Appraisal and Priority Standards for Community Hospital Surveys

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The clear purpose of this paper is to foster community interest in hospitals. Their importance to all social services justifies a thorough study of the data relevant to present and future needs. Facts become the solid basis for action. Information becomes the well-spring of inspiration.

"The Public should exercise better control over its capital investment in hospitals. . . . The quality of care is, of course, in the hands of physicians and the professions concerned with hospitalization. . . . But the public is entitled to control the expenditures. . . . Any community should view with alarm the expansion of hospital facilities except in response to a recognized immediate or future need." * Published in the year 1930, the foregoing statement referred to widespread activity in hospital construction during the preceding decade, when community coordination was not taken seriously. Times have changed—hospital planning is now a primary concern of local hospital bodies, philanthropic foundations, and governmental agencies.

Planning is not accomplished "in the abstract"; it involves daily actions by administrators, physicians, and trustees. Coordination among hospitals should have its counterpart in the program of each institution. Standards are the same for one hospital as for a group of them. Personnel and facilities must be utilized to conserve human and financial resources.

Expansion of hospital plant and equipment is not an unmixed blessing. New construction costs are inevitably followed by expenditures equal to 10 or 20 times the capital investment. These are necessary to finance service during the useful life of the buildings and equipment. After a community spends $2,000,000 to construct or expand a hospital, it must raise from $700,000 to $1,000,000 for annual operating expenses, assuming a constant price level and full utilization.

A community must anticipate trends in hospital service. These are more important than mileage data, hospital days per death, bed death ratios, and beds per population. Six appraisal standards for community hospital surveys are submitted, which may serve as practical guides for programs of capital investment and current support. The article ends with four priority standards that appear justified in the light of modern trends in hospital service.

Appraisal Standards

1. Evidence of unfilled public need for new facilities—Plans for a single institution require data concerning all local hospitals and those in neighboring communities. Some potential contributors may not be interested in the expansion of a particular hospital. High occupancy at one hospital is not a convincing argument to an employer or group of workers who live and work in another part of the city, or to physicians

* Rorem, C. Rufus. The Public's Investment in Hospitals. Chicago, Ill.: University of Chicago Press, 1930, p. 216.

who use other hospitals. A waiting list at one hospital does not necessarily justify expansion at the expense of the community. The writer recently surveyed a five-hospital city where the average bed occupancy ranged from 50 per cent to 95 per cent of available bed complement. At the peak of occupancy, there were more empty beds, in all hospitals combined, than the rated capacity of the largest hospital in the city.

A noticeable imbalance of bed utilization becomes a matter of concern to anyone who is asked to finance the expansion of a specific hospital. Some people will think or say, "Why don't the doctors and patients use the other institutions?" Trustees of one hospital may argue that it needs radium therapy apparatus because it is also available elsewhere, but a potential contributor may feel differently.

A community's needs may not always coincide with the ambitions of a single hospital's trustees or attending staff, or even the philanthropic preference of a large contributor. Institutional pride has been a great stimulus in many cities and population areas, but sooner or later someone must pay the total bill for hospital care. It is not the first cost; it is the upkeep which creates most financial problems for hospitals.

Idle plant and equipment are presumptive evidence that public needs have already been served though the presumption may be wrong. Professional facilities and personnel may be overworked in some institutions, while expensive equipment and well paid technicians elsewhere may be idle for large portions of each day or week. Data for measuring community needs include such facts as the following, applicable to several years: bed capacity of each institution, classified by beds per room and special limitations on their use; admissions and patient days per hospital, classified by accommodations, diagnoses, and seasonal variation; and check lists of diagnostic and treatment facilities at each institution, with monthly and annual data as to volume of professional services furnished for both inpatient and outpatients. There is need for objectivity in measuring community need, and the judgment of an "outsider" may be required to appraise the conflicting interests of local groups.

2. Prospects for utilization of present and expanded facilities—The public needs evidence to justify the prospects, and the "prospectus." Detailed questions arise: Have the waiting lists for elective hospitalization resulted from inflexible classification of room accommodations? Will medical, technical, and institutional staff become available to handle the enlarged program? What are the probable shifts in the proportions of private, semiprivate, and ward utilization? Does the change imply enlargement of the attending medical staff? If so, will the physicians merely transfer patients from other institutions? If the new program involves education or research activities, how will they affect staff privileges and the use of beds and treatment and diagnostic facilities?

The facts that provide answers to the foregoing questions are more difficult to obtain than statistics of patients, days, visits, procedures, and diagnoses. But much can be learned and predicted by an analysis of medical staff activity over a period of years. Significant data include: number and type of staff appointments held by physicians at various hospitals; number of inpatients admitted or served by each physician, classified by length of stay, type of

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This paper was presented before a Joint Session of the American Association of Hospital Consultants and the Medical Care Section of the American Public Health Association at the Eighty-first Annual Meeting in New York, N. Y., November 11, 1953.

accommodation occupied, pay status, and place of residence. Important also is the amount of time spent by each staff physician in the care of ambulatory patients, on the education program for doctors, nurses, and technicians, as well as the extent and character of his clinical, laboratory, or library research.

Measurement of effective use involves estimates of cost of construction and service. Hospital people often describe programs in terms of "investment per bed." Figures of $20,000 per bed are mentioned without apology, although a contributor may be impressed by the fact that his six-room suburban residence has just cost him a similar amount. Why, he may ask, does it require $20,000 worth of plant and equipment to serve him when he is hospitalized? One answer is, of course, that hospitals include much more than sleeping accommodations, which may occupy less than one-fourth of the hospital's total floor space. More significant is the cost of diagnostic and treatment apparatus for bed patients, as well as those who are up and about.

There is need to replace the term "investment per bed" with some expression more descriptive of the present functions of hospital plant and equipment. The investment might more properly be related to the total volume of service which will be performed during a year or the life of the institution. A 200-bed hospital may involve $4,000,000 capital investment (or more). Each year such a hospital would serve about 6,000 inpatients. It will probably admit 250,000 inpatients during 40 years of service to the community. These data yield an average of $16 investment per inpatient admission. The hospital will also serve many ambulatory patients, conduct educational programs, contribute to medical knowledge, as well as promote public health and education.

Bed occupancy data should be supplemented by more significant measures of hospital utilization. The Hospital Council of Philadelphia for the past seven years has calculated the average number of admissions per bed per year for each hospital. Statistics cannot replace sound judgment in appraisal of medical care, but history is a good foundation for prophecy. What a hospital has already accomplished indicates the direction and tempo of its future growth.

3. Physical depreciation or obsolescence of existing plant and equipment—Judgments on this subject involve engineering, medical, and administrative opinion. Nonfire-resistant facilities may endanger the lives or health of patients, employees, staff, or visitors. Improper design and layout may interfere with effective use of personnel and supplies, but these facts do not justify an irresponsible attitude toward the abandonment of present plant and equipment.

Prudence requires careful study of the costs and values of renovating or remodeling existing facilities. A renovated facility will normally have a shorter useful life than a new building or set of buildings. But a $100,000 expenditure may extend the useful life of a wing or building for 10 years. In contrast, complete replacement might entail $1,000,000 of investment. These are amounts of a different order of magnitude. Careful consideration should be given to alternative uses for the additional $900,000.

A structure that is unsatisfactory for one purpose might serve reasonably well for another. Patient pavilions have been transformed to employee residences, classrooms, outpatient services, or offices for private medical practitioners. In Philadelphia, recently, a large general hospital, composed of buildings erected from 30 to 80 years ago, was purchased in its entirety by the Commonwealth for care of tuberculosis patients. The layout had become

unsuitable for modern medical care of acutely ill patients. But the buildings will "last" another 50 years following various fireproofing procedures without basic structural changes.

It may be argued that all medical care in hospitals should be provided in modern buildings which reflect the most recent knowledge and skill in engineering and architecture. Obsolescence is a relative term, and must be used with respect to a program of professional service. Even the expression "fire-resistant" has been defined by safety and fire prevention agencies in terms of alternative services of an institution.

4. Relation to programs of other hospitals in the area—A hospital may serve the public best by supplementing rather than duplicating the program of another institution. Some hospitals have learned about other programs "the hard way." One institution approached a national concern for a contribution, using the argument that the firm had previously contributed to expansion of bed capacity at another hospital. The officers of the business were unimpressed because they had already relieved a shortage and saw no reason to encourage overbuilding. In another instance, a large enterprise had helped to finance an entirely new hospital near its new factory "across the river." When solicited by trustees of an existing hospital, representatives of the firm took the position that pressure had already been relieved from center-city institutions.

There is a tendency for each institution in a multiple-hospital area to feel completely responsible for all service to an expanding community. A recent survey of a six-hospital city, revealed 900 available beds for a territory of 250,000 persons, with expected growth to 350,000 in 10 years. These institutions had drafted independent plans to build 600 more "beds." In addition, two new hospitals were under construction to provide 450 more beds in the "outlying" territory. When these facts were known, the trustees of one hospital shifted their plans to improvement of their present professional program without expansion of bed facilities.

Another example of the importance of knowledge of plans appeared in the projected expansion of a small special (orthopedic) hospital. Each of the community's voluntary general hospitals maintained an active orthopedic service similar in size and character to that in the special hospital. Moreover, each general hospital enjoyed the economic advantage of sharing overhead costs with other departments. As a result of the information made available, the trustees of the "special" hospital decided to consider merger or consolidation with one of the large general hospitals in the area.

Coordination is human as well as ideological. Some hospital people sincerely believe that survival is more important than economy or effective utilization. However, as a matter of history, more hospital programs have been saved through joint action and planning than by professional and financial competition.

5. Prospects for financing current expenses which may result from the new capital expenditures—Additional capital investment may "pay its way" by decreased payroll expenses or by improving quality of service, but ordinarily expanded facilities require additional income from patients, taxpayers, or voluntary contributors. Financial plans should include estimates of the effects of the new program on number of inpatients and outpatients, proportions of pay and "free" services, prospects of community and governmental support, and possibilities that additions to the attending staff will be necessary. Any well managed institution can expand its program of free service, if there need be no thought of finances.

But "free" service to the patient is someone's financial responsibility.

One community hospital contemplated an enlarged physical medicine and rehabilitation program, to be financed by annual voluntary contributions. A preliminary investigation showed that several other organizations expected to continue their "piecemeal" free services to special categories of crippled and disabled persons. Conferences resulted in a plan of coordination of rehabilitation services, expenses, and financial support. The hospital provided physical and occupational therapy, with a program of evaluation and prognosis. Other agencies offered vocational counseling, special education, sheltered employment, and placement in industry. The result was a stable financial program for complete rehabilitation services.

A voluntary hospital has an obligation to arrange full-cost reimbursement for public welfare cases, particularly if there is no established fund which will yield endowment income or no approved plan of annual community giving to avoid the need of tax support. Conversely, a local government hospital should make clear how much of the operating expenses will be met from new taxes and what portion will be collected from individual patients and contractual payments by third-party agencies.

Civic agencies, such as community chests, hospital or welfare councils, departments of health, and chambers of commerce, face a challenge and opportunity to appraise the total costs of hospitalized illness and to develop support which will maintain standards and achieve equitable distribution of service among the population.

The cost of "free" service to patients has often been improperly described as a "deficit" in hospital operations, when in fact, the cost of free service in a well managed hospital is merely the value of care provided on behalf of the general public, for which the people should expect to pay. A hospital is a professional institution, not a bank or financial agency. The public which desires hospital care should both demand a fair estimate, and accept responsibility for, the income necessary to finance an expanded program. It is unfair to permit enthusiastic trustees or physicians to expand a hospital beyond its capacity to develop adequate current support. Perhaps the time has come for the federal government to provide less money for new construction and more for costs of operating community hospitals. A change in emphasis would have a desirable effect on the quality and distribution of medical care in hospitals.

6. Recognition of modern trends in medical practice—The main purpose of a hospital is good medical care. High quality medical service has been provided in outmoded plant and equipment, and vice versa. It is more important for a community to obtain efficient professional service than to enjoy the convenience of modern architecture. Some of the trends in medical practice which affect hospital construction are: early ambulation for bed patients; expansion of ambulatory service; growth of physical medicine; housing the chronically ill; and service to the homebound.

Early ambulation has concentrated diagnosis and treatment into shorter periods. It has also affected the way patients and personnel spend their time. Many inpatients occupy bedrooms (not to mention their "beds") for relatively small portions of each day. Much of the time they are in libraries, sunporches, or the various departments for diagnosis and treatment. The bedroom portion of a hospital has tended to become a "dormitory," although few institutions have permitted patients to share a dining room at mealtime. Rooms

arranged to serve horizontal patients for long periods are not necessarily suitable for short-stay patients who are up and about most of the time.

Physicians refer many private ambulatory patients to hospitals for laboratory tests and diagnostic work-ups. These private vertical patients should be received in adequate waiting rooms on an appointment basis, and the doctors should be provided with suitable space for consultations. This trend is a convenience to private physicians. It also permits effective use of the diagnostic and treatment facilities.

Ambulatory care at hospitals is more than a convenient device for handling emergencies in off-hours, and for reducing the overhead costs of a physician's service to nonpaying patients. It often provides prompt treatment which makes it possible to avoid inpatient hospitalization. Professional attitude toward institutional care has run the full cycle. A generation ago the slogan was: Get patients into hospitals. In recent years the motto has become: Get them out of hospitals. The ultimate objective is: Keep them out of hospitals.

The proper housing of long-stay patients in general hospitals deserves more consideration. Such cases are few in number and seldom require intensive service. But they account for a high percentage of patient days. Long-stay patients may be grouped in special portions of the hospital for custodial care. Hospitals often view with concern the occupancy of beds by patients no longer in need of intensive professional service.

Some prolonged illnesses, involving a severe physical handicap or disability, can be "upgraded" by physical medicine with a reduction in their hospital stay or an increase in the self-help. In the long run, even the active rehabilitation procedures reduce the medical needs and financial cost of institutional care.

Rehabilitation personnel and facilities are properly to be located in general hospitals, in order to assure contact with consultants in all medical specialties. There is a tendency for physical medicine departments to be assigned "left-over" space, made available through adaptations of heating facilities from coal to other fuel. New professional departments should be given equal consideration in renovation and new construction.

In passing, it may be mentioned that most new activities in hospitals were started in cast-off facilities. It is still common to find radiology and pathology departments in basements or far corners, not to mention the makeshift quarters for metabolism tests and cardiography. This "old-clothes-to-Sam" practice may continue for some time. The important thing is to recognize current practices in medical care and to plan capital expenditures in accord with observable trends.

Promise for effective use of capital investment is found in home care. The medical staff is assisted by visiting nurses and subordinate personnel or family members, without the expense of maintaining a bed in a general hospital. Consultants may be called to the bedside at home, or the patient may be transported to the hospital for special examination or treatment. Home care is a special form of hospital service, patients being merely further from the center of the hospital building. It exemplifies the fact that a hospital is "people at work," under the same supervision but not under the same roof. It carries to its logical conclusion the fact that the distinctive character of a hospital is medical service, not custodial care.

A hospital's staff, trustees, and management have an obligation and privilege to maximize the utilization of personnel and equipment by all possible means, including that of breaking with traditional practices. A patient sick at

home is still in need of medical care which may exceed the knowledge, skill, and amount of time which an individual general practitioner can furnish. He can be a hospital patient medically, without the need of institutional care between professional visits.

Population data, patient days, and highway mileage are insufficient evidence to justify establishment of a new hospital, or even the expansion of facilities at an existing institution. More important considerations are: Will the professional care be of high standard? Will the facilities and personnel be utilized to a reasonable degree? Is the community prepared to finance the care which it expects to receive in the new or expanded institution? If the answer is "yes" to each of these questions, the trustees and attending staff of a hospital are justified in pressing their claims for capital expenditures upon their community.

Priority Standards

Though expansion of total bed facilities is not always the most pressing need of a community, capital replacement and expansion are inevitably required by the growth of population, the passage of time, progress in medical knowledge and skill, and new demands upon institutions to serve as centers for medical service, research, and education. The following priority standards are offered as a guide. It is assumed that "true medical need" might often exceed the active economic demand and also that available funds are "limited." The sequence indicates the order of priority in capital expenditures. The basic consideration in these priorities is effective utilization of personnel and facilities. The viewpoint is that of the community.

Capital expenditures to achieve coordination among hospitals—Medical opinion is unanimous that a small hospital cannot provide a high standard of general medical service with a reasonable expenditure of time, energy, and money. A metropolitan area hospital should have at least 200 available beds if it is to furnish the major forms of diagnostic and treatment equipment, and diagnostic facilities must be used by vertical as well as horizontal patients if the hospital is to justify the employment of qualified technical personnel. Small cities and rural areas may be served by smaller hospitals, but in such cases it becomes even more important for the professional personnel and equipment to be available for the entire population, not merely those who require bed care.

The burden is upon a small hospital to prove that it will become large enough to provide complete care with reasonable economy. Plans by hospital trustees and staffs to coordinate their programs, even through informal agreements, should be encouraged. Examples may be joint housing of nursing school students, rental agreements for use of laundries or power plants, contractual arrangements for professional access to diagnostic equipment, joint purchasing agreements for staple supplies, area-wide blood banks, development of central "premature" nurseries, interchange of personnel and respirators during polio epidemics, and joint use of rehabilitation centers for education and training.

Capital expenditures to increase utilization within hospitals—One example is the transformation of wards into semiprivate accommodations to achieve greater flexibility in the use of beds. Another is the provision of additional diagnostic and treatment facilities, particularly for ambulatory patients. Still another is the initiation of rehabilitation services for the disabled and chronically ill, ultimately reducing the community's demands for inpatient care.

Additional examples of capital investment that would coordinate the professional personnel and use of the publicly owned facilities are: physicians' office buildings sponsored or owned by hospitals and adjacent to them, although ultimately they should be self-supporting; training programs (in so far as they involve investment) for submedical, technical, and institutional personnel; experimentation with extramural services, such as home care programs for the chronically ill and housing of such public health services as may suitably be located in a hospital building.

Capital investment to prolong the useful life of plant and equipment—Many items of plant and equipment can be continued in public service by skillful renovation or remodeling. This does not imply approval of a penny-wise, patch-up policy which will reduce standards of care or will merely conceal an actual need for replacement. However, renovation or remodeling may often extend the useful life of a building for a substantial period of time. It may improve the quality of medical care without a corresponding increase in operating costs. It may release valuable space for more important professional or institutional services, in the same hospital, in another hospital, or in a related area of public need.

Capital investment to increase bed facilities—Only when a community's needs cannot be served by coordination, renovation, remodeling, or replacement of existing facilities, should construction of a new hospital or the expansion of bed capacity be undertaken. This conservative statement may disappoint civic leaders or medical practitioners who have regarded the provision of more bed facilities as desirable under all circumstances, particularly in small towns or rural communities. A hospital is more than buildings and equipment. A hospital is an aggregate of professional persons in action. Unless their services are of high quality, and are utilized fully, a new or expanded hospital may give a community a false sense of security in its search for adequate medical care.

Conclusion

Hospital capital has always been provided by the general public, without expectation of repayment or earnings on the investment, and there is no prospect of change in this situation. Private donors, particularly business firms or foundations, tend to regard hospitals as instruments of public service rather than memorials to worthy citizens. Hospital sponsors must prove that the public's investment will be effectively utilized.

The capital invested in a hospital is not available for other forms of public service, such as a school, playground, or religious edifice. It cannot be recalled for some other important use. The character and degree of the need should be established before capital investment is authorized.

A hospital building commits future generations to finance the care received at the institution. A hospital's service program and financial requirements are not predictable beyond the most general limits, but capital investment affects professional policy for three or four decades. An error in employment of personnel can be promptly adjusted, but an unnecessary building cannot lightly be dismissed.

Some residual value may lie in the possibility of overexpansion of general hospitals. Their capital campaigns are usually more successful than drives for facilities for mental illness, tuberculosis, rehabilitation, and care of the infirm aged. Entire "general" hospitals may become available for other aspects of health care.