HOSPITAL-BASED GERIATRIC SERVICES IN GREAT BRITAIN: IMPLICATIONS FOR THE UNITED STATES[1]

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INTRODUCTION

Growing demands of the elderly upon hospitals and long-term care facilities in the United States and other Western countries have prompted widespread efforts to develop services for meeting and containing these demands. Since its inception in the mid-twentieth century, geriatric medicine in Great Britain has stressed avoidance of unnecessary institutionalization and promotion of independent living by infirm elderly persons. Thus, in view of the current quest for answers in the U.S. and elsewhere, it is worthwhile to consult the British experience. The present article describes the results of one effort, made under the auspices of a World Health Organization travel-study fellowship, to accomplish the following broad purposes:

- To examine the evolution and current structure and operation of hospital-based geriatric services in Great Britain;
- To describe geriatric medicine's emerging roles in acute patient care and the impact of these roles on utilization of general hospitals by the elderly; and
- To identify parts of the British experience that might apply to provision of geriatric services in the U.S.—including the more appropriate use of acute hospital beds in caring for elderly patients.

THE BACKGROUND

From the time of its origins with the work of Dr. Marjory Warren and her contemporaries in the 1930s, the geriatric medicine movement in Great Britain has played the complementary roles of bringing dynamic medical and related rehabilitation services to the elderly and reducing unnecessary utilization of acute care and long-stay hospitals by the elderly.

In its formative years, geriatric medicine confined itself to public chronic care hospitals and focused upon

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rehabilitating patients who had been unnecessarily committed to a dependent, custodial existence in these institutions. As a consequence, it was found that significant numbers of such patients could be discharged, and that others referred for chronic institutionalization could remain at home following geriatric assessment. Later, with creation of the British National Health Service at mid-century, chronic care institutions were incorporated into a single hospital service alongside the general (voluntary) hospitals, an act that linked geriatric services with the mainstream of medical care.

Developments since the 1960s have ushered in the era of "modern geriatric medicine" in Great Britain. The commitment to geriatrics is demonstrated by the existence of hospital-based geriatric units in virtually all of the country's several hundred health districts, most of them with admitting beds in general hospitals. There are now over 400 posts for hospital-based consultants in geriatric medicine, and the number of junior-grade training posts allocated to geriatrics has grown steadily *(1)*.

Also, the British Geriatrics Society has promulgated a number of recommended norms for district geriatric services; and, in collaboration with the Royal College of Nursing, it has developed detailed recommendations for equipping and managing hospital geriatric units *(2)*. These norms and recommendations have been widely distributed to regional and local National Health Service administrators. In 1965 the first professorship in geriatrics was established at the University of Glasgow, and there are now 14 medical schools with professorial departments. All but two of the medical schools in the country devote required curriculum time to geriatrics *(3)*.

Development of community social work, nursing, and remedial therapy services has paralleled this growth of hospital-based geriatric care. These services play an essential complementary role, allowing geriatric units to avoid unnecessary hospital admissions and to expedite discharge of patients whose primary needs can be met at home.

Since the late 1960s, hospital advisory services working for the National Health Service and its Scottish counterpart (the Scottish Home and Health Department) have reviewed developments district by district. Their reports have identified above-average geriatric units and have also shown continuing important gaps in services, among the most critical being the continued location of some district services in outdated facilities and the related difficulty of attracting well-trained medical, nursing, and remedial therapy staff members *(4)*.

Acute Care

As demands of an aging population upon acute hospital services intensified in the 1970s, the geriatric services became increasingly involved in acute care. This trend, acknowledged and encouraged in a series of government consultative documents, is described well by the following excerpt from *Growing Older*, a White Paper submitted to Parliament in 1981 by the Secretary of State:

> "Increasingly, an active approach is being adopted to the treatment and rehabilitation of elderly patients in hospital, which reflects both the best modern practice

and the desire of most to return home as soon as possible. The success of modern methods of treatment depends greatly on whether elderly patients are admitted in the first instance to a general hospital where full facilities for diagnosis, treatment, and rehabilitation are readily available. Effective management is likely to be best achieved where a department of geriatric medicine is situated in the same building as the other acute specialties. In these circumstances, the consultant physician in geriatric medicine can admit directly any elderly patient who is more likely to respond to treatment and care by his own specially trained, multidisciplinary team. He can make advice and guidance readily available to other departments, which in turn are able to advise him on problems about which they have particular expertise. The presence of his team in the general hospital also provides a focus for the dissemination to hospital staff (and others in the community) of knowledge and understanding of the special problems associated with the care of elderly people." *(5)*

Through the efforts of progressive elements within the geriatric health care establishment, several different operational models for increased involvement in acute geriatric care have emerged. These may be characterized as follows:

- *Selective referral*: This is a policy adopted by a self-contained geriatric unit, whereby general practitioners and colleagues providing acute care are encouraged to refer selected patients for consultation when acute problems become evident, rather than waiting until the patient reaches a stage of immobility, incontinence, etc., and comes to need prolonged rehabilitation. This strategy, which requires good general hospital facilities and an enthusiastic staff, has reportedly increased bed turnover rates, eliminated waiting lists of patients, and reduced bed-blocking in acute units. Examples in several settings have been described *(6, 7)*.

- *Age-related service*: This is provided by a self-contained geriatric unit that assumes responsibility for general medical care of virtually all patients over a specified age (e.g., 70 or 75) who are referred to hospital. This model, analogous to pediatrics, assures that all patients needing the special expertise and services of geriatrics will receive this from the outset of hospital referral, along with appropriate acute medical care. Results to date show that high bed turnover rates and elimination of waiting lists are again achieved by this strategy when it is successfully applied *(8, 9)*.

- *Integrated service*: This is provided by a unit that incorporates geriatric services within the general medical service of a community hospital, thereby eliminating the need for two separate administrative structures. Such units are staffed by a team of general medicine consultants, some with special training in care of the elderly and others with special training in other medical subspecialty areas (e.g., cardiology, endocrinology, etc.), or in some instances by physicians with combined training in both geriatrics and an organ system specialty. All accept varying degrees of responsibility for elderly as well as younger medical patients referred to the hospital; those with training in the care of the elderly take responsibility for most patients requiring rehabilitation and related geriatric expertise. This approach, which is felt to make optimal use of the limited acute care resources of district general hospitals, was pioneered at Oxford and has been developed in a few other settings in England. Several of the experiences with this approach have recently been described *(10, 11)*.

These various acute care models, which are still evolving, have come to involve a growing but unknown number of geriatric units. Selection of one model over another is contingent on prevailing circumstances. For instance, England has traditionally had greater

difficulty than Scotland in recruiting candidates to fill geriatric consultant posts. In line with this, regional hospital authorities have encouraged development of integrated services staffed by physicians with a special interest in (but not full-time assignment to) geriatrics *(12)*.

PROJECT DEVELOPMENT

Plans for observational visits to selected geriatric units were developed in late 1982 and early 1983, while the author was on sabbatical leave as a post-doctoral fellow in the Department of Geriatric Medicine at the University of Edinburgh. The planning process consisted of defining the essential features of contemporary geriatric services in Great Britain, designing a questionnaire, and selecting units to visit.

The following delineates the spectrum of medical and related services provided to meet the needs of Great Britain's infirm elderly at home, in the hospital, and at institutions giving long-term care.

Home and community services	General hospital services	Services at long-term care institutions
General practitioner services	Acute care medicine	Continuing care
Nursing	Acute care surgery	Residential home care
Rehabilitation	Geriatric unit: Assessment	Sheltered housing
Social services ("home help," domiciliary occupational therapy)	Rehabilitation Respite Day hospital	Care at private facilities

While only some of these services are formally provided by the geriatric unit, it is important to appreciate the significant "managerial" role of the geriatrician and other members of the geriatrics staff in relation to all of them.

In defining these contemporary geriatric services, existence of the several distinctive organizational models previously referred to became evident. For the purpose of examining at least one example of each of these in detail, initial visits were made to the following: (1) the Department of Geriatric Medicine at the City Hospital of Edinburgh (a selective referral service); (2) the Department of Medicine for the Elderly at the Kingston General Hospital in Hull (an age-related service); and (3) the Department of Medicine (Geriatrics) in the Newcastle General Hospital at Newcastle upon Tyne (an integrated service).

Additional services were visited in order to observe examples of each organizational model geographically dispersed about the country; to see examples in both university teaching hospitals and district general hospitals; and, finally, to see geriatric services that were said to have played a significant role in expediting acute hospital care of the elderly. Given about two months to make visits of one to two days each, it was decided to select between 15 and 20 sites. The selection process was based on a review of the recent geriatric literature, discussions during the three initial visits, and suggestions by Dr. Jeffrey Graham, the Senior Medical Officer responsible for geriatric services at the Department of Health and Social Security Headquarters in London. The models used and the academic (teaching or nonteaching) status of the units visited are as shown:

Type of service	Teaching	Nonteaching
Selective referral[a]	9	3
Age-related	1	4
Integrated	2	1

[a] Several of these selective referral services were evolving toward the age-related model

Drawing upon an understanding of the basic set of services provided for the elderly, summarized in the previous table, and upon insights gained from the initial visits, a set of questions for use during visits to the above units was developed. These dealt mainly with the following subjects: (1) history and evolution of the unit; (2) the unit's current internal structure and operations; (3) relationships with other acute care hospital services; and (4) the impact of the geriatric service on hospital utilization. (A list of the sites visited and the hosts at each site appears in Annex 1 at the end of this article.)

EVOLUTION, STRUCTURE, AND OPERATION OF THE UNITS

Structural Components

Most of the 20 units visited were serving the elderly of a single geographically defined health district and perhaps a portion of the elderly in a contiguous district. This pattern applied both to teaching units in large cities (London, Glasgow, Edinburgh) and to units serving relatively discrete communities such as Great Yarmouth, Oldham, and Wrexham. However, some geriatric units (Nottingham, Cardiff, Hull, and Oxford) were serving multiple health districts.

In general, the units were staffed by two to four consultants, though five and seven, respectively, were present at two large university-based units at Cardiff and Nottingham. The ratio of consultants to district inhabitants over age 65 was between 1:10,000 and 1:15,000 in most cases. Some of the university-based units had a lower ratio because up to half of the consultants' time was devoted to teaching and research.

Most units also had at least one senior registrar and one or more registrars (roughly comparable to subspecialty fellows and senior residents, respectively) plus a number of house officers. Most of the house officers were rotating through the geriatric department as part of their general medical training or as part of the hospital component of their general practitioner vocational training. University departments tended to have more senior registrars relative to the number of inhabitants served—again because these trainees had academic as well as service commitments. The largest numbers of house officers relative to the population served were found in units with age-related or integrated admission policies (which by their nature had the highest acute case admission rates). All units had an adequate though not necessarily optimal complement of remedial therapists (physical, occupational, and speech therapists) and social workers.

The absolute number of hospital beds per unit ranged from 120 to over 500, depending mainly on the size of the population served. The number of beds per thousand persons over age 65 ranged from six to 14, with more favorable ratios prevailing in Scotland. In all instances, the beds were physically located at multiple hospital sites, including various combinations of district gen-

eral, rehabilitation, and long-stay hospitals. Every unit had one or more day hospitals (described later), these usually being attached or proximal to one of the unit's inpatient services.

A number of instances where growth was planned or underway demonstrated the dynamic development of geriatric resources in the United Kingdom. Plans were in progress—or had been completed within the past year—to open acute admission geriatric wards in the major teaching hospitals of the universities of Edinburgh, Dundee, Nottingham, and Oxford. Large new or upgraded geriatric sections of district general hospitals were soon to be opened in Paisley, West Middlesex, and Wrexham. New geriatric consultant posts had recently been established by health authorities in Edinburgh, Great Yarmouth, and Nottingham; and applications to establish new posts were pending at several other sites.

Operational Features

Matters relating to operation of the units can be considered under the broad headings of "admissions and discharges," "deployment of resources," and "relationships with other hospital services."

Admissions and discharges. Admissions policy was found to be defined mainly by the type of operational model adhered to by the unit.

The majority of "selective referral" units have actively fostered direct referrals from general practitioners. This contrasts with the traditional geriatric role of admitting mainly patients transferred from other hospital services. The rationale for direct referral is that it enhances the prospects for high-risk elderly patients to receive early and optimal rehabilitation, permitting a shorter overall hospital stay. Such strategies have been developed by geriatricians using active outreach efforts directed at general practitioners and accident-room admitting staff members. The geriatric units involved generally place a tight limit on the number of transfer patients they will accept from other hospital services. As an alternative to such transfers, they have attempted to meet the needs of patients in other services by providing consultations for those patients.

Age-related units admit virtually all patients above a designated threshold age who are referred to hospitals for general medical care. This threshold age ranged from 65 in Oldham to 76 in Hastings. Most patients tended to have relatively short lengths of stay for acute problems; but a small percentage resembled the mix of patients admitted to selective referral services, most of whom require extended hospital stays for rehabilitation in addition to the initial acute care.

Integrated units admit all adult patients referred by general practitioners, regardless of patient age—much like the department of medicine in a U.S. acute care hospital. Under these circumstances, any patient may initially be under the care of a consultant in general medicine with special interest in one of various specialty areas, including geriatrics. Following the acute phase of care, those elderly patients requiring rehabilitation or long-term care are transferred to wards designed and staffed for these purposes, under the supervision of a consultant with special interest in geriatrics. At Newcastle's integrated unit, it was found that approximately 6% of the elderly hospitalized patients required such post-acute geriatric inpatient care *(10)*.

Discharge planning is a very active, critical aspect of a dynamic geriatric service. Such planning generally be-

gins within the first week of a new patient's admission. The basis for this activity is provided by a formal multidisciplinary review of each patient one or more times a week. This activity was noted at all units, most commonly taking the form of a case conference presided over by the consultant in geriatric medicine. Each patient's progress and potential for achieving optimal independent functioning was reviewed, and the appropriate discharge timing and destination were discussed in light of current assessment of the patient's status by all involved disciplines (medicine, nursing, physiotherapy, occupational therapy, social work, etc.). Potential arrangements available to all units, either directly or through liaison with community nursing or social work services, included discharge to home with scheduled followup at the geriatric "day hospital"; provision of community nursing services and/or home help (domestic) services; scheduled readmission to provide respite for the family; or application for admission to a geriatric long-stay hospital or home for the aged run by the social services or churches in the community. To assure a smooth transition upon discharge to home, trial patient home visits with an occupational therapist and/or social worker were utilized by most units. Virtually all units routinely arranged post-discharge followup visits by community nurses, some of whom were attached full-time to the geriatric unit.

Deployment of resources. Hospital beds under the jurisdiction of geriatric consultants were used for emergency care; assessment and rehabilitation; long-stay or continuing care; and intermittent, respite, or holiday admissions.

Emergency admission beds, including those at intensive care facilities, were effectively confined to the age-related and integrated geriatric departments. They were staffed and run by registrars, senior house officers, and registered nurses in a manner indistinguishable from that of general acute care medical services.

Patients in assessment and rehabilitation beds received the major efforts of all the geriatric departments visited. In addition to accommodating a variety of explicit rehabilitation practices, the environment of the assessment and rehabilitation wards was imbued with a rehabilitative atmosphere. Patients were almost always fully dressed in their own clothing, were using toilets rather than being dependent upon bedpans or indwelling catheters, and were walking about or gathering for meals in a day-room instead of being confined to their beds.

Continuing care beds were occupied by patients who, following full assessment and attempted rehabilitation under a geriatrician's supervision, were judged to be in permanent need of supportive nursing care and unable to return to the community. Day-to-day medical care of these patients was usually provided under contract by general practitioners, while geriatric consultants or senior registrars retained overall responsibility. Most acute medical problems were handled within this long-stay setting; hence, referral of these patients for readmission to the general hospital was purportedly a rare occurrence—occurring mostly when necessary, as in the case of a hip fracture. Reality orientation activities were noted in several long-stay facilities.

All the units visited used 5 to 10% of their rehabilitation or continuing care beds for respite or holiday admissions. With stays of the admitted patients averaging two to three weeks, the

geriatric unit was able to provide essential relief for the family, hence maintaining in the community patients who might otherwise have required permanent institutional care.

The bed complements of the departments were organized in different ways to provide these several types of care. The most unusual arrangement was the undifferentiated one observed in Hull—where acute care, rehabilitation, long-stay, and respite admissions were mixed together in 20 to 30 bed wards containing the department's approximately 430 beds, all being located in one of four district hospitals *(9)*. It is the prevailing philosophy that in such an atmosphere the more disabled patients will benefit from the active assessment-rehabilitation environment. At the other end of the spectrum were departments—including ones in Cardiff, Hastings, and South Manchester—where acute care, assessment, rehabilitation, and long-stay beds were separated within the framework of a progressive care system under which patients could be transferred from one setting to another as deemed appropriate by the geriatric consultant. The Hastings experience and a review of the concept involved have been reported elsewhere *(13)*. The rehabilitation facilities are the most distinctive in such a system, consisting of relatively spacious quarters with areas for occupational and physical therapy and often a section designated specifically for stroke patients. A middle ground is occupied by units such as that at the City Hospital in Edinburgh, where assessment and rehabilitation are combined within the district general hospital wards, while long-stay beds are located elsewhere.

An essential administrative component of every geriatric department is a "bed bureau" where the current census of patients and their level of care status is regularly monitored. This information is commonly displayed on a highly visible master "bed board" that allows the geriatricians to ascertain quickly how many beds are occupied by persons awaiting discharge, on respite status, etc., and in turn to estimate the number of vacancies available for new admissions. The administrative and related operational aspects of modern geriatric units have recently been described *(14)*.

The geriatric day hospital, introduced by the geriatric unit in Oxfordshire in the 1950s as an adjunct to inpatient hospital services *(15)*, has become a nearly universal component of geriatric departments in the U.K. *(16)*. Its main goal is to reduce or prevent hospital stays by providing a variety of medical, rehabilitative, and social services for problems that might otherwise require hospitalization. Medical and nursing services found in various day hospitals included evaluation of patients with recurrent falls, titration of drug regimens for patients with unstable Parkinson's disease, and management of chronic varicose ulcers. Rehabilitation activities included reinforcement of gait exercises in physiotherapy and instruction in daily living activities (e.g., kitchen skills, dressing, etc.) in occupational therapy. Social and psychological care included the sharing of games, exercises, meals, and other forms of social activity with other patients. Continued rehabilitation after hospital discharge (designed to ensure a successful return to community living) was the prime role of the day hospital in most of the settings visited; typically, patients would attend these facilities one to three times per week for about six weeks.

Exceptions to this general pattern were noted at Oldham and Hull. The Oldham unit supplemented its busy age-related inpatient service by making relatively heavy use of its day hospital to

provide medical diagnostic and therapeutic services in lieu of hospital admission. In contrast, the age-related service at Hull tended to draw relatively heavily on its day hospital to provide long-term supportive care in the community for patients with major disability who would otherwise have required long-stay hospital beds.

Relationships with other hospital services. In meeting the overall need of hospitalized elderly patients for rehabilitation and long-term care, geriatric medical departments in Great Britain have developed various relationships with other hospital-based departments (principally departments of general medicine, orthopedic surgery, and psychiatry) to which disabled elderly patients tend to be admitted. These relationships may be classed according to their degree of formality as follows:

1) *Ad hoc consultations*, whereby a geriatric consultant sees individual patients in one of the other services only on special written request from another consultant. This is the least structured and probably least effective liaison arrangement, in that patients will often come to geriatric attention only relatively late in their course of acute hospital care, at which point the potential for early rehabilitation and discharge planning may have been lost.

2) *Routinely scheduled consultations*, whereby the geriatric consultant makes rounds in other departments regularly, one or more times a week, to see any newly admitted elderly patients who may potentially require rehabilitation or long-term care arrangements. This allows recommendations for rehabilitative care and discharge planning to be initiated early in the course of acute hospitalization, and it provides reasonable assurance that all patients in need of such care will be identified. This strategy has the limitation of not placing patients directly under the care of a geriatric unit with its pervasive, multidisciplinary concentration on rehabilitation.

3) *Joint services*, whereby geriatrics and one of the other hospital specialties agree to jointly staff wards to which patients are admitted who require their respective services. Under these circumstances, the benefits of geriatric rehabilitative care should be realized in a setting other than a pure geriatric unit.

All the geriatric departments visited had developed an active liaison with one or more other hospital specialty departments. The following table shows the types of observed liaison relationships developed with medical, orthopedic, and psychiatry departments:

	Numbers of geriatric departments with indicated type of liaison		
Department	Ad hoc consultations	Routine consultations	Joint services
Medicine	10	6	3
Orthopedics	10	6	2
Psychiatry	6	5	2

All but one of the 20 geriatric departments studied—including three joint or integrated departments—maintained some form of liaison with the department of medicine. However, establishment of routine consulting rounds was a relatively recent occurrence in several settings, following reported successes of a prototype developed at the University of Edinburgh in the late 1970s *(17)*.

Liaison with orthopedic surgery departments has occurred because of the large numbers of elderly women hospitalized with hip fractures *(18)*. These patients typically have coexisting medical and rehabilitative needs that may lead to unnecessarily prolonged hospital stays and "bed-blocking" in orthopedic departments. The idea of having a

combined orthogeriatric rehabilitation unit to expedite hospital care of these patients was conceived by an orthopedic surgeon, Mr. M. B. Devas, in Hastings, where he and the physicians responsible for geriatric beds started the first such service over 20 years ago *(19)*. This service and a few others currently exist as fully joint enterprises undertaken by two disciplines, while more commonly one finds geriatric departments providing either ad hoc or routine consultations to orthopedic departments.

Liaison with psychiatry departments was found in most but not all units visited, depending mainly on whether the relatively young specialty of geriatric psychiatry was represented in the health district *(20)*. Such liaisons are mutually beneficial, because the geriatrician commonly encounters a patient with a primary physical problem accompanied by hard-to-manage depression or psychosis, while psychogeriatricians encounter significant numbers of patients whose predominantly mental impairments are accompanied by physical problems such as incontinence or arthritis in need of medical attention. The most advanced organizational approach to meeting these mutual needs was found at the Department of Health Care of the Elderly in Nottingham, where geriatrics and psychogeriatrics are administratively combined—thereby facilitating frequent cross-consultations on patient care *(21)*. Arrangements for ad hoc and routinely scheduled consultations were noted at a number of other places visited, an excellent example of such arrangements being found at the University of Manchester *(22)*.

Service development. The important roles played by individual geriatric consultants in fashioning change and development of their units were repeatedly apparent. A variety of explicit tactics were adopted to accomplish such ends. Recurring themes noted in this study were as follows:

- The concept of multidisciplinary rehabilitation team care was cultivated. This concept calls for other disciplines to devise and implement patient care plans conjointly with the physician of the geriatric service.
- Prompt and effective consultation was provided for difficult medical and surgical department patients, thus winning respect and support for geriatrics among previously skeptical peers in other specialties.
- Formal lines of communication were developed and maintained with general practitioners, community nursing services, and social work services to facilitate the complex process of coordinating inpatient and community care of the frail elderly patient.
- Efforts were made to serve on certain committees (hospital management committees, medical advisory committees to district and regional health authorities, and national standard-setting and certifying committees such as the General Medical Council) in order to vigorously promote the needs of geriatric medicine for upgraded facilities, increased medical and remedial staffs, and designated roles in undergraduate and postgraduate medical education.

Effects of Geriatric Services on Hospital Use

Reducing Admissions

Hospital admissions of acutely ill elderly persons can be reduced by vigorous application of the principles of geriatric medicine to patients in their own homes or in long-term, continuing care institutions. In both instances, this requires close collaboration between the hospital-based consultant in geriatrics and

the patient's personal primary care physician, the general practitioner.

A common dilemma that can lead to unnecessary hospitalization arises when an otherwise independently functioning elderly person who lives at home becomes temporarily incapacitated due to acute illness. Under these circumstances, the general practitioner has the option of consulting with a geriatrician (and in some instances getting an emergency home assessment), as well as with district nursing and social services, and arranging temporary support for the patient at home in lieu of making an otherwise indicated referral to an acute care hospital.

In cases where patients in long-stay institutions became acutely ill and potentially in need of referral for acute hospital care, it was quite standard practice among the geriatric units visited for most of these patients to be treated in the institution by their general practitioners or by house officers attached to the geriatric service. The necessary 24 hour nursing care (including a capacity to administer intravenous fluids or medications) was available, as was consultation with the district geriatrician if needed. This approach was not used for patients with acute problems clearly requiring the sophisticated technical services of a general hospital (e.g., fractured femur or diabetic coma).

Expediting Discharges

The prime measurable impact of the geriatric services upon hospital use by the elderly has been to prevent unnecessary prolongation of the hospital stay. While the essential measure of this impact has been the reduced length of stay by geriatric department patients, some impact upon the clinical departments outside of geriatrics has also been reported. This latter has been explained in terms of reduction in the size of waiting lists for geriatric consultation and transfer.

Hull and Oldham

The geriatric departments at Hull and Oldham have both conducted detailed descriptive analyses of the impact their services have had upon hospital utilization by the elderly *(8, 9)*. In both instances, the implementation of age-related services (channeling virtually all hospital referrals over age 65 in Oldham and over age 75 in Hull directly to geriatric departments based in district general hospitals) was found to have the following effects:

- Avoidance of hospital admission for many who would otherwise have been admitted, by arranging for alternative medical as well as nursing, remedial, and social care in the community as needed.
- Reduction of the average length of stay of elderly persons admitted to the hospital.
- Elimination of lists of "bed-blocking" patients in general medical and surgical services who had been awaiting transfer to geriatrics for rehabilitation or continuing care disposition.

This experience contrasts with that of many other health districts, including ones proximate to Oldham and Hull, which still experience sizable waiting lists of "bed-blockers" in acute care services and longer average hospital stays by elderly patients *(23)*. The success of these two units (and others like them in the U.K.) is ascribed to advantages realized by the age-related service—which has early direct access to most elderly patients referred to hospitals, which is based predominantly in general hospitals well-staffed with junior doctors, and

which has ready access to full diagnostic laboratory services.

Wrexham

Developments similar to those reported by the pioneering age-related service departments in Oldham and Hull in the 1960s and 1970s were observed in progress at the geriatric department in the town of Wrexham in north Wales. The department, which had formerly operated a very active selective referral service, evolved into an age-related service beginning in late 1982 with the conversion of a twenty-bed general medicine ward into an acute admission geriatric ward. This resource reallocation, based on a decision by the hospital's management committee, had the full support of the department of medicine, which had become frustrated with a chronic backlog of "bed-blockers" awaiting transfer to the geriatric department. Over the first 10 months of operation, beginning in October 1982, the acute geriatric ward reduced the waiting list of "bed-blocking" elderly patients in other services from a previous monthly average of 35 to 40 down to 20 by February 1983 and to less than five by August 1983.

Edinburgh

The geriatric department at the University of Edinburgh has reported on two strategies developed to reduce hospital use. One of these provides short-term augmented home care for acutely ill elderly patients who would otherwise require hospital admission. This strategy evolved from the observation that up to 30% of the acute hospitalizations of elderly patients could be prevented if short-term intensive community nursing and home help was provided to supplement medical care provided by the patient's general practitioner *(24)*. In a pilot study, 37 such patients were managed at home with evidence of outcomes comparable to what would have resulted from hospital care and an estimated shortening of the time required for them to recover previous levels of independence in daily activities *(25)*. A randomized controlled trial of this augmented home care scheme was initiated in 1983.

The other strategy, implemented by the department in 1977, involved attaching consultants in geriatric medicine to acute medical wards at the main university teaching hospital in order to provide routine consultation for newly admitted elderly patients. This was partly in response to the department of medicine's growing problem of "bed-blocking" by elderly disabled patients. Using historical controls from 1975–1976 for comparison, an evaluative study showed a significant reduction in the average length of stay—from 25 to 16 days for acutely admitted elderly women—following introduction of the consulting scheme in 1977–1978 *(17)*. In the published report of this study, the authors offered the following explanation for the observed impact:

> We cannot define exactly the reasons for the improvement but suggest that the following factors are important: (1) obtaining a prompt and complete social report; (2) multidisciplinary assessment of the patient by the doctor, nurse, physiotherapist, occupational therapist, and, of course, the medical social workers; (3) the special interest and experience in the psychiatry of old age that the geriatric team was able to bring to the ward; (4) early planning of arrangements to facilitate return to the community; (5) familiarity of the geriatric medicine team with the local community resources and how to mobilize them; (6) the ability of the geriatric team to arrange directly for geriatric aftercare for the patients returned home or, in the case of patients who went outside the team catch-

ment area, to negotiate this with other geriatric teams in the region; and (7) possibly the most important single factor was the ability of the geriatric medicine specialist to decide when it was safe and suitable for an individual old patient to be returned home once a certain degree of independence had been achieved. This ability arises out of experience and cannot be achieved in any other way. Another similar factor is the weekly review of each elderly patient, even those who seem to be "stuck." Under the previous system, once a patient had gone on the "long-term lists" and been categorized as a "bed blocker," the incentive to go on seeking alternatives tended to slow down or disappear *(17)*.

Nottingham

The Department of Health Care of the Elderly at the University of Nottingham has also reported the impact of two different strategies to reduce hospital utilization. In the first instance it was observed that increasing the complement of senior house officers on geriatric wards expedited the care and discharge of patients admitted to the service. This in turn freed geriatric consultants to respond more rapidly to patients in the department of medicine who were on the waiting list for consultation and disposition. Between January 1981 and January 1983, the list of such waiting patients at Nottingham declined steadily from 86 to 23. The average length of stay on this waiting list prior to disposition by the geriatric consultant also declined dramatically *(26)*.

The second evaluation at Nottingham examined the impact of an eighteen-bed orthogeriatric rehabilitation ward introduced in 1978. The ward was designed so that consultants from orthopedics and geriatrics would share responsibility for the postoperative rehabilitative care of elderly women hospitalized with a fractured neck of the femur complicated by other disease or disability. Comparison of experience with such patients in 1977 (prior to introducing this ward) and experience in 1979 revealed a decline in the average total length of hospital stay from 66 to 48 days. This in turn freed up orthopedic beds and made it possible to expedite admission of patients on waiting lists for elective surgery *(27)*.

Conclusions

The modern phase of the geriatric medicine movement in Great Britain has been characterized by the emergence of several different organizational models and strategies in general hospitals *(28)*. That these developments have borne fruit is evident from the variety of settings in which geriatric services have been shown to reduce hospital admissions and/or the average length of stay by elderly patients, and also to reduce "bed-blocking" (in the form of transfer waiting lists) in other general hospital departments.

These accomplishments are largely attributable to the innovative and energetic efforts of the leadership in the field of geriatric medicine; however, while necessary and indispensable, such efforts alone are not sufficient to explain the geriatric movement's impact. Also of fundamental importance is the existence of a hospital sector within the National Health Service that does not draw sharp lines of distinction between acute and chronic care, but rather fosters the type of continuum between acute, rehabilitative, and continuing long-term care that is essential to the effective practice of geriatric medicine. Furthermore, the availability in every health district of community nursing and social support services capable of providing long-term care for patients in their homes is an immensely important adjunct to efficient functioning of the geriatric services *(29, 30)*.

COMPARISON WITH THE UNITED STATES EXPERIENCE

The U.S. Background

In seeking to assess applicability of the British experience to the role of U.S. hospitals in providing health care for the elderly, it seems appropriate to examine parallel patient problems and ways they are being addressed in the two countries. It should be emphasized, however, that the work reported here does not include research in the U.S. paralleling that performed in Britain, and hence the suggestions presented—based on a limited review of the available literature and the author's own experience—are both informal and preliminary.

By way of background, it is noteworthy that in addition to public chronic care hospitals, a new entity, the private nursing home, emerged in the United States in the first half of the twentieth century. Encouraged by public financial support, first from the Social Security Act in 1935 and later from special provisions of the Medicare and Medicaid legislation from 1965 to the present, the nursing home industry has developed as a form of institutional care for the disabled elderly distinctly separate from the acute care hospital sector *(31)*.

While in principle charged with providing rehabilitation as well as custodial care for their patients, most nursing homes, driven by financial considerations, have tended to largely restrict themselves to the latter role. Moreover, hospitals and doctors have had little inclination or inducement to work actively with nursing homes or their patients toward assuring the provision of vigorous medical and rehabilitative care *(32)*. One manifestation of this discontinuity in health care is the high rate of referrals to acute hospitals for medical problems, many of which might readily be managed within the nursing home, sparing the patient the "transfer trauma" and saving medical care costs *(33)*. In this regard, a recent survey showed that approximately 10% of all persons over 70 years old admitted to hospitals in one county were transfers from nursing homes *(34)*. It has been estimated that some 40% of such transfers could be avoided by providing basic medical services within the nursing home *(35)*.

Regarding acute care in U.S. hospitals, it has long been recognized that persons over 65 constitute a disproportionately high percentage of admissions, and that a significant minority of these patients present complex rehabilitation and discharge placement problems *(36, 37)*. Increasingly, the needs of patients with these problems have exceeded the capacity of acute care hospitals and the communities involved; and this has given rise to the growing problem of "backup" of such patients on alternate care status in the hospital *(38)*, a problem that is roughly comparable to "bed-blocking" in Great Britain. A variety of strategies have been introduced in an attempt to alleviate this situation.

Initially, during the late 1960s and early 1970s, in response to state and federal financial incentives, there was a rapid expansion of nursing homes. In addition, Medicaid sponsored services that were designed to encourage placement of disabled and dependent patients in the community rather than in nursing homes *(39)*.

Despite these initiatives focused on facilitating placement of the chronic care patient, however, the problem of "backup" in acute hospitals remained serious and showed signs of

reaching new heights in some areas in the early 1980s. As a result, acute care hospitals have tended to adopt innovative strategies of their own *(37)*.

Strategies with which the author is personally familiar have included development of geriatric consultation teams and creation of special rehabilitation units for geriatric inpatients. Such efforts have been mounted at a growing number of chronic care hospitals and at some acute care hospitals in the United States and Canada. Several such experiences have been described in the recent literature. Some of these accounts have reported decreases in hospital utilization, improvement of patients' posthospital functional status and longevity, and better placement of elderly patients *(40, 41)*. Others have questioned the benefits to be realized from special geriatric services *(42, 43)*. The Robert Wood Johnson Foundation is currently funding approximately twenty projects to develop and evaluate geriatric services in community hospitals.

Extending beyond the self-contained hospital geriatric unit to a more comprehensive continuum of acute, rehabilitative, and long-term care services are a number of initiatives that try to link the several stages of care for the elderly into one administrative system. Included among these are various examples developed within the third-party reimbursement model of health care delivery *(44)*, as well as the social health maintenance organization developed within the prepaid model for health care delivery *(45)*.

The recently implemented Diagnostic Related Group system for limiting a patient's length of reimbursable stay in the hospital provides a major incentive for acute care hospitals to develop more formal relations with, if not outright sponsorship of, home health services and/or nursing homes in order to expedite discharge of elderly patients *(46)*. One risk involved here is that such action could discourage efforts by acute care hospitals to develop and experiment with the sorts of geriatric assessment and rehabilitation units described above—instead providing an incentive to simply place patients in long-term care, thus effectively eliminating the hospital's fiscal responsibility.

U.S. Developments in the Light of British Experience

Of the many elements that have contributed to the success of hospital-based geriatric care in the U.K., the following stand out as among the most important:

- The base for geriatric care is the general hospital.
- Acute, subacute, rehabilitation, and long-term (community and institutional) care are all closely linked, both administratively and functionally, under the National Health Service.
- Physicians (consultants in geriatric medicine) with special training and interest in the elderly bear the ultimate responsibility for providing and coordinating this continuum of services.

Clearly, as evidenced by the foregoing, all of these elements can be found to varying degrees in the U.S. Recently, some acute care hospitals have developed explicit geriatric inpatient services that focus on elderly patients' rehabilitative as well as acute care needs. In several instances evaluation of these services has shown them to have a favorable impact on indices of hospital and posthospital service utilization, comparable to the effects achieved by such services in Great Britain. However, with the exception of services developed in Veterans Administration Hospitals, which

are funded under a general budget somewhat analogous to that of Britain's National Health Service, most geriatric units in U.S. general hospitals have required special funding and/or waiving of third-party regulations for hospital reimbursement. Hence, as the terms of such "demonstration" projects have ended, the host hospitals have tended to discard or cut back the services involved for lack of a financing mechanism. In addition, the current climate of increasing stringency regarding coverable services and lengths of hospital stays poses a major dilemma for those who would argue that the acute care or general hospital role in geriatric care should be broadened to include rehabilitation.

Concurrent with this national movement for tightening up hospital use, there is a tendency to restrict expansion of nursing home beds as another key element in cost-containment *(37)*. And in lieu of developing an extended role in geriatric rehabilitation for general hospitals or expanding nursing home capacity, emphasis is being placed upon expansion of home health services.

In principle this is a highly desirable trend, certainly one comparing favorably with the high priority given to maintaining people at home, if possible, in Great Britain. However, the question of how much and what kind of home health services will be provided deserves careful consideration. Among other things, past Medicare support for rehabilitative services in hospitals has been quite limited; so it is worth asking whether Medicare will underwrite and encourage provision of rehabilitative services such as physical and occupational therapy in the home or the community (e.g., through day hospitals). And, in the event that it will not, it seems reasonable to ask whether the proffered funding and incentives might tend to deny patients the potential benefits of active geriatric rehabilitation.

Also, in the event that rehabilitative services are to be readily provided as part of home care, there is need to ask how such services can be effectively orchestrated. One currently favored method is to use "case managers" who review the patient's needs, authorize and arrange the provision of services, and monitor both service quality and the continuing need for services *(47)*. This model contrasts sharply with the approach of British geriatric services, in which the rehabilitative phase of care is continuous with the acute or assessment phase—beginning in the hospital and continuing at home and/or in the day hospital under the continuous supervision of the geriatric consultant and his colleagues in other disciplines. Whether a "case manager" who has not been directly involved with the patient's care can act as a broker/coordinator of rehabilitative and related services, and can expect to achieve good results in terms of patient independence, is an important and unanswered question.

A final matter raised by this informal U.K.-U.S. comparison is the role that should be played by health professionals specializing in geriatrics. Unquestionably, the establishment of consultant posts in geriatrics, with the attendent general hospital and community resources, provided the *modus operandi* for development of dynamic geriatric services in many parts of the U.K. The U.S. counterpart activity has for many years been limited to self-styled geriatricians who have assumed responsibility for patients in nursing homes and chronic care hospitals *(48)*.

Over the past decade, however, there has been a strong call to de-

velop geriatricians in the acute care hospital sector, particularly in teaching hospitals *(49, 50)*. This call is being answered slowly, first by internists and family practitioners who have chosen to make a mid-career shift to concentrate on geriatrics, and second by the establishment of postgraduate fellowships in geriatrics *(51)*. The latter have been sponsored largely by the Veterans Administration, which would like to retain trained geriatric fellows to provide for the aging population that it serves *(52)*. Other geriatric fellows, few in number, are much sought after to develop academic (research and teaching) roles at large medical centers; in the foreseeable future they will be far too scarce to provide comprehensive geriatric services throughout the country, as is done in the U.K.

However, a group in the U.S. that is expanding and will clearly contribute much to the clinical and managerial leadership of geriatric rehabilitation and long-term care is that of the geriatric nurse practitioners. These professionals have already assumed a variety of roles in nursing homes *(53)*, extended care facilities in community hospitals, and experimental geriatric rehabilitation units. Again, however, questions must be raised, first about whether the prevailing cost-control climate for tightening hospital utilization will obviate the potentials for developing geriatric rehabilitation services supervised by geriatric nurse practitioners; and second, if such services do evolve, how effectively will these personnel be able to operate them without the support and collaboration of physicians with a commitment to geriatric medicine?

Suggestions

Despite major differences in both the ownership of health services (which are state-owned and operated in Great Britain but mostly under private ownership with public regulation in the United States) and the method of physician reimbursement (contracted salary in the U.K. versus fee-for-service or prepayment with risk-sharing in the U.S.), preliminary examination suggests that certain strategies and tactics evolved in Great Britain for providing comprehensive health care to the elderly could have importable qualities. Accordingly, the following suggestions drawn from the British experience are offered to academicians, clinicians, administrators, and health policymakers concerned with development and evaluation of innovative approaches to providing health services for the elderly in the United States.

The Delivery System

It could prove worthwhile to develop model health services that fiscally and professionally link primary medical care, acute and rehabilitative hospital care, and long-term care services with the goals of minimizing unnecessary morbidity, maximizing independent functioning, and minimizing unnecessary use of acute or long-stay beds by elderly persons. Elements of such services that call for special attention, both in terms of reimbursement policy and education of physicians and other involved health professionals, include the following:

1) In the area of primary care, simple and valid techniques for identifying and monitoring at-risk elderly persons living in the community need to be implemented, along with tactics for responding promptly to alterations in such

patients' health status that might lead to needless hospital admission. The possibility of having physicians or geriatric nurse practitioners provide prompt home assessments of such patients should be considered and evaluated.

2) Regarding acute hospital care, it would appear desirable to begin the rehabilitation phase of care for hospitalized patients with rehabilitation needs inside the same department or hospital to which the patient is first admitted, rather than first transferring the patient to a separate rehabilitation facility or home health program. This is because discontinuity of care and lack of full knowledge of the patient may significantly delay the patient's progress. This suggests a need to direct particular attention toward developing such broadened inpatient services for the elderly in general medical services and selected surgical services like orthopedics, which are most likely to admit vulnerable elderly persons.

In seeking to guide the development of such services, research on existing patient data from acute care hospitals and skilled nursing facilities would be helpful in defining the amount and type of rehabilitation services (physical therapy, occupational therapy, speech therapy, social services, etc.) that might be required by a known population of elderly persons.

3) With respect to long-term care, those requiring continuing care who have family or other informal support in their own homes need to be provided with sufficient formal support services to enable them to continue living in the community. As an adjunct to current "case management" strategies directed toward this end in the U.S., it would prove worthwhile to develop and evaluate day hospitals and planned respite admissions, two highly valued components of British geriatric services designed to support the patient and his or her family, respectively.

The British experience suggests that nursing home admissions might best be limited primarily to those patients unable to attain sufficient independence through hospital rehabilitation or community support services to live in their own homes. Medical care for intercurrent illness in such patients could be provided mainly within the nursing home, in order to avoid traumatic and costly transfer of patients to acute care hospitals whenever possible. It might thus prove worthwhile to develop incentives for nursing homes and attending physicians to implement such acute care services, and to evaluate the impact of such services upon hospitalization.

Manpower

It would appear worthwhile to develop career tracks for physicians, nurses, social workers, and members of the various remedial therapy professions so as to help them acquire special expertise and assume explicitly designated roles in working with the problems of vulnerable elderly patients. The best places for such training and roles would seem to be the nursing home and the general hospital sector, where the greatest concentration of patients in need of geriatric expertise will be encountered. The work of these professionals would presumably include providing multidisciplinary approaches to patient care as well as consultative linkages with the patients' primary care physicians and with community-based social, nursing, and other support services.

Data Monitoring

Special studies and community surveillance systems need to be de-

veloped to collect quantitative and descriptive data on the health requirements of elderly persons. These data could be used to assess the extent to which manpower and organized services appropriate for meeting these needs are being developed in the country. Some priority areas where more data of these sorts appear to be needed include:

1) Linkages between identifiable medical morbidities and the occurrence of disability and dependency. Morbidity and disability data helping to define such linkages would permit better predictions about how much rehabilitative or long-term care is apt to be needed for particular medical conditions, alone or in combination. The potential for disease prevention or early medical intervention capable of limiting such disability and dependency could also be estimated and used as a basis for action. (Data of this nature, while available to some extent for strokes and hip fractures, are lacking for the vast majority of other chronic conditions important in old age.)

2) Surveys are needed of evolving efforts, largely by community hospitals, to "vertically integrate" primary care, inpatient acute care, and rehabilitative care, as well as both community-based and institutional long-term care. Information is needed about how such systems develop from existing hospital operations so as to find new forms of financing and integrating different levels of care, and also about how they affect rates of acute and long-term institutionalization, as well as the overall cost of caring for the elderly persons served.

3) In addition, surveys are needed of geriatric training programs and trainees in order to identify the special ingredients of such training, as well as correctable gaps; to ascertain the types of career positions being assumed by graduates of this training; and to assess how well this effort is meeting the country's need for geriatric services.

ANNEX 1. A LIST OF THE SITES VISITED BY THE AUTHOR (HOSTS' NAMES IN PARENTHESES)

West Middlesex Hospital
Isleworth
Middlesex TW7 6AF, England
(Dr. J. Andrews)

Sherwood Hospital
Hucknall Road
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(Professor T. Arie)

University Hospital of South Manchester
Nell Lane
Manchester M20 8LR, England
(Professor J. C. Brocklehurst)

Newcastle General Hospital
Newcastle upon Tyne NE4 6BE, England
(Professor J. Grimley Evans)

St. Pancras Hospital
4 St. Pancras Way
London NW1 OPE, England
(Professor A. N. Exton-Smith)

Hammersmith Hospital
Ducane Road
London W12 OHS, England
(Dr. H. M. Hodkinson)

Kingston General Hospital
Beverly Road
Hull HU3 1UR, England
(Dr. P. Horrocks)

St. Helen's Hospital
Hastings
Sussex TN35 5AH, England
(Dr. R. E. Irvine)

Hayward Building
Selly Oak Hospital
Raddlebarn Road
Birmingham, England
(Professor B. Isaacs)

Stobhill General Hospital
Glasgow G21 3UW, Scotland
(Dr. R. D. Kennedy)

Royal Alexandra Infirmary
Paisley PA2 6AB, Scotland
(Dr. C. Joan McAlpine)

St. George's Hospital
Blackshaw Road
London SW17, England
(Professor P. H. Millard)

Oldham and District General Hospital
Rochdale Road
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(Dr. T. D. O'Brien)

University Hospital of Wales
Heath Park
Cardiff CF4 4XN, Wales
(Professor M. S. Pathy)

Royal Victoria Hospital
Dundee, Scotland
(Dr. R. T. Ritchie)

Maelor General Hospital
Wrexham LL13 7TD, Wales
(Dr. I. U. Shah)

Charing Cross Hospital (Fulham)
Fulham Palace Road
London W6 8RF, England
(Dr. I. G. Walton)

Northgate Hospital
Northgate Street
Great Yarmouth, England
(Dr. D. J. Wayne)

City Hospital
Greenbank Drive
Edinburgh EH10 5SB, Scotland
(Professor J. Williamson)

Radcliffe Infirmary
Oxford, England
(Dr. L. Wollner)

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Summary

The study reported here, made in mid-1983, sought to examine Great Britain's hospital-based geriatric services, describe the emerging role of British medicine in providing acute care and rehabilitation for elderly patients, and identify parts of the British experience that might apply to the United States.

In general, it is clear that Britain's commitment to geriatric medicine has grown considerably since the 1960s. Hospital-based geriatric units currently exist in nearly all of the country's several hundred health districts, and most of these units have admitting beds in general hospitals. There are also about 500 posts for geriatric consultants (senior hospital positions), and the number of junior-grade training posts allocated to geriatrics has grown steadily. Developments in remedial therapy, medical education,

nursing, and community social work have paralleled this growth in hospital-based geriatric services.

This growth has been especially marked in the area of acute care services, which have tended to take one of several forms, namely: (a) selective referral services that encourage general practitioners and others providing acute care to refer selected patients to the geriatric unit for consultation; (b) age-related services provided by geriatric units that assume general medical responsibility for virtually all hospitalized patients over a specified age (e.g., 70 or 75); or (c) integrated services provided by units that incorporate geriatric services within a district hospital's general medical service.

Overall, the essential medical and related care currently provided by general hospital services to meet the needs of Great Britain's infirm elderly includes acute care medicine; acute care surgery; geriatric assessment and rehabilitation services; "respite" (short-term admission) services designed to provide relief for the patient's family; and "day hospital" services providing various medical, rehabilitative, and social services for patients who might otherwise require general hospital or long-term care admission. Coordination between the geriatrics department and other hospital departments (principally the departments of medicine, orthopedics, and psychiatry) is maintained by a variety of ad hoc consultations, regularly scheduled consultations, and arrangements for providing joint services. In addition, geriatricians and other members of the geriatrics staff work in close liaison with other services outside the hospital—most notably general practitioner, nursing, rehabilitation, social, and long-term care services.

These developments have borne fruit, as evidenced by a decline in the admission rate or average length of hospital stay for elderly patients in a wide variety of settings. However, they have not been solely attributable to innovative and energetic leadership in the field of geriatric medicine. Rather, they have depended partly on this and partly upon a national health service that fosters an effective continuum between acute, rehabilitative, and chronic care, and provides community nursing and social support services capable of providing long-term care for patients in their homes.

Despite marked differences between the U.S. and British health systems, and between the two countries' patterns of geriatric care, informal and preliminary review suggests that the British approaches described have qualities that could be effectively transferred. Hence, from the U.S. standpoint it might prove worthwhile to develop model health services that link primary, acute, rehabilitative, and long-term care. It might also prove desirable to develop career tracks for physicians, nurses, social workers, and others so that they can gain special expertise and assume explicitly designated roles in geriatric care. In addition, there seems good reason to seek ways of gathering more data (both qualitative and descriptive) about elderly health needs, so as to be able at least to assess the extent to which appropriate organized services and manpower are being developed.

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