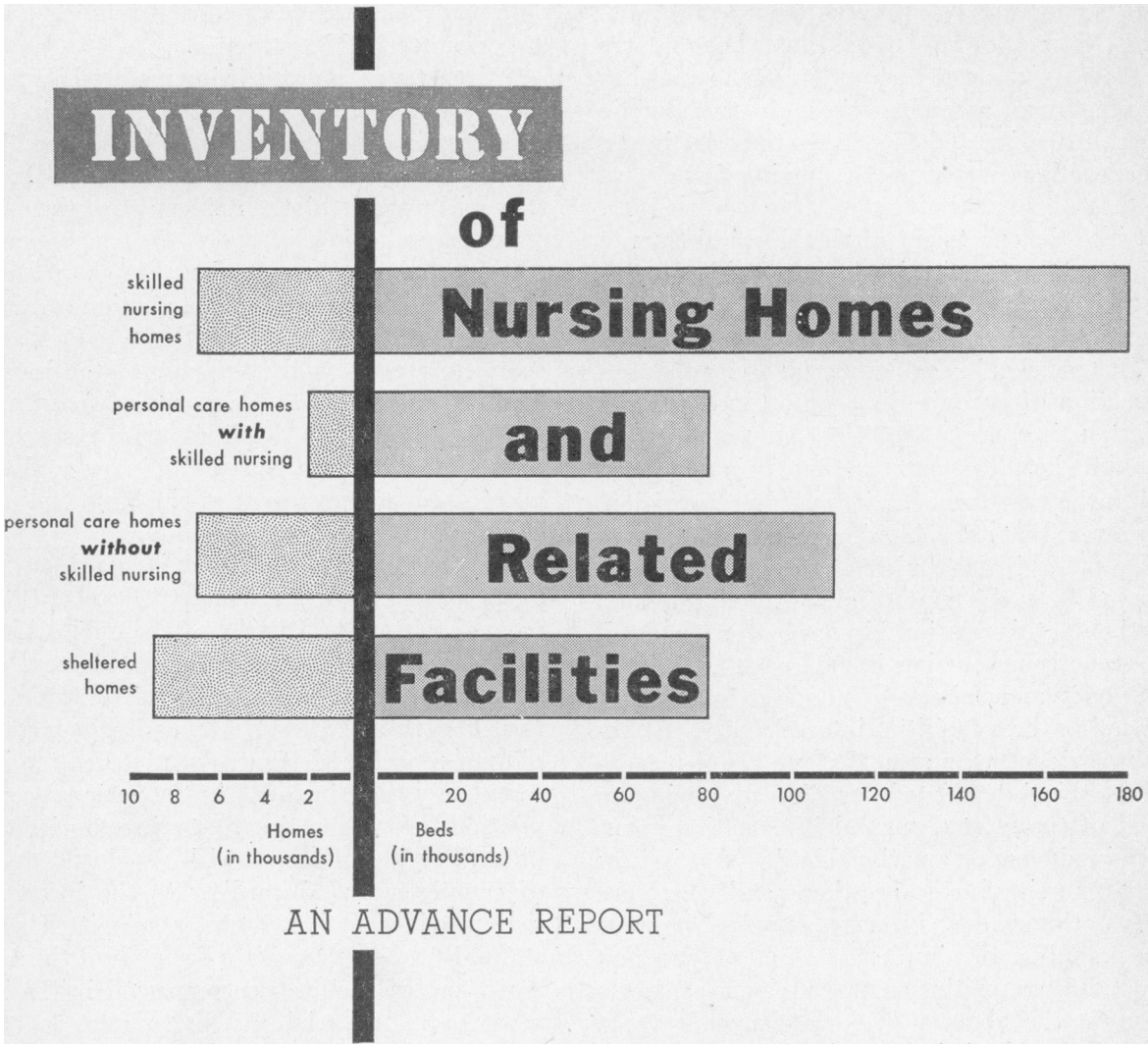

By JERRY SOLON, M.A., and ANNA MAE BANEY, B.A.

DURING the past two decades, the nursing home as an institution has developed as a significant part of this Nation's medical care facilities. For the first time, a national inventory has been taken to determine how many such homes there are and how many people they can accommodate. This is the story of how the inventory came about and what it has uncovered.

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Interest in nursing homes has increased remarkably in the last few years. It has not required any research to observe that there has been a heightened public awareness of nursing homes, along with a continued increase in their number; that there has been an upsurge of concerns with standards for these homes and

with their licensing by public authorities; that nursing home operators as a group have moved toward organized professional association. The Congress of the United States has recently taken cognizance of the nursing home and has made funds available through the Public Health Service and the States to assist in the construction of nonprofit nursing homes, as well as other types of medical care facilities (*1*).

Since the enactment of the Hospital Survey and Construction Act in 1946, the Public Health Service has had the responsibility of assisting communities, through the designated official State agencies, in developing plans for the construction of chronic disease hospitals, and in constructing such facilities, as part of the overall hospital construction program (*2*). With the years came an increasing recognition, however, that the planning of chronic disease hospital facilities could not realistically be divorced from the related role of nursing homes. Although this relationship has been recognized, apparently no one has known what criteria of adequacy and balance of numbers to apply in planning these facilities interrelatedly. It became evident very soon that we could not explore this interrelatedness directly, owing to lack of the most elemental information about nursing homes on a national basis—that is, how many nursing homes are there, and where are they? Nor could an informed approach be made in planning the implementation of the new amendments relating to nursing home construction in the absence of such elemental facts. This lack of basic information has also been an obstacle to many others who have a related concern in the area of nursing homes.

With the aim of supplying basic national data on the number and types of existing nursing homes, the Division of Hospital Facilities of the Public Health Service set out to take a national inventory. This was accomplished through the State agencies administering the Hospital Survey and Construction Program. Each State agency was asked to furnish information which was already available to them or to other agencies and organizations or which was readily obtainable through such sources. To the extent that detailed field surveys were not requested for this particular purpose, the resulting data lack some degree of accuracy and completeness. We regard the results, however, as at least getting us into the area of reliable data, where heretofore we have had nothing or, at best, unverifiable estimates.

This advance report is being made while further processing of detailed data reported in the inventory is still under way. When the results of the complete processing become available, they will permit (*a*) the refinement of the estimates presented in this report, (*b*) a more penetrating analysis, on a local rather than State basis, of the nature of the distribution of these facilities, and (*c*) the publication of a final and complete report on the findings of the inventory. In view of the widespread demand for such data and their timeliness with respect to immediate problems, this preliminary analysis is designed to report some of the basic findings as early as possible.

The information presented is based on reports received during April to October 1954 from 47 States, the District of Columbia, Alaska, Hawaii, and Puerto Rico. For ease of comparison, we will refer to all of these 51 jurisdictions as "States." The Virgin Islands did not report, and Kentucky reported too incompletely to be included in the national compilation. The reporting States inventoried the different types of homes with varying degrees of completeness. According to the information provided, only 32 States submitted substantially complete reports for each of the several types of facilities encompassed in the inventory. The variability in completeness of reporting was taken into consideration in projecting national estimates.

Number and Types of Facilities

Taking an overall view of the variety of facilities covered by the inventory, we find in the United States approximately 25,000 "homes." These include essentially all types of nonhospital facilities providing nursing or supportive services to chronically ill, convalescing, aged, disabled, or infirm persons. More specifically, they represent nursing or convalescent homes, as well as domiciliary facilities which are predominantly for aged persons and provide at least a minimum of supportive services. They include nursing homes, homes for the aged, boarding care homes for aged persons,

Definitions and Classification

Used in the National Inventory of Nursing Homes

Level of Care	Type of Home
SKILLED NURSING CARE *includes* Those procedures employed in caring for the sick which require some technical nursing skill beyond that which the ordinary untrained person can adequately administer. These may include full bed baths, enemas, irrigations, catheterizations, application of dressings or bandages, administration of medications by whatever method the physician orders (oral, rectal, hypodermic, intramuscular), and carrying out other treatments prescribed by the physician which involve a like level of complexity and skill in administration. They may be provided by either professional or practical nursing personnel, so long as they extend beyond "personal care" as described below.	**SKILLED NURSING HOME** Provides "skilled nursing care" as its primary and predominant function. 
PERSONAL CARE *includes* Such personal services as help in walking and getting in and out of bed, assistance with general bathing, help with dressing or feeding, preparation of special diet, supervision over medications which can be self-administered, and other types of personal assistance of this order.	**PERSONAL CARE HOME,** ***with skilled nursing*** Provides some "skilled nursing care," but only as an adjunct to its primarily domiciliary or "personal care" function. **PERSONAL CARE HOME,** ***without skilled nursing*** Provides "personal care," with no "skilled nursing care" 
SHELTER *includes* Room and board and minimum services of a domiciliary nature such as laundry, personal courtesies as occasional help with correspondence or shopping, and occasional helping hand short of the routine "personal care" described above.	**SHELTERED HOME** Provides "shelter" with its associated minimum services to aged residents who essentially manage their own care and affairs.

county homes, children's convalescent homes, special nursing homes for alcoholics, drug addicts, or mentally disturbed patients, and the like. Excluded are maternity homes and domiciliary facilities for children. And, unless they distinctly meet the defined criteria for a nursing home giving primarily "skilled nursing care," such facilities as institutions for the blind and the deaf and institutions for the mentally deficient are also excluded.

The 25,000 homes covered in the inventory can accommodate about 450,000 people. This means that there is a combined ratio of nearly 3 beds per 1,000 population for the variety of facilities included here.

These various facilities, as might be anticipated from the description of the inventory's coverage, range from the professional type of nursing home furnishing highly skilled and intensive nursing care to the boarding home for aged persons which provides only the simplest supportive services.

How to differentiate the types of homes within this broad range is a difficult problem, but one which the present inventory has sought to solve. Inevitably, this involves definitions containing some arbitrary elements, since the facilities with which we are dealing do not fall neatly into specific categories. Rather, they shade imperceptibly from one level of care into another. With full recognition of the impact, particularly on the borderline facilities, of definitions which slice into this gradient, we have established a classification which, however imperfect, has considerable basis in practice.

The classification of facilities was accomplished by determining from information furnished on the inventory reports:

1. Whether the highest level of service provided by the particular home is "skilled nursing care," or "personal care," or "shelter"; and,
2. Where "skilled nursing care" is provided, whether that type of care is the primary and predominant function of the facility, or whether it is an adjunct to a primarily domiciliary or personal care function.

The definitions employed for the three levels of care are given in the inset, together with a description of the four categories of homes which hinge on these definitions. We will distinguish the four types of facilities throughout the discussion of the inventory.

First, we will start with a brief rundown of the number of facilities of each type. These are tabulated in table 1. We will then follow with an analysis of the distribution of skilled nursing homes by State, and then examine some of the factors with which that distribution seems to be associated. And, finally, we will look at the interrelationship among the levels of supply of the several types of facilities.

Skilled nursing homes. There are about 7,000 skilled nursing homes in the country. They provide 180,000 beds, or an average of 1.1 beds per 1,000 population. In the total framework of the facilities embraced in the inventory, the skilled nursing homes comprise 40 percent of the beds. The size of the average skilled nursing home is about 25 beds.

Personal care homes with skilled nursing. These homes are relatively large, averaging 40 beds. Although a majority are proprietary establishments, the large average size of these homes undoubtedly flows from the nonproprietary complement—public homes and nonprofit homes for the aged. The public and nonprofit

Table 1. National estimates of the number of nursing homes and related facilities, 1954

Type of facility	Number		Percent distribution		Approximate average number of beds per home	Number of beds per 1,000 population
	Homes	Beds	Homes	Beds		
Total United States [1]	25,000	450,000	100	100	20	2.8
Skilled nursing homes	7,000	180,000	28	40	25	1.1
Personal care homes with skilled nursing	2,000	80,000	8	18	40	.5
Personal care homes without skilled nursing	7,000	110,000	28	24	15	.7
Sheltered homes	9,000	80,000	36	18	10	.5

[1] Includes Territories.

homes in this category present a well-known traditional pattern, that of a home domiciliary in general character but providing skilled nursing care either in a separate infirmary or at regular bedside for a minority of the residents who are temporarily or permanently ill or disabled.

Personal care homes with skilled nursing number about 2,000, and have a total of about 80,000 beds. We surmise that perhaps as many as one-fourth of these beds are for patients receiving skilled nursing care. If this portion (20,000) of the beds in the personal care homes with skilled nursing is added to the 180,000 beds in skilled nursing homes, we have, all told, 200,000 beds for skilled nursing care (1.2 beds per 1,000 population).

Personal care homes without skilled nursing. Paralleling the skilled nursing homes in number but not in size, personal care homes without skilled nursing are represented by 7,000 establishments with 110,000 beds. They are typically quite small in capacity, averaging about 15 beds.

If we think of the total of personal care beds available, we might add to the 110,000 beds in these homes the estimated 60,000 beds available for personal care alone in the preceding category—personal care homes which also provide some skilled nursing care. This yields a crude total of 170,000 beds for personal care (1.0 beds per 1,000 population).

Sheltered homes. These homes—whose prototype would be the proprietary boarding home for older persons, which offers somewhat more than mere room and board but less than continuing personal services as found in the personal care homes—are typically the smallest of the four types of facilities studied. The average home approaches 10 beds.

Among the several types of facilities inventoried in the State reports, sheltered homes are the most incompletely reported—because they resemble the commercial boarding house which provides no other supportive services. Acceptance of the reported information on sheltered homes, to the extent that the reports are presumed to cover this type of home, and projecting this information to a national total, produces a count of 9,000 establishments with 80,000 beds. At best, this can only be regarded as a minimum estimate.

Variations in Availability of Nursing Homes

The skilled nursing homes are the core of our interest in this study. We are interested in the other types of facilities because to discover the relationship of their availability and role to the availability and role of skilled nursing homes would enlighten us on the need for nursing home facilities. In a broader perspective, too, our concern is with the provision of facilities for care of the chronically ill. All of these types share, each in its own way, in meeting the needs of chronically ill people. In what follows, this balancing of interests will be reflected in our giving primary emphasis and attention to the skilled nursing homes, and later, involving the other types as complementary data.

The range among the States in the availability of beds in skilled nursing homes is very wide. Alaska has none of this type of facility, and quite a few States have next to none. At the opposite extreme is Washington with 3.6 beds per 1,000 population (*3*). The Nation's average, as stated earlier, is 1.1 beds per 1,000 population.

Individual State rates are given in table 2. Summarizing these rates into categories of availability, we have the following grouping of the 51 States for which data are available:

Number of skilled nursing home beds per 1,000 population	*Number of States*	*Percent distribution of population*
Less than 0.1	5	5.9
0.1–0.4	12	15.5
0.5–0.9	15	25.8
1.0–1.4	8	27.4
1.5–2.4	8	22.9
2.5 and over	3	2.5
Total	51	100.0

The differing pattern of distribution as between number of States and their populations points to a tendency for the more populous States to have a larger supply of beds in skilled nursing homes relative to population (see also State map). In the discussion that follows we

Table 2. Number of facilities reported in the inventory of

State	Civilian population (in thousands)	All facilities [1]			Skilled nursing homes		
		Number		Bed ratio per 1,000 population	Number		Bed ratio per 1,000 population
		Homes	Beds		Homes	Beds	
Total, 51 States reported [3]	159, 032	—	—	—	6, 539	171, 816	1. 1
Total, 32 States [1]	82, 147	13, 554	234, 152	2. 9	3, 767	92, 663	1. 1
Alabama	3, 100	—	—	—	67	1, 446	0. 5
Arizona	974	71	1, 172	1. 2	7	132	. 1
Arkansas	1, 891	79	1, 500	. 8	61	1, 281	. 7
California	12, 213	2, 856	32, 072	2. 6	573	12, 806	1. 0
Colorado	1, 408	182	3, 788	2. 7	52	1, 775	1. 3
Connecticut	2, 210	714	12, 072	5. 5	193	4, 868	2. 2
Delaware	362	—	—	—	1	44	. 1
District of Columbia	820	79	2, 461	3. 0	7	311	. 4
Florida	3, 436	309	3, 782	1. 1	43	475	. 1
Georgia	3, 561	—	—	—	56	1, 822	. 5
Idaho	611	82	1, 130	1. 8	1	36	. 1
Illinois	9, 106	1, 646	34, 094	3. 7	527	16, 753	1. 8
Indiana	4, 203	495	13, 186	3. 1	175	3, 035	. 7
Iowa	2, 636	1, 704	16, 398	6. 2	278	6, 303	2. 4
Kansas	1, 972	459	6, 477	3. 3	5	118	. 1
Louisiana	2, 901	91	3, 012	1. 0	53	1, 631	. 6
Maine	916	459	4, 541	5. 0	189	2, 491	2. 7
Maryland	2, 522	—	—	—	112	3, 604	1. 4
Massachusetts	4, 906	1, 094	24, 422	5. 0	484	10, 854	2. 2
Michigan	7, 010	586	16, 398	2. 3	458	14, 256	2. 0
Minnesota	3, 098	329	10, 153	3. 3	178	4, 242	1. 4
Mississippi	2, 180	—	—	—	2	24	. 0
Missouri	4, 115	—	—	—	95	3, 832	. 9
Montana	624	83	1, 554	2. 5	8	289	. 5
Nebraska	1, 358	290	5, 714	4. 2	3	440	. 3
Nevada	209	—	—	—	10	239	1. 1
New Hampshire	528	239	4, 712	8. 9	75	1, 681	3. 2
New Jersey	5, 174	—	—	—	147	5, 220	1. 0
New Mexico	752	86	819	1. 1	36	547	. 7
New York	15, 368	—	—	—	767	20, 717	1. 3
North Carolina	4, 162	281	4, 674	1. 1	4	59	. 0
North Dakota	635	75	2, 210	3. 5	7	143	. 2
Ohio	8, 535	—	—	—	471	12, 838	1. 5
Oklahoma	2, 232	282	3, 503	1. 6	109	1, 927	. 9
Oregon [6]	1, 634	—	—	—	171	3, 914	2. 4
Pennsylvania	10, 755	—	—	—	146	7, 448	. 7
Rhode Island	790	169	2, 800	3. 5	40	642	. 8
South Carolina	2, 171	—	—	—	29	618	. 3
South Dakota	659	103	1, 758	2. 7	2	18	. 0
Tennessee	3, 344	165	3, 045	. 9	29	700	. 2
Texas	8, 240	—	—	—	120	2, 683	. 3
Utah	753	—	—	—	3	73	. 1
Vermont	383	—	—	—	82	841	2. 2
Virginia	3, 418	—	—	—	144	3, 129	. 9
Washington	2, 459	—	—	—	298	8, 964	3. 6
West Virginia	1, 946	—	—	—	51	1, 697	. 9
Wisconsin	3, 574	458	13, 888	3. 9	152	4, 267	1. 2
Wyoming	302	51	615	2. 0	13	151	. 5
Alaska	171	0	0	0	0	0	0
Hawaii	484	27	1, 570	3. 2	3	366	. 8
Puerto Rico	2, 221	10	632	. 3	2	66	. 0

[1] Shown only for 32 States which reported substantially completely for all 4 types of facilities. State total exceeds sum of 4 types in a few cases, where some facilities were not identified as to type. [2] Probably underreported. [3] Virgin Islands did not report. Kentucky's total of 149 homes with 2,604 beds could not be classified by type, for lack of information on level of service. [4] "Sheltered homes" includes some unknown number of facilities which

nursing homes and related facilities, by State, 1954

Personal care homes with skilled nursing			Personal care homes without skilled nursing			Sheltered homes [2]			State
Number		Bed ratio per 1,000 population	Number		Bed ratio per 1,000 population	Number		Bed ratio per 1,000 population	
Homes	Beds		Homes	Beds		Homes	Beds		
1, 482	68, 912	0. 6	4, 977	86, 687	0. 7	5, 122	45, 446	0. 5	Total, 51 States reported.[3]
994	37, 589	. 5	3, 812	56, 593	. 7	4, 900	43, 655	. 5	Total, 32 States.[1]
6	52	0. 0	—	—	—	—	—	—	Alabama.
13	426	. 4	51	614	0. 6	0	0	0	Arizona.
1	12	. 0	0	0	0	17	207	. 1	Arkansas.
30	2, 499	. 2	(4)	(4)	(4)	[4] 2, 253	[4] 16, 767	[4] 1. 4	California.
52	869	. 6	59	613	. 4	19	531	. 4	Colorado.
13	1, 617	. 7	283	3, 087	1. 4	[5] 225	[5] 2, 500	[5] 1. 1	Connecticut.
—	—	—	41	391	1. 1	—	—	—	Delaware.
13	1, 453	1. 8	28	391	. 5	31	306	. 4	District of Columbia.
73	1, 194	. 3	190	1, 938	. 6	3	175	. 1	Florida.
4	369	. 1	19	442	. 1	—	—	—	Georgia.
36	765	1. 3	45	329	. 5	0	0	0	Idaho.
43	3, 215	. 4	38	978	. 1	[5] 1, 000	[5] 10, 000	[5] 1. 1	Illinois.
152	2, 723	. 6	168	7, 428	1. 8	0	0	0	Indiana.
24	454	. 2	771	3, 471	1. 3	631	6, 170	2. 3	Iowa.
9	479	. 2	292	4, 728	2. 4	124	966	. 5	Kansas.
10	570	. 2	22	748	. 3	6	63	. 0	Louisiana.
3	17	. 0	40	844	. 9	227	1, 189	1. 3	Maine.
22	1, 514	. 6	36	613	. 2	—	—	—	Maryland.
20	2, 034	. 4	588	11, 226	2. 3	0	0	0	Massachusetts.
0	0	0	17	508	. 1	104	1, 634	. 2	Michigan.
104	5, 216	1. 7	47	695	. 2	0	0	0	Minnesota.
—	—	—	39	719	. 3	43	—	—	Mississippi.
238	6, 386	1. 6	82	1, 279	. 3	—	—	—	Missouri.
11	395	. 6	59	814	1. 3	5	56	. 1	Montana.
4	382	. 3	282	4, 883	3. 6	1	9	. 0	Nebraska.
6	74	. 4	—	—	—	—	—	—	Nevada.
23	1, 112	2. 1	65	1, 159	2. 2	[5] 75	[5] 750	[5] 1. 4	New Hampshire.
6	764	. 1	62	3, 336	. 6	—	—	—	New Jersey.
0	0	0	24	90	. 1	26	182	. 2	New Mexico.
169	21, 194	1. 4	250	4, 903	. 3	—	—	—	New York.
30	1, 417	. 3	243	3, 198	. 8	0	0	0	North Carolina.
4	404	. 6	64	1, 663	2. 6	0	0	0	North Dakota.
—	—	—	—	—	—	—	—	—	Ohio.
98	1, 107	. 5	75	469	. 2	0	0	0	Oklahoma.
—	—	—	73	1, 262	. 8	4	84	. 1	Oregon.[6]
—	—	—	364	14, 136	1. 3	175	1, 707	. 2	Pennsylvania.
54	591	. 7	75	1, 567	2. 0	0	0	0	Rhode Island.
—	—	—	—	—	—	—	—	—	South Carolina.
11	298	. 5	79	1, 324	2. 0	11	118	. 2	South Dakota.
0	0	0	85	1, 571	. 5	51	774	. 2	Tennessee.
37	970	. 1	92	1, 438	. 2	—	—	—	Texas.
—	—	—	68	1, 224	1. 6	—	—	—	Utah.
0	0	0	39	351	. 9	—	—	—	Vermont.
—	—	—	—	—	—	—	—	—	Virginia.
—	—	—	—	—	—	—	—	—	Washington.
—	—	—	—	—	—	—	—	—	West Virginia.
123	6, 672	1. 9	107	2, 039	. 6	76	910	. 3	Wisconsin.
20	262	. 9	11	150	. 5	7	52	. 2	Wyoming.
0	0	0	0	0	0	0	0	0	Alaska.
12	840	1. 7	4	68	. 1	8	296	. 6	Hawaii.
8	566	. 3	0	0	0	0	0	0	Puerto Rico.

would more properly be classified as "Personal care homes without skilled nursing" if precise information on level of service were available. [5] Estimated. [6] "Personal care homes without skilled nursing" includes some unknown number of facilities which would more properly be classified to other types if the level of service were known.

NOTE: A dash (—) represents "not known."

will see how this reflects some underlying economic and demographic factors.

State Characteristics as Factors

Certain characteristics of States may be suspected of governing, or of having some relationship to, the supply of beds in skilled nursing homes. Some of these factors are examined below. Since comparable data on most of the factors to be considered are not readily available for the Territories, the following analysis will be limited to the 48 continental States (Kentucky excluded) which have provided information on skilled nursing homes.

Population 65 Years and Over

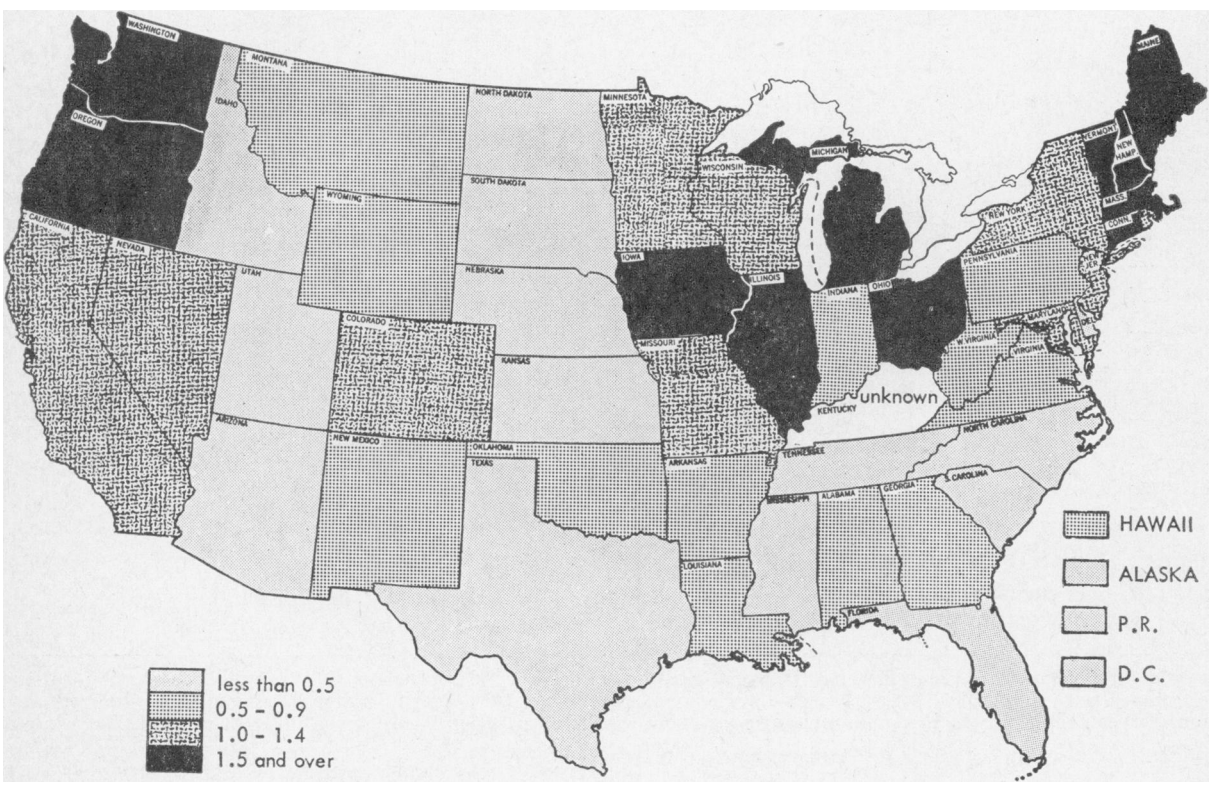
Patients in nursing homes are predominantly older people. We might therefore expect that where there are more older people there might be a correspondingly greater need for nursing home beds. Does the existing distribution of beds in skilled nursing homes bear this out?

This table shows the number of States with given proportions of persons aged 65 years and over in the population (*4*), and, for each group of States, the average number of beds per 1,000 population.

Percent population 65 and over	*Number of States*	*Skilled nursing home beds*
Less than 6.0	3	0. 3
6.0–6.9	7	. 5
7.0–7.9	8	. 9
8.0–8.9	7	. 8
9.0–9.9	15	1. 4
10.0 and over	8	1. 6
Total	48	1. 1

There is, very clearly, a progressive increase in availability of beds in skilled nursing homes as the aged portion of the population increases. This is also reflected in comparing the concentration of population and beds in the group of 24 States whose proportion of population aged 65 and over exceeds the national average of 8.5 percent. Within the reporting group of States, these 24 States have 57 percent of the total population but account for 72 percent of the beds in skilled nursing homes.

Beds in skilled nursing homes, per 1,000 State population, 1954.



Per Capita Income

The wealthier States, in terms of per capita income, have relatively more skilled nursing home beds than do the less wealthy States. As shown below, in grouping the States according to 1953 per capita income (*5*) there is an average of only 0.3 beds per 1,000 population in States whose per capita income is less than $1,250. In contrast, States with a per capita income of $1,750 or more have an average of 1.4 beds per 1,000 population.

Per capita income of State	*Number of States*	*Skilled nursing home beds*
Less than $1,000	2	0.3
$1,000–$1,249	6	.3
$1,250–$1,499	12	.6
$1,500–$1,749	13	1.2
$1,750–$1,999	5	1.4
$2,000 and over	10	1.4
Total	48	1.1

Eighteen States exceed the 1953 national per capita income of $1,709. These States, with 59 percent of the population of the reporting States, have 76 percent of all beds in skilled nursing homes.

Rurality

The availability of beds in skilled nursing homes is related to the rural or urban character of States (*6*). The more rural a State, the lesser the proportionate supply of nursing home beds it is likely to have. Witness the following downward course of the bed ratio per 1,000 population with increasing rurality:

Percent rural population	*Number of States*	*Skilled nursing home beds*
Less than 50	31	1.2
50–59	9	.8
60–69	6	.4
70 and over	2	.1
Total	48	1.1

If the 31 predominantly urban States in the first group are broken down into small categories by degree of urbanism, their average bed ratios do not depart far from the overall urban average of 1.2 beds per 1,000 population.

Availability of Hospital Beds

If we are to regard nursing homes as a link in the chain of medical care facilities, our interest is drawn to the relationship between availability of nursing home facilities and hospital facilities. Do we find that those States which are more adequately supplied with hospital beds are also better supplied with beds in skilled nursing homes? Or is there some offsetting tendency so that the availability of one "discourages" the growth of the other?

In the case of general hospitals, there is no apparent relationship. States with different general hospital bed ratios (*7*)—grouped below—nevertheless average a quite consistent ratio of beds in skilled nursing homes.

General hospital beds per 1,000 population	*Number of States*	*Skilled nursing home beds*
Less than 3.5	18	1.0
3.5–4.4	23	1.2
4.5 and over	7	1.2
Total	48	1.1

The availability of chronic disease hospital beds (*7*), on the other hand, seems to be associated to a marked extent with the supply of beds in skilled nursing homes. Holding aside the States which have no chronic disease hospital facilities at all, we can see in the following table a tendency for the States which are better supplied with chronic disease hospital beds to have relatively more skilled nursing home beds as well.

Chronic disease hospital beds per 1,000 population	*Number of States*	*Skilled nursing home beds*
None	8	1.2
0.01–0.14	21	.7
0.15–0.49	13	1.2
0.50 and over	6	1.6
Total	48	1.1

The eight States with no chronic disease hospital facilities actually form a bimodal distribution with respect to skilled nursing homes. Four of these States have very few skilled nursing home facilities (averaging 0.3 beds per 1,000 population), while the other four have an average or superior supply compared to other States (average ratio of 1.5 beds). The former group's situation is quite understandable—conditions which lead to a relatively low supply in one type likewise produce a low supply in the related

type. The other group of States suggests reliance on the combination of general hospital care and skilled nursing homes to meet the needs of the chronically ill.

Availability of Medical Personnel

The operation of nursing homes obviously necessitates accessibility of certain types of medical personnel. Subsequent analysis of local data will be required effectively to relate the distribution of facilities with that of personnel. However, the table below documents the expected association on a State basis (*8*). States comparatively advantaged in the supply of physicians and nurses (professional and practical) also tend to have a greater volume of beds in skilled nursing homes.

Number per 100,000 population in State	*Number of States*	*Skilled nursing home beds*
Physicians:		
Less than 75	3	0.3
75–99	14	.4
100–124	15	1.4
125–149	10	1.2
150 and over	6	1.4
Total	48	1.1
Professional nurses:		
100–149	3	.4
150–199	10	.4
200–249	11	.9
250–299	9	1.4
300–349	8	1.6
350–399	3	1.2
400 and over	4	2.1
Total	48	1.1
Practical nurses:		
Less than 70	8	.6
70–79	8	1.1
80–89	10	1.3
90–99	11	1.0
100–119	6	1.0
120 and over	5	1.5
Total	48	1.1

Recapitulation

We have now seen that the volume of existing beds in skilled nursing homes, by State, is related to a number of factors which we have examined. The extent of chronic disease hospital facilities seems to have some partial correspondence to the volume of beds in skilled nursing homes. But no such association is evident with the level of supply of general hospital beds. A positive association is apparent with per capita income, "agedness" of population, proportion of the population living in urban areas, and relative availability of physicians and nurses. These are not mutually independent relationships, since the several factors are themselves interrelated. Therefore, at this point, we suggest that the availability of beds in skilled nursing homes is associated with the total complex of these factors.

Relationships Among Types of Facilities

A crucial question is what relationship exists between the availability of beds in skilled nursing homes in a State and the availability of the related types of facilities. Do States with a comparatively high or low supply of beds in skilled nursing homes also tend to have concomitantly high or low supplies of beds in personal care homes and sheltered homes? Or does a better supply in one or another type go with poorer supplies in other types?

We are able to examine this question in 32 States which reported substantially completely for all 4 types of facilities covered in the inventory. The rank order of the States in the supply of each type of facility proportionate to population is shown in table 3. A single clear-cut pattern does not emerge, but a number of conclusions may be drawn:

1. It is a rarity for a State to rank consistently high in all four types of facilities. Connecticut and New Hampshire stand as the only examples in this group of States.

2. It is fully as rare for a State to rank consistently low on all four types. Notable in this respect are Alaska, which has none of these facilities, and Puerto Rico.

3. Somewhat more frequently encountered is the State which has a combination of middle and low ranks. A group of southern States fall in this category: Arizona, Arkansas, Florida, Louisiana, North Carolina, Oklahoma, and Tennessee.

4. By far the most common situation is a marked difference of ranks for a State among the several types of facilities. About 20 of the 32 States show this marked tendency to occupy quite different positions in the different types

Table 3. Rank order of States [1] in ratio of beds to population, for nursing homes and related facilities

State	Rank order number within each type of facility [2]				
	All facilities combined	Skilled nursing homes	Personal care homes with skilled nursing	Personal care homes without skilled nursing	Sheltered homes
Arizona	24	26	16	14	*27*
Arkansas	30	17	28	*30*	17
California	18	11	24	([3])	3
Colorado	16	9	13	21	9
Connecticut	3	5	9	9	5
District of Columbia	15	21	3	19	10
Florida	26	25	19	16	19
Idaho	22	28	6	17	*27*
Illinois	8	7	18	27	6
Indiana	14	16	10	8	*27*
Iowa	2	3	26	10	1
Kansas	11	27	23	3	8
Louisiana	28	18	25	22	20
Maine	5	2	27	12	4
Massachusetts	4	4	17	4	*27*
Michigan	20	6	*30*	28	13
Minnesota	12	8	5	23	*27*
Montana	19	20	12	11	18
Nebraska	6	22	21	1	21
New Hampshire	1	1	1	5	2
New Mexico	27	15	*30*	26	12
North Carolina	25	31	20	13	*27*
North Dakota	10	23	11	2	*27*
Oklahoma	23	12	14	24	*27*
Rhode Island	9	13	8	7	*27*
South Dakota	17	30	15	6	16
Tennessee	29	24	*30*	18	14
Wisconsin	7	10	2	15	11
Wyoming	21	19	7	20	15
Alaska	32	*32*	*30*	*30*	*27*
Hawaii	13	14	4	25	7
Puerto Rico	31	29	22	*30*	*27*

[1] Includes only 32 States which reported all 4 types of facilities.

[2] Number "1" assigned to State with highest ratio of beds of given type relative to its population. States with no beds of given type take the end-ranking number, shown in italics. The end number is shared when several States have no beds of the given type, the number assigned in such cases being the midpoint of the remaining numbers in the ranking series.

[3] Some unknown number of this type of facility are included with sheltered homes for lack of precise information on level of service.

of facilities, placing higher in some and lower in others.

5. Among this majority of 20 States which reveal a counterbalancing of ranks, there are no dominant patterns as among the types of facilities; each type is about as frequently represented as the others in high ranking and in low ranking among the States. For example, Michigan ranks high in skilled nursing homes, low in personal care homes. Kansas ranks low in skilled nursing homes and in personal care homes with skilled nursing, but high in the more distinctly domiciliary types of facilities. Nebraska, standing low in all the other types of facilities, ranks highest among the States in personal care homes without skilled nursing.

The variety of compensatory patterns of supply of the different types of facilities suggests that the relative unavailability of certain types may be in a sense merely a consequence of the availability of other types. Or, to put it more bluntly, the supply of the different types relative to each other may be quite "accidental." Whether the several levels of facilities are appropriately and soundly balanced to meet the real need is a question which perhaps some of the States can answer affirmatively. But it is not likely to be so answered by most, in view of the widely opposing patterns of availability found among the States.

Determinations of what is an appropriate balance and what are proper levels of adequacy in these facilities will not be attempted until the data collected in the inventory have been mined more intensively. We will look particularly to an analysis of the local distribution of facilities to tell us on a functional level how that distribution is related to controlling factors.

REFERENCES

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Commissioning of New Reserve Officers Started

The Public Health Service has completed preliminary arrangements for the expansion of the Commissioned Reserve Corps for service in national emergencies, and the appointment of new officers is under way. The expansion program was announced in the November 1954 issue of *Public Health Reports* by Surgeon General Leonard A. Scheele.

Dr. Scheele pointed out that in order to serve effectively in a major national emergency "public health forces of the country must be in a position not only to carry on necessary normal functions under abnormal conditions but to take on vital new responsibilities as well."

"In these circumstances," the Surgeon General said, "the present public health forces of the Nation will need substantial augmentation. Intensive action to control communicable diseases will become an immediate necessity. Essential public health services for displaced populations will have to be provided. Medical services in the Coast Guard will have to be expanded overnight."

In expanding the Commissioned Reserve, the Service has two fundamental objectives: effective emergency utilization of professional personnel with training and experience in public health and augmenting these forces with physicians and other professional people not normally working in the field of public health but whose services would be needed to meet expanded demands.

An officer of the emergency reserve, a recent memorandum to commissioned and civil service personnel throughout the Public Health Service stated, "would be called to active duty without his consent only in the event of a national emergency publicly recognized as requiring such action," and such an officer who was "already performing important health duties would not be called for service in another area unless the situation in that area clearly justified it."

This memorandum emphasized that officers in the emergency reserve may request active duty at any time and will be called by the Service if needed.