A method for systematically securing information on patient needs, nursing care provided, and changes in patient status is described. Some types of findings with this method are presented and the implications discussed.

HOW EFFECTIVE IS PUBLIC HEALTH NURSING?

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QUESTIONS concerning the influence of the public health nurse in her work with patients and families have been asked repeatedly by persons inside and outside the field of public health. Possibly the loudest and most frequent questioning has come from budget bureaus, since the nursing service represents such a large proportion of local public health appropriations. But answers to these questions are frequently vague and indirect, usually based on accounts of services provided, statements of functions, and descriptions of a few selected cases which demonstrate dramatic benefits from care. The paucity of concrete evidence regarding the results of nursing service is a serious handicap to planning, evaluating, and directing the total public health program as well as nursing aspects of that program. Even more crucial is the fact that the magnitude of this handicap increases as we become more engrossed in the care of patients with long-term illnesses, emotional stresses, and other conditions where the effects of service, unlike the more acute and infectious diseases, are not readily reflected by reports of morbidity and mortality.

Almost three years ago the Public Health Service, recognizing this critical need in modern public health nursing administration, undertook an exploratory study aimed at developing a method for systematically securing specific information which could be used to describe the accomplishments, or lack of accomplishments, of the nursing services. We approached the problem with caution and trepidation, aware of the impact and complexity of the many social, medical, and biological factors which influence health and health behavior. We were also aware of the inherent danger of misinterpreting observations because of the presence of unknown or unreported forces within the patient-family-community setting. In order to avoid some of these pitfalls we addressed ourselves to the question of "what" changes occur in the health status or behavior of patients rather than delving into "why" changes occurred. A further demand derived from the fact that the method, to be acceptable, must be applicable to public health programs generally. This meant that it must be easily taught, feasible for staff nurses to use, gross enough to apply readily to most patient situations, yet, refined enough to indicate changes in the condition of the patient. But, most importantly, the method must reflect areas of care for which the public health nurse carries major responsibility.

The present method for reporting patient progress has evolved with the help of many. The work of Janice Mickey regarding community needs for public

Table 1—Service Categories Represented in Families

	Patients		Families	
	Number	Per cent	Number	Per cent
Totals	410	100.0	270	100.0
One Category Only:				
Health supervision	41	10.0	37	13.7
Communicable disease	54	13.2	44	16.3
Chronic disease	107	26.0	106	39.2
Noncommunicable	7	1.7	7	2.6
More Than One Category:				
Maternity and child health	98	23.9	45	16.7
Health supervision, maternity and morbidity*	90	22.0	27	10.0
Morbidity*	13	3.2	4	1.5

* Included patients with communicable, noncommunicable, and chronic diseases.

health nursing service was particularly helpful in the early planning stage.[1] Thirty-six staff nurses and ten supervisors in six public health agencies—three health departments and three visiting nurse services—have taken part in developing or testing the method. It is still far from being fully tested and refined but even at this stage we believe it has purpose for programs. In this first report we will briefly describe the method and illustrate the type of information which can be obtained through its use.

Patient Progress Method

In order to identify changes in the patient's health while he is under the care of the public health nurse, it is necessary to know what his health problems are and how well he is coping with these problems at the time service is initiated and again at some later point, at least at the time of discharge.

This information is obtained by having the nurse who is primarily responsible for providing service to the family enter on a patient schedule those nursing, medical, social or other needs related to health which she evaluates in planning patient care. In addition she records three separate evaluations of each need listed: The first reflects the nurse's initial assessment of the problem; the second, also made at the time of initial assessment, reflects the expected outcome of the problem and hence might be considered the nursing prognosis; the third or final evaluation takes place when service is terminated or at the end of the period of study, whichever occurs first.

To help the nurse make these evaluations and report them consistently, patient care requirements were translated into codes which could be related to each need. These "Care Status" codes describe grossly a wide variety of situations, using, for example, such designations as "care needed, adequately provided by family"; "care not adequate, family needs instruction"; and "care not needed, condition corrected." In reporting her appraisal of a patient need, the nurse selects the code which, in her judgment, best reflects the individual situation.

The study method encompasses one additional procedure—a simple checking to indicate the kinds of public health nursing services given in relation to each problem. Nursing services were divided into four general cate-

gories—direct care, instruction and counseling, evaluation and supervision, and referral. The nurse checks any one or any combination of these services, as appropriate, to describe the type, but not the amount, of nursing care given. All of the participating nurses were instructed to give the usual amount and kind of service, in keeping with the policies of the agency. Each incorporated the study methodology into the daily activties with no major adjustments in work assignments. The usefulness of this method can best be demonstrated by information obtained from 20 staff nurses in four generalized public health agencies involved in testing the procedures.

Study Population

Beginning on a specified date each nurse admitted to the study all new admissions to service, and any members of their family already under care, until she had a total of 20 study patients. These patients remained in the study until discharged from service or for a maximum period of three months. In this way a total of 410 patients in 270 families were included in the study. Table 1 shows the service categories represented in families. More families had patients with chronic diseases cared for (almost 40 per cent) than any other service category. When there were two or more categories, they were usually maternity and child health, but combinations of health supervision and morbidity services occurred in 10 per cent of the families, representing 22 per cent of the patients. One hundred and thirty-six patients, one-third of the total, were referred by family or friend and an additional 65 were found by the public health nurse during her visits to homes and schools. Of all the referrals only 48, less than 12 per cent, came from private physicians and almost all of these patients (90 per cent) were chronically ill.

A few of the circumstances relating

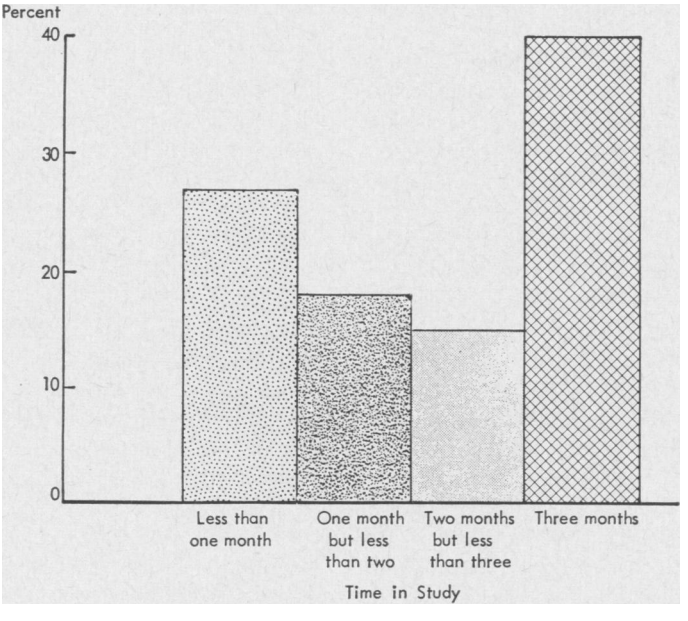

Figure 1—Percentage Distribution of Patients by Length of Time in Study

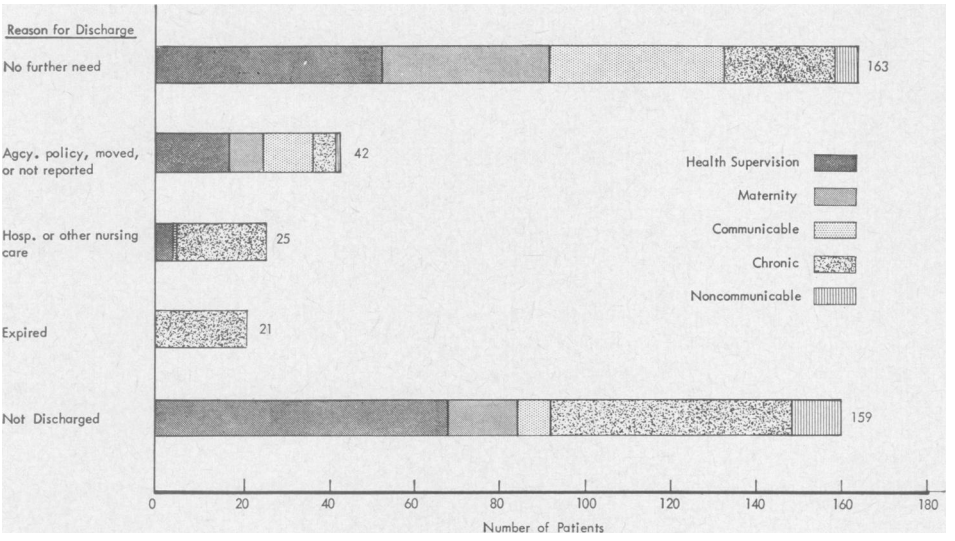

Figure 2—Reasons for Discharge of Patients

to the nurse's opportunity to work effectively with patients should be mentioned, since her knowledge of them and the span of time to observe and care for them may influence the progress reported as much as the patient's condition and potential for change.

Figure 1 shows the length of time the nurse had to know and to work with the patients during the study. However, some of the patients were known for a longer time than the study period through previous service given to the family. This was true for 43 per cent of the patients. Even so in view of the number of individuals in the health supervision and chronic disease categories, it was rather surprising to find 60 per cent, 251 patients, discharged from the public health nursing service within the three-month study period; 27 per cent were under care for less than one month. When this information was analyzed in relation to the reasons for discharge (Figure 2), we found that 163 (40 per cent) of the patients were discharged because their needs had been met or the patient and family were adequately providing the necessary care. Twenty per cent of the chronically ill patients were included in this group, although the nurse knew some of them will need to be readmitted later when their condition worsens or their care becomes more complex.

The number of patient-nurse contacts is a usual measure of intensity of service. Our findings are quite consistent with other public health nursing studies on this point. Although there was wide variation in the number of nurse contacts per patient, the average for all patients was 7.6 with a range of one to 54. Chronic disease patients accounted for over half of all contacts made during the three months of study although they represented less than one-third of all patients. Although it is not shown here, home visits represented 76 per cent of the total 3,106 contacts.

This is just a glimpse of the patients and of the nursing services which comprise the setting of the study, using information quite routinely collected by public health nursing agencies. But it is the study approach that adds sub-

stance and motion to this picture. It brings new dimensions to be examined, a new outlook for evaluating public health services. Again we have selected a few items from the study to describe the attributes of the method and, simultaneously, to illustrate what happens to patients under the care of public health nurses.

Patient Needs and Progress

The scope of potential health needs which the nurses reported as pertinent to patient care is one of the basic products of the method. A total of 4,578 potential needs were evaluated for the 410 study patients. Of these 62 per cent related to nursing care, 27 per cent to medical care, and 11 per cent to social, economic, and other needs for care. Within the nursing category, the needs which we grouped as "personal hygiene" ranked first. This item encompassed such care requisites as precautionary measures, prevention of decubiti and other health practices aimed at increasing the personal comfort of the patient as well as the prevention of sequelae. It was most reassuring to find that the nurses were recognizing the importance of behavior and emotional problems as a component of nursing care. This item, behavior and emotional need, ranked second, but was of almost equal rank with personal hygiene. Problems of nutrition and feeding ranked third and needs concerned with treatment fourth. Again documenting the impact of long-term illnesses on community resources, patients with chronic diseases had a much greater proportion of needs examined than any other category, encompassing 40 per cent of all the nursing care items.

The second new dimension, the extent of the need for care, is demonstrated by the nurses' initial evaluations. Forty-two per cent, or 1,184, of the nursing care needs were being met adequately by the patient or family on admission to the study. Of the problems requiring medical attention, 802 (65 per cent) were attended by a physician, and half of the 532 social and other problems related to health were either receiving the necessary service or were managing

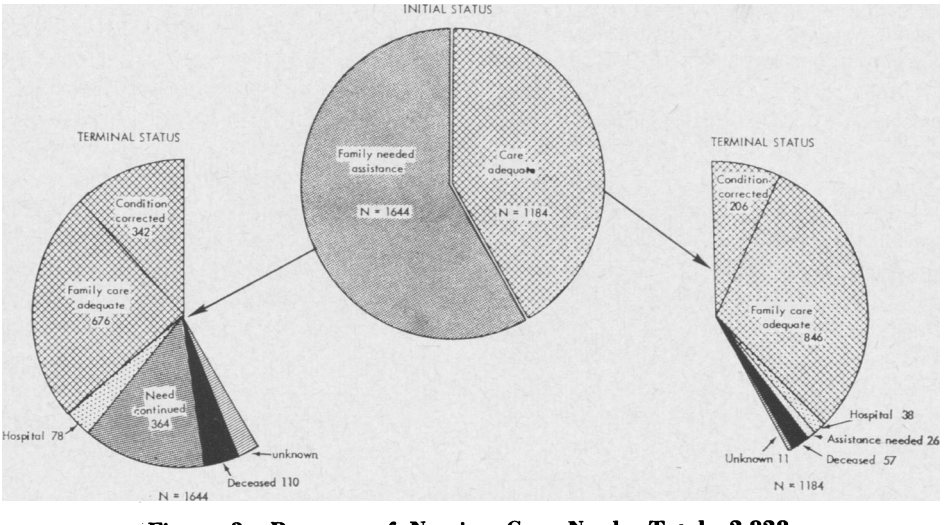

Figure 3—Progress of Nursing Care Needs, Total=2,828

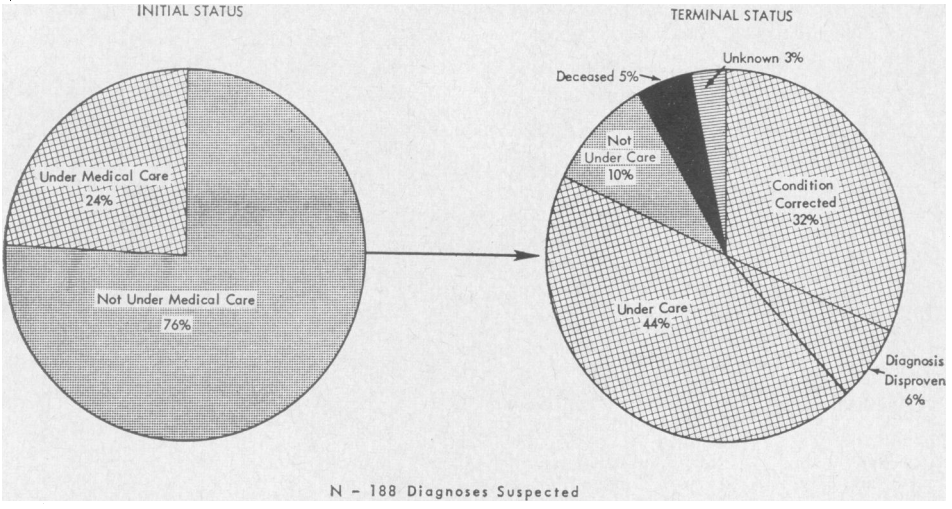

Figure 4—Case Finding Among Patients

satisfactorily without it. This information gives evidence of the strengths within families to care for their own problems. But what of the remaining percentages which may be even more important for us? What happens to them in three months' time? Can we see another dimension, one of progress? Look at Figure 3 depicting nursing care problems and at the section on the lower left which represents the terminal status of the 1,644 needs of patients that on admission required nursing assistance. Here patient progress becomes evident. Within three months almost two-thirds of these needs had been eliminated or were being satisfactorily cared for by the patient or family. Unfavorable changes also occurred, as demonstrated by those considered initially not in need of assistance shown by the semicircle on the right and later found to require the help of the nurse. Though not included on the chart, analysis of this information indicates still further that problems of personal hygiene changed most readily, and, as might be predicted, emotional problems seemed slowest to change.

Similarly, distinct progress was observed with regard to medical care and social service. And some regressions also occurred in that a few of the problems originally under care lapsed from care.

One additional finding of the study is presented here because of its special implication for public health. It relates directly to the nurses' participation in case finding—a well accepted responsibility of public health nurses. There were 188 illnesses or abnormalities (in 140 patients) suspected by the public health nurses. These are illustrated in Figure 4. When first detected 76 per cent of this number, or 142, were not under medical care. But, within the three-month study period 90 per cent had been examined. Special mention should be made of the fact that only 6 per cent of these conditions on examination were reported as diagnosis disproven.

In conclusion we may again ask "How effective is public health nursing?" From this study we still cannot say, for the answer to this question requires controlled studies of patient care.

We can say, however, that a method has been developed which provides indications of the effectiveness of service. As we have illustrated, the patient progress approach identifies the needs observed in patients, systematizes the reporting of nurse evaluations, and does document evidence of change in patients' health and health behavior. Because of these characteristics this method holds challenging possibilities for program implementation. For example, it might be adapted to facilitate periodic program evaluations, or to carry out more penetrating studies of new or changing aspects of programs, or even to peer, as we must, into the effects of service. Fundamentally the most important contribution of patient progress reporting lies in the fact that it demonstrates a new approach to teaching and to assessing public health services, accenting not what we do but rather what happens to patients who have the benefits of public health.

REFERENCE

1. Mickey, Janice E. Studying Extra-Hospital Nursing Needs. A.J.P.H. 48,7:880, 1958.

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This paper was presented before a Joint Session of the Health Officers and Public Health Nursing Sections of the American Public Health Association at the Eighty-Ninth Annual Meeting in Detroit, Mich., November 14, 1961.

Air Pollution Conference Plans

Plans and arrangements for the National Conference on Air Pollution, to be held in Washington next December 10-12, have been reviewed by a steering group representing industrial, governmental, technical, and civic organizations. L. D. Zeidberg, M.D., M.P.H., professor of epidemiology, Vanderbilt University School of Medicine, represented the American Public Health Association.

The conference, called by Luther L. Terry, M.D., Surgeon General of the Public Health Service, will bring together physicians, engineers, scientists, legislators, and representatives of business, labor, and the public. Under the theme, "Let's Clear the Air," the conference objective is to assess where the nation stands in its effort to meet the threat of air pollution and to determine what additional action needs to be taken to improve and safeguard the air.

Organizations wishing to exhibit at the conference are advised that there will be adequate space for exhibits and no charge for such space. Executive Secretary of the Conference is Arthur C. Stern, assistant chief, Division of Air Pollution, Public Health Service, Washington 25, D. C., from whom further details may be obtained.