ABOUT DISTRIBUTION POINTS

Rural *tiendas* - use three central pharmacies

PREVENTION - 73

TREATMENT - 36

The resulting number of potential Prevention and Treatment Behaviors was much too high. Some means had to be found to select critical and efficacious sets of behaviors.

Behavioral Design Principles

1. COMPATIBILITY WITH EXISTING PRACTICES

   0 Totally incompatible
   5 Already widely practiced

2. APPROXIMATIONS

   0 Nothing like this now exists
   5 Several existing behaviors are similar

3. DIVISIBILITY

   0 Not divisible into discrete parts
   5 Easily broken down into segments which can be taught sequentially

4. PERCEPTIBLE POSITIVE CONSEQUENCES FOR THE MOTHERS

   0 No perceptible consequences which the mother would logically associate with behavior
   5 Clear, positive, and immediate consequences for correct performance of behavior

5. PERFORMANCE COSTS

   0 Requires some unavailable or expensive outside commodity, or demands some unrealistic level of effort
   5 Can be performed with existing resources

6. FREQUENCY

   0 Must be done with great regularity or benefit is marginal
   5 May be done infrequently and still have significant value

7. PERSISTENCE

   0 Requires continuous compliance over a long period of time
   5 Can be accomplished quickly

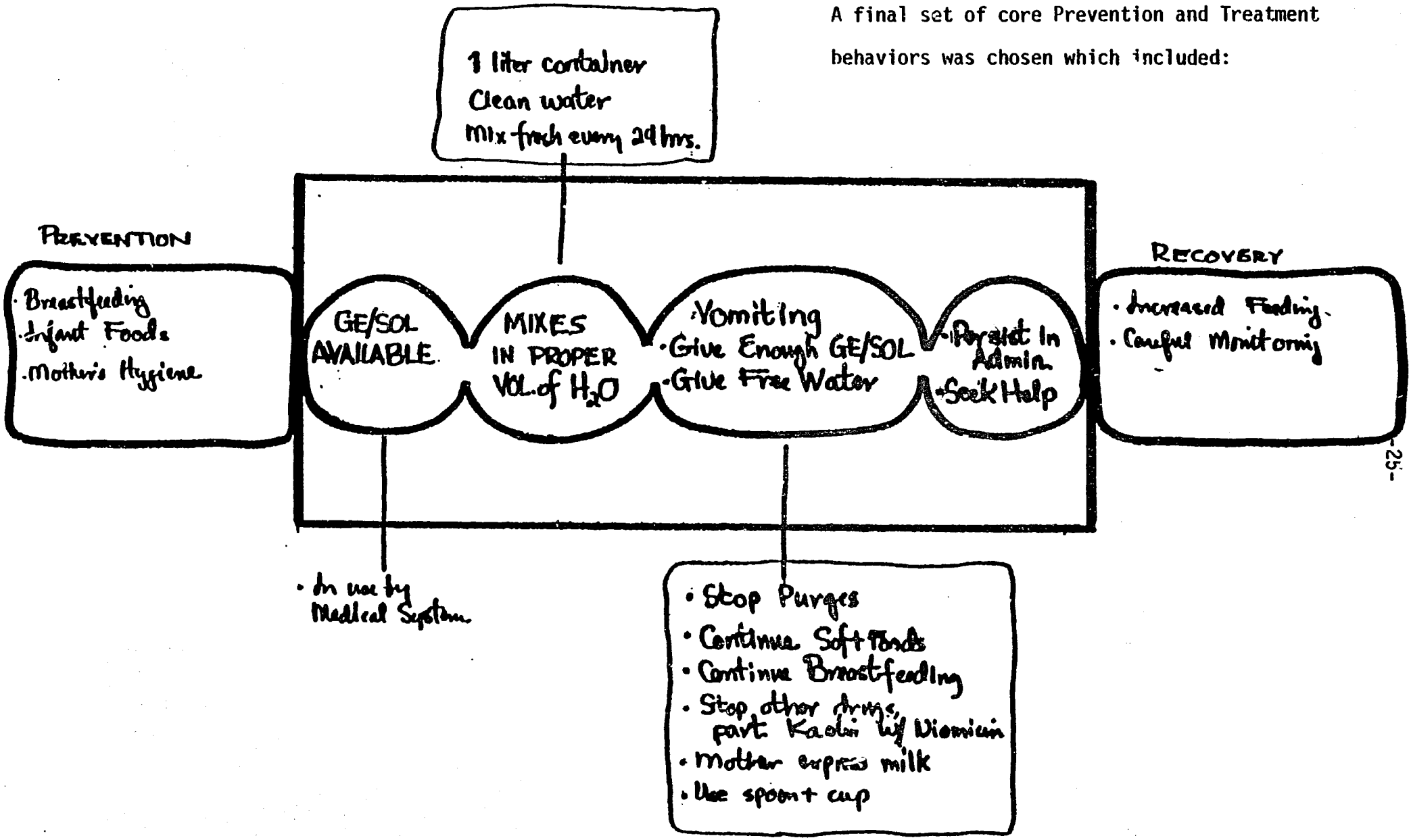
8. OBSERVABILITY

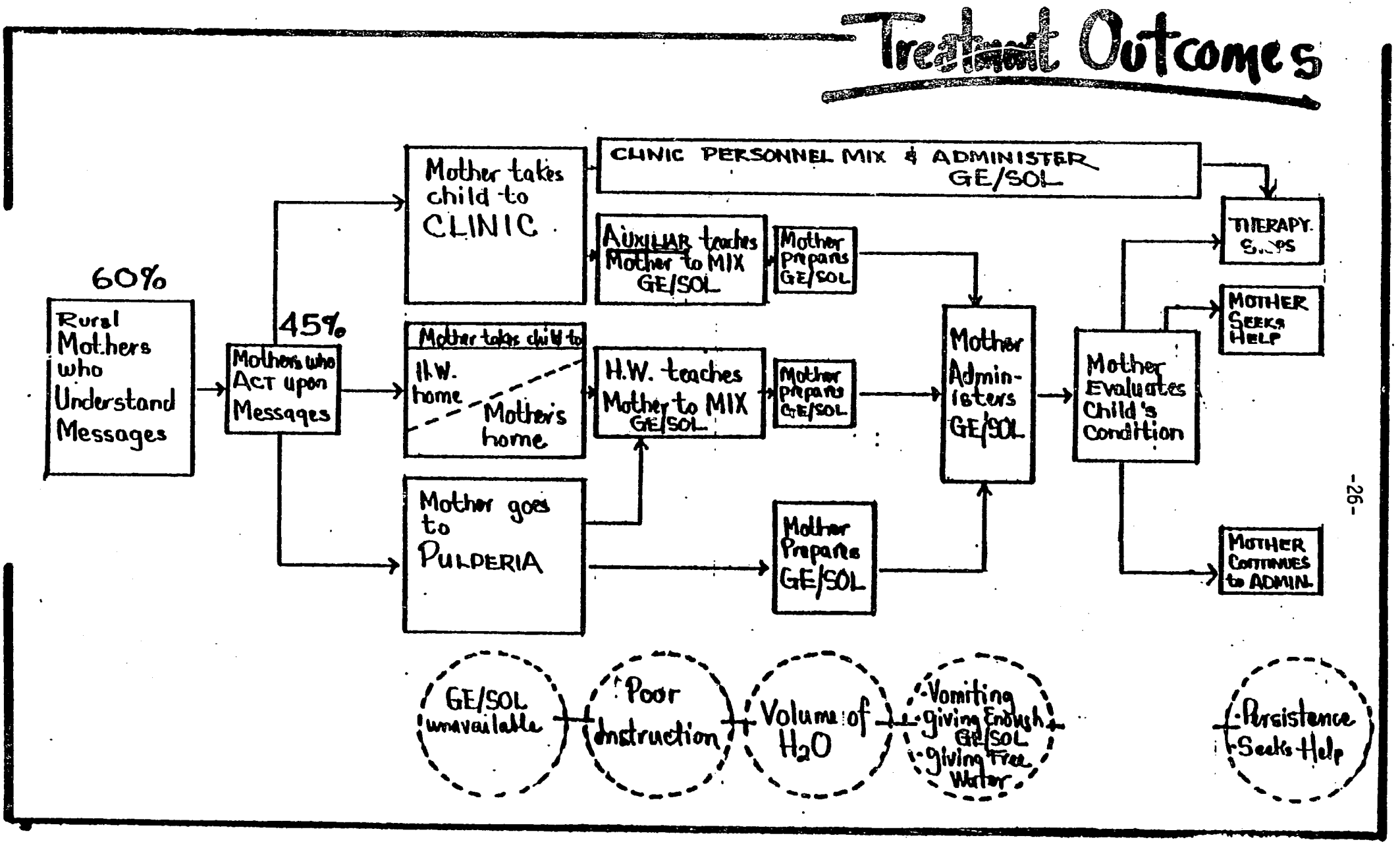
   0 The behavior itself is very difficult for an outsider to observe
   5 The behavior can be readily perceived and reinforced by outsider

9. SALIENCE

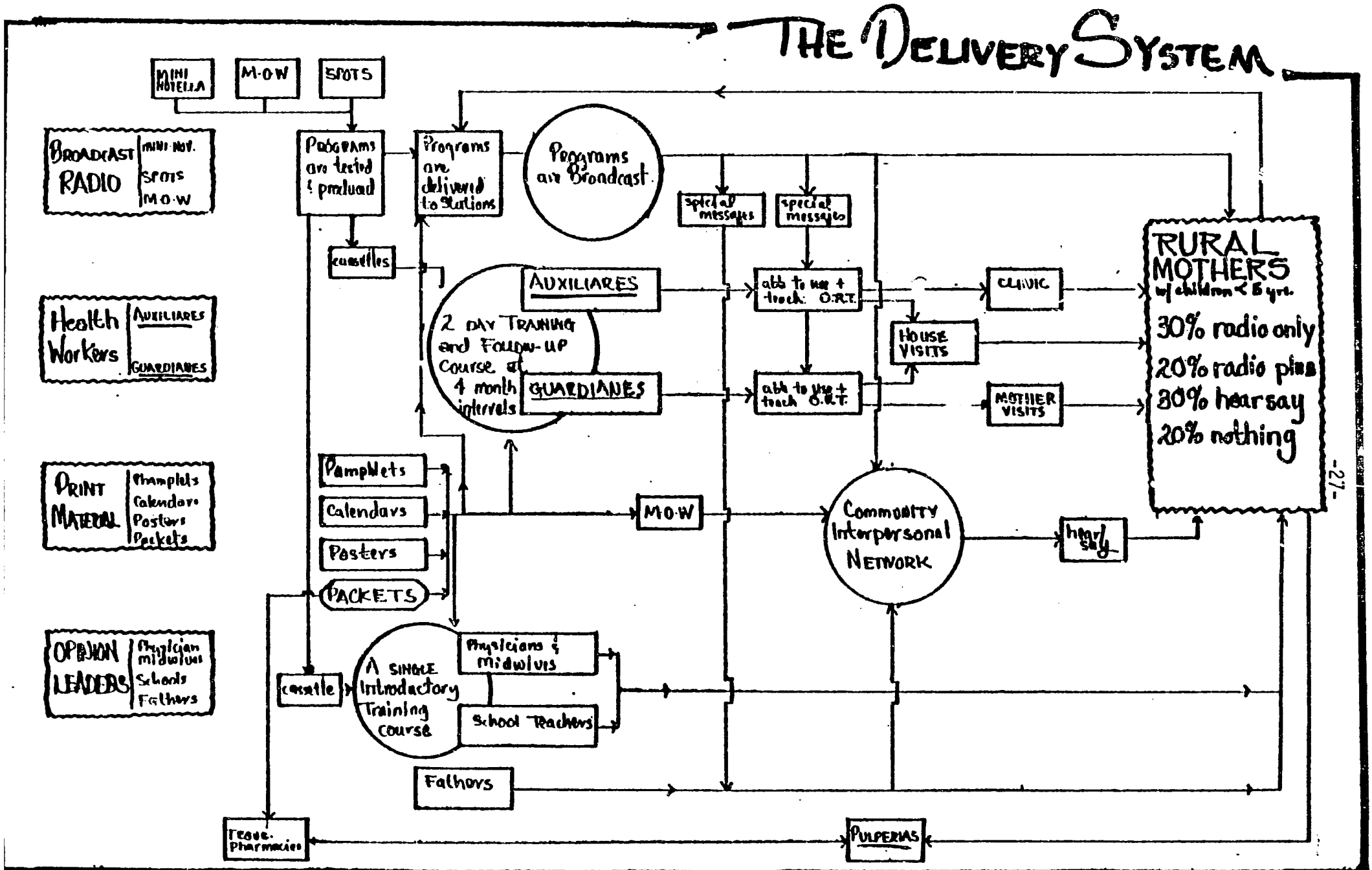
   0 Has a modest positive effect on health problem
   5 Has a potentially dramatic positive effect on health problem

A final set of core Prevention and Treatment behaviors was chosen which included:





If the Campaign worked effectively than we would expect that rural mothers would adopt one of the treatment paths defined above.



The Campaign itself would constitute a Distribution System for Packets, educational messages, & training.

- BEHAVIORAL ORIENTATION
  - People / ACTION
  - Specific + Detailed
  - Medical : Soc. Scientist together
- APPLICABILITY of the MODELS
- EFFICACY of Focus Group RESEARCH

Having completed the design phase of project activity we feel that these three elements proved to be particularly important and indeed represent contributions to the design of future health education programs.