# REPORT FROM THE COMMISSIONER OF THE VIRGINIA STATE HEALTH DEPARTMENT

# ON

# NURSING HOME BED NEED IN RELATION TO ALTERNATIVES IN THE COMMONWEALTH

# TO

# THE GOVERNOR

# AND

# THE GENERAL ASSEMBLY OF VIRGINIA

**HOUSE DOCUMENT NO. 18**

COMMONWEALTH OF VIRGINIA
RICHMOND
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## PREFACE

The following report on nursing home bed need is one of several reports requested by the 1981 General Assembly on long term care in Virginia. Other long term care reports are to be found in the responses of various state agencies to HJR 294 (research, administrative proposal), HJR 295 (preadmission screening), HB 269 (levels of care), and HB 1250 SS 406 (Medicaid issues). Together, these reports comprise the major long term care issues facing the Commonwealth today.

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A Report from the Commissioner
of the
Virginia State Health Department
to the
Governor and the General Assembly
Richmond, Virginia
October, 1981

TO: The Honorable John N. Dalton, Governor of Virginia
and the General Assembly of Virginia

The Virginia State Health Department has completed its study of the need for additional nursing home beds in relation to alternatives in the Commonwealth, pursuant to House Bill No. 1452 of the 1980 Session of the General Assembly. The House Bill follows:

An Act establishing a moratorium on the issuance of certain certificates-of-need for nursing homes and requiring a report from the Commissioner of Health.

House Bill 1452

Whereas, the current methodology utilized by the Department of Health for projecting the need for additional nursing home beds in the State Health Plan needs to be examined before further expansion of this health care service is authorized; and

Whereas, the Commonwealth is studying the need for alternatives to long term institutional care; now, therefore,

Be it enacted by the General Assembly of Virginia:

1. § 1. Except as provided herein, after the effective date of this act and prior to June thirty, nineteen hundred eighty-two, the Commissioner of Health shall not approve or authorize the issuance of any certificates-of-need in accordance with § 32.1-96 of the Code of Virginia for which applications are received after the effective date of this act for the construction of any new nursing homes or an increase in the bed capacity of any existing nursing home. The Commissioner may approve or authorize the issuance of a certificate-of-need for the replacement of an existing nursing home in accordance with applicable provisions of law when a capital expenditure is required to comply with life safety codes, licensure, certification, or accreditation standards.

§ 2. The Commissioner of Health shall report to the Governor and the nineteen hundred eighty-two session of the General Assembly on the most appropriate methodology to utilize in projecting the need for additional nursing home beds in the Commonwealth and shall suggest an appropriate policy for utilizing this health care service in relation to alternative programs to nursing home care.

2. That an emergency exists and this act is in force from its passage.

Executive Summary

House Bill 1452 of the 1981 General Assembly established a moratorium on the issuance of certificates of need for nursing home beds. The bill requires the Commissioner of Health to report on the most appropriate methodology for projecting nursing home bed need and to suggest a policy for utilizing nursing home beds in relation to alternatives.

An analysis of the existing methodology, which is described in the State Medical Facilities Plan, is presented. Based on data from the 1981 Nursing Home Survey, the analysis suggests some inadequacies in the methodology. A revised methodology is proposed which assumes that the demand for nursing home beds will continue at the current (1981) level. Based on this assumption, a total bed need of 24,040 beds, or over 1000 more than the current number of licensed and approved beds, is projected for 1985.

A second projection of needed beds is made, based on the assumption that a full range of community long term care services will be available and that a consequent reduction in the demand for nursing home beds will occur. Under this assumption, 21,225 nursing home beds will be required by 1985.

The projection based on current demand suggests a need of almost 3000 more beds by 1985 than the second projection based on reduced demand. The annual cost of these 3000 beds to the Virginia Medicaid Program is estimated at $18.5 million (1980 dollars). National studies indicate that the public cost of serving these 3000 people in the community would be lower than the public cost of providing nursing home care.

Based on the analysis of nursing home bed need, the following policy for the Commonwealth on the utilization of nursing home services in relation to alternatives is proposed:

> A full range of long term care services, both community based and institutional, should be available to citizens of the Commonwealth with long term care needs. The services should be organized and available in a manner which promotes the highest quality of care in the setting with the least public cost.

To implement the policy above, the following actions are recommended:

1) The General Assembly should extend the moratorium on the issuance of certificates of need for new nursing home beds for one year, and thereafter for as long as indicated from the annual analysis of bed need in the State Medical Facilities Plan; 2) The State Medical Facilities Plan should project the need for nursing home beds based on the revised methodology which assumes that a full system of community services will be developed, and 3) The General Assembly should implement the recommendations of related reports* on long term care which provide for the development of a full system of community services.

*HB 269 (Levels of Care), HB 1250 (Medicaid Issues), HJR 294 (Research, Administrative Proposal for Statewide Management), HJR 295 (Preadmission Screening).

Process for Development of Report

This report was developed with the advice and assistance of twenty agencies and organizations involved in the long term care system. Additionally, an Internal Review Committee on Long Term Care was formed within the Department. This committee, which represented the expertise within the Department on long term care, met several times to review materials, discuss relevant issues, and suggest revisions to the drafts of the report. Prior to finalizing the report, comments on the draft were received from a variety of sources and incorporated where appropriate.

# I. INTRODUCTION

## A. Legislative Directive

This report on the need for nursing home beds has been completed in accordance with the requirements of House Bill 1452 of the 1981 General Assembly. The bill is summarized as follows:

1. HB 1452 - AN ACT ESTABLISHING A MORATORIUM ON THE ISSUANCE OF CERTAIN CERTIFICATES OF NEED FOR NURSING HOMES AND REQUIRING A REPORT FROM THE COMMISSIONER OF HEALTH.

   The Commissioner shall report to the Governor and the General Assembly on the most appropriate methodology to utilize in projecting the need for additional nursing home beds in the Commonwealth and shall suggest an appropriate policy for utilizing this health care service in relation to alternative programs to nursing home care.

## B. Background

Over the past ten years, nursing homes have become a major expense for the Commonwealth. Currently, there are approximately 20,000 skilled or intermediate care beds, operating in community nursing homes and hospitals in Virginia. An additional 2,600 beds have been approved by the Certificate of Public Need process and are scheduled for or under construction. In FY 1980, the Virginia Medical Assistance Program paid over $123 million to these nursing homes. An additional $59 million of Medicaid funds went to the long term care system of state mental health and mental retardation facilities.

The burden of nursing home care to the Medicaid program is even more striking when related to the small number of patients served. In May of 1981, for example, Medicaid nursing home patients composed about 6% of all Medicaid eligibles, but required almost half of all the Medicaid funds. The Medicaid program pays for the care of approximately 67% of all community nursing home patients. In FY 1980, the intermediate care cost ranged from $30 to $42 per patient day in Virginia.

In addition to concern over the alarming size of public expenditures for nursing home beds, there has been increasing concern over the appropriateness of nursing home care. Data from the Virginia Medicaid program support the conclusions of a number of studies[1] which estimate that between 10 and 40 percent of the elderly residing in nursing homes would be capable of returning to the community if appropriate support services were available. Most of these estimates were based on medical criteria alone and would be significantly reduced if social and psychological factors were included. However, the point remains that the number of nursing home beds needed by the long term care population of the Commonwealth relates directly to the availability of community long term care services.

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[1] Long Term Care: Background and Future Direction, Health Care Financing Administration, 1981, page 34.

C. Assumptions of the Report

Long term care services are defined as nursing home services and all other services, either institutional or community-based, which, if available and utilized would delay or avoid unnecessary or inappropriate utilization of nursing home beds. This report analyzes the need for nursing home beds under two assumptions: 1) the availability of community long term care services and the current demand for nursing home beds will remain unchanged 2) the availability of community long term care services will increase and the current demand for nursing home beds will decrease. A third possible assumption is that community services will decrease and the demand for nursing home beds will actually increase. Because this option was clearly undesirable, it was not considered in the development of this report.

Other changes in the long term care system can also affect the demand for nursing home beds. For example, tightening of Medicaid eligibility criteria could lower the effective demand for beds. Although such changes can affect the number of people referred for nursing home care, these changes do not affect the number of persons who actually need long term care. The focus of this report is to project the number of nursing home beds required to meet the needs of the citizens of the Commonwealth.

## II. DATA SOURCES

A variety of data sources were used for this analysis of the need for nursing home beds. Data on nursing homes, community long term care services, and population projections during the 1980's were used. Major data sources were as follows:

A. The 1981 Nursing Home Survey

To gain a better understanding of the long term care system in Virginia, the State Health Department, Division of Health Planning, conducted the 1981 Nursing Home Survey. The Survey collected basic information, including age of patients and zip code of prior residence, for all nursing home patients in Virginia on February 11, 1981. Additionally, data on persons awaiting nursing home placement were collected from all hospitals, welfare departments, health departments, nursing homes, and DMHMR facilities in Virginia. Over 93% of all nursing homes in the State participated in the survey. The response rate of facilities and agencies involved in the waiting list data request was also high.

The Nursing Home Survey has provided data crucial to the analysis of nursing home bed need. Some of the key information obtained through the survey includes:

(1) The number of people awaiting nursing home placement. The waiting list information supplied by agencies and organizations has been unduplicated so that a true count of the number of persons awaiting placement by their current residence has been used. Age, preadmission screening status, predicted level of care, and predicted payment source were also collected on persons awaiting placement.

(2) The number of persons in nursing home beds by their prior residence. The number of nursing beds and patient days is collected routinely in the licensure process. By knowing where the patient lived prior to admission, however, the demand of each locality on nursing home beds can be assessed. Since age was also collected, age-specific use rates have been generated.

(3) Other information on nursing home patients, including time since admission, level of care, payment source, race, sex, and marital status. The data have provided much insight into the types of persons comprising the long term care population in nursing homes.

Although the survey provides a wealth of information previously unknown, the survey data are limited in that the survey was conducted for only one day: February 11, 1981. Before deciding to use the data to represent all of 1981, it was important to verify the accuracy of the data. In general, it was found that the data from the survey on nursing home patients were consistent with the trends of other data sources on nursing home patients.

Other data sources on nursing home waiting lists are nonexistent. The last survey of waiting list information was conducted in 1975. An additional problem was that the numbers of persons awaiting placement can fluctuate tremendously from week to week. In summary, a number of concerns exist in relation to generalizing from the waiting list data.

Although concerns about the reliability of the waiting list data are well founded, they are somewhat lessened by the management of the over-reporting problem which occurred. Some nursing homes reported persons on their waiting lists who were not realistic candidates for admission to the facility. Some adjustments to account for this over-reporting were made (see Appendix 2), but the numbers awaiting placement are almost certainly still overstated. Analytic decisions in this report have been based on the cautious principle that it is better to overestimate the demand for nursing home beds than to underestimate the demand.

B. The Annual Licensure Survey of Nursing Home Facilities in Virginia

The State Health Department has conducted a survey of nursing homes as part of the licensure process since 1975. Information on occupancy rates and inpatient days are available by level of care by facility from 1975 to 1980.

C. Population Data

The population data for this report are very important, since major increases in the elderly population are expected to place great demand on long term care services in the 1980's. The report used the 1979 series of projections produced by the Virginia Department of Planning and Budget. Analysis of these projections in comparison with advance data from the 1980 census suggest that the projections are fairly accurate for the elderly population.[2] Of course, the nursing home bed need projections will be updated when age specific data from the 1980 census become available.

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[2] Source: Virginia Center on Aging - Virginia Commonwealth University

D. Approved Beds

The State Health Department's Certificate of Public Need Program approves the construction or renovation of nursing home beds in Virginia. Data from the program indicate that, in addition to licensed beds in Virginia, there are 2,595 beds which have been approved for construction but are not yet licensed. Plans for construction or actual construction are underway for these beds. Approved but not licensed beds are an important component of the potential pool of nursing home beds for the state.

E. Medicaid Program Data

As part of the Medicaid program, all Medicaid applicants for nursing home admission who are residing in the community are screened and recommended/not recommended for nursing home care. About 80% of the screened applications are approved for nursing home care.

The form used in the prescreening program includes a section to indicate "services required-available/unavailable". Meals, chore services, companion services, home health, day care, and other services are listed. The person completing the form is instructed to indicate all services which would be required for the applicant to remain in the community, and the availability of those services.

Another source of data is the Community Services Survey, conducted from May-September, 1979. The Survey was conducted for the Nursing Home Preadmission Screening Program Planning Committee. The purpose of the survey was twofold: 1) to better determine the availability of community services and the characteristics of individuals who are potential nursing home candidates and 2) to determine if there are differences in community based individuals and acute care patients who are both potential nursing home candidates.

Additionally, the Medicaid program has been analyzing data on Medicaid nursing home patients to determine the proportion who could be discharged under strict medical criteria for the need for nursing home care. Clearly, data from the Medicaid program provide perspective on the need for nursing home beds in relation to alternative services.

## III. ASSESSMENT OF EXISTING METHODOLOGY

The existing methodology for projecting the need for nursing home beds is found in the Virginia State Medical Facilities Plan (SMFP), published annually by the Virginia State Health Department and approved by the State Board of Health. In the following analysis of the methodology, data from both the annual licensure survey and the 1981 Nursing Home Survey on nursing home utilization, including actual patient days, occupancy rates, patient origin, and waiting lists are compared with the projections found in the SMFP.

A. The Existing Methodology

The 1980 State Medical Facilities Plan (SMFP) projections of bed need in 1985 were based on an estimated use rate of 10,900-14,500 patient days

per thousand population over the age of 65. Each Health Systems Agency recommends a use rate within the range, based on the specific needs of each area.

The projected use rate is applied to the projected population over 65 to calculate total demand for beds and adjusted for the expected occupancy rate (now set at 95%). The resulting formula, as stated in the 1980 SMFP, follows:

$$\text{Projected 1985 bed requirements} = \frac{\text{Projected 1985 Population} \times \text{Projected 1985 Use Rate}}{\text{Expected Occupancy} \times \text{(Annual Days)}}$$

The 1980 SMFP projections of beds needed in 1985, by Health Service Area, are displayed in Table 1.

TABLE 1

PROJECTED NURSING HOME BED DEMAND FOR 1985[1]

| | Projected Bed Demand | Licensed/Approved Beds as of 10/1/80 | Net HSA | |
|---|---|---|---|---|
| | | | Need | Excess |
| HSA I (Northwestern) | 3,565 | 3,559 | 6 | |
| HSA II (Northern) | 3,115 | 3,104 | 11 | |
| HSA III (Southwest) | 6,475 | 6,479 | | 4 |
| HSA IV (Central) | 4,410 | 4,870 | | 460 |
| HSA V (Eastern) | 5,733 | 5,437 | 296 | |
| STATE[2] | 23,298 | 23,449 | 313 | 464 |

[1]Source: 1980 State Medical Facilities Plan
[2]A map of Virginia with Health Service Areas is found in Appendix 1.

Although a net excess of 151 beds exists on a statewide basis, certain areas of the state exhibit a need totalling 313 beds. The 1980 SMFP concluded that although some maldistribution problems exist in the state, the total of licensed and approved beds is sufficient to meet the projected demand for beds in 1985.

B. Actual Use

The actual use rates of nursing homes in Virginia from 1977 to 1981 are shown in Table 2. For comparative purposes, the table also includes the projected use rates (both base and upper limit) for the same years. These projected use rates are derived from the State Medical Facilities Plan.

TABLE 2

ACTUAL USE RATES AND PROJECTED USE RATES FOR NURSING HOMES IN VIRGINIA, 1977-1981

| | 1977[1] | 1978[1] | 1979[1] | 1980[1] | 1981[2] |
|---|---|---|---|---|---|
| Actual Use | 10,566.6 | 10,911.1 | 11,082.3 | 12,015.2 | 13,003.0 |
| Projected Use (Base) | 10,900 | 11,200 | 11,600 | 11,900 | 12,200 |
| Projected Use (Upper Limit) | 11,200 | 11,700 | 12,300 | 12,800 | 13,400 |

[1]Source: Annual Licensure Survey of Nursing Homes. Use rate equals the number of inpatient days per thousand elderly.
[2]Source: The 1981 Nursing Home Survey. The rate of occupied beds per thousand elderly on the day of the survey was adjusted to patient days over a year. An adjustment was also made for facilities which did not participate in the survey (see Appendix 1).

As Table 2 shows, the actual use rates seem to parallel the projected base use rates for 1977-1981. In 1981, the actual use rate is somewhat higher than the projected base use rate, and is slightly closer to the project upper limit than to the base rate. The projected use rates applied in the SMFP are valid in comparison with the actual use rates for 1977-1981.

C. Occupancy Rates

The actual use rate does not in itself reflect the total demand for nursing home beds, since the actual use rate can only be as high as the existing number of beds allows. To determine whether the actual use rate is a good estimate of total demand, it is necessary to consider the occupancy rate of facilities at the time that the actual use rate is calculated. Table 3 displays the occupancy rate of facilities for Virginia for 1977-1981.

Additionally, Table 3 displays the actual use rate and the unused patient days per thousand elderly under the assumption of 95% occupancy of all facilities. For long term care facilities, 95% is considered a realistic and efficient occupancy rate for both planning and management purposes.

Table 3

OCCUPANCY RATES AND USE RATES OF NURSING HOMES IN VIRGINIA, 1980

| | 1977[1] | 1978[1] | 1979[1] | 1980[1] | 1981[2] |
|---|---|---|---|---|---|
| Actual Occupancy Rate | 87.8 | 93.2 | 92.6 | 93.1 | 94.3 |
| Actual Use Rate | 10,566.6 | 10,911.1 | 11,082.3 | 12,015.2 | 12,519.5 |
| Unused Patient Days Per 1000 Elderly Based on 95% Occupancy | 866.5 | 210.6 | 287.0 | 166 | 92.6 |

[1]Source: Annual Licensure Survey of Nursing Homes. Use rate equals the number of inpatient days per thousand elderly.
[2]Source: The 1981 Nursing Home Survey. The rate of occupied beds per thousand elderly on the day of the survey was adjusted to patient days over a year.

Although some regional differences exist, Table 3 indicates that on a statewide basis nursing homes have maintained less than optimal occupancy rates during 1977-1981. These lower occupancy rates result in unused patient days, suggesting that nursing homes have been meeting the total demand for beds. If there were more demand for beds, the occupancy rates would reach at least 95% and there would be no excess patient days. Occupancy rates however, may vary according to other factors besides demand: new construction and opening of beds may lower occupancy rates temporarily. Additionally, the rising occupancy during the years 1977-1981 suggests that nursing homes may no longer be meeting total demand.

D. Waiting Lists

Through waiting list information, a picture of the total demand for nursing home beds can be developed. By adding the number of persons in nursing homes on the day of the 1981 Nursing Home Survey with the number of persons reported waiting for a bed on the day of the survey, a total demand for nursing home beds can be seen. As Table 4 shows, the total demand on the day of the survey was for 21,270 beds. The demand for beds was thus 896 higher than the licensed beds (20,374 licensed) on the day of the survey, but well within the total of licensed beds and beds approved for or under construction (22,969 licensed and approved beds). Although approved but unbuilt beds do not lessen the present excess demand for beds, approved but unbuilt beds must be considered in projecting the need for additional approvals of more nursing home beds.

TABLE 4

TOTAL DEMAND FOR NURSING HOME BEDS

ON FEBRUARY 11, 1981[1]

| # of Nursing Home Patients | # Awaiting Placement[3] | Total Bed Demand | # Licensed Beds[2] | # Licensed and Approved Beds[2] |
|---|---|---|---|---|
| 18,860 | 2,410 | 21,270 | 20,374 | 22,969 |

[1]Source: The 1981 Nursing Home Survey
[2]Source: State Health Department, Center for Health Statistics and Certificate of Public Need Records. Approved beds refers to beds which are scheduled for or under construction.
[3]See Appendix 2 for waiting list data by Health Service Area.

A waiting list of a reasonable size is a sign that the state is not overbedded and that the nursing home system is operating efficiently. Unfortunately, the lack of data on how long persons are on waiting lists restricts the understanding of waiting lists. However, since 50% of all beds become vacant in one year, (or 4% each month) a reasonable size for a waiting list can be assumed to be 4% of the total bed capacity (or 800 persons awaiting placement). That is, a waiting list of 800 persons would assure that each person would be placed within a month. Since hospital patients form 23% of the waiting list, this approach assures that hospital patients could be placed within a week of application. According to this approach, 4% fewer beds would be needed than the total demand figure indicates. On the other hand, 5% more beds would be needed to allow for a 95% occupancy rate for facilities. Thus, the waiting list phenomena and the occupancy rate requirements tend to balance one another, so that the total demand for beds closely approximates the number of beds needed in the state.

The total bed demand of 21,270 shown in Table 4 translates to 40.0 beds per thousand elderly or 14,600 annual patient days per thousand elderly in 1981. The State Medical Facilities Plan projects a use rate of 12,200 (base) to 13,400 (upper limit) annual patient days per thousand elderly in 1981. The total demand in 1981 is higher than the State Medical Facilities Plan projected for 1981.

E. Patient Origin

The 1980 State Medical Facilities Plan (SMFP) methodology for projecting bed need is based on the consideration that a person should be able to find a nursing home bed near his own home: specifically, at least in his own Health Service Area. As Table 5 shows, over 90% of all nursing home patients in facilities in HSAs II-V are also from HSAs II-V. Only in HSA I (Northwestern Virginia) do a large proportion (25%) go outside of the HSA for nursing home care. Of course, it is uncertain whether an actual lack of beds in the HSA or preference factors are behind this finding. Overall, the data indicate that an adequate distribution of beds has occurred in most of the state.

TABLE 5

PRIOR RESIDENCE OF NURSING HOME PATIENTS BY LOCATION

OF NURSING HOME IN VIRGINIA, 1981[1,2]

| Prior Residence of Patient | Location of Facility of Patient | | | | TOTAL |
|---|---|---|---|---|---|
| | Same HSA | Percent | Other HSA | Percent | |
| HSA I (Northwestern) | 1,618 | 75.0 | 539 | 25.0 | 2,157 |
| HSA II (Northern) | 2,173 | 91.9 | 192 | 8.1 | 2,365 |
| HSA III (Southwest) | 3,914 | 96.5 | 143 | 3.5 | 4,057 |
| HSA IV (Central) | 3,283 | 90.4 | 350 | 9.6 | 3,633 |
| HSA V (Eastern) | 3,920 | 95.1 | 203 | 4.9 | 4,123 |

[1] 617 unknown and 636 out-of-states excluded from table.
[2] Source: The 1981 Nursing Home Survey.

F. Conclusion

The analysis of the existing bed need methodology has shown that the current methodology has adequately projected the need for nursing home beds. A summary of the findings of this analysis follows:

- The actual use rate and the projected use rate have been similar from 1977-1981, although the actual use rate has grown closer to the upper limit of the projected rate in recent years.

- The occupancy rates for 1977-1981 have indicated a surplus of patient days, although this surplus has grown smaller in recent years and was almost nonexistent in 1981.

- The number of persons awaiting nursing home placement during the 1981 Nursing Home Survey suggests that the total demand rate in 1981, after adjusting for waiting list data, is higher than the upper limit of the projected use rate. The total number of licensed and approved beds

still exceeds the total number in nursing homes or awaiting placement.

-Most nursing home patients in Virginia have found a nursing home close to their own home - in their own Health Service Area.

Although the findings from this analysis indicate that the current methodology has been adequate in predicting the need for beds, it is clear that the methodology has become less accurate over time. Adjustments to refine the method are discussed next.

## IV. REVISED METHODOLOGY BASED ON CURRENT DEMAND

### A. Introduction

The reasons that the existing bed need methodology has become less accurate over time relate to the assumptions behind the methodology. The existing methodology began with an actual base use rate and assumed that this rate would increase each year due to an increase in the intensity of demand for nursing home beds by the population 65 and over. Two major limitations exist with this approach: 1) The base use rate was based on actual use, not total demand; 2) the allowance for an increase in intensity of demand factor gave inadequate consideration to the higher use among the population 75 and over. These methodological problems were unavoidable because data were not available to measure total demand nor were use rates available by age groups.

### B. Refinements to Methodology

With the 1981 Nursing Home Survey, data are available to refine the bed need methodology. Both total demand (actual use plus waiting list) and age adjusted demand can be calculated through the survey data. In Table 6, age specific rates for actual use (patient in facilities on the day of the survey) and total demand (actual use plus waiting list data) are displayed. Clearly, use of nursing home beds is concentrated in the 75 and over population.

TABLE 6

ACTUAL USE RATES AND TOTAL DEMAND RATES OF NURSING HOMES BY AGE GROUP IN VIRGINIA ON FEBRUARY 11, 1981[1]

| Prior Residence of Patient | Actual Use[2] | | | Total Demand[3] | | |
|---|---|---|---|---|---|---|
| AGE | 64 | 65-74 | 75+ | 65 | 65-74 | 75+ |
| HSA I (Northwestern) | .47 | 10.4 | 66.0 | .59 | 12.9 | 81.8 |
| HSA II (Northern) | .20 | 8.2 | 85.3 | .23 | 8.9 | 92.8 |
| HSA III (Southwest) | .47 | 8.5 | 64.3 | .52 | 9.4 | 71.1 |
| HSA IV (Central) | .71 | 9.0 | 71.6 | .45 | 9.9 | 78.4 |
| HSA V (Eastern) | .39 | 10.8 | 70.1 | .46 | 12.4 | 79.5 |
| STATE | .38 | 9.4 | 70.0 | .43 | 10.6 | 78.9 |

[1] Source: The 1981 Nursing Home Survey
[2] See Appendix 3 for detailed calculations: Actual Use = Beds in use on day of survey.
[3] See Appendix 4 for detailed calculations: Total Demand = Beds in use plus waiting list.

As Table 6 shows, the actual use of nursing homes varies by HSA, with the beds per thousand age 75 and over ranging from a low bed use rate of 64.3 to a high rate of 85.3. It is important to note that both the actual use and the waiting list data are given by the HSA of the patient or person on the waiting list, rather than the HSA of the facility. Whether the differences in actual use are due to a lack of beds in some areas or to lower demand for beds can be determined through an analysis of total demand data. HSA III (Southwest) tends to have a genuinely lower total demand rate of nursing homes, while HSA I (Northwestern) has a high total demand rate.

By applying the total demand rates for each HSA in the state in Table 6 to the population by age group, a projected total bed need can be obtained. Table 7 shows the projected bed need for 1985 for each Health Service Area and the state, based on the total demand rates of Table 6. The table also indicates the net need or excess bed capacity for 1985 based on the current number of licensed and approved beds.

TABLE 7

PROJECTED NURSING HOME BED DEMAND IN VIRGINIA, 1985[1]

| Origin | Projected Bed Demand | Licensed/Approved Beds as of July 1, 1981 | Net HSA Need | Net HSA Excess |
|---|---|---|---|---|
| HSA I (Northwestern) | 3,968 | 3,489 | 479 | |
| HSA II (Northern) | 3,584 | 3,138 | 446 | |
| HSA III (Southwest) | 6,150 | 6,276 | | 126 |
| HSA IV (Central) | 4,594 | 4,778 | | 184 |
| HSA V (Eastern) | 5,744 | 5,288 | 456 | |
| STATE | 24,040 | 22,969 | 1,381 | 310 |

[1]Based on total demand rates found in Table 6. See Appendix 5 for detailed calculations.

Since the philosophy of this report and the State Medical Facilities Plan is that persons should be served in their own Health Service Areas, the table indicates the net bed need or excess by HSA. Although a "net" statewide need of 1,071 beds is projected for 1985, an actual shortage of 1,381 beds exists in particular HSAs.

C. Conclusion

The revised methodology of applying an age specific total demand rate by the HSA of patient origin is more sensitive to both total demand (i.e. waiting lists), changes in the size of the aging population, demand by the very old, and differences in demand among HSAs than the current methodology. With the anticipated growth in the population 75 and over, the revised methodology can be expected to be more accurate in future years

in projecting total bed need than the current methodology. For 1985, the revised methodology indicates a need of about 700 more beds than the existing methodology, which reflects increased sensitivity to total demand as well as the growth in the population 75 and over. The revised methodology is based on assumption (1) of page 2 of this report: no change in community service availability nor in demand for nursing home beds.

## V. REVISED METHODOLOGY ADJUSTED FOR REDUCTION IN CURRENT DEMAND

### A. Inadequacies of the Demand Based Methodology Above

The methodology above for projecting nursing home bed need assumes that the past actual demand for nursing home beds will continue. Further, the methodology assumes that total demand for nursing home beds will be met through nursing homes rather than alternative services. In this section, the revised methodology for projecting nursing home bed need is adjusted based on assumption (2) of page 2: community long term care services will be increased and the demand for nursing home beds will decrease.

### B. Lowering the Demand for Nursing Home Beds

With increased availability of community services, the total demand for nursing home care may be lowered due to 1) decreasing nursing home admissions and 2) decreasing lengths of stay in nursing homes.

#### 1. Decreasing Nursing Home Admissions

Estimates of potential reduction in nursing home admissions, given the availability of community services, can be derived from data from the Virginia Medicaid Program. Data from the pre-admission Screening Program (FY 1979) and the special Community Services Survey can be summarized as follows:

- "Required, but unavailable, services" was a factor in the nursing home admission of at least one-third of those pre-screened in FY 1979. Although an unduplicated count of persons for whom one or more services was required but unavailable is unknown, specific needed services which were unavailable ranged from companion services (31% of those pre-screened) to Home Health (4%).

- The Community Services Survey showed that non-availability of community services influenced the recommendation for nursing home care for 39.6% of those applying for nursing home care from the community, for 31.5% of those applying from the hospital, and for 29.2% of those applying from State Mental Health and Mental Retardation Facilities. Because the cost of alternatives were not considered, as well as the fact that alternatives may only postpone rather than avoid nursing home placements for some patients, acutal reductions in nursing home placement could not occur to the extent indicated by these data. Nevertheless, the data support the conclusion that a lack of alternatives is a factor in many nursing home admissions.

2. Reducing Nursing Home Lengths of Stay

The average length of stay in nursing homes in Virginia can be estimated at two years (20,000 beds/10,000 discharges/year). However, in facilities open since 1977, between 30-40% of the patients have been in a nursing home for four years or longer. The cost impact to the Medicaid program is very striking, since a high proportion of these patients are Medicaid patients.

Preliminary analysis by the Medicaid program suggests that 31% of the intermediate care clients reviewed by the program would be discharged to the community under stricter criteria for the medical need for intermediate care. The Medicaid program audits the medical records of each Medicaid nursing home patient at least annually, or approximately 1200-1500 records per month. If 31% of these patients were discharged, there would be approximately 418 additional discharges per month, or 5022 additional beds becoming available during the year.

C. Adjustments to the Revised Bed Need Methodology Based on Reduced Demand

The data described above on reducing the demand for nursing home beds suggest that community service availability could significantly lower the demand for nursing home care among Medicaid clients. It can also be assumed that a proportion of non-Medicaid patients would also choose community long term care services over institutional services, were community services more readily available.

Although the data above suggest that demand among Medicaid Clients could be reduced by as much as 30%, the following analysis assumes a smaller reduction in demand. The potential length of stay of the patients for whom nursing home care would be avoided or shortened is a major unknown factor impacting on bed availability. Because of this and other limitations of the data, a conservative reduction in demand of 15% among Medicaid clients and 5% among non-Medicaid clients is assumed under a full system of community services. Table 8 indicates the number of beds required in 1985, given an increase in community services.

TABLE 8

NURSING HOME BED PROJECTIONS BASED ON REDUCED DEMAND[1]
BY HEALTH SERVICE AREA IN VIRGINIA, 1985[2]

| | Projected Bed Demand | Licensed/Approved Beds as of July 1, 1981 | Net HSA | |
|---|---|---|---|---|
| | | | Need | Excess |
| HSA I (Northwestern) | 3,503 | 3,489 | 14 | |
| HSA II (Northern) | 3,165 | 3,138 | 27 | |
| HSA III (Southwest) | 5,430 | 6,276 | | 846 |
| HSA IV (Central) | 4,056 | 4,778 | | 722 |
| HSA V (Eastern) | 5,071 | 5,288 | | 277 |
| STATE | 21,225 | 22,969 | 41 | 1,845 |

[1]Reduced demand based on full system of community services. See narrative above.
[2]For detailed calculations see Appendix 6.

a) The General Assembly should extend the moratorium on new issuances of certificate of public need for nursing home beds for one year, and thereafter for as long as indicated from the annual analysis of bed need in the State Medical Facilities Plan.

b) Future State Medical Facilities Plans should use a methodology for projecting nursing home bed need which assumes that community services will be available. Planning for long term care services should no longer be based on the assumption that nursing home beds will continue to consume the vast majority of the public dollars available for long term care.

c) The General Assembly should implement the recommendations of related reports[1] on long term care which provide for the development of a full system of community services. This system should include at least the following management and program components:

1) Care Management. Planning for a client to receive long term care in the community is much more difficult than simply placing a client or patient in a nursing home. If community services are to satisfactorily meet a client's needs, appropriate individual service planning is essential.

2) Targeting. Given scarce resources, targeting of the limited community services available is particularly important. Among applicants for nursing home care, those who are the most appropriate candidates for community services should be targeted for the services. Also, community services should be maintained for the long term care population, not the elderly in general, who could quickly consume huge amounts of some services. A key to service targeting is a single effective service authorization point in each community.

3) Eligibility. Targeting and eligibility are closely related, since the authority to deny or approve services must be supported by clear eligibility criteria. But eligibility for community services is important for an additional reason. Currently, some clients are ineligible for minimal community services but eligible for complete nursing home care (under Medicaid). Community services are only an alternative to nursing home care if a method of payment is available for the alternative.

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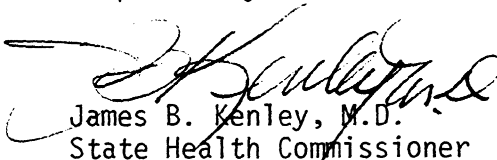
[1] HB 269 (Levels of Care), HB 1250 (Medicaid Issues), HJR 294 (Research, Administrative Proposal for Statewide Management), HJR 295 (Preadmission Screening).

4) Services. It is impossible to predict exactly which community services, in what amounts, are necessary to serve the estimated number of persons for whom nursing home care could be avoided or shortened. The addition of personal care services and more extensive companion services would provide a sound basis for developing the community service system.

5) Incentives for Community Service Development. Beyond the issue of which community services are most needed is the issue of how to encourage the development of such services. The role of public and private sector involvement in the provision of services must be clarified. Clearly, a strong financing mechanism must be developed: the nursing home industry is an excellent example of the response of the private sector to a service need, when a profitable source of payment is available. Finally, each community must participate in determining and developing local solutions to its own service needs.

6) Interagency Co-ordination. A number of public agencies are struggling with these and other long term care issues. A co-ordinated approach among these agencies is crucial to a consistent resolution of the issues.

Respectfully submitted,



James B. Kenley, M.D.
State Health Commissioner

## ADJUSTMENT FOR NONPARTICIPATING FACILITIES

Beds of nonparticipating facilities were treated as though filled (95% occupancy) with patients from the same HSA as the facility. This probably slightly overestimates demand from HSAs with extensive nonresponse.

| Area | # Beds In Facilities Not Responding to the Survey | # Beds Filled In Nonresponding Facilities Assuming 95% Occupancy | # Patients Reported In Survey From Area | # Total Patients from Area |
|---|---|---|---|---|
| HSA I | 674 | 640 | 2,153 | 2,793 |
| HSA II | 0 | 0 | 2,364 | 2,364 |
| HSA III[1] | 582 | 553 | 4,053 | 4,606 |
| HSA IV | 42 | 40 | 3,625 | 3,665 |
| HSA V[2] | 104 | 99 | 4,080 | 4,179 |
| Out of State | 0 | 0 | 636 | 636 |
| Unknown | 0 | 0 | 617 | 617 |
| TOTAL | 1,402 | 1,332 | 17,528 | 18,860 |

[1] Includes Virginia portion HSA VI. A map of Virginia by HSA, a list of non-participating facilities and the response rate to the survey follow.

[2] St. Mary's Infant Home excluded. The facility serves a unique function in its own area which is met through means other than community nursing home care elsewhere in the state.

## 1981 NURSING HOME SURVEY

### Nursing Homes not Responding

| Facility Name and Location | # of Licensed Nursing Home Beds* |
|---|---|
| HSA I | 674 |
| The Cedars, Charlottesville | 145 |
| Montvue Nursing Home (Page NH), Page Co. | 60 |
| Oak Hill Nursing Home, Staunton | 130 |
| Staunton Manor Nursing Home, Staunton | 89 |
| The Towers, Charlottesville | 128 |
| Woodmont Nursing Home, Stafford | 122 |
| HSA II | 0 |
| HSA III | 422 |
| Guggenheimer Memorial Hospital | 110 |
| Roman Eagle Memorial Home, Danville | 312 |
| HSA IV | 42 |
| Masonic Home of Virginia, Henrico | 42 |
| HSA V | 104 |
| Beth Sholom, Virginia Beach** | 80 |
| Bi-County, Accomack | 24 |
| HSA VI | 160 |
| Bristol Nursing Home, Bristol | 120 |
| Memorial Hall Hospital, Bristol | 40 |

*Source: Center for Health Statistics Annual Survey of Virginia Hospitals and Nursing Homes, 1980

**Inadvertently not surveyed

# 1981 NURSING HOME SURVEY

## Analysis of Non-Respondents by HSAs and the State

| | # of Licensed Nursing Homes Surveyed | # of Non-Respondents | Facility Response Rate | # of Licensed Beds in Surveyed Facilities | # of Beds in Nursing Homes Responding* | Response Rate based on # of Beds |
|---|---|---|---|---|---|---|
| State | 174 | 11 | 93.7% | 20,037 | 18,635 | 93.0% |
| HSA I | 31 | 6 | 80.6% | 2,735 | 2,061 | 75.4% |
| HSA II | 20 | 0 | 100.0% | 2,962 | 2,962 | 100.0% |
| HSA III[1] | 48 | 2 | 95.8% | 5,467 | 4,885 | 89.3% |
| HSA IV | 33 | 1 | 97.0% | 4,102 | 4,060 | 99.0% |
| HSA V | 42 | 2 | 95.2% | 4,771 | 4,667 | 97.8% |

[1]HSA VI (Virginia portion) included in HSA III

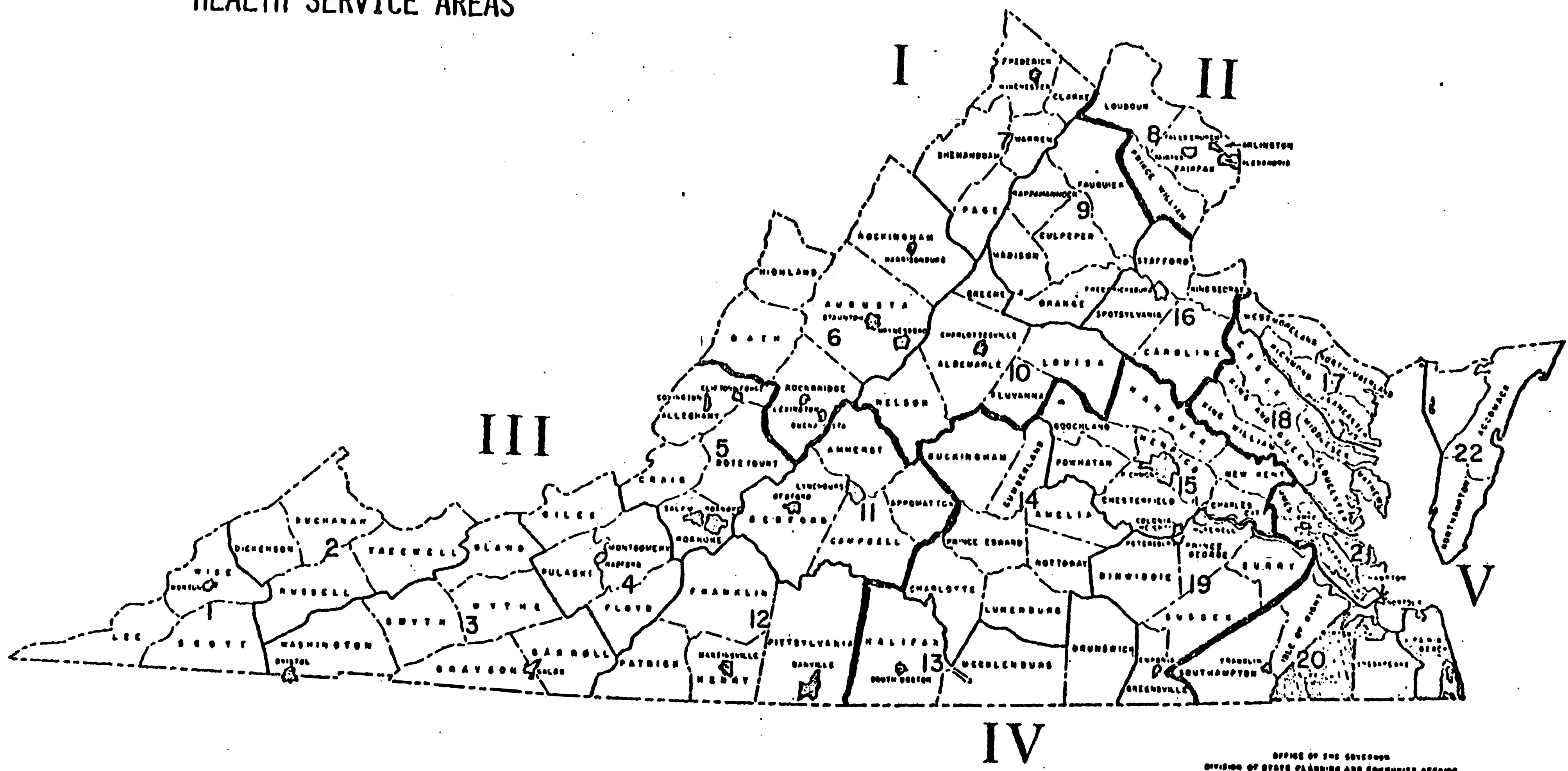
*Source: Center for Health Statistics Annual Survey of Virginia Hospitals and Nursing Homes, 1980

# 1981 NURSING HOME SURVEY

## Response Rate by Planning District, HSA, and the State

| | Licensed Beds in Surveyed Facilities | Licensed Beds in Responding Facilities | Response Rate based on # of Beds |
|---|---|---|---|
| State | 20,037 | 18,635 | 93.0% |
| HSA I | 2,735 | 2,061 | 75.4% |
| PD 6 | 1,032 | 813 | 78.8% |
| PD 7 | 592 | 532 | 89.9% |
| PD 9 | 366 | 366 | 100.0% |
| PD 10 | 476 | 203 | 42.6% |
| PD 16 | 269 | 147 | 54.6% |
| HSA II | 2,962 | 2,962 | 100.0% |
| PD 8 | 2,962 | 2,962 | 100.0% |
| HSA III | 5,467 | 4,885 | 89.3% |
| PD 1 | 294 | 294 | 100.0% |
| PD 2 | 180 | 180 | 100.0% |
| PD 3 | 719 | 559 | 77.7% |
| PD 4 | 550 | 550 | 100.0% |
| PD 5 | 1,707 | 1,707 | 100.0% |
| PD 11 | 1,022 | 912 | 89.2% |
| PD 12 | 995 | 683 | 68.6% |
| HSA IV | 4,102 | 4,060 | 99.0% |
| PD 13 | 314 | 314 | 100.0% |
| PD 14 | 255 | 255 | 100.0% |
| PD 15 | 2,783 | 2,741 | 98.5% |
| PD 19 | 750 | 750 | 100.0% |
| HSA V | 4,771 | 4,667 | 97.8% |
| PD 17 | 120 | 120 | 100.0% |
| PD 18 | 336 | 336 | 100.0% |
| PD 20 | 2,932 | 2,852 | 97.3% |
| PD 21 | 1,188 | 1,188 | 100.0% |
| PD 22 | 195 | 171 | 87.7% |

# VIRGINIA
# HEALTH SERVICE AREAS



## ADJUSTMENTS TO WAITING LIST DATA

Waiting list information from the 1981 Nursing home Survey is less valid than data from the survey on patients in nursing homes. Although instructions on the survey form requested that the waiting list be limited only to patients who actually would be admitted if a bed became available, many nursing homes do not record such information on their waiting lists. Waiting lists sometimes include any person who has ever inquired about the availability of a bed should he become impaired. To reduce the over-reporting of persons awaiting placement, other information about persons on waiting lists was used in Table 1 below.

TABLE 1

Persons Awaiting Nursing Home Placement[1]
by Current Residence, Source of Application,
Anticipated Payment Source, and Prescreening Status
in Virginia, 1981

Source of Application

| | Hospital | | | | | Community Applicants | | | | DMHMR Applicants | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Medicaid | | | Medicaid | | |
| Current Residence | Medicaid | Medicare | Priv. | Other | Total | Priv. Pay | Prescreen Approved | Awaiting Approval | Other | Appr. | Await. | Total |
| HSA 1 | 39 | 32 | 28 | 6 | 105 | 381 | 122 | 55 | 2 | 6 | 1 | 672 |
| 2 | 13 | 7 | 10 | 1 | 31 | 48 | 65 | 24 | 6 | 0 | 0 | 174 |
| 3 | 54 | 18 | 11 | 13 | 96 | 121 | 125 | 71 | 3 | 44 | 13 | 473 |
| 4 | 30 | 25 | 12 | 10 | 77 | 74 | 99 | 55 | 9 | 19 | 6 | 339 |
| 5 | 37 | 28 | 13 | 9 | 87 | 87 | 231 | 107 | 24 | 19 | 1 | 556 |
| Unknown | | | | | 0 | 30 | 31 | 15 | 1 | 0 | 0 | 77 |
| Out of State | 5 | 5 | 7 | 5 | 22 | 46 | 29 | 12 | 10 | 0 | 0 | 119 |
| TOTALS | 178 | 115 | 81 | 44 | 418 | 787 | 702 | 339 | 55 | 88 | 21 | 2410 |

[1]Source: The 1981 Nursing Home Survey

In Table 1, the following conservative assumptions were made: 1) All hospital patients on a nursing home waiting list are realistic candidates for nursing home admission; 2) all anticipated private pay patients and "other" in the community are realistic candidates for admission (no data available to conclude otherwise); 3) all anticipated Medicaid patients who have received prescreening approval or who have been referred to prescreening are realistic candidates for admission. In effect, the only persons removed from the waiting list count in Table 4 are: 1) persons in the community awaiting placement whose anticipated payment source is Medicaid and who have not been referred for prescreening; and 2) community applicants for whom anticipated payment source and preadmission screening status were unknown.

APPENDIX 3

## TABLE 1

Patients in Nursing Homes by Age Group in Virginia, by Health Service Area, 1981[1]

| Prior Residence of Patient | Under 65 # | % | 65 - 74 # | % | 75 and Older # | % | Unknown # | Total |
|---|---|---|---|---|---|---|---|---|
| HSA 1 Survey | 224 | 10.4 | 385 | 17.9 | 1,539 | 71.7 | 5 | 2,153 |
| Non-responses[2] | 67 | | 115 | | 458 | | - | 640 |
| Total | 291 | | 500 | | 1,997 | | 5 | 2,793 |
| HSA 2 Survey | 176 | 7.5 | 342 | 14.5 | 1,840 | 78.0 | 6 | 2,364 |
| Non-responses[2] | 0 | | 0 | | 0 | | - | 0 |
| Total | 176 | | 342 | | 1,840 | | 6 | 2,364 |
| HSA 3 Survey | 416 | 10.3 | 643 | 15.9 | 2,986 | 73.8 | 8 | 4,053 |
| Non-responses[2] | 57 | | 88 | | 408 | | - | 553 |
| Total | 473 | | 731 | | 3,394 | | 8 | 4,606 |
| HSA 4 Survey | 340 | 9.6 | 572 | 15.9 | 2,687 | 74.7 | 26 | 3,625 |
| Non-responses[2] | 4 | | 6 | | 30 | | - | 40 |
| Total | 344 | | 578 | | 2,717 | | 26 | 3,665 |
| HSA 5 Survey | 465 | 11.5 | 779 | 19.3 | 2,802 | 69.3 | 34 | 4,080 |
| Non-responses[2] | 11 | | 20 | | 68 | | - | 99 |
| Total | 476 | | 799 | | 2,870 | | 34 | 4,179 |
| Out of State | 44 | 7.0 | 103 | 16.3 | 485 | 76.7 | 4 | 636 |
| Unknown | 60 | 9.9 | 74 | 12.2 | 475 | 78.0 | 8 | 617 |
| TOTAL Survey | 1725 | | 2898 | | 12,814 | | 91 | 17,528 |
| Non-responses[2] | 139 | | 229 | | 964 | | - | 1,332 |
| Total | 1864 | 9.8 | 3127 | 16.5 | 13,778 | 73.0 | 91 .5 | 18,860 |

[1] Source: The 1981 Nursing Home Survey
[2] Assumed 95% occupancy rate in non-responding facilities and distributed patients into age groups according to the percentile distribution of responding facilities.

TABLE 2

Projected Population by Age Group
in Virginia and each Health Service Area, 1981[1]

| | Age | | |
|---|---|---|---|
| | Under 65 | 65-74 | 75 and over |
| HSA 1 | 623,175 | 48,671 | 31,008 |
| 2 | 1,030,351 | 48,558 | 24,922 |
| 3 | 1,086,129 | 92,642 | 58,024 |
| 4 | 859,347 | 66,061 | 39,593 |
| 5 | 1,249,879 | 76,939 | 44,673 |
| STATE | 4,848,881 | 332,871 | 198,220 |

[1]Source: Virginia Department of Planning and Budget

In calculating number of beds per thousand in an age group for Table 6 of the report, unknown ages were included in the age group 75 and over. Unknown prior residence and out-of-state were included in state rates but not in HSA rates.

TABLE 4-1

Total Demand for Nursing Home Beds in Virginia, February 11, 1981[1,2]

| Residence | Under 65 # pts. | Under 65 # W/L | Under 65 Total[7] | 65-74 # pts. | 65-74 # W/L | 65-74 Total[7] | 75 and Over # pts. | 75 and Over # W/L[3] | 75 and Over Total[7] |
|---|---|---|---|---|---|---|---|---|---|
| HSA 1 | 296 | | 367 | 508 | | 629 | 2,045 | | 2,535 |
| Origin[4] | 291 | 70 | 361 | 500 | 120 | 620 | 2,002 | 482 | 2,484 |
| Out of State[5] | 3 | 1 | 4 | 6 | 1 | 7 | 29 | 6 | 35 |
| Unknown[6] | 2 | 0 | 2 | 2 | 0 | 2 | 14 | 2 | 16 |
| HSA 2 | 202 | | 241 | 399 | | 433 | 2,123 | | 2,310 |
| Origin[4] | 176 | 13 | 189 | 342 | 25 | 367 | 1,846 | 136 | 1,982 |
| Out of State[5] | 22 | 6 | 28 | 52 | 8 | 60 | 243 | 47 | 290 |
| Unknown[6] | 4 | 0 | 4 | 5 | 1 | 6 | 34 | 4 | 38 |
| HSA 3 | 511 | | 563 | 787 | | 872 | 3,730 | | 4,125 |
| Origin[4] | 473 | 47 | 520 | 731 | 75 | 806 | 3,402 | 349 | 3,751 |
| Out of State[5] | 7 | 2 | 9 | 18 | 3 | 21 | 82 | 16 | 98 |
| Unknown[6] | 31 | 3 | 34 | 38 | 7 | 45 | 246 | 30 | 276 |
| HSA 4 | 353 | | 387 | 595 | | 652 | 2,835 | | 3,103 |
| Origin[4] | 344 | 33 | 377 | 578 | 107 | 632 | 2,743 | 253 | 2,996 |
| Out of State[5] | 5 | 1 | 6 | 12 | 2 | 14 | 58 | 11 | 69 |
| Unknown[6] | 4 | 0 | 4 | 5 | 1 | 6 | 34 | 4 | 38 |
| HSA 5 | 493 | | 571 | 837 | | 950 | 3,135 | | 3,553 |
| Origin[4] | 476 | 64 | 540 | 798 | 13 | 905 | 2,903 | 385 | 3,288 |
| Out of State[5] | 7 | 2 | 9 | 15 | 2 | 17 | 73 | 14 | 87 |
| Unknown[6] | 20 | 2 | 22 | 24 | 4 | 28 | 159 | 19 | 178 |
| STATE | 1864 | 236 | 2100 | 3127 | 398 | 3525 | 13,869 | 1771 | 15,640 |
| Origin[4] | 1760 | 227 | 1987 | 2949 | 340 | 3330 | 12,896 | 1605 | 14,501 |
| Out of State[5] | 44 | 12 | 56 | 103 | 15 | 118 | 489 | 93 | 578 |
| Unknown[6] | 60 | 5 | 65 | 74 | 13 | 87 | 483 | 59 | 542 |

[1]Source: The 1981 Nursing Home Survey
[2]Total Demand: The Number of Patients + The Number on Waiting Lists
[3]Those on Waiting Lists were assumed to have the same age distribution as nursing home patients.
[4]Origin indicates prior residence of patient.
[5]Out of State indicates out of state patients in facilities (or on waiting lists) in that HSA.
[6]Unknown indicates unknown prior residence for patients in facilities (or on waiting lists) in that HSA.
[7]Due to rounding, numbers may not add to totals.

## TABLE 1

Projected Total Demand for Nursing Home Beds by Age Group of Patients in Virginia, 1985[1]

| | Under 65 | 65-74 | 75 and Over | Total |
|---|---|---|---|---|
| HSA 1 | 391 | 673 | 2,904 | 3,968 |
| HSA 2 | 250 | 531 | 2,803 | 3,584 |
| HSA 3 | 583 | 917 | 4,650 | 6,150 |
| HSA 4 | 398 | 699 | 3,497 | 4,594 |
| HSA 5 | 595 | 1,063 | 4,086 | 5,744 |
| STATE | 2,217 | 3,883 | 17,940 | 24,040 |

[1]Based on current total demand rates, found in Table 8 of narrative, and population projections below.

## TABLE 2

Projected Population by Health Service Area in Virginia, 1985[1]

| | Under 65 | 65-74 | 75 and Over |
|---|---|---|---|
| HSA 1 | 664,183 | 52,212 | 35,536 |
| HSA 2 | 1,090,814 | 59,740 | 30,232 |
| HSA 3 | 1,121,225 | 97,458 | 65,351 |
| HSA 4 | 884,364 | 70,593 | 44,613 |
| HSA 5 | 1,295,381 | 85,728 | 51,417 |
| STATE | 5,055,967 | 365,731 | 227,149 |

[1]Source: Virginia Department of Planning and Budget, 1979 Series

Table 3

LICENSED AND APPROVED LONG TERM CARE BEDS IN VIRGINIA, 1981[1]

| HSA and Planning District | Licensed Beds | COPN Approved Beds (as of 7-1-81) | Total Licensed and Approved Beds |
|---|---|---|---|
| STATE | 20,374 | 2,595 | 22,969 |
| HSA I | 2,735 | 754 | 3,489 |
| PD 6 | 1,032 | 178 | 1,210 |
| PD 7 | 592 | 94 | 686 |
| PD 9 | 366 | 170 | 536 |
| PD 10 | 476 | 110 | 586 |
| PD 16 | 269 | 202 | 471 |
| HSA II | 3,020 | 118 | 3,138 |
| PD 8 | 3,020 | 118 | 3,138 |
| HSA III[2] | 5,687 | 589 | 6,276 |
| PD 1 | 294 | 164 | 458 |
| PD 2 | 280 | 119 | 399 |
| PD 3 | 839 | 126 | 965 |
| PD 4 | 550 | 76 | 626 |
| PD 5 | 1,707 | 0 | 1,707 |
| PD 11 | 1,022 | 0 | 1,022 |
| PD 12 | 995 | 180 | 1,175 |
| HSA IV | 4,102 | 676 | 4,778 |
| PD 13 | 314 | 240 | 554 |
| PD 14 | 255 | 240 | 495 |
| PD 15 | 2,783 | 196 | 2,979 |
| PD 19 | 750 | 0 | 750 |
| HSA V | 4,830 | 458 | 5,288 |
| PD 17 | 120 | 120 | 240 |
| PD 18 | 336 | 47 | 383 |
| PD 20 | 2,871 | 291 | 3,162 |
| PD 21 | 1,188 | 0 | 1,188 |
| PD 22 | 315 | 0 | 315 |

[1] Includes long-term care units of general hospitals.
[2] Includes Counties of Scott and Washington and City of Bristol, Virginia.

Source: 1980 Annual Survey of Medical and Nursing Facilities and COPN Records of the Division of Resources Development, State Health Department.

Nursing Home Bed Need in Virginia,
Based on Reduced Demand, 1985

| | Projection Based on Current Demand | | | Projection Based on Reduced Demand | | |
|---|---|---|---|---|---|---|
| | Total | Medicaid[1] Portion | Non-Medicaid Portion | 15% Reduction in Medicaid | 5% Reduction in Non-Medicaid | Total |
| HSA 1 | 3,968 | 2,658 | 1,309 | 2,260 | 1,243 | 3,503 |
| HSA 2 | 3,584 | 2,401 | 1,183 | 2,041 | 1,124 | 3,165 |
| HSA 3 | 6,150 | 4,120 | 2,030 | 3,502 | 1,928 | 5,430 |
| HSA 4 | 4,594 | 3,077 | 1,516 | 2,616 | 1,440 | 4,056 |
| HSA 5 | 5,744 | 3,848 | 1,895 | 3,270 | 1,801 | 5,071 |
| STATE[2] | 24,040 | 16,104 | 7,933 | 13,689 | 7,536 | 21,225 |

[1]Attributes 67% of total demand to Medicaid population.
[2]Due to rounding, numbers may not add to totals.