Capital Financing for Health Facilities

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A SIGNIFICANT SHIFT IN THINKING has taken place within the last few years about the appropriate supply of hospital beds for the United States. As the costs of medical care have continued to rise at a rate well above that of the consumer price index, serious questions have been raised as to the contribution of hospital beds to this increase and whether we have too many beds. The authors of a number of recent studies have reached the conclusion that a significant surplus of short-term general hospital beds does exist and that these are contributing significantly to rising hospital costs.

One recent policy statement was the October 1976 report of the Institute of Medicine. Entitled "A Policy Statement—Controlling the Supply of Hospital Beds" (*1*), the report reaches the basic conclusion that a significant surplus of short-term general hospital beds exists in the United States. A number of recommendations are made on how to deal with this problem, including establishment of a national planning goal of reducing the current national average of approximately 4.4 non-Federal short-term general hospital beds per 1,000 population to approximately 4.0 in 5 years.

Also, in the September 1977 draft of the National Guidelines for Health Planning (which are required under section 1501 of the Public Health Service Act), some national standards regarding the need for hospital beds, and consequently, the need for capital financing, are proposed:

- The ratio of non-Federal, short-term hospital beds to population should be less than 4 beds per 1,000 persons, except under extraordinary circumstances.
- The average occupancy rate of all general short-term hospital beds in a health service area should be more than 80 percent, except under extraordinary circumstances.

In addition, in a report entitled "Reducing Excess Hospital Capacity" (*2*), recently completed for the Health Resources Administration (HRA), McClure concludes:

- Hospital capacity could be reduced at least 20 percent without harm to health.
- Such reduction, if it emphasized moratoriums and the closing or converting of entire hospitals, would result in substantial savings (a 10 percent reduction nationally could save up to $3 billion annually).

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• The major obstacle to reduction is the lack of public understanding and support, since the costs of overbuilding are hidden and spread far beyond the community, whereas the impact of reduction on local conveniences, employment, and prestige are immediately evident.

To better understand the shift in thinking that has taken place and define what our future policy should be with regard to hospital construction and its financing, it is worth reviewing some of the major trends in the supply of hospitals and beds, trends in investment, and the changing sources of funds for construction. In addition, an understanding of current Federal interventions in capital financing and a review of special problems and opportunities will also contribute to the consideration of future policy.

Supply of Community Hospitals and Beds

The major trend in the supply of community (non-Federal short-term general) hospitals and beds is that the number per 1,000 population continues to rise, despite recent indications that we have as many or more beds than we need. Between 1967 and 1975, the beds per 1,000 population rose from 4.18 to 4.58. Overall, beds have been increasing about 1.8 percent per year.

Table 1 shows a number of other trends:

Table 1. Beds in non-Federal short-stay (nonpsychiatric) hospitals

Year	Number of facilities	Number of beds	Average daily census	Occupancy rate	Beds per 1,000 population (civilian)
1975	6,216	968,379	716,829	74.0	4.58
1974	6,240	951,582	710,215	74.6	4.54
1973	6,259	933,112	674,817	72.3	4.48
1972	6,290	913,574	681,931	74.6	4.43
1971	6,403	902,341	681,459	75.5	4.42
1969	6,380	857,807	674,348	78.6	4.31
1967	6,418	815,420	611,410	75.0	4.18

SOURCE: National Center for Health Statistics master facility inventory. Health Resources Administration, Hyattsville, Md.

• There has been a slow overall decline in the number of community hospitals over the past few years, amounting to about 3 percent, from 6,418 in 1967 to 6,216 in 1975.

• This decline, however, has been offset by growth in the total number of beds in these hospitals, from 815,420 in 1967 to 968,379 in 1975. In essence, this increase in total beds means that the average size of community hospitals has been growing, as the following table shows:

Year	Average bed size
1975	156
1974	152
1972	145
1969	134
1967	127

• Although the occupancy rate in community hospitals has varied from year to year, from as high as 78.6 percent to as low as 72.3 percent, it is difficult to define much of a trend.

Since the Hill-Burton program's inception in 1946, the differences in the bed-to-population ratio among States have declined. Originally low in many rural States, this ratio is now actually higher in such States, particularly in the Midwest.

It is also worth noting the current ownership of community hospitals:

Kind of facility	Hospitals		Beds	
	Number	Percent	Number	Percent
Nonprofit	3,449	55.5	669,871	69.2
Proprietary	885	14.2	81,529	8.4
State and local government	1,882	30.3	216,979	22.4
Total	6,216	100.0	968,379	100.0

There has been a tendency for State and local government hospitals to make up an increasing percentage of the total hospitals (from 25.3 percent in 1967 to 30.3 percent in 1975) but to account for a smaller percentage of beds. This tendency reflects the extent to which such hospitals are often small and located in rural areas.

Trends in Investment and Assets

The value of new health facilities construction increased from $843 million in 1950 to $5.2 billion in

Table 2. Annual value of health facilities construction

Calendar year	Health facility construction in current dollars (in millions)	Health facility construction in constant 1967 dollars (in millions)[1]		
			Percentage of total	
		Total	Private construction	Public construction
1950	$ 843	$1,267	40.8	59.2
1955	651	846	53.9	46.1
1960	1,006	1,204	60.1	39.9
1964	1,760	1,997	73.4	26.6
1970	3,360	2,715	75.1	24.9
1972	4,180	2,966	75.9	24.1
1975	4,873	2,476	65.9	34.1
1976	5,168	2,610	67.9	32.1

[1] The 1967 dollars deflator is a composite of various indexes used by the U.S. Bureau of the Census and derived from private associations and Federal agencies.

SOURCE: U.S. Bureau of the Census: Value of new construction put in place. Construction Report C30-74S. Washington, D.C., 1975.

1976 (current dollar figures), as reflected in table 2. This increase is smaller if measured in constant 1967 dollar terms. The adjusted figures show an increase from $1.3 billion in 1950 to $2.6 billion in 1976, with the high point in 1972 at $2.97 billion. During the period 1950 to 1976, the average annual rate of increase (constant dollars) was 2.8 percent. Since 1974, the rate of increase has been rising, from a 3.5 percent increase in the period 1974–76 to a 5.4 percent increase in the period 1975–76.

There have been marked changes in the distribution of health facility construction dollars since 1950. In 1950, 40.8 percent of the dollars spent were for private construction and 59.2 percent for public. The private sector grew steadily until 1973, when its share was 75.9 percent of the new construction. Since that time, the public sector's share has increased slightly, reaching 34.1 percent in 1975.

Other major trends in investment and assets include the following:

- Total U.S. hospital plant assets in 1975 were valued at $40.7 billion, with an average annual rate of increase between 1950 and 1975 of 8.2 percent.
- Medical equipment produced and used in the United States was valued at $3.7 billion in 1976. This figure represents an average annual rate of increase of 12.2 percent from the 1958 figure of $469 million.

Sources of Funds for Construction

Capital development for health facilities has gone through three major stages in recent U.S. history:

In the early 1900s to 1946, primary support for hospital construction came either from philanthropy for private institutions or from government investment in its own facilities. In 1929, for example, approximately half of the funds for construction came from philanthropy, while most of the rest came from government funds spent on government hospitals.

In the period 1946–65, following World War II, the Federal Government initiated grants-in-aid through the Hill-Burton program for the construction, renovation, and modernization of nonprofit hospitals. These grants were followed by various programs of loans and loan guarantees that made the Federal Government a major source of funds for capital projects.

In the most recent stage, from 1965 into the 1970s, internally generated operating funds, including those received through Medicare and Medicaid, have been used to finance capital investment. As the funds available from philanthropy and direct government aid have diminished, hospitals have increasingly turned to accumulated reserves and to the capital market; the capital market in particular has experienced rapid growth in the past 5 years.

Internally generated funds can be used for capital purposes in two major ways: (*a*) by taking a prospective approach, that is, accumulating reserves to finance future investment in capital facilities, and (*b*) by taking a retrospective approach, in which operating funds are used to pay interest and retire debt incurred when purchasing capital. The second approach is rapidly becoming the method of choice.

As noted by Wolkstein at the Capital Investment for Health Facilities Conference held in November 1976: "With funds from operations as the major contributor to capital development; with debt becoming such a major factor in health facility investment; and with funds from reimbursement by third parties for health services being the major source of hospital income, the specifics of reimbursement have become vital not only to capital development but to the very survival of hospitals" (*3*).

In the latest stage of capital development, long-term debt is now equal to approximately one-fourth of the assets of short-term hospitals. If the requirements for debt repayment are not met by the various reimbursement formulas of Medicare, Medicaid, Blue Cross, and other third-party payors, hospitals can be in real financial trouble. Funds from philanthropy and grants have largely become the source of the down payments needed for borrowing funds. Although the amounts derived from philanthropy and grants are becoming relatively small, they often provide significant leverage.

As has been noted and is summarized in table 3, the major trend in the source of funds for hospital construction is increasingly debt financing, which includes the public sale of taxable and tax exempt bonds, as well as direct loans, loans with Hill-Burton guarantees, and FHA (Federal Housing Administration) insurance. For non-Federal short-term hospitals, debt financing has grown from 35 percent of the total funds for hospital construction in 1969 to more than 65 percent in 1975, an increase of 85 percent. The share of funds for hospital construction coming from government grants and appropriations showed the largest decrease, dropping from 26.1 percent to 11.2 percent. This drop reflects in part the phasing-down of the Hill-Burton program. Philanthropy continued to drop somewhat as a source of funds (from 15.1 percent to 9.9 percent), as did hospital reserves (from 23.8 percent to 13.3 percent).

Within the sources of debt financing, tax-exempt bonds issued by State and local bonding authorities

Table 3. Percentage distribution of sources of funds for non-Federal short-term hospital construction in 1969, 1973, 1974, and 1975

Sources of funds	Hospital construction			
	Begun in 1975 [1]	Begun in 1974 [2]	Begun in 1973 [3]	Completed in 1969 [3]
Government grants and appropriations	11.2	13.8	15.7	26.1
Philanthropy	9.9	10.6	10.4	15.1
Internal operations (reserves and owner's equity)	13.3	14.2	16.4	23.8
Debt	65.6	61.4	57.5	35.0

[1] SOURCE: Manley, S., and Ashby, S.: Sources of funding for construction. AHA Research Capsule No. 24. Hospitals 51: 59, 62–63, June 16, 1977.
[2] SOURCE: Manley, S.: Sources of funding for construction. AHA Research Capsule No. 19. Hospitals 49: 104, 108–109, Dec. 16, 1975.
[3] SOURCE: Marine, D. E., and Henderson, J. A.: Trends in the financing of hospital construction. Hospitals 48: 56, July 1, 1974.

were the single largest source of capital for construction projects. By 1975, tax-exempt bond issues supplied 35.8 percent of the total funds for short-term general hospitals, up 5.9 percent from 1974. According to figures compiled by the Daily Bond Buyer, there were 253 tax-exempt bond financings in 1976, totaling $2.69 billion (*4*). These financings included 96 general obligation or tax-supported issues of $600 million and 157 revenue bond issues (almost exclusively for private nonprofit institutions) that totaled $2.1 billion.

The trend to debt financing is expected to continue. "By 1981, debt financing from all sources is expected to provide over 80% of total community hospital capital outlays. For the years 1976–1981, the aggregate amount (par value) of tax-exempt hospital bond financing will exceed $15 billion and by 1981 will account for more than two-thirds of total debt financing" (*5a*).

Current Federal Interventions

The Federal Government has four major forms of intervention that affect the capital financing of health facilities: construction assistance, Medicare-Medicaid depreciation, tax incentives, and planning and regulation.

Construction assistance. A variety of government programs provide construction assistance through either grants, loans, or loan guarantees. These include Hill-Burton, FHA (Federal Housing Administration) mortgage insurance, Farmers Home Loan Administration direct loans, public works employment grants, and Economic Development and Appalachian Redevelopment Act grants. Since the inception of the Hill-Burton program in 1947, direct dollar support and loan guarantees have totaled more than $5.8 billion, making possible construction projects totaling some $19.5 billion. During this time, more than 12,000 grants and loans have been made, assisting nearly 7,000 hospitals and other facilities.

Medicare-Medicaid depreciation. A significant contribution to capital financing has been the depreciation payments under Medicare and Medicaid. In fiscal year 1976, Medicare expenditures for hospital care were $12.6 billion. According to a BHI (Bureau of Health Insurance) sample of participating hospitals in 1974, about 6.9 percent of Medicare allowable costs were represented by interest (1.5 percent) and depreciation (5.4 percent). If this proportion continued in 1975, Medicare would have paid $739 million for interest and depreciation. It has been estimated that Medicare payments for depreciation and interest are increasing by more than $87 million a year.

Tax incentives. The major tax incentive is the availability of a variety of tax-exempt bond financing mechanisms. In 1975, tax-exempt bond issues provided 35.8 percent of the total sources of funds for community hospital construction. Before 1963, private nonprofit hospitals with few exceptions had virtually no access to the tax-exempt market. Publicly owned county and municipal hospitals and nursing homes were largely financed through the issuance of tax-supported general obligation bonds or through sale and lease-back financing when the lease was secured from tax monies (*5b*). Since then, three major routes have been opened to finance hospitals through tax-exempt bonds: Internal Revenue Service ruling 63-20, State building authorities, and local hospital financing authorities.

In 1963 the Internal Revenue Service issued ruling 63-20, which was used as the basis for private hospitals to issue tax-exempt bonds with the stipulation that title in the project financed would ultimately revert to a municipality, State, or other public entity upon final repayment of the debt.

A number of States have created special authorities to make tax-exempt financing available, bypassing certain cumbersome features in "63-20" financing, and more important, permitting the title to the hospital facility to remain with, or revert to, the hospital corporation. In 1966 Connecticut established a Health and Education Facilities Authority to act

as a financing vehicle for private nonprofit educational and health institutions. Since then a number of other States (Arizona, Idaho, Illinois, Maine, Maryland, Massachusetts, Michigan, Missouri, New Hampshire, New Jersey, New York, Rhode Island, South Dakota, Vermont, and Washington) have set up such special authorities. In some States, previously enacted industrial revenue bond statutes have been broadened to provide tax-exempt financing for private hospitals (Iowa, Minnesota, and Wisconsin, for example).

Also, in some States statutes have been enacted to permit the creation of local hospital financing authorities. Alabama, Michigan, and Indiana have such authorities for tax-exempt financing of private, nonprofit hospital construction. In most cases, cities over a certain size can create authorities that have the power to issue bonds that are secured solely on the leverage of the hospital project.

Planning and regulation. The National Health Planning and Resources Development Act of 1974 (Public Law 93-641) charges health planning agencies at State and sub-State levels with major new responsibilities in planning for health care delivery. The planning law does not merely give these planning agencies the responsibility to develop plans for health services and facilities within their respective geographic areas; it also provides the tools with which these agencies can implement their plans. Two of these tools are the review of new institutional health services and facilities through State certificate-of-need programs and the review of existing institutional health services and facilities for appropriateness. Although distinct, these two review processes are mutually reinforcing. Each review process works toward the more efficient allocation of health resources.

Section 1523(a)(4)(B) of the Health Planning Act requires each State to administer a certificate-of-need program that is "satisfactory to the Secretary" of Health, Education, and Welfare. In the words of the statute, this requirement is intended to insure "that only those services, facilities, and organizations found to be needed shall be offered or developed in the State." The health planning law also details minimum criteria to be used by health planning agencies as they review the need for new institutional health services and facilities.

Other legislation (Public Law 92-603) creates a nationwide network of locally based physician groups (PSROs—professional standards review organizations) to review the necessity, quality, and appropriateness of the institutional care provided under Medicare. The legislation contains two provisions of major importance: preadmission screening and length-of-stay review. PSROs may have a significant impact on hospitals. A decrease in inpatient utilization because of changes in admissions and the length of stay is expected. This decrease should result in a decrease in the demand for bed construction, which should, in turn, reduce the pressure for new capital investment.

Needs and Opportunities in Capital Financing

Despite a body of opinion that the United States has an excess of community hospital beds, the construction of certain types of medical facilities still offers opportunities to deal with specific needs or to promote an increased emphasis on ambulatory care. These opportunities include public and municipal hospitals, health maintenance organizations, ambulatory care facilities, and conversions of hospital beds to other purposes.

Public and municipal hospitals. Public-general hospitals often have significant responsibility as the sole or ultimate source of hospital-based health care for a variety of patient groups. In some urban areas, this situation is due to the patterns of hospital use, patterns which in turn are closely related to the economic and racial makeup of the community. In smaller cities and in rural areas, public-general hospitals are often the only hospitals available or readily accessible to the entire population of the area, not just to the area's disadvantaged members. Almost half of the public-general hospitals in the United States provide the only hospital care that is available in the counties where they are located. Of the 1,476 counties with one hospital, 824 were served by public-general institutions in 1974. More than 16 million persons lived in these counties, which were located in 38 States (*6*). It is often in these public-general hospitals that problems and trends in medical care initially appear, and therefore these institutions are able to give other hospitals the benefit of their experience in how to deal with them. For example, as greater reliance is placed on ambulatory care under health insurance, the experience that public hospitals have had with primary care outpatient facilities and emergency care should prove useful to other health care institutions.

In terms of municipal hospitals, there were 86 public-general hospitals in 1974 in the 50 largest cities in the United States. These hospitals contained 44,084 beds, or an average of slightly more than 500. Only four major cities, however, supported more than two public-general hospitals in 1974:

City	Public-general hospitals	Total community hospitals
New York	18	112
Chicago	5	64
Los Angeles	3	47
St. Louis	3	29

Eight of the 50 largest cities had no public-general hospitals. Overall, the public institutions provided 10 to 20 percent of the community hospital beds in the cities in which they were located. Public-general hospitals are a critical source of primary care in many large cities. They provide outpatient care that is substantially in excess of their proportion of the total facilities and beds. In at least 12 of the largest 50 cities, public-general hospitals account for more than 40 percent of the outpatient visits in the city. In most cases, this percentage is two to three times the percentage of hospital beds in these hospitals (*6*). The Commission on Public-General Hospitals (an independent body created by the Hospital Research and Educational Trust, which is an American Hospital Association affiliate) is currently examining the role of public-general hospitals in the delivery of health care services and preparing a report on the need for these hospitals and the prospects for change.

Health maintenance organizations. Another area with special needs for capital financing is the development of HMO's (health maintenance organizations). Public Law 93-222, the Health Maintenance Organization Act of 1973, as amended by Public Law 94-460, provides financial assistance in the form of grants and loan guarantees for the development of health maintenance organizations and loans and loan guarantees for operating cost assistance for periods up to 60 months of an HMO's initial operations or for its significant expansion.

A program of loan guarantees for the construction and equipment of HMO facilities was considered by the Congress and rejected in the original act. To some extent, development grant funds may be used to purchase equipment and make minor facility alterations. Also, operating loans and guaranteed loans may be used to cover charges to facility and equipment rents or interest and depreciation, but no direct purchase of capital assets from Federal loan or guaranteed loan funds is allowable. Therefore, within the authorities of the HMO Act, as amended, there is limited financial assistance for constructing or equipping HMO facilities.

Title IX of the National Housing Act, administered by HUD (the Department of Housing and Urban Development) with assistance from the Department of Health, Education, and Welfare, provides mortgage insurance assistance to group practice facilities, although certain requirements have limited the usefulness of this program as an aid to HMO development.

Ambulatory care facilities. One area in need of additional capital financing for construction, modernization, and renovation is ambulatory care facilities, especially in low-income communities. The Bureau of Community Health Services, Health Services Administration, Public Health Service, has estimated that these development needs in low-income areas will require annual funding in the range of $50 million over the next few years.

Hospital bed conversions. The conversion of unused hospital facilities to other, more productive uses, especially the provision of other desirable health services, is often feasible. Such an approach has many attractive features. However, there are uncertainties about the costs and complications of conversion; in some cases, costs may exceed benefits. The relatively low rate of occupancy in acute care hospitals in many parts of the country makes this issue especially pertinent. While the national average occupancy is about 75 percent, the rate is under 70 percent in about 25 percent of the health services areas across the country. Occupancy rates of 80 to 90 percent would be desirable. There are a number of needs in the health care field to which underutilized inpatient facilities might be converted—ambulatory care, long-term care, drug abuse programs, alcoholism programs, and rehabilitation services. Conversion of a facility will usually be more acceptable to a community than closure. The facility can then continue to be used for an important social purpose and retain its identity. Jobs are maintained for many, if not all, of the hospital staff. Substantial costs for building new facilities may be saved. Referral among services may be facilitated. However, in some cases, the costs of conversion can be substantial. Many hospitals with excess beds are old and outmoded. Some hospitals have been so designed and constructed that adjustments are costly; investment in modernization and conversion can approach or even exceed the cost of new facilities. Further, partial conversions may lead to continuing problems in allocating costs.

In the past, Federal assistance has been provided to hospitals through the Hill-Burton program for conversion. Modernization projects, for example, in recent years have often included an expansion of ambulatory care facilities. In title XVI of Public Law 93-641 (the National Health Planning and Re-

sources Development Act of 1974), the "conversion of existing medical facilities for the provision of new health services" is listed as one of the four purposes of the revised Hill-Burton program; however, the funds available at present under this authority are not sizable enough to provide substantial incentives.

Under one approach, title XVI of Public Law 93-641 might be extended to provide a substantial stimulus to aid and encourage conversions of hospital beds. Such support would contribute to dealing with the needs and opportunities now being identified by local communities and States in their development of health systems plans and State health plans. Another approach entails additional support as part of Medicare reimbursement payments.

Modification of Capital Financing Policy

The control of capital investment must be a part of any realistic effort at cost containment in the health field. Capital investment in health resources has often been excessive and wasteful. Some aspects have been overcapitalized, for example, acute care inpatient beds and much specialized equipment. Other aspects have been undercapitalized, for example, organized ambulatory care programs and prepaid group practices. A number of approaches to this problem are, or could be made available, including the following.

Establishment of the reduction of excess hospital capacity as a national health planning goal. The setting up of the reduction of excess hospital capacity as a national health planning goal could help improve public understanding of the link between excess capacity and rising hospital costs. Such a goal should also serve as an instrument for guiding health planning at national, local, and State levels.

The National Guidelines for Health Planning provide a major mechanism for making such a statement. The guidelines, to be issued by the Secretary of Health, Education, and Welfare, are to include statements of national health planning goals and standards respecting the supply, distribution, and organization of health resources. Both the goals and standards can be useful in this cost-containment effort. The national guidelines are to be used by local and State health planning agencies in developing their plans. The local health systems plans (HSP) are to be "consistent" with the national guidelines. In turn, the HSPs are to be used in drawing up each State's health plan.

The September 1977 draft of the national guidelines includes two relevant standards: (*a*) the ratio of non-Federal, short-term hospital beds to population should be less than 4 beds per 1,000 persons, except under extraordinary circumstances, and (*b*) the average occupancy rate of all general short-term hospital beds in a health service area should be more than 80 percent, except under extraordinary circumstances. An approach based on these standards would promote the development of plans for the control and reduction of inpatient resources across the country. While reflecting a national objective, it would place on local leadership the responsibility for designing the best ways to reach these targets.

Use of State medical facilities plan and a strengthened certificate-of-need program to control capital investment. The State medical facilities plan is part of the State health plan that must be developed under Public Law 93-641. The State plan is prepared by the State health planning and development agency and adopted by the State health coordinating council. It is based on the local health systems plans, which are revised to achieve appropriate coordination and to deal more effectively with statewide health needs. The State medical facilities plan sets forth the number and type of beds and facilities needed to provide adequate inpatient care and includes a plan for the distribution of such beds and facilities in health service areas throughout the State. It is also required to indicate the number, type, and distribution of the facilities necessary to provide adequate public health services and outpatient care. The State medical facilities plan is to be in accordance with regulations, issued by the Secretary, for determining needs and priority. Criteria for these purposes are currently being developed by the Bureau of Health Planning and Resources Development, Health Resources Administration. The issuance of strict criteria for this purpose would indicate Federal concern about the need to deal forcefully with these issues.

Control over capital investments could be further strengthened if reimbursement for depreciation under Medicare and Medicaid were only to be allowed for new facilities that were in line with the State medical facilities plan. This end might be achieved by amending the regulations and practices under section 1122 of the Social Security Act. Another step would be to insure that decisions under State certificate-of-need programs are in accordance with, and aimed at, implementing the State medical facilities plan. Such assurance might be accomplished by amending the current regulations for section 1523 of Public Law 93-641, or it might require a legislative amendment. An additional supporting action would be a statutory change to include all medical equip-

ment costing more than $150,000 in the State facilities plan, as well as under certificate-of-need coverage.

A provision that all Federal financial assistance for health facilities be consistent with the State medical facilities plan. The effect of the State medical facilities plan, which is now focused on financial assistance under the Public Health Service Act, would be greatly enhanced if there were statutory changes that made all other Federal financial assistance for health facilities subject to its provisions. These changes should include at least the programs of HUD (FHA mortgage insurance for hospitals and nursing homes), the Department of Commerce (Economic Development and Appalachian Redevelopment programs), and the Department of Agriculture (Farmers Home Loan Administration loans). Consideration might also be given to including the facilities program of the Veterans Administration. In a recently completely study of the Veterans Administration health care delivery system by the National Academy of Sciences, further integration of that system with the national health care system is discussed (*7*).

Revision of legislative authorization of title XVI of the Public Health Service Act. Two major modifications of title XVI of the Public Health Service Act, dealing with health facilities construction, might be considered as the act comes up for legislative hearings. The first would make the formula grant program focus strictly on (*a*) the conversion of inpatient facilities to other uses, such as long-term care and ambulatory care, (*b*) the closing of unneeded facilities, and (*c*) the construction of outpatient facilities in low-income areas. Alternatively, these three purposes might be dealt with through project grants. Project grants for meeting accreditation standards and life safety codes could be a separate authorization.

The second modification would discontinue the program of loans and loan guarantees. Part C of title XVI of the Public Health Service Act provides for a program of loans, loan guarantees, and interest subsidies for health facilities construction projects. This program generally is counterproductive to the objective of controlling capital costs. The bulk of the evidence points to excess capacity in health facilities as the area where future investment should decline. It does not make sense for the Government to contribute to this excess through credit subsidies. As noted in the Executive Summary of the Capital Investment for Health Facilities Conference: "Guarantees are attractive to hospitals and investors because they reduce the penalty for default and assure repayment to investors. Lenders are attracted by this security to lend on favorable terms, which reduces the amount of capital needed by hospitals to start projects and enables them to invest in projects of more uncertain need. On balance, this will increase the number of unneeded facilities" (*8*).

Guaranteed loans and interest subsidies also shift the main burden of the subsidy to the future. Under the Medical Facilities Guarantee and Loan Fund, the Department of Health, Education, and Welfare is currently paying $40 million per year on interest subsidies for projects previously approved under title VI of the Public Health Service Act, the precursor of title XVI. These payments will continue, although on a declining basis, until the year 2002, without any new loans. With the Government as co-signer of the mortgage, there are incentives for hospitals to undertake expansion without cautious and careful planning as to how they will meet their commitments, that is, assure payment of principal and interest. Since the Federal Govermnent is unlikely to take over a hospital in case of default, the hospital faces few costs in defaulting. A recent evaluation of the Hill-Burton program concluded that "Since guaranteed loans provide the wrong set of incentives to hospitals, they should be abandoned" (*9*).

Enactment of capital expenditure portion of proposed Hospital Cost Containment Act of 1977. The recently introduced Hospital Cost Containment Act of 1977 (H.R. 6575) would directly affect the level of new investment in acute care hospitals. In a press release accompanying the bill, it was summarized as follows:

> First, the program would set an annual national limit on new capital expenditures by acute care hospitals. The limit would be set at a level somewhat below expenditures in recent years.
>
> The national limit would be allocated to the States by a formula based on population for at least the first year. In later years, the Secretary of HEW could adjust the formula to take into account factors other than population—such as costs of construction and need for capital expansion or modernization. States would award new certificates of need to hospitals up to their limit. HSAs would assist the States by reviewing and commenting on applications of certificates.
>
> Medicare and Medicaid would deny reimbursement to hospitals for unapproved projects. The Federal Government would operate the program in States which do not agree to participate.
>
> Second, in any health service area in which the number of hospital beds exceeds 4 per 1,000 population, or in which the average hospital occupancy rate is less than 80 percent, no certificates of need would be allowed if they would yield a net increase in beds in the area.

Enactment of a proposal along these lines would definitely slow the rate of growth of bed capacity and the duplication of expensive technology.

Other approaches have been suggested in which the power of Medicare-Medicaid could be used to reduce the amount of funds spent on capital amortization and promote rational resource allocation. One discussion of this approach, included in a recent paper by Gaus and Cooper, would "place an overall national limit on the amount of additional Medicare reimbursement each year that would go to capital amortization" (*10*). Interest and depreciation payments would continue for all approved capital projects. For future capital decisions, however, each State would "receive a specific allocation of Medicare funds for capital amortization and once those newly approved projects were put in operation, they would receive capital amortization payments directly from the planning authorities. The system would permit the Federal governmet to directly influence the overall level of capital growth in the industry by increasing or decreasing the total amount allocated" (*10*).

The possibility of using changes in the reimbursement system, including various ways of pooling depreciation payments, to affect the flow of capital for new investment is an area that needs more study, particularly so that the results may contribute to development of a national health insurance program.

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SYNOPSIS

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As the costs of medical care in the United States have continued to rise at a rate twice that of the consumer price index, serious questions have been raised about the contribution of hospital beds to this rise and as to whether there are too many beds. It is clear that in recent years the number of short-term general hospital beds continues to increase at a rate of about 1.8 percent per year. Between 1967 and 1975, the beds per 1,000 population rose from 4.18 to 4.58.

A review of major trends in the supply of hospitals and beds, in investment, and in the changing sources of funds for construction can contribute to a better understanding of the increase in medical care costs. It is also worth reviewing Federal interventions in capital financing and special opportunities for future capital investment.

Capital investment in health resources has often been excessive and wasteful. Some aspects have been overcapitalized, for example, acute care inpatient beds and much specialized equipment, while other aspects, such as organized ambulatory care programs and prepaid group practices, have been undercapitalized. Potential approaches to cost containment include the establishment of a reduction in excess hospital capacity as a national health planning goal; use of the State medical facilities plan and of a strengthened certificate-of-need program to control capital investment; decreased Federal financial support for hospital construction and increased support for ambulatory care facilities; and enactment of a dollar limit on capital expenditures for health facilities, as well as the possible pooling of depreciation payments.