Patients with Chronic Disease in Richmond's Home Care Program

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THE HISTORY of home medical care in the City of Richmond, Va., is documented in the reports of the Richmond Board of Health. The first suggestion that health services be provided for indigent patients was made in 1882, and in 1891 four physicians were appointed to care for the sick poor.

The home medical care program expanded with the formation of the city's department of public health in 1909, when two additional physicians were employed. Each physician was responsible for a geographic district of the city and rotated on call to ensure adequate service at all times.

The program continued with minor modifications until 1949, when its inadequacies occasioned an investigation at the request of the director of public health. The investigating committee recommended that the health department abandon the physicians' part-time schedules and establish a combined teaching and service program with the Medical College of Virginia. The combined program began April 1, 1949 (*1*), and remained in effect until July 1, 1967.

A preliminary evaluation of the program during 1951 resulted in some revisions, and a committee was appointed in 1955 to perform a more complete review of the home care services. No further evaluation was made until 1965 when the Public Health Service granted funds to study the program.

Patient Data, December 1965

The pattern of services in the home care program has been to visit indigent and medically indigent patients at home whether they had an acute or chronic illness. Review of patients' charts in December 1965 revealed that of the estimated 70,000 persons eligible for care only 149 patients currently under supervision had a chronic disease. Individual patients' charts were reviewed by one investigator (L.B.) and the data entered on a master sheet prior to data processing on the medical school computer. The age, sex, and race of patients with chronic disease reflected the demographic variables of the population served. Sixty-nine percent of the patients were over 65 years of age, and one-fourth of the total number were aged 80 years or more (fig. 1). The sex and race distribution indicated that the majority of patients were Negro women. There were 78 nonwhite and 36

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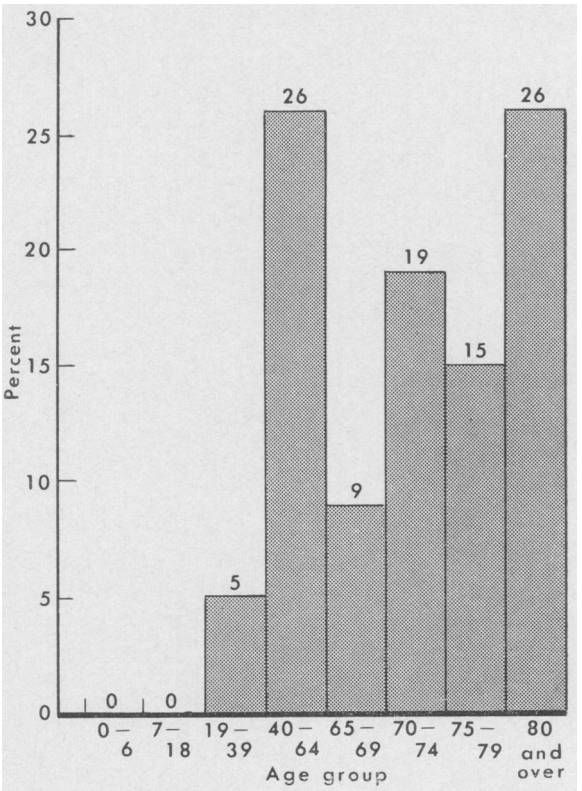
white women in the group along with 18 white and 17 nonwhite men. More than one-third of the patients lived in the western census tracts of the city (table 1).

The primary illness of more than half the patients studied was disease of the cardiovascular system, predominantly arteriosclerotic heart disease. Metabolic diseases, principally diabetes mellitus, constituted the second largest group of conditions, followed by diseases of the central nervous system, mainly strokes. Behavioral disorders associated with cerebrovascular disease, pulmonary disease, principally chronic bronchitis and emphysema, and musculoskeletal disorders, chiefly arthritis, constituted smaller groups. Miscellaneous diagnoses included diseases of the gastrointestinal and genitourinary systems, and diseases of the endocrine system other than diabetes (fig. 2).

Multiple pathological conditions were evident in most patients; only 11 percent had one illness. The percentages of patients with more than one illness ranged from 15 percent with two diagnosed conditions to 1 percent with seven separately defined illnesses. Three-fourths of the patients had three or more diseases (fig. 3).

Half the patients had been known to the home care program for 2 years or less while 17 percent had been in the program for 10 or more years (table 2). Five percent of the patients were receiving no pharmaceutical preparations while one-fourth received prescriptions for four or more drugs (fig. 4). Laboratory tests had been performed for 98, or about two-thirds, of the patients.

Figure 1. Patients with chronic disease in the Richmond home care program, by age group, December 1965



Multiple admissions to the program were unusual; 95, or 64 percent, of the patients were admitted only once. Of the remainder, 30 patients, or 20 percent, were admitted twice; 15, or 10 percent, were admitted three times; four patients came into the program four times; and only five were admitted five times.

Table 1. Demographic data on Richmond by census tract area and percent of home care patients

Census tract area	1960 census data				Home care patients[1] (percent)
	Median income	Median age (years)	White (percent)	Nonwhite (percent)	
West	$3,772	38	79	21	36
East	2,619	27	13	87	28
North	3,786	36	52	48	18
South	5,051	30	80	20	18

[1] 1965 survey.

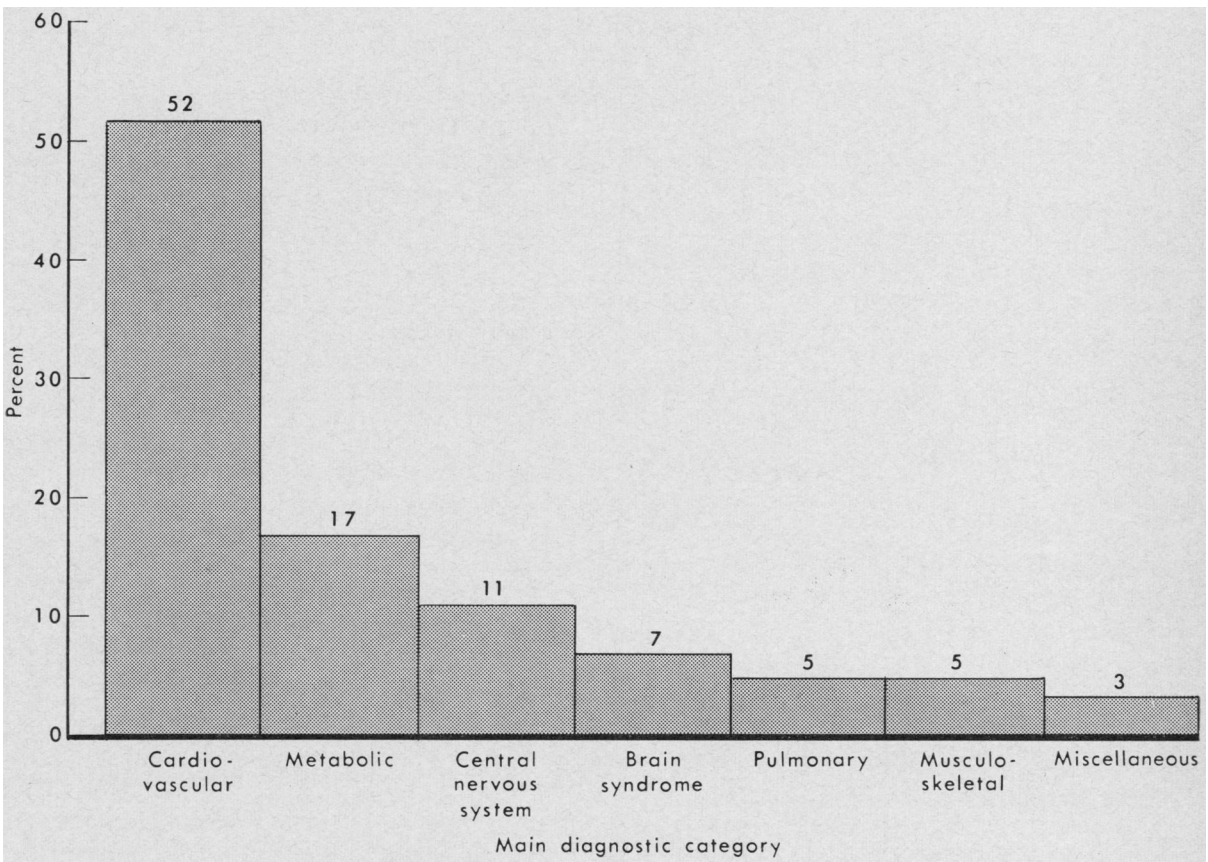
Review of the medical and social services to which the patients had been known during their stay in the program revealed that three-fourths had been treated in one of the medical school's specialty clinics. Half the group had been inpatients in the medical school hospital, and 10 percent had been admitted to other hospitals. Two-thirds of the patients were served by the social service bureau of the welfare department. Only 54 percent had been visited by a nurse in the home, and only 46 percent were known to the public health social worker. Twenty-two percent had been in a nursing home at some time. Practically no visits had been made by a nutritionist or a sanitarian.

Discussion

Review of the data about the 149 patients with chronic disease in the Richmond city home care program in December 1965 emphasized certain points to be considered in establishing and maintaining a home care program. Chronic disease increases and the ratio of men to women decreases with age. Thus the number of elderly women in the program is not unusual. The excess of Negro patients was expected because medically indigent patients in Richmond are predominantly Negro. These three demographic variables unquestionably influenced the geographic distribution of patients either directly or through such indirect means as lack of education, ignorance of community services, extent of political efficacy, and access to a personal physician.

Income did not seem to be the only determinant of program use. Age and race also were factors (table 1). This inference is supported by an unpublished study based on individual census tract data in Richmond which demonstrated no correlation between income and home

Figure 2. Patients with chronic disease in the Richmond home care program, by category of illness, December 1965



care physicians' visits. Retention of 17 percent of the patients in the program for more than 10 years may indicate that they had been treated at home during the early stages of their illness with beneficial results.

The main diagnostic categories differ from morbidity data currently existing in the United States (*2*). The variations probably reflect the use of different diagnostic criteria. The occurrence of multiple illnesses is a concomitant of chronic disease in the aged patient.

The number of drugs prescribed for the chronically ill and often confused patient necessitates close watch on drug administration. Use of digitalis warrants particularly close surveillance to prevent intoxication. Drug supervision is more difficult if communications are poor among the various services to which the patient may go, for example, the emergency room, specialty clinic, or general medical clinic. This lack of communication may be obviated by using a single record for all clinical services. If maintaining a single record is impractical, all records must be easily accessible.

Figure 3. Number of diagnoses of patients with chronic disease in the Richmond home care program, December 1965

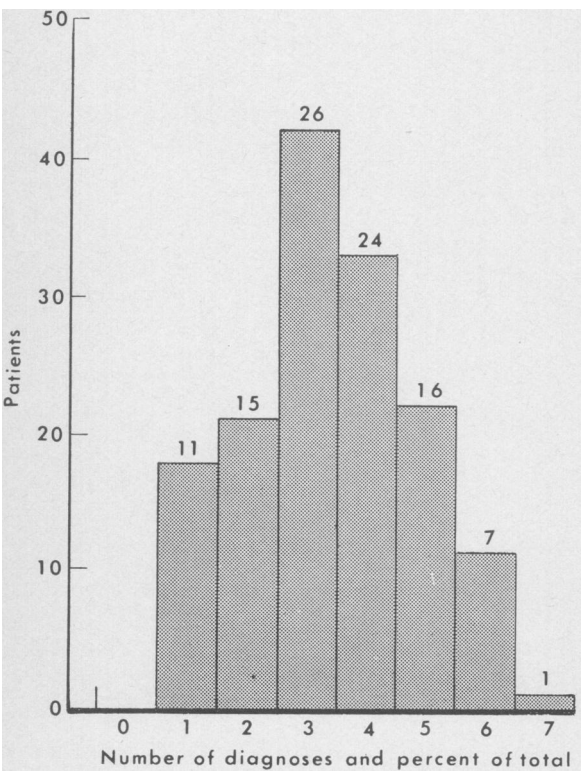


Table 2. Number of years 149 patients with chronic disease were in the Richmond home care program, December 1965

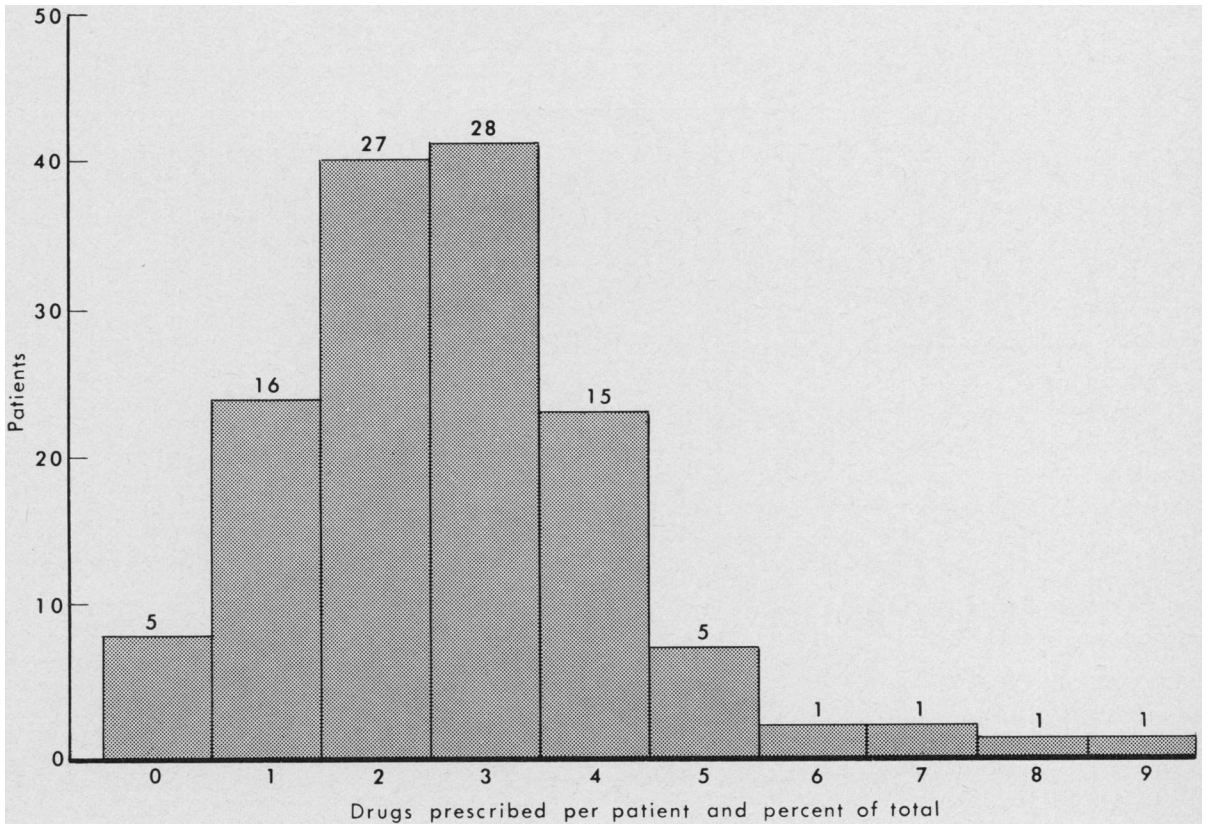
Years	Patients	
	Number	Percent
1	49	33
2	32	22
3	12	8
4	13	9
5	5	3
6	6	4
7	0	0
8	4	3
9	2	1
10	6	4
11	3	2
12	3	2
13	2	1
14	5	3
15	4	3
16	3	2

Lack of laboratory data on one-third of the patients is a reminder that criteria for patients' admission to a home care program should include basic laboratory tests. The majority of patients were admitted to the program only once, a circumstance not unexpected among patients with chronic disease.

The services to which home care patients were known revealed some deficiencies. Frequent use of specialty clinics should not necessarily be part of a home care program. The teaching component of the program may have influenced specialty clinic referrals because of the prevailing and unfortunate characteristic of medical faculties, and therefore students, to fragment treatment of patients by specialty services. Similarly, the use of emergency room and other hospital clinics reflects the prevailing pattern of medical care for indigent persons in Richmond.

Perhaps the most disturbing element is the lack of visits of health personnel, other than physicians, to patients in the home. The evaluation of each patient by members of the health team obviously varies with the availability of health personnel. Public health nurses, sanitarians, a public health social worker, and a nutritionist for home visiting are available in

Figure 4. Number of drugs prescribed for patients with chronic disease in the Richmond home care program, December 1965



the Richmond Public Health Department. Failure to use these personnel indicates the paramount importance of establishing definitive criteria for patients' admission to home care programs. One requirement should be the evaluation of the patient and his environment by at least a physician, a public health nurse, and a sanitarian, that is, by the basic members of the public health team. Two recently published surveys of home care programs do not mention the services of a sanitarian (*3*, *4*).

Summary

Of the 149 patients with chronic disease who were supervised by the Richmond home medical care program in December 1965, 95 were nonwhite and 69 percent were over 65 years of age. Three-fourths of the patients had three or more diseases, with heart disease, diabetes mellitus, and diseases of the central nervous system being most prevalent.

Three-fourths of the patients had been treated at the specialty clinics of the Medical College of Virginia. One-fourth received prescriptions for four or more drugs, suggesting a need for close supervision of drug use. Laboratory tests had been performed for 98 patients. Half the patients had stays at the school's hospital, and 10 percent had been in other hospitals.

Sixty-four percent of the patients had been admitted to the program only once, and 17 percent had been in the program 10 or more years. A nurse had visited 54 percent of the patients in their homes, but practically no visits had been made by a nutritionist or sanitarian.

Two-thirds of the patients were served by the social service bureau of the welfare department, but only 46 percent were known to the public health social worker.

REFERENCES

(*1*) Holmes, E. M., et al.: The Richmond home medical care program. Amer J Public Health 43: 596–602 (1953).

(2) National Center for Health Statistics: Chronic conditions and activity limitation, United States, July 1961–June 1963. PHS Publication No. 1000–Series 10–No. 17. U.S. Government Printing Office, Washington, D.C., 1965.
(3) Public Health Service: Survey of coordinated home care programs. PHS Publication No. 1062. U.S. Government Printing Office, Washington, D.C., 1963.
(4) Public Health Service: Coordinated home care programs. PHS Publication No. 1479. U.S. Government Printing Office, Washington, D.C., 1966.

Education Notes

Graduate Degree Air Pollution Study Programs. The University of Pittsburgh Graduate School of Public Health, Department of Occupational Health, is offering a study program in air pollution and related subjects leading to the degree of master of science or doctor of science in hygiene. The program is designed to enable graduate engineers, chemists, and other scientists to become specialists in aspects of atmospheric chemistry, physics, and engineering as they relate to the air pollution problem.

Other programs have been developed in cooperation with the graduate school of engineering and the division of natural sciences for students working toward degrees in chemical engineering, civil engineering, or chemistry.

The programs were made possible through a 5-year training grant from the National Center for Air Pollution Control, Public Health Service. The grants, renewable yearly, total $448,000.

Students in any of the programs can be awarded a Public Health Service traineeship immediately after meeting the admission requirements. Awards are renewable yearly until the doctoral degree is awarded.

Additional information is available from Dr. Morton Corn, University of Pittsburgh Graduate School of Public Health, Pittsburgh, Pa. 15213.

Doctorate in Medical Care Organization. Fellowships for a program of study leading to a Ph.D. degree in medical care organization are available from the University of Michigan.

The program is intended to prepare students for careers in teaching, research, and policy formulation in the sociological, economic, and administrative aspects of medical care organization. Designed to be completed in 3 years, the program is intended to provide competence in medical care; relevant aspects of sociology, economics, political science, or psychology; and research methods.

Stipends, which begin at $2,400, are supplemented by an additional $500 for each dependent and full tuition. They are increased every year.

Students with a bachelor's or an advanced degree in the social or health sciences can apply by writing to Prof. Benjamin J. Darsky, Chairman, Ph.D. Program in Medical Care Organization, School of Public Health, University of Michigan, Ann Arbor. 48104.

Middle Manpower for Mental Health. Training at the junior college level of a new kind of middle manpower for mental health service has begun through a cooperative program by the Illinois Department of Mental Health and Chicago's Central YMCA Community College. The 2-year program offers an associate in arts in mental health degree from the college.

The curriculum has a liberal arts core with emphasis on behavioral sciences, supplemented by special seminars conducted by State workers. First-year students are required to take an internship in State mental facilities where they are paid for working a specific number of hours a week. They receive on-the-job training and professional supervision and consultation.

On completing the requirements, students will be ready for full-time jobs, such as mental health program assistants, as well as other positions in special programs related to the control and prevention of mental illness and the treatment and rehabilitation of the mentally ill and mentally retarded. Graduates may go on to a bachelor's, master's, or doctor's degree.

Additional information can be obtained from Dr. Harold M. Visotsky, Director, State Department of Mental Health, 160 N. LaSalle Street, Chicago 60601.