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# PATIENT MAINTENANCE

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*Patient maintenance is the process of keeping patients who need services actively participating in programs providing those services. This article, based on empirical observations by the author, describes a number of basic concepts that can help in determining reasons for insufficient patient participation and in overcoming the problems involved.*

## Introduction

It is advisable, in designing and operating health programs, to distinguish between programs concerned mainly with personal services and those directed primarily at the general "microenvironment." The design of personal service programs—providing such things as prenatal care; family planning assistance; supervision of child nutrition, growth, and development; cancer screening; or any of numerous other services—requires special efforts to identify, motivate, and follow up the individual patient.

Since such personal service programs must usually endeavor to promote and sustain voluntary changes in individual behavior, their methods of operation tend to be quite complex. In contrast, no such degree of continuing individual motivation and participation is required by programs directed at the macroenvironment—such as water treatment and supply programs, waste disposal programs, mosquito control programs, etc. In such undertakings it is not necessary for the individual to keep making decisions about being willing to "participate" in the program. This passive consumer role is very different from, say, the role of a pregnant woman who has registered for prenatal care, who has to make decisions about keeping her appointments and following the instructions received at every visit.

Although this clear-cut distinction may sometimes be difficult to draw, it is nevertheless important to do so. One reason is that the distinction has important implications for program monitoring and evaluation. Furthermore, patients constitute the only justification for a personal service program. Hence, in operating such a program, it is important that every effort be made to procure and maintain patient confidence, support, and continuing participation.

Historically, medical and other health services (especially public services) have sought to establish good working conditions for their staffs and to provide quality clinical care (*1-4*). Though these objectives are important and necessary in themselves, they do have the effect of taking the patient and his needs for granted. That is, they assume that the staff knows what is required and that such knowledge provides a sufficient basis for program design.

It is now starting to be recognized that this orientation produces a rigid service delivery system, and that having a client-centered orientation may be just as important and in fact more realistic (*4-7*). This

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realization has caused providers, planners, administrators, and managers of personal service programs to become increasingly aware that patient response is a critical criterion of program evaluation. That is, one of the "measures of program success" (*8*) is the ability to attract patients (or clients) and, more specifically, to maintain their interest and continuing utilization of the services involved. Efforts directed toward this objective are referred to here as *patient maintenance efforts.*

The main purpose of this article is to identify some of the elements that contribute to patient maintenance. The ideas expressed are based largely on personal observations and experiences resulting from the author's work with family planning programs in several Latin American countries and the United States.[2]

## Elements of Patient Maintenance

One of the contributions that family planning programs have made and continue to make in the area of health service delivery relates to program management and evaluation (*8*). Specifically, the emphasis that family planning programs have given to program evaluation has forced planners and administrators of these programs to develop measurable program objectives and monitoring techniques (*9, 10*). These are now being applied to programs providing other kinds of services.

The monitoring techniques that have been developed include, among others, ways of analyzing recruitment rates, rates of kept appointments, services provided, and costs. Measurement of these variables, plotted against the anticipated results over time, can give a good indication of the program's relative success in terms of anticipated trends.

However, this type of activity analysis reflects only the program's overall efficiency (*11*). It fails to provide information about the reasons for success or failure. Clearly, when seeking the causes of failure, an administrator needs to examine the possible sources of difficulty. In this regard, the author feels that one or a combination of various elements can influence patient maintenance to determine the outcome of program efforts, and that these elements can be arbitrarily grouped under the following headings: (1) the consumer (the patient) ; (2) the mechanisms of service operation; (3) the providers of services (personnel); and (4) the environment.

The following discussion of these elements can be employed as a management tool to determine changes in program activities. By way of illustration, examples are given of situations where the elements described were identified and where they played a significant role in governing utilization of the services involved.

## The Consumer (the Patient)

Knowledge about service recipients (clients) is a prerequisite for establishing services. Likewise, details about the area where services will be implemented—such as geographic boundaries, available transportation, and existing resources—are essential for program design (*5*). Population data (on family structure, demographic composition, socioeconomic conditions, etc.) should also be obtained, since these will provide descriptive information helping to define who the potential recipients are and where they reside (*5-12*).

However, the success of the maintenance effort is also related to other important factors. How does the recipient perceive the service? Do the patients (clients) think that

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there is a need for such services? What priority do the services have on the recipient's list of unmet needs? How attractive are the services? In general, what is the attitude of the potential consumer toward the services? Could this attitude be influenced or modified? If so, in what way? Those seeking answers to these questions have made extensive use of Knowledge Attitude Practice (KAP) studies, which have played an instrumental role in this regard—especially prior to program implementation (11).

Besides such initial information, however, it is necessary to have answers to these questions throughout the time the program is underway. Therefore, ways to obtain such information must be developed. For this purpose sample surveys (using direct questionnaires), analysis of patient characteristics, peer group review, or a combination of any of these may be employed.

Overall, it should be kept in mind that the patient-related factors affecting utilization of services depend on the patients' motivational status as well as upon how much the patients feel a need for the services involved. It is obvious that there will be more demand for services that are thought necessary than for those considered impositions or mere luxuries that are not required.

*Example:* A clinic that had previously succeeded in retaining a satisfactory proportion of consumers (60 per cent of the appointments given were kept) began to experience a decline in attendance. An analysis of the characteristics of the patients attending the clinic revealed that two different groups of patients were coming in. One was composed of young women with low parity, while the other consisted of somewhat older women with higher parity. These two groups of patients received the same type of information, consisting largely of material on reproductive physiology and postpartum care. It was found that the clinic attendance of the first (younger) group was high (around 70 per cent), and that the decline had occurred in the second group (where it had fallen from 60 to 40 per cent).

In view of this situation, arrangements were made to separate the two groups and have them attend different clinic sessions. The educational service for the second group was changed, the information on postpartum care and reproductive physiology being reduced and partially replaced by more information on child-raising, family life, and health conditions (cancer, obesity, hypertension, etc.). Apparently as a result, while the clinic attendance of the first group remained satisfactory (over 60 per cent), the attendance rate of the second group returned to 60 per cent. The example thus provides a straightforward illustration of the importance of gearing a program to the patients' interests and to their views on what services they need and desire.

### Mechanisms of Service Operation

The operating mechanisms of family planning services can be directed toward at least three objectives that help ensure patient participation. These objectives are as follows:

- To develop an awareness in the patient population of alternatives for dealing with a particular situation or circumstance (e.g., fertility).
- To enhance the capacity of the patient or family members to analyze and evaluate the different alternatives available.
- To provide the tools or mechanisms necessary for accomplishing the solution that has been selected.

The three objectives provide the framework for operating mechanisms that encompass at least three different activities: (1) patient identification and recruitment; (2) provision of clinic services; and (3) follow-up actions. These three types of activities, combined in a dynamic and ongoing fashion and directed toward the forementioned objectives, contribute to main-

taining patients within the system. Hence it is worth considering each in turn.

*Patient Identification and Recruitment*

Patient participation is directly related to the efforts the program makes to identify potential patients, to contact them, and to recruit them. This recruitment process should be carried out within a time period sufficiently short to ensure an adequate number of participants. A given program's initial success or failure will depend primarily on its ability to enroll patients. Enrollment activities are also a relevant subject of program evaluation, since the program's impact upon the overall target population will depend partly upon the proportion of individuals recruited from that population.

*Examples:* A family planning program was implemented in one rather large city of a country where such services had never been available, and where studies had shown a lack of knowledge about family planning. The program operated 41 facilities serving an estimated target population of 350,000 eligible women. During a considerable period of operation (65 months), the program had succeeded in reaching only 14.9 per cent of the estimated target population. Subsequent analysis revealed that the program had no effective ways of informing the community about the services available or the scope of the program, nor did it have any direct means of identifying and recruiting potential patients.

Obviously, the lack of recruitment efforts was affecting the efficiency of the program. Because of this, recommendations were made for designing a recruitment mechanism that would include hospital postpartum referrals, referrals by other agencies, provision of information to the community served, and direct contact with identifiable potential users. These recommendations were implemented within the following year and as a result the rate of recruitment began to increase.

*Provision of Clinic Services*

The second type of activity included under the rubric "mechanisms of service operation" is provision of clinic services. Naturally, all the services offered should reflect respect for the privacy and personal feelings of the individual participant. They should also employ well-thought-out guidelines for maintaining the quality of care offered in the particular setting involved—care which needs to include educational as well as medical clinic supervision. Even more important, the process of providing services requires a realistic appointment system—one that is patterned around patient needs and availability so as to increase the services' appeal and maximize the likelihood of patients' keeping their appointments.

The ability to provide quality services that are both attractive to the consumer and available when desired should be a constant preoccupation of program administrators. They should know how long patients must wait to be served, because long waiting time is one of the most common complaints of clinic clientele. In this regard, it is a fact that block appointments tend to produce the longest patient waiting times. On the other hand, a well designed appointment system will increase patient motivation to remain in the program and will do away with the need for tedious waiting.

*Example:* A clinic that had enjoyed a satisfactory recruitment rate began to show a decline in clinic attendance after operating for a year. In particular, among returning patients the average rate of appointments kept fell from 80 per cent to 50 per cent. An analysis of waiting time by patient categories revealed that waits ranged anywhere from 5 minutes to 2 hours for each of the different categories involved.

To help remedy this situation, the flow of services was analyzed and an appointment system based on the type of visit involved was implemented, thereby separating initial visits from annual visits, regular revisits, and supply revisits. A more individualistic appointment procedure was thus developed, taking into consideration the services offered to patients during each of the four types of visits, and thereby expediting provision of clinic services.

As a result, the total time spent at the clinic came to average 90 minutes for patients making initial visits, 30 minutes for annual visits, 20 minutes for regular revisits, and less than 10 minutes for supply revisits. A notable reduction in average patient time spent at the clinic was achieved, mostly through reduced waiting time. The overall effect was to increase clinic service capacity, making more appointments available, and to boost clinic attendance. Within three months of the new procedure's implementation clinic attendance was satisfactory, with 80 per cent of the appointments made being kept.

### *Follow-up*

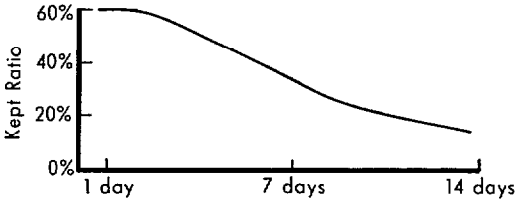
Sustained motivation on the part of a clinic's patient clientele should not be taken for granted. That the patient has accepted and kept an initial appointment is no guarantee or assurance that this pattern will be followed in the future. Therefore, a routine sequential follow-up mechanism is essential for encouraging continuing patient participation. Besides increasing the likelihood of retaining a patient, this mechanism also provides a means of detecting obstacles interfering with patient participation, thus paving the way for such obstacles to be removed. To an extent, systematic follow-up efforts will demonstrate genuine interest on the part of the program for the individual participant, and will also prove useful in determining the reasons for participants' dropping out or losing interest in the services received.

Patients will often hesitate to openly voice their reasons for not attending the clinic (sickness in the family, too much waiting time, inconvenient appointment times, baby-sitting problems, etc.). These obstacles can be identified and dealt with by means of follow-up efforts that ensure communication. Such communication is enhanced when the follow-up efforts include home visits performed by personnel who share many of the patient's characteristics, who have the patient's trust, and who are familiar with the patient's environment.

In addition, to make optimum use of the follow-up contact's motivational impact, follow-up efforts need to be tied in closely with the appointment system. That is because the probability of a client's keeping an appointment is inversely related to the length of time between the contact (telephone call, letter, or home visit) and the appointment date. Analyzing the factors influencing appointment keeping behavior at the Orleans Parish family planning clinic in Louisiana, Dr. Frank Moore found that the shorter the interval between the follow-up contact and the appointment date, the higher the probability that the appointment would be kept (see Figure 1) (*3*).

*Example:* Family planning programs were implemented in two comparable

**Figure 1. A drawing based on data from an Orleans Parish study showing that time elapsed between follow-up contacts and appointments was inversely related to the probability of those appointments being kept.**



neighborhoods. Both were serving patients with similar social characteristics and were successfully recruiting initial acceptors. However, one program had a retention rate of less than 30 per cent per year, while the other had a continuing participation rate of over 60 per cent. The main difference between the two was that the first limited its follow-up work to scheduling a return appointment. The second did this too, but it also sent out a reminder letter timed to reach the patient two or three days before the scheduled appointment, and followed this up with a telephone call or second letter if the first scheduled appointment was not kept; the case was only closed after efforts to contact the patient directly (through a home visit) had been made.

**Providers of Services (Personnel)**

Providers of services comprise the third element of patient maintenance considered here. These providers are, specifically, the personnel in direct day-to-day contact with the patient population. The training and skills of these program personnel, and in particular their attitudes toward the patient population, inevitably affects patient utilization of services. These skills and attitudes are thus key factors influencing the patient's decision of whether or not to continue participating in the program. Hence, when analyzing patient maintenance, it is necessary to assess personnel attitudes and to seek to maintain program efforts aimed at sustaining attitudes that will have a desirable effect.

Most programs have established procedures for acquiring personnel. Proper personnel recruitment and selection techniques, followed by job-related training, can help ensure, to a degree, that the personnel hired are sufficiently motivated to perform their duties for the benefit of the patient. However, this patient-oriented motivation needs to be reinforced periodically as a part of regular in-service training activities.

*Example:* A clinic that was very successful in attracting a satisfactory number of patients for initial visits was not successful in retaining the patients for subsequent visits. Overall, less than 50 per cent of the revisit appointments were kept.

When reviewing clinic activities, it was discovered that several clinic personnel were critical of the patients and made occasional remarks to patients on welfare and unwed mothers about lack of patient responsibility. These circumstances were confirmed by patient statements made to the home visitor during follow-up efforts. Obviously, this personnel attitude was adversely affecting the patients' feelings and their desire to keep subsequent appointments.

Although all clinic personnel had gone through initial orientation sessions—wherein the philosophy of the program was explained and its purposes and the population to be served were discussed—this orientation had not been sufficient to modify the attitudes or behavior of some clinic personnel. In-service training, including discussions about personnel attitudes and how they significantly affected patient responses, was therefore implemented for the entire clinic staff. Utilizing real examples and role-playing, these efforts made a significant contribution to changing undesired personnel attitudes. Thereafter patient satisfaction increased, as was demonstrated by a sample survey in which 90 per cent of the responding patients classified the personnel as friendly, considerate, and warm. The proportion of return appointments kept climbed slowly but consistently to a more satisfactory 60 per cent.

**The Environment**

Naturally, the clinic environment is a very important factor influencing patient

participation. The location of the facility, its attractiveness, and the degree of privacy it affords can make the difference between a successful clinic and an empty clinic. Two examples, one dealing with physical layout and the other with location, help to illustrate this point.

*Example 1:* Privacy can play an important role in determining the effectiveness of a clinic. For instance, one clinic—in which recruitment and motivation efforts were producing a high rate of initial visits—had a low retention rate. An analysis of clinic activities revealed that the patients were being asked to dress and undress in a common room and to travel from that room to the examining area covered only by their gowns. When questioned, patients objected to this procedure.

Because it was felt that lack of privacy could account for the low retention rates, the clinic was remodeled. Increased privacy was afforded by installing private dressing rooms that connected directly with the examining areas. Once these changes were made, the clinic's retention rate rose to a more satisfactory level.

*Example 2:* A clean and attractive clinic facility that made use of well-planned recruitment and follow-up procedures never attained satisfactory rates of patient recruitment or retention. An analysis of the area revealed that transportation routes being used by the patients had changed. As a consequence, the clinic was located at an inconvenient place. The clinic was therefore relocated closer to the main transportation routes. Once this move was accomplished, patient attendance and clinic utilization increased.

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These examples, derived from observation of various family planning programs, have been offered to highlight, in a simplified manner, some of the circumstances that can adversely affect patient maintenance—circumstances that can be controlled and avoided if due consideration is given to program design and operation.

## SUMMARY

In designing and operating health programs it is important to single out services involving direct and repeated patient contact. That is because programs providing such personal services should ensure that patients needing the services are adequately motivated to return—in other words, "patient maintenance" efforts are required.

The present article, based on the author's experience with family planning programs, reviews ways in which a number of basic considerations can affect patient maintenance. Specifically, it considers problems relating to the patient, the personnel, the service system, and the environment in turn and discusses examples of cases where problems in each category were discovered and overcome. It is hoped that the guidelines and descriptions offered here will provide some practical rules of thumb for health program directors as well as useful information about analytical concepts that can be employed to assess program activities.

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**Obituary: MR. EFRAIN RIBEIRO**

Mr. Efrain Ribeiro who served as Sanitary Engineer with the Pan American Health Organization both at Headquarters and in El Salvador and Argentina, died in his native country of Peru on 29 April 1979.

He graduated as a Civil Engineer from the National Engineering School in Lima in 1943, and received his M.S. in Sanitary Engineering at the University of Michigan and an M.S. in Public Health at Michigan State. Between 1947 and 1950 he was affiliated with the Peruvian Ministry of Health and in 1950 served with the Environmental Sanitation Unit of the United Nations Expeditionary Forces in Korea.

In addition to a full career of distinguished service with PAHO from 1951 to 1978, he found time to be an active participant in and supporter of the Inter-American Association of Sanitary Engineering and Environmental Health (AIDIS). In recognition of his contributions, he was elected President of AIDIS International in Santo Domingo in 1978. Forced to resign the presidency for health reasons, the AIDIS Executive Committee bestowed upon him the rare title of Honorary Member in further recognition of his work, thus joining the special and select cadre of renowned international engineers.

As a last tribute, the AIDIS Board of Directors authorized a special award as acknowledgment of his outstanding dedication to the peoples of the Hemisphere.