Medical Care Program for the Elderly in a Housing Project

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THE SPRINGBROOK Health Maintenance Unit project was devised to demonstrate the cost feasibility and value of offering a wide range of out-of-hospital services to residents of a public housing project who are 62 years of age or older. It is hoped that the project will help to define the elements of health care that can be supplied economically to elderly persons in a residential setting as well as providing experience in documenting the health needs of an older population.

The health maintenance unit is located on the first floor of Springbrook Estates, a 16-story apartment building operated by the Cleveland Metropolitan Housing Authority, housing approximately 319 persons. Residents are those who are 62 years or older, those who are totally disabled (as defined by the Social Security Act), and spouses of both groups. Across the street is Mount Sinai Hospital, a general hospital caring for those with acute illnesses, with an active teaching service and outpatient department. The hospital appointed the unit's clinical director and assisted him in employing a staff and in purchasing equipment and makes its facilities available for inpatient and outpatient care.

A medical care program is offered to Springbrook residents on a voluntary basis. Anyone wishing to continue with his private physician is not encouraged to discontinue this relationship.

Direct services are given for all health care needs of ambulatory patients, and they are referred to an appropriate facility when care in an acute or chronic hospital or nursing home is indicated. The services offered include initial, subsequent, and periodic physical examinations, and physician and nursing services for the diagnosis and treatment of illnesses in the health unit and in the patient's apartment. Mount Sinai Hospital facilities are used for X-rays, laboratory services, eye examinations, surgical consultations, genitourinary referrals, and other specialty services. Routine drugs are dispensed at the Springbrook unit and other prescribed medications are secured from the hospital pharmacy.

The unit is staffed by a part-time medical director, assistant medical director, full-time nurse, social worker, secretary, and research assistant. The services of a dietitian, an occupational therapist, and a physical therapist are also available at the nearby hospital or in the apartments as needed.

Services are not free. Patients are charged according to ability to pay, since many receive public assistance with no allocation for health care. A $2 initial registration fee is charged to initiate the patient's record, file or other forms, and administrative procedures. Each patient is classified on the basis of his net monthly income. The range is from $150 or over in the standard or S class to $55 or less in the C class. Fees paid per visit by class follow: S $2, D $1, A $0.50, B $0.25, and C no charge.

Fees for laboratory procedures, X-rays, and other outpatient services at Mount Sinai Hos-

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pital are also assessed by financial class. For example, charges for blood chemistry studies are $0.50, blood counts are $0.50, barium enemas are $6.50, chest X-rays are $3, and gallbladder examinations are $6. Classes S and D pay the full fee, class A, half the fee, class B, $0.25, and class C, nothing. Springbrook patients pay for prescriptions at the hospital pharmacy at cost plus 25 percent regardless of financial class.

Some patients receive financial assistance from the Division of Aid for Aged, Ohio Department of Public Welfare. Aid for Aged pays $7.70 per visit and for drugs obtained at authorized pharmacies.

The general program enjoys the lively cooperation of the Division of Chronic Diseases, Public Health Service, State and city health departments, local volunteer agencies, and the local academy of medicine. There is close liaison with Ernest J. Bohn, director, Cleveland Metropolitan Housing Authority, who was one of the conceivers of the project several years before the construction of Springbrook Estates.

Physical Layout

The health unit encompasses approximately 2,200 square feet and contains a waiting room off the main corridor of the apartment house with an adjacent secretarial unit, a physician's consultation room, two examining rooms with the equipment generally used in practicing internal medicine, a small office for the social worker, an additional room used by the nurse for electrocardiograms, venous punctures, and other laboratory procedures, a nurses' station patterned after those on the wards of a general hospital, a small utility room used for analyzing urine specimens and storing equipment, and a small kitchen (fig. 1).

In addition, there is a large area originally conceived as a 10-bed ward for the temporary admission of patients for evaluation or observation of an acute illness. However, after a suitable period of study and experience, it was felt that this unit was not necessary, primarily because with readily available nursing and medical services, such patients could be adequately cared for in their own apartments.

A portion of this large area was recently converted into a podiatry unit. As the patient load increases, the remainder could become additional examining space, offices, and a physical therapy unit.

Maintenance and housekeeping of the clinic are the responsibility of the housing authority staff that services the entire building.

The project director is the medical director of Mount Sinai Hospital. The half-time clinical director has three major areas of responsibility. As the focal point of patient care, he acts as the patients' private physician and is actively engaged in treatment and continuing evaluation of those enrolled in this medical care program. He also directs the research that is an integral part of the project, compiling statistical reports and presenting data to appropriate hospital and public grant authorities. Finally, he acts as liaison with Mount Sinai Hospital and the metropolitan housing authority. The assistant clinical director assists the director in meeting all these responsibilities and engages actively in patient care. He spends one-third of his time on the project.

The full-time registered nurse makes apartment visits to ill patients, often evaluating whether a physician visit is needed. She also visits patients after the physician has seen them to ascertain whether a return visit is necessary.

In the clinic the nurse takes all blood specimens ordered for hematocrits, blood sugar tests, and other blood chemistry studies; gives injections such as diuretics, desensitization shots, and antibiotics; does minor laboratory procedures such as urine tests for sugar, acetone, and blood; and takes electrocardiograms on all new patients and followup tracings as ordered. The nurse changes dressings, explains diets to patients, and, occasionally, escorts patients to and from specialty clinics.

She assists in all physical examinations, preparing the patient and is present during pelvic examinations. She makes all specialty clinic appointments at Mount Sinai Hospital and is responsible for placing reminders of those clinic visits in the patients' mailboxes. She also maintains the currency and continuity of all medical records and makes notations in the charts of all procedures. She does not, however, make progress notes in the charts; these are the respon-

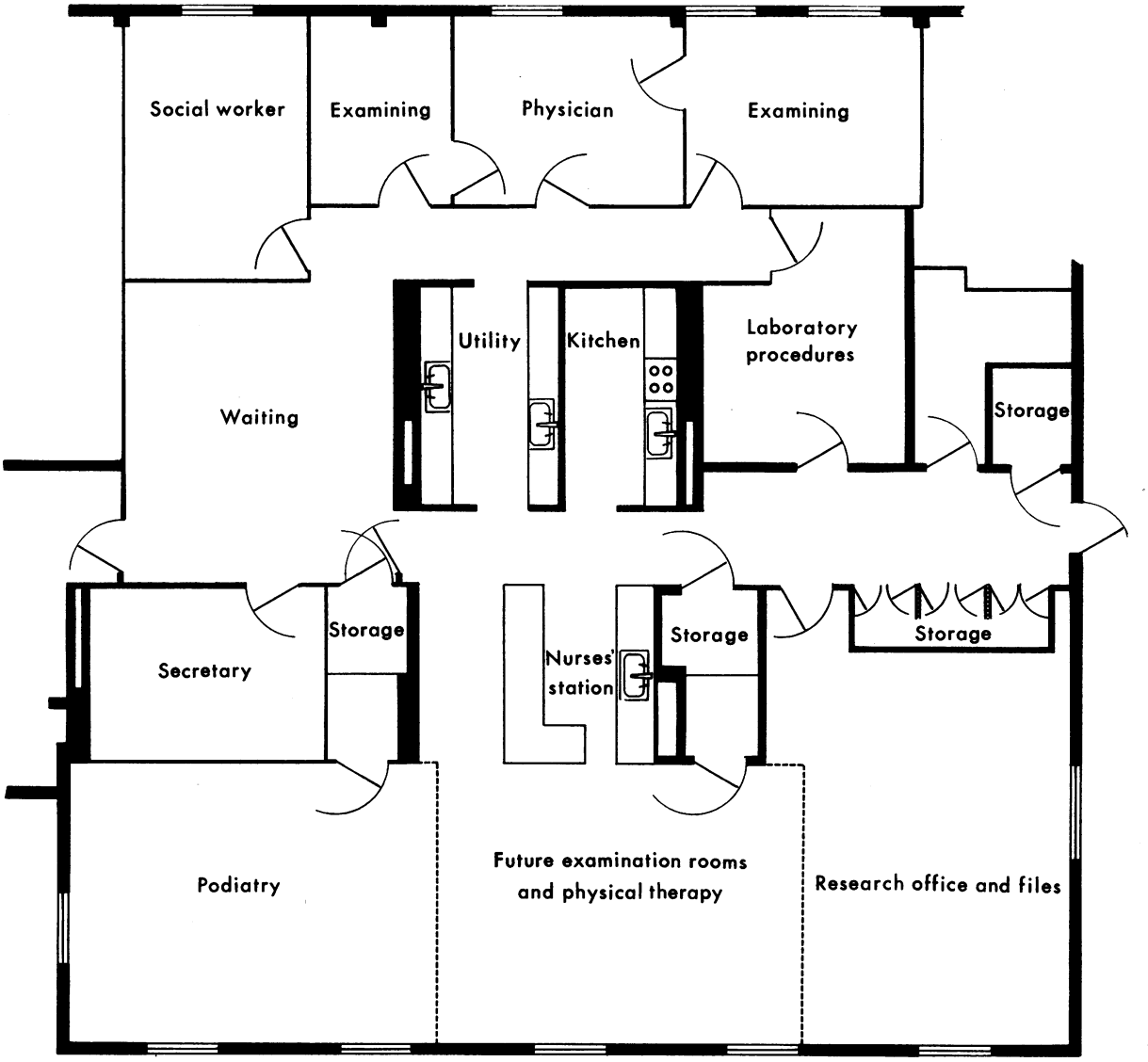


Figure 1. Floor plan, Springbrook Health Maintenance Unit

sibility of the attending physician. The nurse is responsible for clinic maintenance and overseeing housekeeping.

The full-time social worker is primarily responsible for initial evaluation and continued contact with patients electing to participate in this program. The social evaluation is an integral part of each patient's chart and is important in outlining a therapeutic program.

When social problems arise, the social worker acquaints patients with various available social resources and acts as a liaison with the appropriate authorities. She is particularly helpful with financial difficulties because of her familiarity with the Social Security and Aid for Aged agencies which are the usual source of financial support for patients. The social worker is the main contact of the patient and his family with the health program.

The social worker keeps in constant touch with hospitalized patients, writing periodic notes in the Springbrook charts concerning their progress and indicating when they are expected to return to the health unit for ambulatory care or if additional hospitalization in a chronic illness or convalescent facility is necessary. She also makes apartment visits after a patient has an acute illness and tries to ascertain if he has

social problems or emotional difficulties as a result of the illness.

She is responsible for obtaining all medical information on new patients from other sources, such as hospitals and physicians. These data are added to the patient's permanent record to assist the physician and nurse in establishing the active medical treatment of the patient. This service is particularly valuable since obtaining a history from an elderly patient is often difficult because of poor memory.

A full-time research assistant is obtaining morbidity, mortality, and other health data on residents of Wade Apartment House, housing similar to Springbrook except that it lacks a medical maintenance unit. The medical experiences of Springbrook and Wade residents will be compared in a subsequent publication.

The full-time secretary-receptionist makes patients' appointments with the physicians, nurse, and social worker; maintains all charts and administrative records; and when necessary, helps patients with poor understanding of the questionnaire or poor memory fill out medical histories. She is also responsible for collection of fees for patient visits and keeps a financial record for the Mount Sinai Hospital comptroller.

Services Offered

The secretary-receptionist makes the initial contact with the resident wishing to join the Springbrook health program. She explains the services offered, gives him forms to record a medical history, and makes an appointment with the clinical director or the assistant clinical director for a physical examination.

The physical examination is complete, including a proctoscopy, a Papanicolaou smear test for all women, chest X-ray, hematocrit, complete urinalysis, and an electrocardiogram. Additional blood chemistry studies are ordered only if there is cause to suspect certain diseases from the findings of the physical examination or medical history.

An important part of the initial physician-patient contact is the time the physician spends, after the examination is completed, to discuss with the patient the conditions present, to set up and explain therapy, and to assure the patient of careful continued medical care. Followup visits and specialty clinic appointments are then arranged, and patients are instructed to come to the clinic to see the physician or nurse if an acute illness develops before their next appointment. They are also told that apartment visits will be made when necessary.

To complete the medical record, the patient is asked to give a written authorization to the social worker or the research assistant so that she can obtain data on previous medical experiences with hospitals and physicians. Both medical facilities and physicians have been extremely cooperative in sending reports promptly.

Mount Sinai Hospital provides emergency medical coverage for Springbrook patients at night and on weekends. The hospital's resident physician either solves the problem by telephone, instructs the patient to come to the emergency room, or makes a home call. He can also arrange for admission to the hospital if necessary.

Patients are usually hospitalized at Mount Sinai. If they carry insurance for private or semiprivate care in the hospital, a private physician assumes the responsibility of medical care on a fee-for-service basis. It is always explained to the patient and his family that, if they desire a private physician for in-hospital care, the Springbrook health unit subscribes to this wish. Patients without hospitalization or financial resources are cared for on the service units at the hospital.

A patient participating in the Springbrook health program may request and obtain a private medical consultation. The consulting physician makes a full written report to the health clinic. This practice has led to good medical care continuity.

Because participation in all services at Mount Sinai Hospital and Springbrook is strictly voluntary, a patient may decline any treatment or service. However, if the clinic physician feels this action interferes with good medical treatment, he explains this to the patient. Patients persisting in disregarding medical advice are dropped from the program with notification by an official letter. The Springbrook physicians cannot assume the medicolegal responsibility for an uncooperative patient.

Table 1. Comparison of participants in the medical care program and entire Springbrook population

Category	Participating residents (N=192)		All Springbrook residents (N=319)	
	Number	Percent	Number	Percent
Sex:				
Male	58	30.2	92	28.8
Female	134	69.8	227	71.2
Age group (years):				
59 or under	8	4.2	12	3.8
60–64	20	10.4	33	10.3
65–69	49	25.5	93	29.2
70–74	51	26.6	78	24.5
75–79	39	20.3	70	21.9
80 or over	25	13.0	33	10.3
Living arrangement:				
Alone	110	57.3	177	55.5
With spouse or relative	82	42.7	142	44.4

Stock medications at the Springbrook unit given free of charge include certain antibiotics, analgesics, dermatological preparations, injectable vitamins, and diuretics. Patients obtain special medications ordered by the physician from the pharmacy at Mount Sinai Hospital. Careful documentation of all drugs dispensed from both Springbrook and the hospital pharmacy is kept at the clinic office. All prescriptions paid for by the Aid for Aged agency are ordered for the patient from an authorized pharmacy.

Analysis of Activities

In examining the health needs of persons 65 years and older one must accept that they are not a homogeneous group economically, socially, or medically, and experimental data must be interpreted in terms of the particular group studied. Life at 65 years and after can be thought of as a downward curve; the angle of decline depends upon the individual.

At the top of the curve is a person socially, economically, and medically able to function well and be completely responsible for his own care. At the bottom of the curve is a completely dependent person with severe impairment medically, often close to death, alone, and without means. All degrees of variation exist between these two points; a person's position on this curve determines his needs at a particular point in time.

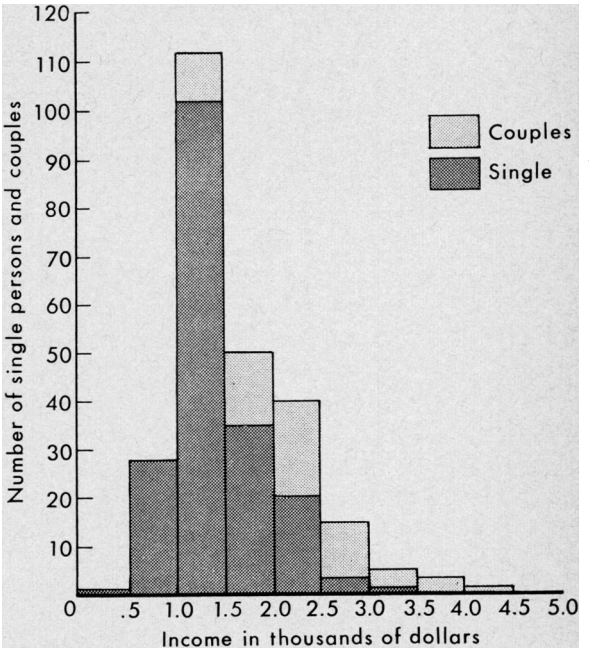
Patients do not remain at a given point on this curve; they move down and sometimes temporarily up so that needs do not remain constant, and periodic evaluation is necessary. Further, disease must be thought of in terms of functional impairment, and planning for the care of patients must be done on this basis.

The experiment which we are undertaking at the Springbrook Health Maintenance Unit is couched in terms of a population group 62 years and older living in a public housing development. Springbrook Estates at the end of 1963 housed a total of 319 persons, 92 men (28.8 percent) and 227 women (71.2 percent).

The clinic registrants numbered 192 (58 men and 134 women) for the entire year, or approximately 60 percent of the Springbrook residents. Data on living arrangements and an age breakdown of participants and all Springbrook residents are given in table 1.

Because slightly more than half of those in both groups lived alone, and the age distribu-

Figure 2. Distribution of annual income of all Springbrook residents, 1963



tion was also similar, it was felt that the participants were a representative sample of Springbrook residents.

The annual income of residents ranged from $500 to $4,500 for both single persons and couples, with the vast majority in the $1,000–$2,500 category (fig. 2). Their sources of income were agencies such as Social Security, Veterans' Administration, Railroad Pension, Aid for Aged, and Public Employees' Retirement System. A few had income from annuities, a small number worked part time, some received welfare payments, and a minute number lived on their savings.

Clinic utilization. From February 1963 through January 1964, 192 Springbrook residents registered at the health maintenance unit in increments of 124 in the first 3 months, 30 in the second quarter, 22 in the third quarter, and 16 in the fourth quarter. Thirteen patients dropped out of the program for various reasons to be discussed later. There were two dropouts who were reinstated in the program, and 7 died, leaving a total of 174 participating at the end of a year.

The average during the year was 153 patients, or approximately 50 percent of the Springbrook residents. This number corresponds with the impression of other observers that among older people in the United States living outside of institutions, about 50 percent are in good health and use medical services in a limited fashion.

During the first year of operation 1,311 appointments were scheduled for initial visits, examinations, or treatment for illness. Unscheduled office visits necessitated by acute illness numbered 439. The physician and nurse each made 65 house calls during the day. There were 57 physician night calls, or about 5 per month made by a Mount Sinai resident physician. Visits and physician contacts totaled 1,937 or about 13 visits per ambulatory patient per year.

A breakdown of the Springbrook clinic visits by quarter shows a fairly even distribution (table 2). Although some patients made frequent visits and others came infrequently, the disparity was not great. The majority of those enrolled made somewhat more than three visits per 3-month period.

Visits were analyzed by the patient's financial class to see if those in class C, who paid no charges, were the most frequent users of the clinic. Following are the results.

Class	*Fee per visit*	*Percent*
S	$2	2.5
D	1	18.5
A	.50	20.3
B	.25	25.5
C	0	16.2
Aid for the Aged	7.70	17.0

Table 2. Springbrook physician and clinic visits, 1963

Number of visits	First quarter (127 enrolled)		Second quarter (150 enrolled)		Third quarter (168 enrolled)		Fourth quarter (174 enrolled)	
	People	Visits	People	Visits	People	Visits	People	Visits
1	26	26	21	21	31	31	55	55
2	27	54	26	52	33	66	25	50
3	15	45	25	75	23	69	33	99
4	21	84	22	88	12	48	14	56
5	12	60	15	75	11	55	15	75
6	10	60	10	60	11	66	9	54
7	2	14	4	28	6	42	3	21
8	5	40	5	40	2	16	3	24
9	3	27	2	18	3	27	3	27
10	2	20	3	30	1	10	0	0
11	1	11	0	0	0	0	3	33
12	2	24	1	12	1	12	0	0
13	0	0	0	0	0	0	0	0
14	1	14	0	0	0	0	0	0
15	0	0	1	15	1	15	0	0
Total	127	479	135	514	135	457	163	494
Average per quarter		3.7		3.8		3.4		3.1

Nonregistrants were responsible for 0.3 percent of the visits; no one visiting the clinic for the first time in an emergency was turned away. Obviously, the majority of patients paid something for their visits.

As mentioned earlier, the clinics at Mount Sinai Hospital were used extensively by the participants in the health program for consultation in various surgical and nonsurgical specialties. There were a total of 629 such visits, or approximately 4 per patient per year.

The majority of visits were to the eye clinic. Visits to the podiatry, diabetes, urology, surgery, and psychiatry clinics accounted for the remainder. The number for podiatry will be reduced because a podiatry unit has been established in the Springbrook health unit. There were also some visits for special therapy in physical medicine, in speech for those who have aphasia as a result of strokes, and in inhalation therapy for those with chronic pulmonary diseases. Following is a list of visits to the various hospital clinics.

Clinic	*Number of visits*
Allergy	6
Podiatry	52
Diabetes	19
General	33
Dental	37
Oral surgery	28
Peridontal	9
Dermatology	33
Diabetes	42
Ear, nose, throat	11
Gynecology	18
Hematology	1
Neoplastic	1
Ophthalmology	180
Orthopedics	4
Proctology	2
Psychiatry	16
Surgery	22
Urology	16
Therapy	188
Inhalation	48
Physical medicine	69
Speech	71
Total	629

The hospital laboratory performed 617 procedures, or approximately 4 per patient per year. The largest numbers were for hematology (233) and urinalysis (285), with fewer for chemistry (52), bacteriology (6), and serology (2). The 39 pathology procedures were mainly examinations of sputum specimens and of specimens from the female genital tract.

X-ray procedures totaled 240, or about 1.6 per patient per year. Most (196) were chest X-rays because all registrants were so screened. The remaining 44 were barium enemas 12, intravenous pyelograms 10, gastrointestinal series 5, gallbladder 3, shoulder 3, and 1 or 2 X-rays each of clavicle, foot, kidney, bladder, urethra, breast, nose and skull, pelvis, and wrist, as well as 1 intravenous cholecystogram. The X-ray surveys often led to diagnoses which resulted in new forms of therapy or admission to the hospital for further evaluation and therapy.

The Mount Sinai Hospital pharmacy filled 765 prescriptions for Springbrook participants during the year, or approximately 5 per patient. This number does not include those of recipients of Aid for the Aged, who are required to use certain authorized pharmacies.

The nurse's time was divided into the following types of service during the clinic's first year: 5 percent to apartment visits; 44 percent to clinic procedures such as electrocardiograms, injections, administration of medication, diet counseling, and minor laboratory procedures such as spot analysis of urine for sugar and albumin; 38 percent to administration, making clinic appointments and reminders, keeping the medical records up to date, and unit maintenance; and 13 percent to assisting the physicians during physical examinations, weighing patients, and assisting in sigmoidoscopies and pelvic examinations.

Hospital admissions and duration of stay. Of the 153 average number of registrants, 39 persons (26 percent) were admitted to the hospital. These 39 were admitted 58 times for a total of 985 hospital days. Thirty-seven of these were admitted 44 times for acute illnesses, a total of 586 hospital days, or 13.3 days per admission. The 12 admissions to chronic disease hospitals were for a total of 329 hospital days, or about 27 days per admission. Eight of these admissions were from a hospital treating acute illnesses and four were from home. However, all four had at one time or other been hospitalized for acute illness. Two patients were admitted to a mental illness hospital for

a total of 70 hospital days. A partial list of diagnoses for the various hospitalizations is given in table 3.

In addition, there were 7 patients who stayed in the hospital less than 1 day for procedures such as biopsies, catheterizations, and similar investigations.

Patients lost to the program. Seven Springbrook registrants died (3.6 percent of the patient population). These deaths were primarily related to the cardiovascular system. Of the 13 dropouts, 4 patients moved out of the apartment house for nonmedical reasons, and 3 moved because of deteriorating health and the necessity of a more protective medical and nursing environment (1 went to a proprietary nursing home; the other 2 went to the chronic section at Highland View Hospital). Four preferred care by other physicians or at another hospital clinic. The remaining two dropouts were reinstated in the program.

Table 3. Diagnoses for hospitalizations

Diagnosis	Number of admissions[1]
Cardiovascular and peripheral vascular diseases:	
Arteriosclerotic heart disease	3
Congestive heart failure	6
Myocardial infarction	2
Thrombophlebitis	1
Dental and oral:	
Teeth extraction	1
Eye:	
Trichiasis	1
Cataract surgery	2
Gastrointestinal:	
Bleeding	1
Colon (resection of transverse, diverticulosis, ulcerative colitis, and rectal fistula)	4
Peptic ulcer	2
Perforated ulcer	1
Genitourinary:	
Transurethral resection	1
Urinary tract infection	1
Gynecology:	
Vaginal hysterectomy	1
Vulva vaginitis with excoriation	1
Metabolic:	
Diabetes mellitus	3
Nervous system:	
Cerebral vascular accident	1
Sciatic nerve root compression	1
Physical medicine:	
Physical therapy	1
Psychoneurotic disorders:	
Observation	2
Renal:	
Azotemia	1
Respiratory:	
Asthma	2
Pulmonary emphysema	2
Tracheobronchitis	2
Skin and connective tissue:	
Erythema bullosum	1
Total	50

[1] There were 8 transfers to a chronic disease hospital accounting for the total of 58 hospital admissions.

Table 4. Summary of costs for Springbrook Health Maintenance Unit, 12 months ending December 14, 1963

Item	Yearly total
Expenses	
Total expenses	$92,321
Total cost for ambulatory patients	59,108
Direct costs (operating expenses and equipment purchases)[1]	50,364
Indirect costs	8,744
Mount Sinai Hospital:	
Clinic visits	3,861
X-rays	1,427
Laboratory procedures	220
Pharmacy drugs	1,136
Emergency room visits	191
Proportion of administrative overhead	1,909
Estimated cost of rent, heat, and electricity for clinic supplied by metropolitan housing authority [2]	8,540
Total cost for inpatients	33,213
Mount Sinai Hospital	21,652
Other hospitals (chronic and acute)	11,561
Income	
Total income	88,734
Total grant and charges	58,847
Public Health Service grant for direct costs	56,514
Charges for Springbrook clinic visits	795
Charges for Mount Sinai Hospital clinic visits, X-rays, laboratory procedures, and emergency room visits	440
Charges for Mount Sinai Hospital clinic drugs	1,098
Total private hospitalization insurance payments	29,887
Mount Sinai Hospital	20,907
Other hospitals	8,980
Net program cost	3,587

[1] Includes staff salaries.
[2] Not actually charged and not included in total expenses.

NOTE: Number of patients for the year averaged 153.

Cost Analysis

A Cleveland firm of certified public accountants analyzed costs and income during the first year of the Springbrook project's operation. Their costs analysis is covered in table 4 and

should be regarded with some caution since the data cover only a 1-year period.

Based on an average of 153 patients, annual costs were $390 per ambulatory patient and $217 per inpatient. A figure of $195 per patient per year paid by hospitalization insurance approximates the second figure. The insurance premiums were paid by the patient or a relative. The cost of outpatient visits, X-rays, drugs, laboratory procedures, emergency room visits, and administrative overhead were calculated by a formula which included visits of all patients served by Mount Sinai Hospital's outpatient department. Costs were as follows: $5.76 per visit to speciality clinics at Mount Sinai Hospital, $5.75 per X-ray procedure, approximately $0.34 per laboratory determination, and an average of $1.48 per prescription.

Total income received from patients only, broken down per patient per year, were calculated as follows: $5.13 for Springbrook clinic visits; $2.86 for Mount Sinai clinic visits, X-rays, and laboratory; and $7.10 for drugs.

Nonparticipating Population

Information about the 40 percent of the Springbrook Estates residents not participating in the medical care program was sought (table 5). Of 134 nonregistrants, 97 (28 men and 69 women) were contacted and interviewed. Their average age was 71.5 years. The major reason for nonparticipation seemed to be satisfaction with the medical services that these persons were receiving from other sources. Also, some considered themselves in good health and were limited users of medical services. However, we feel that members of this group will ultimately become ill and will need more extensive and expensive medical service. As present registrants either die or become ill enough to be moved to a more protective environment, "well" nonregistrants will then need the services offered by the Springbrook clinic and join the program. We expect that this inflow will probably equal the outflow, and no more than 50 percent of the residents will be active participants in the health program at one time.

Table 5. Results of interviews with 97 nonregistered residents of Springbrook

Topic	Number	Percent
Medical contacts:		
Private physician	60	62
Other clinics	11	11
None	26	27
Regularity of medical contacts:		
Regular	41	42
When necessary	30	31
No contacts	26	27
Opinion of present medical care:		
Satisfied	60	62
Prospective registrants	7	7
Not interested or in good health	30	31
Action in medical emergencies:		
See private physician	49	50
Go to hospital emergency room	4	4
Don't know	44	46
Type of hospitalization:		
Blue Cross	67	69
Other insurance companies	11	11
None	19	20

NOTE: 37 nonregistrants (28 women and 9 men) were not interviewed.

Discussion

What can be learned and what can be inferred from the first year's experience at the Springbrook Health Maintenance Unit? First, it has proved entirely feasible logistically to operate a health clinic of this type in cooperation with a neighboring general hospital. Second, medical care, given by board-certified internists in conjunction with a teaching hospital and grouped in one locality, can be delivered to elderly persons without sacrificing the individual physician-patient relationship. Each person can be treated as a private patient, avoiding the onus that often surrounds outpatient clinic care with rotating physicians in charge of cases. Third, although it was not easy to measure the practical and psychological values that a well-trained social worker contributed to the success of the project, it is safe to say that its effectiveness would be markedly diminished without her. Fourth, the psychological impact of the presence of intramural medical services and adjacent, readily available emergency and hospital facilities added a good measure of security for persons with limited means who were chronically ill and needed frequent medical and nursing service. Fifth, in considering the true cost of this program, it must be remembered that the expenses were

derived from analysis of data covering a short period, and it also included maintenance of the research aspect. Certainly further time and experience are necessary in determining more accurately program income versus cost in terms of service to the patient.

The 10-bed infirmary or observation unit that was first thought necessary for the treatment of short-term illnesses and temporary medical observation was not needed because of the availability of the physician and nurse to make apartment calls. Acute illnesses were adequately treated in the home and observation of developing illnesses was successfully carried out.

It became increasingly evident that competent and interested medical personnel, easily accessible facilities for specialty consultations, hospitalization, medications, and convenient ambulatory services with physician and nursing care available in the home were the important ingredients in this program's initial success. Patients benefited psychologically, we felt, by paying what they could afford for medical care; in effect there was no onus of charity on the clinic. In addition, the voluntary participation in the program was important in making the project a success.

Summary

Springbrook Health Maintenance Unit supplies medical care to residents of a 16-story dwelling built by the Cleveland Metropolitan Housing Authority for low-income persons 62 years or older.

The health unit on the first floor provides a full range of ambulatory services, including physical examinations and physician and nursing services in the clinic and the patient's apartment. Inpatient services are available at adjacent Mount Sinai Hospital which also makes facilities and staff available for laboratory and specialty services and emergency care at night and on weekends.

Charges for visits and laboratory procedures are scaled to the patients' incomes, which range from $150 to $55 a month. The hospital pharmacy fills their prescriptions at cost plus 25 percent.

During the first year of operation, 192 of 319 Springbrook residents voluntarily enrolled in the program, and the average patient load was 153. Visits and physician contacts totaled 1,937, or about 13 visits per ambulatory patient per year.

Based on an average of 153 patients, annual costs were $390 per ambulatory patient and $217 per inpatient, sums that include the cost of the program's research aspect.

Erratum

A typographical error appeared in "Wood Applicators for the Confirmatory Test in the Bacteriological Analysis of Water," by O. E. McGuire, published in the September 1964 issue of *Public Health Reports*. The first sentence in Methods, page 812, is incorrect. Following is the correct sentence: "The results of three parallel sets of confirmatory tests using three transfer methods (a wire loop, pipettes, and wood applicators) were compared for 606 presumptive tubes."