Emerging Trends in Selected Post-Acute Care Settings in Maryland

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MARYLAND HEALTH CARE COMMISSION

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Division of Health Resources

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Executive Summary

Introduction

While post-acute care can be broadly defined, this report focuses on two types of post-acute care settings: chronic hospitals and acute care hospital-based skilled nursing facilities. The purpose of this document is threefold:

♦ to establish a framework for understanding the underlying factors influencing the role of chronic hospitals and hospital-based skilled nursing care units in Maryland as key types of post-acute care providers;

♦ to guide policy development regarding post-acute care in Maryland; and,

♦ to fulfill the requirement of publishing a final report based on the data collected in the Commission's Subacute Care Survey, consistent with the regulations governing the development of subacute care (COMAR 10.24.05).

This report provides an overview of Maryland's chronic hospitals and acute hospital-based skilled nursing facilities. This analysis includes examining 1997 and 2001 utilization trend data for both types of post-acute care settings. A descriptive profile of a "typical" patient in each type of post-acute care setting is presented, followed by a section highlighting the common themes and differences for both settings. Factors influencing the demand for such post-acute care settings are discussed. Reimbursement issues, including inherent incentives and disincentives, are also examined. Key issues are summarized and recommendations for short and long-term initiatives for future study by the Commission are proposed.

Evolution of Post-Acute Care: Factors Contributing to its Growth

While there are many factors promoting the development and growth of post-acute care, the most important factor has been change in reimbursement systems for both acute care hospitals and skilled nursing facilities. Changes in utilization patterns in both types of post-acute care settings seem to coincide with changes in the payment structures for acute care hospitals and skilled nursing facilities (SNFs).

In addition to reimbursement-driven incentives, several other factors have fostered the growth of post-acute care services and will most likely continue to shape the way in which post-acute care services are delivered and financed in the future. These factors include: advances in medical technology and knowledge; an aging population with more medically complex conditions; and geographic distribution of post-acute care services across the State.

Overview: Maryland Chronic Hospitals

A chronic hospital is defined as a facility licensed as a special hospital-chronic in accordance with COMAR 10.07.01 that provides continuous and intensive medical, nursing, and ancillary services to medically-complex patients whose severity of illness requires an intensity of service, that is, close professional monitoring and observation, and frequent intervention, either after an acute

hospital phase of care or as a result of acute exacerbations of illness while residing in other settings, such as, home or nursing home.

Seven facilities in Maryland are licensed to provide special hospital-chronic care by the State's Office of Health Care Quality, with a statewide total of 525 chronic hospital beds. Their chronic bed complements range in size from 24 to 180 beds. Five chronic hospitals are private, and two are state-operated. This distinction is important as it determines the method of chronic hospital payment.

The five private chronic hospitals are geographically located in Central and Southern Maryland regions, which are more heavily populated areas, in general. The two state-operated chronic hospitals are each located in less densely populated geographic areas of the Western portion and Eastern Shore areas of Maryland.

Summary of Major Findings: Chronic Hospital Utilization Trends and Patient Profiles

Statewide trends and patient characteristics of Maryland's private and state-operated chronic hospitals for calendar years 1997 and 2001 are summarized below:

- Discharges increased by 40 percent from 1,380 to 1,936; while the overall statewide population increased by less than one percent.

- Statewide average lengths of stay decreased moderately from 55 to 51 days.

- Statewide occupancy of the private chronic hospitals increased from 63 percent to 73 percent.

- Statewide occupancy for the two state-operated chronic hospitals, based on licensed beds, slightly decreased from 43 percent to 41 percent. With the reduced number of budgeted beds, the occupancy of these state-operated chronic hospital beds increased, from 73 percent to 97 percent.

- While the source of chronic hospital admissions from acute care hospitals increased from 87 percent in 1997 to 94 percent in 2001, there was a simultaneous decline in those admitted from comprehensive care/extended care facilities (CCFs/ECFs) (the next highest source of admission) from seven percent in 1997 to one percent in 2001.

- The principal diagnosis on admission for chronic hospital patients in 1997 was respiratory system diseases in 28 percent of the cases, and circulatory system diseases in 14 percent of cases. By 2001, data show that there was a nine percent increase in chronic hospital patients with respiratory system related diseases, and a six percent decline in chronic hospital patients with circulatory system diseases.

- The proportion of patients discharged from chronic hospitals to acute care hospitals rose from 24 percent to almost 50 percent, while the percent of chronic hospital patients who died declined from 18 percent to 12 percent.

- While Medicare and Medicaid combined continue to be the largest payer of all chronic hospital admissions, there was a nine percent proportional decline in Medicaid with a simultaneous proportional increase in private insurance and Health Maintenance Organization coverage.

In summary, a typical chronic hospital patient in 2001 can be generally described as a male, 65+ years old, living with a relative (including spouse, children and other relative) prior to admission. This "typical" chronic hospital patient is from Baltimore City, and was directly admitted from an acute care hospital (medical/surgical unit) with a principal diagnosis related to respiratory system diseases. Medicare is the principal payment source, and this "typical" patient will have an average length of stay of 51 days in the chronic hospital and will be discharged to an acute care hospital (medical/surgical unit).

Overview: Maryland Acute Care Hospital-Based Skilled Nursing Facilities

Skilled nursing facilities (SNFs) in Maryland are licensed either as a comprehensive care facility (CCF) or extended care facility (ECF) in accordance with COMAR 10.07.02. Twenty-two of Maryland's 47 acute care hospitals (with medical/surgical beds) have distinct skilled nursing units licensed as either comprehensive care or extended care facilities, with a statewide total of 532 CCF or ECF beds. Their bed complements range in size from 10 to 49 beds. However, from December 2002 to June 2003, seven of these 22 acute hospital-based SNFs, with a total of 164 CCF/ECF beds, have recently indicated their intent to either temporarily delicense or close their skilled nursing units. This would represent a 31 percent decline in post-acute capacity in these hospital-based SNFs.

The majority of the 22 facilities is located in Central Maryland, and has about half the supply of beds, with 263 CCF or ECF beds. Western Maryland region has four facilities with 80 beds, Montgomery has three facilities with 72 beds, Southern Maryland region has three facilities with 54 beds, and two facilities on the Eastern Shore have 63 beds.

Summary of Major Findings: Acute Care Hospital-Based Skilled Nursing Facility Utilization Trends and Patient Profiles

Major findings on statewide trends and patient characteristics of Maryland's acute care hospital-based skilled nursing facilities, as based on the Commission's Subacute Care Surveys for calendar years 1997 and 2001, are summarized to include the following:

- Discharges increased by 21 percent from 10,553 to 12,765; while the overall statewide population increased slightly by less than one percent.

- The mean length of stay decreased by 1.5 days and the median declined by one day to a 13-day mean and a 10-day median length of stay in 2001.

- Statewide occupancy increased from 69.7 percent in 1997 to 76.9 percent in 2001.

- About 99 percent of patients in acute care hospital-based SNFs are admitted from acute general hospitals.

- Three diagnostic groups (circulatory system, injury and poisoning, and muscular/connective tissue) account for the majority (55 percent) of discharges.

- Most patients (75 percent in 2001) are discharged to their private residence.

- The primary payment source for acute care hospital-based SNFs is Medicare—about 80 percent.

In summary, a typical patient in an acute care hospital-based skilled nursing facility in 2001 can be described as a Caucasian female, aged 75-84 from the Central Maryland area. This person lived alone or with family, had Medicare as the primary payer. This "typical" patient was admitted from an acute care hospital, stayed about 13 days, and was discharged back home.

Post-Acute Care: Comparison and Analysis

Although post-acute care in Maryland is provided in both chronic hospitals and hospital-based skilled nursing facilities (SNFs), there are many differences in the types of patients served in the two settings. In general, chronic hospitals serve a more heterogeneous patient population than hospital-based skilled nursing facilities. Selected characteristics which highlight the differences and similarities include: demographics (age, race and gender); patient origin; living situation; primary payment source; source of admission; discharge destination; primary diagnosis; and mean and median lengths of stay. The similarities are reflective of some of the health system variables that have fostered the development of post-acute care. The differences are often reflective in differences in philosophies of the programs as well as reimbursement incentives, and geographic locations.

Reimbursement and Related Issues

The five private and two state-operated chronic hospitals in Maryland are under two vastly different reimbursement systems. The five private chronic hospitals are under the rate-setting authority of the Health Services Cost Review Commission (HSCRC) and are currently exempt from the federal reimbursement principles.

To date, there is no uniform rate setting methodology applied by HSCRC for determining private chronic hospital unit rates, similar to the charge per case (CPC) system applied to acute care hospitals. Until most recently, the HSCRC had exempted three of the five private chronic hospitals from reporting medical records abstract information on their chronic hospital patients, so there was no uniform method of obtaining information on charge per admission for chronic hospital patients at those facilities. However, beginning January 1, 2003, all private chronic hospitals are required to submit case-mix data on their patients.

The two state-operated chronic hospitals, Western Maryland Hospital Center and Deer's Head Medical Center, are not under the jurisdiction of the HSCRC and, therefore, fall under the federal reimbursement system for long term care hospitals. Until most recently, they were reimbursed under Medicare and Medicaid cost-based reimbursement principles. Medicare's new prospective payment system (PPS) for long term care hospitals now applies to the two state-operated chronic hospitals only, since the five private chronic hospitals are under a waiver from the federal PPS. However, Medicaid chronic hospital payment remains under cost-based reimbursement principles.

Given the different payment systems under which the private and state-operated chronic hospitals operate, it is difficult to make comparisons of rates. Even when attempting to compare Medicare rates, for instance, the daily private chronic hospital rates established by HSCRC include room, board and routine nursing costs, while the state-operated chronic hospital rates include room, board, routine nursing costs, and ancillary costs. Such gaps and inconsistencies in the information collected across all chronic hospitals limit specific data analysis and comparisons.

Unlike the all-payer rate setting system for private chronic hospitals, skilled nursing facility rates are determined based on the payer type. For private pay, facilities are free to set rates as they wish. For Medicare skilled nursing facility (SNF) clients, per diem rates are determined based on Medicare's Resource Utilization Groups (RUGs)-based prospective payment system (PPS) for skilled nursing facilities. For Medicaid nursing home clients, per diem rates are based on a prospective cost-based methodology. Once again, due to the various approaches for setting rates and collecting data, it is quite difficult to analyze data across these two post-acute care settings.

Community-Based Alternatives to Institutional Post-Acute Care

Institutional facilities providing long term care services are facing new challenges with the recent United States Supreme Court decision, *Olmstead v. L.C.* In response to this decision, the State of Maryland has expanded its existing planning and development of community-based services and is implementing new initiatives under Medicaid.

The federal and Maryland state governments have jointly recognized the importance of fostering development of community-based alternatives to institutional long-term care settings. The impact of the *Olmstead* decision, as well as the recent development and implementation of waivers in Maryland on the occupancy of institutional post-acute care settings such as chronic hospitals and hospital-based SNFs, is currently not known.

Post-Acute Care: Summary of Key Issues

Several issues or themes emerge from this report as follows:

- Post-acute care is an evolving level of care.
- Reimbursement incentives are a major driving force in the provision of post-acute care.
- Although post-acute care is provided in both chronic hospitals and hospital-based skilled nursing facilities, there are many differences in the types of patients served in the two settings.
- More complete and comparable data across all settings is required for planning and policy development.
- Alternative planning strategies for post-acute care services in Maryland should be evaluated.

Recommendations for Future Study

Short-Term Initiatives

1. The Commission will continue to collect patient and facility-specific data for all chronic hospitals and hospital-based skilled nursing facilities via its annual Subacute Care Survey.

2. The Commission will establish a Work Group composed of representatives from: Health Services Cost Review Commission, Medicaid, Delmarva, Office of Health Care Quality, and Department of Health and Mental Hygiene, to evaluate the data currently being collected for post-acute care settings, and determine how the data collection process can be improved to more precisely describe the role of post-acute care providers.

3. The Commission will monitor the impact of the new federal prospective payment system (PPS) for long term care hospitals (LTCHs) on Maryland's two state-operated chronic hospitals, which went into effect in January 2003.

4. The Commission will continue to update its chronic hospital occupancy report and publish it annually in the *Maryland Register*.

Long-Term Strategies

Following the collection and analysis of patient level data from both post-acute care settings, the following long-term strategies for planning and policy development are recommended:

1. The Commission will take the necessary steps to sunset the Subacute Care Regulations (COMAR 10.24.05), once the patient-level data has been analyzed and a mechanism for ongoing data collection and reporting has been established for all chronic hospitals and hospital-based skilled nursing facilities.

2. As part of the next update of the State Health Plan for Long Term Care Services, the Commission will examine alternative planning strategies for post-acute care services.

I. Introduction

Background

As the aged population grows, the magnitude of persons suffering from chronic illnesses and conditions will most likely increase.[1] Although recent trends indicate that disability rates among older persons have declined,[2] it is likely that the need for post-acute care will grow. Therefore, it is important to understand the underlying factors influencing the way post-acute care services are delivered and financed in Maryland, in order to better plan for these settings.

The Maryland Health Care Commission (MHCC) is responsible for developing a State Health Plan for Long Term Care Services to ensure that persons of all ages have access to a range of services. In that regard, the Commission monitors the forces that are shaping the health care delivery and financing systems, in order to better predict and plan for such services. Through its data collection efforts, the Commission analyzes trends in health care utilization to predict change and to assess emerging issues. The goal of this report is to assess trends and forces affecting post-acute care. While post-acute care can be broadly defined, this paper focuses on two types of post-acute care settings: chronic hospitals, and acute hospital-based skilled nursing facilities.[3]

Chronic hospitals in Maryland are currently licensed as special hospital-chronic under COMAR 10.07.01.02B, if they offer a recognized program of specialized services to patients who need "…constant medical and nursing care by reason of chronic illness or infirmity; or have a chronic disability amenable to rehabilitation." (Health-General Article, §19-501 et seq., Annotated Code of Maryland.) Chronic hospital care refers to a Maryland-specific licensure category. It is important to note that patients with a chronic disease do not necessarily reside in a chronic hospital.

Skilled nursing facilities in Maryland are licensed either as a comprehensive care facility (CCF) or extended care facility (ECF) in accordance with COMAR 10.07.02. The CCF license is defined as a unit or facility "…which admits patients suffering from diseases, disabilities, or advanced age who require medical service and nursing service rendered by or under the supervision of a registered nurse." [4] The ECF license refers to "…a unit or facility which offers

[1] "Medicine and Chronic Illness;" *Health Affairs*, November/December 2001; p. 43

[2] AARP Public Policy Institute, *Before the Boom: Trends in Long-Term Supportive Services for Older Americans with Disabilities*, October 2002.

[3] Post-acute care is not a licensure category. Rather, it is a level of care that is best described as less intensive than general acute hospital care, but more intensive than custodial nursing home care. As the term implies, post-acute care usually refers to services rendered following an acute care hospital stay, typically for patients recovering from an illness or operation. Such post-acute patients receive a higher level of clinical services than typical residents in a traditional nursing home. Post-acute care services can be provided in a variety of settings, including home-based settings (e.g., home health agencies) and institution-based settings (e.g., chronic hospitals, extended care facilities, skilled nursing facilities, and rehabilitation hospitals).

[4] Health-General Article, §19-308; Annotated Code of Maryland Regulations (COMAR) 10.07.02.01

subacute care, providing treatment services for patients requiring inpatient care but who do not currently require continuous hospital services."[5]

The term "skilled nursing facility" is generally referenced by Medicare's reimbursement for this level of care. More specifically, Medicare does not reimburse for long term care services, but for post-acute skilled nursing level of care, which could be provided in either freestanding or hospital-based nursing homes. For purposes of this document, those acute care hospitals with distinct units of licensed nursing home beds (that is, licensed as either comprehensive care or extended care facility beds) are categorized as "acute hospital-based skilled nursing facilities."

Purpose of Report

The purpose of this report is threefold: to establish a framework for understanding the underlying factors influencing the role of chronic hospitals and hospital-based skilled nursing care units in Maryland as key types of post-acute care providers; to guide policy development regarding post-acute care in Maryland; and, to fulfill the requirement of publishing a final report based on the data collected in the Commission's Subacute Care Survey, consistent with the regulations governing the development of subacute care (COMAR 10.24.05).

The Commission is in a unique position to undertake this since it has conducted several studies focusing on the increasing demand for post-acute care services in Maryland:

- In 1993, the Maryland Health Resources Planning Commission (the "MHRPC", a predecessor agency to the Maryland Health Care Commission) conducted an analysis of Maryland's chronic hospitals.[6]

- In 1995, the MHRPC initiated the Subacute Care Project, including adoption of COMAR 10.24.05, Development of Subacute Care Units, which became effective July 31, 1995.[7]

- In 2001, the MHCC published its report examining Certificate of Need (CON) policy and regulatory issues affecting rehabilitation hospital and chronic hospital services in Maryland.[8]

[5] Health-General Article, §19-308; Annotated Code of Maryland Regulations (COMAR) 10.07.02.01
[6] Maryland Health Resources Planning Commission; *An Analysis of Chronic Hospitals in Maryland: A Report of the Chronic Hospital Technical Advisory Committee*; December 1993.
[7] Maryland Health Resources Planning Commission; *Subacute Care Project: Preliminary Report*; December 1995.
[8] Maryland Health Care Commission; *An Analysis and Evaluation of Certificate of Need Regulation in Maryland; Working Paper: Rehabilitation Hospital and Chronic Hospital Services;* May 17, 2001.

Report Organization

This report provides an overview of Maryland's chronic hospitals and acute hospital-based skilled nursing facilities. This analysis includes examining 1997 and 2001 utilization trend data for both types of post-acute care settings. A descriptive profile of a "typical" patient in each type of post-acute care setting is presented, followed by a section highlighting the common themes and differences for both settings. Factors influencing the demand for such post-acute care settings are also presented. Reimbursement issues, including inherent incentives and disincentives, are addressed. Key issues are summarized and, finally, recommended short and long-term initiatives for future study by the Commission are proposed.

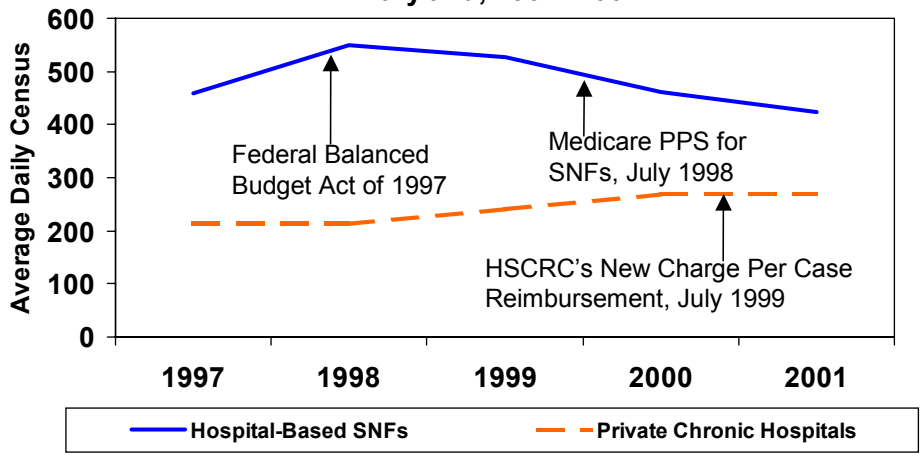
II. Evolution of Post-Acute Care: Factors Contributing to its Growth

One strategy to reduce acute care hospitals' lengths of stay has been the development of post-acute care services. This strategy has been encouraged with the implementation of the rate setting system for all acute general hospitals in Maryland.[9] As care moves out of the acute care hospital setting, other post-acute sources of care become the predominant provider. While there have been an increasing number of acute care hospital admissions, the average lengths of stay in the acute hospital setting have been declining. From 1997 to 2001, there was about a 12 percent increase in the number of acute care hospital discharges (medical/surgical), from 418,503 to 468,269 discharges, and a concurrent decline in the average length of stay from 4.97 days to 4.56 days during this same time period. This implies that hospital patients continue to be discharged "quicker and sicker." The issue then raised is: where are these patients going, and is there enough post-acute care capacity to assure access for these more medically complex patients.

Changing Reimbursement Systems Across the Continuum

While there are many factors promoting the development and growth of post-acute care, the most important factor has been change in reimbursement systems for both acute care hospitals and skilled nursing facilities. The relationship between changes in utilization patterns in both types of post-acute care settings and changes in the payment structures for acute care hospitals and skilled nursing facilities (SNFs) is shown in Figure 1, Changes in Average Daily Census: Hospital-Based SNFs and Private Chronic Hospitals, Maryland, 1997 – 2001.

Figure 1
Changes in Average Daily Census:
Hospital-Based SNFs and Private Chronic Hospitals,
Maryland, 1997- 2001



Sources: Maryland Health Care Commission, Nursing Home Occupancy Reports, Fiscal Years 1997 – 2001; and, Health Services Cost Review Commission, private chronic hospitals' financial data base, Fiscal Years 1997 - 2001.

[9] Maryland's "charge per case" (CPC) targeting system was implemented in July 1999 by the Health Services Cost Review Commission (HSCRC). The CPC remains in effect today, with periodic revisions. A more detailed description of the inherent incentives of the CPC system is included later in the report.

As shown in Figure 1, following the first full year of Medicare's implementation of its new SNF prospective payment system (PPS), there was a 19.8 percent decline in the average daily census of hospital-based SNFs, from 526.9 in 1999 to 422.7 in 2001. Simultaneously, with the implementation of HSCRC's new charge per case acute hospital reimbursement system in July 1999, there was a 12.7 percent increase in the private chronic hospital's average daily census from 240.6 in 1999 to 271.1 in 2001. An historical perspective of changes in Medicare's reimbursement is summarized below.

1970 to 1984

Prior to the development of diagnostic related groups (DRGs) and Medicare's Prospective Payment System (PPS) for acute care hospitals, there were generally two types of institutional settings: acute care hospitals and nursing homes. Both types of settings were simply paid for services rendered based on costs. With changes in the acute care hospital reimbursement system nationwide and Maryland's unique all payer rate setting system[10], incentives were created to reduce hospital costs by getting patients out of the acute hospital setting more quickly. Moreover, advances in medical technology allowed for the development of freestanding ambulatory surgical centers. This further fostered the shift from inpatient care to outpatient care.

1985 to 1996

During this time period, many hospitals were beginning to establish their own hospital-based skilled nursing facilities. Prior to the Balanced Budget Act of 1997 and the development of a prospective payment system for skilled nursing facilities, such facilities were reimbursed by Medicare based on "reasonable" costs, with a higher reimbursement for hospital-based nursing facilities than for freestanding nursing facilities. Since almost all the patients in these hospital-based skilled nursing facilities (HB SNFs) were admitted from an acute care hospital, the role of these hospital-based SNFs was primarily to serve as a "step-down" unit from the hospital. This shifting of patients from an acute care hospital to a skilled nursing facility was perceived to be a cost-effective strategy, at least from the acute hospital's perspective. It remains unclear if there were true cost savings to the entire *system* of care.

In 1995, the Maryland Health Resources Planning Commission (MHRPC, a predecessor agency to the Maryland Health Care Commission) initiated the Subacute Care Project[11], which

[10] Legislation enacted in 1971 established hospital rate regulation in Maryland. While Maryland's hospital rate setting system has been revised over the past 30 years, it can be generally described as a unit rate system based on charges, where Medicare, Medicaid and some third party payers who qualify pay 94 percent of rates set. In 1977, Maryland participated in a Heath Care Financing Administration (HCFA) demonstration project to study various payment approaches for reducing Medicare hospital costs. Although the national DRG-based PPS system became effective in 1982, a specific federal law passed in 1980 allowed Maryland to maintain its all payer rate setting system. Maryland's Medicare waiver from the national Medicare PPS may be retained as long as Maryland hospitals perform better than the nation in the rate of growth of Medicare payments ("Medicare waiver test"). To date, Maryland continues to meet the waiver test criteria. (Correspondence dated November 27, 2002, from Centers for Medicare and Medicaid Services to Robert Murray, Executive Director, HSCRC). The Health Services Cost Review Commission (HSCRC) retains the authority for Maryland's hospital rate setting system. In July 1999, the HSCRC replaced the Inflation Adjustment System (IAS) and the Guaranteed Inpatient Revenue (GIR) with the new Charge Per Case system (CPC) with specified facility-specific targets.

[11] The Subacute Care Project included adoption of COMAR 10.24.05, Development of Subacute Care Units, which became effective July 1995. There is no unique Maryland license or reimbursement category for subacute care. Different types of providers, under varying licensure categories and reimbursement mechanisms, may all provide

created a subacute care bed pool of comprehensive care facility beds not to exceed 175 beds statewide. This bed pool was separate from, and in addition to, the comprehensive care bed need. It was determined that only acute care general hospitals could apply for the limited number of beds from the subacute care bed pool.[12] In addition, the regulations governing the development of subacute care (COMAR 10.24.05) set forth the parameters of a comprehensive subacute care data collection instrument. These regulations also required the development of a final report based on the data collected.[13]

1997 – 2003

With the advent of Medicare's Prospective Payment System (PPS) for skilled nursing facilities established with the passage of the Balanced Budget Act of 1997, payment for SNFs was no longer based on a cost-based system of "reasonable" costs. Rather, SNFs receive a set payment for each day of care (per diem rate) rendered to its Medicare beneficiaries. The PPS for SNFs is based on a case-mix system of Resource Utilization Groups (RUGs), which combines routine, ancillary, and capital costs into an all-inclusive case-mix adjusted rate.

With this pivotal change in Medicare reimbursement (phased-in over three years starting July 1, 1998), several hospital-based SNFs closed[14] due to financial disincentives, since costs were higher than PPS-based reimbursement. Research supports the assumption that the RUGs-based PPS provides a higher reimbursement for intensive rehabilitation cases than for medically complex patients.[15] The simultaneous decline in the average daily census of acute hospital-based SNFs with the increase in average daily census of private chronic hospitals (as shown in Figure 1) suggest that with closures of some of these hospital-based SNFs, some patients may have shifted to chronic hospitals. Due to data limitations on tracking patients from one type of post-acute provider to another, the magnitude of this shift cannot be quantified. Nevertheless, the issue remains; with the recent and anticipated closures of hospital-based SNFs, where are these patients receiving care?

As Appendix Table A-1 shows, the statewide occupancy of the private chronic hospitals has increased steadily over the last five years from 63 percent in 1997 to 73 percent in 2001. Part of the reason for this increase in utilization may be as a result of incentives in the HSCRC's rate setting system. In July 1999, the HSCRC authorized implementation of a new rate setting system for all acute general hospitals in Maryland called the Charge per Case (CPC) targeting system. Under the CPC system, a per case constraint is established for each hospital. The per case constraint was initially established by dividing the hospital's total inpatient revenue for a 12 month period by its actual cases for that period. The CPC constraints are updated every year for

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subacute care – whether a full range of subacute care services, or a single, specialized service. Some settings may provide subacute care in a dedicated unit, while others may not. Unlike post-acute care patients, subacute care patients may not have required an acute care hospital stay prior to receiving so-called subacute care services.

[12] Acute care hospitals without comprehensive care facility beds were given the opportunity to apply for the limited number of beds from the subacute care bed pool, as a way to "level the playing field" with other providers who could readily establish subacute care units with existing comprehensive care beds within their facility.

[13] As required by COMAR 10.24.05, both preliminary and progress reports have been published.

[14] From 1997 to 2001, five hospital-based SNFs with a total of 119 beds closed, while four new facilities opened, with a total of 80 beds. In 2002 four hospital-based SNFs closed, with a total of 81 beds. From December 2002 to June 2003, seven additional hospital-based SNFs with a total of 164 beds have indicated their intent to either temporarily delicense or close their skilled nursing units.

[15] Liu, Korbin; Harvell, Jennie; and Gage, Barbara. *Post-Acute Care Issues for Medicare: Interviews with Provider and Consumer Groups, and Researchers and Policy Analysts*. May 2000.

inflation on July 1 and each hospital has to live within its overall CPC constraint for all of its cases for the next 12 month period. Of the five private chronic hospitals, Deaton Specialty Hospital and Home ("Deaton"), Levindale Hebrew Geriatric Center and Hospital ("Levindale"), and Gladys N. Spellman Specialty Hospital and Nursing Center ("Spellman") were specifically excluded from the CPC system. Although James Lawrence Kernan Hospital ("Kernan") and Johns Hopkins Bayview are on the CPC system, the HSCRC excludes the chronic hospital cases from the CPC because of the expensive nature of the cases and the lack of case-mix data on the chronic cases.

Under the CPC there is an incentive for acute care hospitals to treat patients more efficiently. This can be accomplished by lowering length of stay, reducing ancillary charges, or discharging patients more quickly. If a hospital can reduce what it has historically charged to a group of patients, it can raise its charges to other patients so that it achieves its overall CPC for by the end of the year. Hospitals could also perform favorably under the CPC system by transferring patients to a chronic hospital (or skilled nursing facility, when appropriate) for care. Acute hospitals have an incentive to move patients to their chronic hospitals or SNFs, because the chronic hospitals' and SNF cases are not included in the acute hospitals' CPC standard. Additionally, since the chronic hospitals under the HSCRC get paid 94% of charges by Medicare and Medicaid, the hospitals would not lose any reimbursement by transferring the patient. This transfer incentive may be part of the reason for the increase in private chronic hospital admissions. Moreover, the five private chronic hospitals are all part of multi-hospital systems, which would further facilitate such transfers.

Beginning January 2003, case-mix data from all private chronic hospitals are now being collected by the HSCRC. Moreover, the HSCRC has established interim constraint mechanisms for all private chronic hospitals, effective July 2003.[16] However, it appears that HSCRC's current data collection system can not provide information on "tracking" acute care hospital patients discharged or transferred to a chronic hospital.

The new federal PPS for long term care hospitals[17] went into effect for Maryland's two state-operated facilities (Deer's Head Medical Center and Western Maryland Hospital Center) beginning January 1, 2003. This Medicare prospective payment system for long term care hospitals (LTCH)[18] replaces the cost-based Medicare payment system under which Maryland's two state-operated chronic hospitals were historically paid. Since the five private chronic hospitals are currently under the Medicare waiver, they will not be reimbursed by the new long term care hospital payment method as long as Maryland retains its Medicare waiver. It is anticipated that any *new* private chronic hospital established in Maryland would be reimbursed by this new federal PPS for long term care hospitals, since they would not be under the Medicare waiver. It is important to further note that currently, only five of the licensed Maryland chronic hospitals are designated by the federal classification of "long-term care hospital."[19] Should

[16] Health Services Cost Review Commission, "Final Staff Recommendation on Rate Update and Rate Constraints for Chronic Care Services in Maryland," June 4, 2003

[17] Department of Health and Human Services, Centers for Medicare and Medicaid Services, 42 CFR Parts 412, 413, and 476; Medicare Program; Prospective Payment System for Long Term Care Hospitals: Implementation and FY 2003 Rates; Final Rule. *Federal Register*, August 30, 2002.

[18] According to Section 42 Code of Federal Regulations, long term care hospitals must have a Medicare provider agreement to participate as a hospital, maintaining a minimum 25-day average length of stay. .

[19] According to CMS' Online Survey Certification and Reporting System (OSCAR), Johns Hopkins Bayview and Gladys Noon Spellman are *not* designated as long term care hospitals. (Phone call March 6, 2002, with Judy Richter, CMS)

Maryland's Medicare waiver come to an end, the federal Centers for Medicare and Medicaid Services (CMS) would not recognize the "chronic hospital" license and those private chronic hospitals without the long term care hospital federal designation would not receive Medicare reimbursement.

This nationwide change in LTCH payment policy was initially part of the multiple payment reforms included in the Balanced Budget Act of 1997, to address concerns for the rapid growth in Medicare payments to long term care hospitals.[20] Subsequent legislation was passed to design and implement a PPS for LTCHs that is based on diagnosis-related groups (DRGs) and uses the discharge as the unit of payment.

In addition to these reimbursement-driven incentives, several other factors have fostered the growth of post-acute care services and will most likely continue to shape the way in which post-acute care services are delivered and financed in the future. These factors include: advances in medical technology and knowledge; an aging population with more medically complex conditions; and, geographic distribution of post-acute care services across the State.

Medical Technology Advances

Recent research has indicated that there is declining disability among the elderly.[21] This decline has been attributed to improved medical technology and behavioral changes. Ongoing changes and advances in medical knowledge and technology have prolonged lives for persons, some of whom have become technology-dependent. Research advances have also benefited individuals with autoimmune disorders in which the immune system attacks the body's own tissues. Such illnesses include diabetes, rheumatoid arthritis, multiple sclerosis, and some kidney and blood-vessel disorders. Advances in medical imaging (e.g., computed tomography scanning and magnetic resonance imaging) have enhanced diagnostic capabilities. With this dramatic evolution of medical technology, there have also been shifts in human resources, with nursing staff requiring a higher level of skills and knowledge. This change in technology also permits chronic care to be delivered at home.

Continuing advances in medical technology will most likely increase the demand for post-acute care. Once the patient's acute episode of illness has subsided and he or she no longer requires an acute care hospital setting, the patient's post-acute care needs may be met in a variety of settings, including that of a chronic hospital and hospital-based skilled nursing facility. What remains uncertain is what proportion of the increased post-acute patient population will require these settings. With consumers' preference for home-based or community-based settings, at this point in time it is difficult to ascertain the magnitude of future need for institutional post-acute care.

[20] Between 1988 and 1996, Medicare payments to long term care hospitals grew from $0.2 billion to $1.7 billion, an average annual growth rate of 31 percent. (Medicare Payment Advisory Commission, 1999.)
[21] David M. Cutler, "Declining Disability Among the Elderly." *Health Affairs*, November/December 2001.

Aging Population with Medically Complex Conditions

Patients who are living longer tend to have multiple medical system problems. There is a greater number and intensity of medical care services now being provided to post-acute patients, requiring an increase in hours of care provided by both physicians and professional nursing staff. Many of the types of patients served in post-acute settings today are those who would have remained in acute care hospital beds 20 years ago.

While the aging population will most likely impact the need for long term care services, it remains unclear as to what types of services and how much. Long term care services are provided in a variety of settings; however, consumer preference as well as *Olmstead* rulings will result in increased demand for community-based care.[22] Whether certain patients can be appropriately cared for in a non-institutional setting with less physician intervention or monitoring is a question that remains to be answered.

Geographic Distribution

Geographic distribution of Maryland's seven licensed chronic hospitals and beds include four facilities located in Baltimore City, with a total of 366 licensed chronic hospital beds. The remaining three facilities are located in Prince George's County (33 chronic beds); Washington County (60 chronic beds); and Wicomico County (66 chronic beds). (Refer to Table 1.)

It appears that chronic hospital beds have been developed, by default, on a regional basis. The vast majority of the beds are located in the most populated region (Central Maryland, Baltimore City). However, in the Southern region of Maryland (including Prince George's County), there is only one chronic hospital available. Moreover, Montgomery County has no chronic hospitals at all. Furthermore, the less populated regions (Western Maryland's Washington County, and the Eastern Shore's Wicomico County) have a greater number of chronic beds available to their region's population. The two state-operated chronic hospitals are located in each of these regions, serving the population of the entire region.

In comparison, the 22 acute care hospitals with skilled nursing facility beds (refer to Table 3) are more evenly distributed across the state than the seven chronic hospitals. This distribution of HB-SNFs across the state is partly related to the Subacute Care Project initiative discussed earlier. Under this 1995 initiative, a subacute care bed pool of comprehensive care facility beds not to exceed 175 beds statewide was established. As part of this initiative, only acute care hospitals could apply for this limited number of beds from the subacute care bed pool, with up to two programs within each of the five planning regions.

The current geographic distribution of chronic hospital and acute hospital-based SNF beds may be due, in part, to the availability and accessibility to other post-acute alternative settings in those regions. This, combined with the socioeconomic variations across the regions, would provide the opportunity for greater consumer choice across the range of alternative settings, including noninstitutional alternatives. The supply and distribution of both types of institutional post-acute care settings are described in greater detail later in this report.

[22] The United States Supreme Court decision, *Olmstead v. L.C.*, in July 1999, supports federal, state, and local governments to develop community-based services for individuals with disabilities. Further explanation can be found in the section on community-based alternatives to institutional post-acute care.

III. Overview: Maryland Chronic Hospitals

Licensure Description

A chronic hospital is defined as a facility licensed as a special hospital-chronic in accordance with COMAR 10.07.01 that provides continuous and intensive medical, nursing, and ancillary services to medically-complex patients whose severity of illness requires an intensity of service, that is, close professional monitoring and observation, and frequent intervention, either after an acute hospital phase of care or as a result of acute exacerbations of illness while residing in other settings, that is, home or nursing home.[23]

Chronic hospitals may be voluntarily accredited by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) under hospital standards. Deemed status may be obtained for purposes of licensure and Medicare certification if the beds are JCAHO-accredited under hospital standards, or a facility may opt to be surveyed by the Maryland Department of Health and Mental Hygiene's (DHMH's) Office of Health Care Quality (OHCQ) as a hospital.

In summary, the chronic hospital level of care reflects a patient who, while not in an acute phase of an illness, requires a *hospital* level of care that provides the necessary intensive staffing (by a physician and registered nurses) for continuous monitoring of the patient's medical needs. The patient would require the medically necessary support and ancillary diagnostic and treatment services not typically available in alternative non-acute hospital settings.[24]

Supply and Distribution of Chronic Hospitals in Maryland

Seven facilities in Maryland are licensed to provide special hospital-chronic care by the State's Office of Health Care Quality, with a statewide total of 525 chronic hospital beds (see Table 1). Their chronic bed complements range in size from 24 to 180 beds. Five chronic hospitals are private, and two are state-operated. This distinction is important as it determines the method of chronic hospital payment.

It is interesting to note that four of the five geographic planning regions have at least one facility with chronic hospital beds. Only Montgomery County (a single county planning region) does not have any chronic hospitals. Four of the five private chronic hospitals are located in Baltimore City, with 366 licensed chronic hospital beds, representing 70 percent of the State's total chronic hospital capacity. The remaining fifth private chronic hospital is located in Prince George's County (Southern Maryland region), with 33 beds, which is about six percent of Maryland's total chronic hospital capacity. Moreover, each of the private chronic hospitals is also part of a multi-hospital system. Specifically, in Baltimore City, Deaton and Kernan are part of the University of Maryland Medical System (UMMS); Johns Hopkins Bayview is part of the Johns Hopkins Medical System (JHMS); and Levindale is part of the LifeBridge Health System. In Prince George's County, Spellman is part of the Dimensions Health System. This is important, as discussed above, related to patient transfers from acute care to chronic hospitals.

[23] Health-General Article, §19-501 *et seq*., Annotated Code of Maryland; Code of Maryland Regulations (COMAR) 10.07.01

[24] Maryland Health Resources Planning Commission, *An Analysis of Chronic Hospitals in Maryland: A Report of the Chronic Hospital Technical Advisory Committee, December 1993, p. 24*.

One of the two state-operated chronic hospitals is located in Western Maryland, with 11 percent of the State's chronic hospital capacity. The other state-operated chronic hospital is located on the Eastern Shore, with about 13 percent of the statewide chronic hospital capacity.

In summary, the private chronic hospitals are geographically located in Central and Southern Maryland regions, which are more heavily populated areas, in general. The two state-operated chronic hospitals are each located in less densely populated geographic areas of the Western portion and Eastern Shore areas of Maryland.

As noted in Table 1, all seven chronic hospitals are located in facilities also licensed for comprehensive care facility (CCF) beds.[25] Some have other licensure categories, as well, such as comprehensive inpatient rehabilitation (CIR) beds and acute medical/surgical beds. This bed composition provides a continuum of care within an institutional framework. It should be noted that this report focuses on the chronic hospital, not chronic patients, as a type of post-acute care setting. This distinction is important to note since not all patients with chronic disease necessarily reside in a chronic hospital or another institutional setting.

[25] On July 11, 2002, the Maryland Health Care Commission authorized the permanent delicensure of 114 of the 194 comprehensive care facility beds. Subsequently, on October 3, 2002, the remaining 80 CCF beds were requested to be relinquished, thus requiring a CON application for the permanent closure of the nursing facility. Source: MHCC correspondence to James Warner, University Specialty Hospital, letter dated November 14, 2002.

Table 1
Inventory of Licensed Beds at Facilities with Special Hospital-Chronic and Other Types of Licensed Beds, by Facility: Maryland, June 1, 2003

Facility	Type of Licensed Beds: Special Hospital-Chronic	Rehabilitation Hospital	Comprehensive Care Facility	Acute Care Hospital (M/S)Beds
Baltimore City				
Deaton Specialty Hospital and Home	180[26]	0	80[27]	0
Johns Hopkins Bayview	62	4	49[28]	216
James Lawrence Kernan Hospital[29]	24	90	22	8
Levindale Hebrew Geriatric Center and Hospital[30]	100	20	176	0
Prince George's County				
Gladys N. Spellman Specialty Hospital and Nursing Center[31]	33	0	77	0
Washington County				
Western Maryland Hospital Center	60	0	63	0
Wicomico County				
Deer's Head Medical Center	66	0	90	0
Total State	525	114	557	224

Source: Maryland Health Care Commission's Inventory of Beds, June 1, 2003. Licensed beds do not include waiver or CON-approved (certified beds) not yet operational or licensed by Maryland's Office of Health Care Quality. Furthermore, temporarily or permanently delicensed beds are not reflected in the current inventory of licensed beds.

[26] Deaton's chronic bed complement is broken down as follows: 20 psychiatric rehabilitation beds, 38 ventilator dependent beds, and 122 chronic hospital beds; for a total of 180 special hospital–chronic. Source: Maryland Health Services Cost Review Commission.

[27] On July 11, 2002, the Maryland Health Care Commission authorized the permanent delicensure of 114 of the 194 comprehensive care facility beds. Subsequently, on October 3, 2002, the remaining 80 CCF beds were requested to be relinquished, thus requiring a CON application for the permanent closure of the nursing facility. Source: MHCC correspondence to James Warner, University Specialty Hospital, letter dated November 14, 2002.

[28] The 49 CCF beds licensed to Johns Hopkins Bayview Medical Center include 18 beds known as the Transitional Care Unit. The remaining 31 beds are currently not operational, since they were approved by the Office of Health Care Quality for a "voluntary admission ceiling" on May 23, 1997 which, to date, is still in effect. Johns Hopkins has an additional 22 comprehensive care beds dually licensed as Special Hospital-Communicable Disease Beds, but are temporarily off-line, and are not reflected.

[29] By letter dated August 23, 2002, the Maryland Health Care Commission approved the re-licensure of 24 chronic hospital beds it had acquired pursuant to an October 1996 consolidation of Kernan and Montebello Rehabilitation Hospitals. Subsequently, in a letter dated May 28, 2003, the Commission noted the need for a public informational hearing on Kernan's closure of its Transitional Rehabilitation Unit comprised of 22 CCF beds. Note: 16 of the remaining 90 rehabilitation beds received prior approval to be dually-licensed as chronic hospital beds.

[30] Levindale has a total of 296 beds. Of the 176 comprehensive care facility (CCF) beds, 24 are designated as subacute. Licensed beds reflect Commisison's approval (April 22, 2003) of Levindale's CON application to add 20 chronic hospital beds by delicensing 20 CCF beds.

[31] Spellman has requested (letter dated April 29, 2003) to increase its chronic hospital capacity by 4 waiver beds, with a corresponding delicensure of 4 CCF beds.

Maryland Chronic Hospital Utilization Trends

Data Sources

There are generally three sources of information available for analyzing utilization trends in Maryland's chronic hospitals: the Health Services Cost Review Commission's (HSCRC) monthly statistical data; the Maryland Department of Health and Mental Hygiene's (DHMH) Hospital Management Information System (HMIS); and, the Commission's annual Subacute Care Survey. However, it should be noted that there are some differences in methods of reporting when comparing the utilization data from these three different sources.

HSCRC data include only the five private chronic hospitals in Maryland. DHMH data include information for the two state-operated chronic hospitals. The Commission's data include all private chronic hospitals (except for Kernan Hospital which did not report), as well as the two state-operated chronic hospitals. The HSCRC monthly statistical data are based on the utilization and number of licensed beds *as reported by the facility*. MHCC data are based on the Commission's inventory of beds, consistent with the Office of Health Care Quality's license. DHMH data for the two-state operated facilities are based on budgeted number of chronic hospital beds for fiscal year (not calendar year) periods. HSCRC's monthly statistical data reflect the number of admissions, while Commission data reflect the number of discharges. DHMH's data from its Hospital Management Information System provide the number of patient days for the two state-operated chronic hospitals.

Furthermore, as the rate setting authority for the private chronic hospitals, HSCRC, in some instances, sets separate rates for different programs within the same chronic hospital license (i.e., chronic and respirator dependent), or may combine rates for different licensed programs (i.e., chronic and rehabilitation). Thus, HSCRC's utilization data for these various programs may be combined, and may not necessarily reflect solely "chronic hospital" utilization. Moreover, the data reported to the HSCRC and DHMH are based on audited financial information, while the Commission data is not audited. In summary, the three sets of utilization are presented in this report, but may not necessarily be fully comparable. This highlights the need for more comparable and consistent data across settings.

Overall: Chronic Hospital Utilization Trends, 1997 - 2001

Utilization statistics for the five *private* chronic hospitals obtained from HSCRC for the calendar year period from 1997 to 2001 is summarized in Appendix Table A-1. These data show that from 1997 to 2001 the average length of stay for all private chronic hospital patients fell from 60.8 to 44.3 days. At the same time, the number of admissions to the five private chronic hospitals increased by 71% from 1,283 to 2,235. This jump in admissions offset the decline in average length of stay and caused the overall statewide occupancy of the five private chronic hospitals to increase from 63% to 73% from 1997 to 2001.

For this report, utilization and occupancy data for the two state-operated chronic hospitals were obtained from HMIS, as maintained by DHMH. The statistics reported are for fiscal years 1997 and 2001, and are presented in Appendix Table A-2. The data shows that from FY 1997 to 2001, there was a six percent decline in total patient days for the two-state operated chronic hospitals, combined. This is most likely due to the reduction in number of budgeted chronic

hospital beds funded by the state during FY 1997 and 2001, from a total of 75 to 53 state-operated chronic hospitals beds. While the statewide occupancies based on the number of *licensed* state-operated chronic hospital beds are quite low (43 percent in FY 1997 and 41 percent in FY 2001), occupancies based on the number of budgeted beds are substantially higher (73 percent in FY 1997 and 97 percent in FY 2001).

Characteristics of Chronic Hospital Discharges: 1997 and 2001

Characteristics of total statewide chronic hospital discharges for Maryland's private *and* state-operated chronic hospitals (including the New Children's Hospital which closed in April 1999) for the calendar years 1997 and 2001 based on the Commission's Subacute Care Survey[32] are summarized in Table 2. While the information provided in Table 2 is in aggregate form, selected facility-specific information for all seven chronic hospitals are in Appendix Tables A-3 to A-5. Due to the heterogeneous nature of chronic hospitals, both state-operated and private, it is necessary to analyze the variations within the group.[33]

Demographic Profile: Race, Gender, and Age

From 1997 to 2001, there was a 40 percent increase in the number of discharges from all reporting chronic hospitals, from 1,380 to 1,936 discharges, as shown in Table 2. During this same time period, Maryland's overall population increased slightly, by less than one percent, from 5,157,328 in 1997 to 5,207,510 in 2001.[34]

From 1997 to 2001, the distribution of chronic hospital patients by race, gender, and age remained fairly stable. There was no significant change in gender, with the proportion of female chronic hospital patients declining by one percent. During this same time period, there was a slight shift in the distribution of chronic hospital discharges by race; a two percent decrease in the number of African-Americans with a concurrent three percent increase in the percentage of whites. In comparing the age breakdown of chronic hospital discharges from 1997 to 2001, it appears that the percent distribution of patients served in 1997 were slightly younger than those served in 2001.

Lengths of Stay: Mean and Median

The statewide mean length of stay ("LOS") for patients discharged from chronic hospitals during calendar year 2001 was about 51 days; the median LOS was 22 days. This difference between the mean and median LOS is a result of patient outliers with very long lengths of stay (greater than 365 days). The data show marked differences among the individual chronic hospitals (excluding the now-closed The New Children's Hospital) in mean lengths of stay during 1997 - 2001, from a low of 21 days in 1999 at Johns Hopkins Bayview to a high of 91 days in 1998 at Western Maryland Hospital Center (refer to Appendix Table A-3).

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[32] Data for the James Lawrence Kernan Hospital's chronic hospital beds are not available.

[33] In general, the notion that Maryland's chronic hospitals are heterogeneous in terms of the patients they serve is consistent with the findings of a study on long term care hospitals nationwide conducted by Korbin Liu, et. al., "Long-Term Care Hospitals Under Medicare: Facility-Level Characteristics," *Health Care Financing Review*, Winter 2001.

[34] 1990 – 2000 U.S. Census Bureau Intercensal Population Estimates; and 2001 Maryland Department of Planning population estimates.

Table 2
Characteristics of Chronic Hospital Discharges:
Maryland, Calendar Years 1997 and 2001

Characteristic	1997	2001
Number of Discharges (# of facilities)	1,380 discharges (7 facilities)	1,936 discharges (7 facilities; 6 reported)
Gender	49% Female 51% Male	48% Female 52% Male
Race	49% White 49% African American 1% Asian 1% Other	52% White 47% African American <1% Asian <1% Other
Age Breakdown:		
0-64 years	47%	45%
65-74 years	23%	21%
75-84 years	21%	26%
85+ years	9%	8%
Patient Origin:		
Anne Arundel County	3%	3%
Baltimore City	54%	41%
Baltimore County	15%	17%
Montgomery County	<1%	2%
Prince George's Co.	8%	6%
Washington County	6%	3%
Frederick County	<1%	1%
Harford County	1%	1%
Wicomico County	2%	3%
Other and Unknown	10%	23%
Living Situation:		
With Spouse	19%	21%
With Children	12%	7%
With Other Relatives	14%	14%
Living Alone	20%	21%
With Unrelated Person	8%	9%
Other and Unknown	27%	28%
Primary Payment Source:		
Medicare	58%	58%
Medicaid	35%	26%
HMO Insurance	<1%	4%
Private Insurance	6%	10%
Other and Unknown	<1%	<2%

Source: Maryland Health Care Commission; Subacute Care Survey for Calendar Years 1997 and 2001.

Table 2 (continued)
Characteristics of Chronic Hospital Discharges:
Maryland, Calendar Years 1997 and 2001

Source of Admission:		
Private Residence	3%	<1%
Acute Care M/S	87%	94%
CCF/ECF	7%	1%
Rehab. Hospital	2%	3%
Chronic Hospital	<0.01%	<1%
Discharge Destination:		
Private Residence	24%	25%
CCF/ECF	14%	6%
Acute Care M/S	39%	50%
Assisted Living	<1%	<1%
Rehabilitation Hospital	2%	1%
Death	18%	2%
Other	2%	5%
Primary Diagnosis:		
Circulatory System	14%	8%
Injury and Poisoning	12%	17%
Muscular/Connective Tissue	7%	6%
Respiratory System	28%	37%
Neoplasms	3%	2%
Endocrine/Nutritional	3%	1%
Digestive System	2%	2%
Subcutaneous Tissues	11%	10%
Genitourinary	6%	5%
Other	14%	12%
Length of Stay:		
Mean	55 days	51 days
Median	25 days	22 days
Range	1 – 682 days	1- 1,991 days

Source: Maryland Health Care Commission; Subacute Care Survey for Calendar Years 1997 and 2001.

The variation in LOS may be related, in part, to the types of patients served and the discharge practices of each facility. The Western Maryland Hospital Center's (WMHC) relatively high mean LOS of 79 days in 2001 with a median LOS of 45 days may result from its treating ventilator-dependent patients, who generally have longer lengths of stay. The WMHC has a maximum of 20 beds to treat ventilator-dependent patients. The other state-operated chronic hospital, Deer's Head Center, does not serve ventilator-dependent patients. In addition, WMHC treats patients diagnosed with tuberculosis, who will also have extended lengths of stay.[35]

Patient Origin

Most of the chronic hospital patients discharged during 2001 were from Baltimore City (41 percent), Baltimore County (17 percent), Prince George's County (6 percent), Washington and Wicomico Counties (both with 3 percent), Anne Arundel County (3 percent), and Montgomery County (2 percent).

The patient origin distribution in Maryland's chronic hospitals appears to reflect the number of chronic hospital beds located within, or adjacent to, these jurisdictions. However, the patient origin distribution does not reflect the total state population distribution. Both Prince George's and Montgomery Counties have a large share of Maryland's total population and population aged 65 and older; however, there are relatively few reported chronic hospital patients from these two jurisdictions: six percent and two percent, respectively. For calendar year 2001, about eight percent of the total number of chronic patients at Spellman, in Prince George's County, were Montgomery County residents, and 53 percent were residents of Prince George's County. Implications of this data analysis raise the question as to where Montgomery County residents in need of chronic hospital care go to receive that care. As noted above, two percent of the discharges from all chronic hospitals statewide were from Montgomery County. It could be inferred that there are alternative settings for these residents to receive post-acute care, either in Maryland or in adjacent states.

Living Situation Prior to Admission

Before admission to a chronic hospital, about 42 percent of the patients discharged in 2001 were living with relatives, -- a spouse (21 percent), children (seven percent), or other relatives (14 percent). This is a decrease from 45 percent in 1997. Of the remaining 58 percent in 2001: 21 percent lived alone; nine percent lived with unrelated persons in an institutional setting; 24 percent were in some other living situation; and four percent were in an unknown living situation. Less than one percent (19 people) had been homeless.

[35] Telephone contact April 27, 2001 with Kay Pryor, Secretary to Barbara Galloway, Director of Clinical Services, Western Maryland Hospital Center.

Sources of Admission

Statewide, the vast majority of chronic hospital patients in calendar year 2001 were admitted directly from acute care hospitals (medical/surgical units) (94 percent). This reflects an increase over 1997 data when 87 percent of patients were admitted from acute care hospitals, and seven percent were admitted from nursing homes. The other major sources of admission in 2001 were rehabilitation hospitals (three percent), comprehensive care facilities (1.3 percent), private residence (0.8 percent), and other chronic hospitals (0.6 percent).

There are differences in the predominant admission sources among the chronic hospitals (see Appendix Table A-4). For example, in 2001, patients admitted directly from acute care hospitals represented 96 percent of the admissions to the Gladys Spellman Specialty Hospital and Nursing Center, but only 89 percent of Deer's Head Medical Center's chronic hospital patients. Other major sources of admission at Deer's Head Medical Center included private residence (nine percent), and comprehensive care facility and rehabilitation hospital (both one percent).

For the other chronic hospitals in Baltimore City that are part of multi-hospital systems, the majority of the admissions also came from acute care hospital medical/surgical units. Specifically, for those chronic hospitals in 2001, direct admissions from acute care hospital medical/surgical units were as follows: Levindale, 93 percent; Deaton, 91 percent; and Johns Hopkins Bayview, 99 percent. Based on data available to the Commission, it is not possible to verify the assumption that chronic hospitals admit patients from within their own multi-hospital systems.

Major Principal Diagnoses on Admission

Statewide, the following four major principal diagnoses were consistently the most common for chronic hospital admissions in both calendar years 1997 and 2001: respiratory system, injury and poisoning, subcutaneous tissues, and circulatory system diseases (refer to Table 2). There were some shifts in the percentage distribution from 1997 to 2001, including a nine percent increase in admissions with primary diagnosis of respiratory system disease, and a five percent increase in admissions with primary diagnosis of injury and poisoning. There was also a six percent decrease in admissions with diagnosis related to circulatory system disease, and a one percent decline in diagnosis of subcutaneous tissues. While Table 2 represents a statewide distribution of the principal diagnosis on admission for the majority of chronic hospital discharges (about two-thirds of all discharges for calendar year 1997, and three-fourths of all discharges for calendar year 2001), it is important to highlight some facility-specific differences.

Appendix Table A-5 illustrates the facility-specific differences of these four selected major principal diagnoses on admission for calendar years 1997 and 2001. As noted in Appendix Table A-5, Spellman had the highest percent of its chronic hospital admissions with respiratory system diseases (92 percent in 2001), while Deer's Head Medical Center had the lowest percent (six percent in 2001). Western Maryland Hospital Center had the highest proportion of its chronic hospital admissions (21 percent in 2001) with circulatory system diseases. The percentage of Deaton's chronic hospital admissions with injury and poisoning diagnoses was 23 percent, as compared to Spellman's one percent of its chronic hospital admissions. Thus, it appears that such facility-specific variations may be due, in part, to the

types of special care programs developed by some facilities, (such as ventilator units) and operated under their chronic hospital licenses.

Patient Discharge Disposition

Statewide, half of the chronic hospital patients in calendar year 2001 were discharged to acute care hospitals (medical/surgical units). Other chronic hospital patients were discharged to private residences (25 percent), comprehensive care facilities (six percent), and rehabilitation hospitals (one percent). About 12 percent of chronic hospital patients died in 2001, which is a six percent decline from the percent of deaths in 1997 (18 percent died).

Analyses of the 2001 data again reveal facility-specific differences. While Deaton had the highest proportion of its chronic patients discharged to acute care hospitals (68 percent), Deer's Head Center had the lowest (21 percent). More than fifty percent of the patients at Johns Hopkins Bayview were discharged to private residences, as compared to Spellman's patients, less than five percent of whom were discharged to private residences.

Overall, the proportion of patients discharged from chronic hospitals to acute care hospitals (medical/surgical units) rose from 39 percent in 1997 to 50 percent in 2001. During the same time period from 1997 to 2001, there was a decline in the proportion of patients discharged to comprehensive care facilities, from 14 percent to six percent.

In summary, there was an overall shift in chronic hospital patients' discharge destination from 1997 to 2001, with a 11 percent increase in discharges to acute (medical/surgical) hospitals, with a simultaneous eight percent decrease in the number of discharges to comprehensive care facilities. This shift in the discharge destination may imply that these chronic hospital patients are sicker and have unstable medical conditions that require an acute hospital level of care.

Principal Payment Source on Admission

For calendar year 2001, the major payment sources were Medicare and Medicaid (58 percent and 26 percent, respectively). The mix of other payment sources on admission includes the following: private insurance (10 percent), health maintenance organization (four percent), private self-pay (one percent), and other (less than one percent). Facility-specific analysis shows that while the principal payment sources were Medicare and Medicaid combined, there was some variation among the individual facilities: Johns Hopkins Bayview Center had the highest percentage of Medicare (81 percent) and Deaton had the highest percentage of Medicaid (46 percent). Deaton and Western Maryland both had the highest percentage of patients with private insurance coverage (20 percent).

From 1997 to 2001, Medicare remained the predominant payment source on admission, with 58 percent for both years, while there was a nine percent proportional decline in Medicaid (from 35 percent in 1997 to 26 percent in 2001). During this same time period, there was a simultaneous proportional increase in the mix of other payment sources: a four percent increase in private insurance (six percent in 1997), almost a four percent increase in health maintenance organization (less than one percent in 1997), and a slight increase in private self-pay (less than half a percent in 1997).

In summary, from 1997 to 2001, analyses of the principal payment source on admission reveal no change in Medicare, an overall proportional decline in Medicaid, with a simultaneous proportional increase in the use of private payers (i.e., private insurance, HMOs, and self-pay) to cover their chronic hospital stay.

Summary of Major Findings: Chronic Hospital Trends and Patient Profiles

The major findings from these profiles for the calendar years 1997 to 2001 include the following:

- Discharges increased by 40 percent from 1,380 to 1,936; while the overall statewide population increased by less than one percent.

- Statewide average lengths of stay decreased moderately by seven percent from 55 to 51 days.

- Statewide occupancy of the *private* chronic hospitals increased from 63 percent to 73 percent from CY 1997 to CY 2001.

- Statewide occupancy for the two *state-operated* chronic hospitals, based on licensed beds, slightly decreased from 43 percent in FY 1997 to 41 percent in FY 2001. With the reduced number of budgeted beds, the occupancy of these state-operated chronic hospital beds increased, from 73 percent to 97 percent over this same time period.

- Patients were, on average, older in 2001 than 1997, with a four percent decline in the 0 to 74 year olds, and a five percent increase in the 75 to 84 year old patient population.

- Baltimore City remains the largest source of admissions, but the jurisdiction's overall percent of patients dropped from 54 percent to 41 percent.

- While the source of chronic hospital admissions from acute care hospitals increased from 87 percent in 1997 to 94 percent in 2001, there was a simultaneous decline in those admitted from comprehensive care/extended care facilities (CCFs/ECFs) (the next highest source of admission) from seven percent in 1997 to one percent in 2001.

- The principal diagnosis on admission for chronic hospital patients in 1997 was respiratory system diseases in 28 percent of the cases, and circulatory system diseases in 14 percent of cases. By 2001, data show that there was a nine percent increase in chronic hospital patients with respiratory system related diseases, and a six percent decline in chronic hospital patients with circulatory system diseases.

- In 1997, over one third of all chronic hospital patients were discharged to an acute general hospital, 24 percent were discharged to private residences, and 18 percent died. In 2001, the proportion of patients discharged from chronic hospitals to acute care hospitals rose to almost 50 percent. Those chronic hospital patients who were

discharged to private residences slightly increased to 25 percent, while the percent of chronic hospital patients who died declined to 12 percent in 2001.

- While Medicare and Medicaid combined continue to be the largest payer of all chronic hospital admissions, there was a nine percent proportional decline in Medicaid with a simultaneous proportional increase in private insurance and Health Maintenance Organization coverage, from 1997 to 2001.

In summary, a typical chronic hospital patient in 2001 can be generally described as a male, 65+ years old, living with a relative (including spouse, children and other relative) prior to admission. This "typical" chronic hospital patient is from Baltimore City, and was directly admitted from an acute care hospital (medical/surgical unit) with a principal diagnosis related to respiratory system diseases. Medicare is the principal payment source, and this "typical" patient will have an average length of stay of 51 days in the chronic hospital and will be discharged to an acute care hospital (medical/surgical unit).

IV. Overview: Maryland Acute Care Hospital-Based Skilled Nursing Facilities

Licensure Description

Skilled nursing facilities (SNFs) in Maryland are licensed either as a comprehensive care facility (CCF) or extended care facility (ECF) in accordance with COMAR 10.07.02. The CCF license is described as a unit or facility "…which admits patients suffering from diseases, disabilities, or advanced age who require medical service and nursing service rendered by or under the supervision of a registered nurse." [36]

The ECF license is described as a unit or facility "…that offers subacute care, providing treatment for services for patients requiring inpatient care but who do not currently require continuous acute care services, and admitting patients who require convalescent, restorative, or rehabilitative services, or patients with terminal disease requiring maximal nursing care."[37]

Supply and Distribution of Acute Hospital-Based SNFs in Maryland

Twenty-two of Maryland's 47 acute care hospitals (with medical/surgical beds) have distinct skilled nursing units licensed as either comprehensive care or extended care facilities, with a total of 532 beds (see Table 3). Their facilities' individual bed complements range in size from 10 to 49 beds. Two of the 22 facilities are licensed as extended care facilities (ECFs).[38] The vast majority of these hospital-based post-acute care units were established between 1995 and 1998, following the Commission's implementation of its regulations COMAR 10.24.05, Development of Subacute Care Units, which became effective July 31, 1995, and prior to the implementation of Medicare's prospective payment system (PPS) for all skilled nursing facilities established in July 1998, and phased-in over the following three years.

Over the past six-month period (December 2002 to June 2003), seven of these 22 acute hospital-based SNFs, with a total of 164 CCF/ECF beds, have indicated their intent to either temporarily delicense or close their skilled nursing units. This would represent a 31 percent decline in post-acute capacity in these hospital-based SNFs.

The geographic distribution of these 22 acute care hospital-based SNFs, with a statewide total of 532 CCF or ECF beds, is summarized by region in Table 4. This Table illustrates that the majority of the facilities (10 acute care hospitals) located in Central Maryland have about half the supply of beds, with 263 CCF or ECF beds. Western Maryland region has four facilities with 80 beds, Montgomery has three facilities with 72 beds, Southern Maryland region has three facilities with 54 beds, and two facilities on the Eastern Shore have 63 beds.

[36] Health-General Article, §19-308; Annotated Code of Maryland Regulations (COMAR) 10.07.02.01
[37] Health-General Article, §19-308; Annotated Code of Maryland Regulations (COMAR) 10.07.02.01
[38] Historically, there have been only three facilities in Maryland with ECF license. Union Memorial's 31 ECF beds were temporarily delicensed in October 2002.

Table 3
Inventory of Licensed Comprehensive Care and Extended Care Facility Beds at Acute Care Hospitals, by Facility and Jurisdiction: Maryland, June 1, 2003

Jurisdiction/Facility	Number of Licensed Beds
Allegany County	
Sacred Heart Hospital/Western Maryland Health System	16 ECF beds; opened 5/95
Anne Arundel County	
North Arundel Hospital	17 CCF beds; opened 8/97
Baltimore City	
Good Samaritan Hospital	27 CCF beds, opened 1/96
Johns Hopkins Bayview Medical Center[39]	49 CCF beds; opened 9/96
Kernan Hospital Transitional Rehabilitation Unit[40]	22 CCF beds; opened 7/96
Mercy Hospital Transitional Care	35 CCF beds; opened 4/96
St. Agnes ContinuCare[41]	24 CCF beds; opened 5/96
Baltimore County	
Greater Baltimore Medical Center	25 CCF beds; opened 12/97
Northwest Hospital Center	21 CCF beds, opened 7/96
St. Joseph's Medical Center TCU	26 CCF beds; opened 3/96
Calvert County	
Calvert Memorial	18 CCF beds; opened 1/97
Charles County	
Civista Transitional Care Center (formerly Physician's Memorial)[42]	12 CCF beds; opened 2/97
Frederick County	
Frederick Memorial Hospital	20 CCF beds; opened 1/97
Garrett County	
Garrett County Memorial Hospital	10 CCF beds; opened 8/97
Harford County	
Harford Memorial Hospital TCU	17 CCF beds; opened 12/98
Montgomery County	
Holy Cross Hospital	20 CCF beds; opened 7/96
Montgomery General Hospital	21 CCF beds; opened 9/96
Suburban Hospital[43]	31 CCF beds; opened 6/95
Prince George's County	
Southern Maryland Hospital	24 CCF beds; opened 8/96
Talbot County	
Memorial Hospital at Easton	33 CCF beds
Washington County	
Washington County Hospital[44]	34 ECF beds; opened 4/85
Wicomico County	
Peninsula Regional Medical Center TCU	30 CCF beds; opened 11/96

Source: Maryland Health Care Commission's Inventory of Beds, June 1, 2003. Licensed beds do not include waiver or CON-approved (certified) beds not yet operational or licensed by Maryland's Office of Health Care Quality. Furthermore, temporarily or permanently delicensed beds are not reflected in the current inventory of licensed beds.

[39] The 49 CCF beds licensed to Johns Hopkins Bayview Medical Center include 18 beds known as the Transitional Care Unit. The remaining 31 beds are currently not operational, since they were approved by the Office of Health Care Quality for a "voluntary admission ceiling" on May 23, 1997, which, to date, remains in effect. Bayview Medical Center also has 22 CCF beds dually licensed as special hospital-communicable disease beds, but are temporarily not operational.

[40] Kernan Hospital has provided notice to the Commission of its intent to close its 22-bed unit effective December 25, 2002. By letter dated May 28, 2003, the Commission has informed Kernan of the need for an informational public hearing on the closure of this subacute unit.

[41] St. Agnes Hospital has sent an e-mail to the Commission of its intent to close its 24 CCF beds.

[42] Civista Transitional Care Center requests (May 1, 2003) temporary closure of its 12 CCF beds for one year.

[43] Suburban Hospital has provided notice (April 17, 2003) to temporarily delicense 31 CCF beds.

[44] Washington County Hospital temporarily delicensed 13 beds from 47 to 34 ECF beds (11/17/02).

Table 4
Geographic Distribution of Acute Care Hospitals with Licensed Comprehensive Care and Extended Care Facility Beds, by Jurisdiction and Region: Maryland, June 1, 2003

***Health Planning Region*/Jurisdiction**	**Number of Facilities**	**Number of Licensed Beds**
Western Maryland		
Allegany County	1	16
Carroll County	0	0
Frederick County	1	20
Garrett County	1	10
Washington County	1	34
Subtotal	**4 facilities**	**80 beds**
Montgomery County	**3 facilities**	**72 beds**
Southern Maryland		
Calvert County	1	18
Charles County	1	12
Prince George's County	1	24
St. Mary's County	0	0
Subtotal	**3 facilities**	**54 beds**
Central Maryland		
Anne Arundel County	1	17
Baltimore County	3	72
Baltimore City	5	157
Harford County	1	17
Howard County	0	0
Subtotal	**10 facilities**	**263 beds**
Eastern Shore		
Caroline County	0	0
Cecil County	0	0
Dorchester County	0	0
Kent County	0	0
Queen Anne's County	0	0
Somerset County	0	0
Talbot County	1	33
Wicomico County	1	30
Worcester County	0	0
Subtotal	**2 facilities**	**63 beds**
Statewide Total	**22 facilities**	**532 beds**

Source: Maryland Health Care Commission's Inventory of Beds, June 1, 2003. Licensed beds do not include waiver or CON-approved (certified) beds not yet operational or licensed by Maryland's Office of Health Care Quality. Furthermore, temporarily or permanently delicensed beds are not reflected in the current inventory of licensed beds.

Maryland Acute Care Hospital-Based Skilled Nursing Facility (SNF) Utilization Trends

Overall: Acute Care Hospital-Based SNF Utilization Trends, 1997 to 2001

From 1997 to 2001, there was a 21 percent increase in the number of discharges from all reporting acute care hospital-based SNFs, from 10,553 to 12,765, as shown in Table 5. Statewide occupancy for these acute hospital-based SNFs increased from 69.4 percent in 1997 to 72.9 percent in 2001.

Characteristics of Acute Hospital-Based SNF Discharges: 1997 and 2001

Characteristics of total statewide comprehensive care (CCF) and extended care facility (ECF) discharges for Maryland's acute care hospitals with distinct CCF or ECF units, based on the Commission's Subacute Care Survey for the calendar years 1997 and 2001, are summarized in Table 5. Facility-specific analyses generally reveal that these hospital-based skilled nursing facilities (HB-SNFs) in acute care hospitals do not show wide variations across the facilities. HB-SNFs are generally a more homogenous group of providers than the seven facilities licensed as chronic hospitals. Therefore, this analysis will focus on aggregate, rather than facility-specific data.

Demographic Profile: Race, Gender, and Age

From 1997 to 2001, the distribution of hospital-based SNF patients by gender essentially stayed the same. Distribution by race showed a five percent decline in the number of African Americans, with a concurrent five percent increase in the Asian and other categories. During this same time period, there was a shift in the age breakdown of SNF discharges. It appears that hospital-based SNF patients were younger in 2001 than 1997, with a five percent increase in the 0 to 64 year age cohort, and a simultaneous five percent decline in the 65 to 74 and 75 to 84 year age group. The 85+ cohort remained the same at 19 percent. This is significantly higher than the 85+ group in chronic hospitals.

Lengths of Stay: Mean and Median

The statewide mean length of stay ("LOS") for patients discharged from hospital-based SNFs during calendar year 2001 was 13 days; the median LOS was 10 days. Compared with 1997, there was a 1.5 day decline in the average length of stay, and a one day decline in the median length of stay. This data, combined with the other variables of sources of admission and discharge destination, imply that these patients require a very short-term post-acute level of care.

Patient Origin

As shown in Table 5, about 45 percent of patients in hospital-based SNFs come from the Central Maryland area. This is consistent with the geographic distribution of acute care hospitals with HB-SNF units. Specifically, 10 of the 22 facilities with about 50 percent of the beds are located in the Central Maryland area (see Table 4). There was a shift, however, from 1997 to 2001 between Baltimore City and Baltimore County. In 1997, 24 percent came from Baltimore City and 19 percent from Baltimore County. By 2001, this had shifted to 10 percent from

Table 5
Characteristics of Acute Hospital-Based Skilled Nursing Facility Discharges: Maryland, Calendar Years 1997 and 2001

Characteristic	1997	2001
Number of Discharges (# of facilities)	10,553 discharges (27 facilities; 26 reported)	12,765 discharges (26 facilities reported)
Gender	65% Female 35% Male	66% Female 34% Male
Race	78% White 20% African American 2% Other	78% White 15% African American 3% Asian 4% Other
Age Breakdown:		
0-64 years	15%	20%
65-74 years	27%	24%
75-84 years	39%	37%
85+ years	19%	19%
Patient Origin:		
Anne Arundel County	2%	4%
Baltimore City	24%	10%
Baltimore County	19%	32%
Montgomery County	13%	14%
Prince George's County	7%	3%
Washington County	8%	5%
Frederick County	3%	4%
Harford County	1%	4%
Wicomico County	2%	3%
Other and Unknown	21%	21%
Living Situation:		
With Spouse	32%	40%
With Children	16%	12%
With Other Relatives	6%	5%
Living Alone	32%	38%
With Unrelated Person	3%	3%
Other and Unknown	11%	3%
Primary Payment Source:		
Medicare	84%	79%
Medicaid	2%	1%
HMO Insurance	7%	4%
Private Insurance	5%	14%
Other and Unknown	2%	2%

Source: Maryland Health Care Commission; Subacute Care Survey for Calendar Years 1997 and 2001.

Table 5 (continued)
Characteristics of Acute Hospital-Based Skilled Nursing Facility Discharges: Maryland, Calendar Years 1997 and 2001

Source of Admission:		
Private Residence	<1%	<1%
Acute Care M/S	99%	99%
CCF/ECF	0.2%	0.06%
Rehab. Hospital	<1%	0.03%
Chronic Hospital	0.03%	0.2%
Discharge Destination:		
Private Residence	70%	75%
CCF/ECF	10%	8%
Acute Care M/S	12%	10%
Assisted Living	2%	2%
Death	2%	2%
Other	4%	3%
Primary Diagnosis:		
Circulatory System	21%	19%
Injury and Poisoning	18%	16%
Muscular/Connective Tissue	16%	21%
Respiratory System	8%	9%
Neoplasms	6%	5%
Endocrine/Nutritional	5%	4%
Digestive System	4%	3%
Subcutaneous Tissues	5%	5%
Genitourinary	3%	3%
Other	14%	15%
Length of Stay:		
Mean	14.5 days	13 days
Median	11 days	10 days
Range	1 – 526 days	1- 1,110 days

Source: Maryland Health Care Commission; Subacute Care Survey for Calendar Years 1997 and 2001.

Baltimore City and 32 percent from Baltimore County. This may be due, in part, to the fact that four facilities in Baltimore City (Maryland General, Church Hospital, Recovercare, and University of Maryland) closed units during the time period of 1997-2001. Anne Arundel County increased slightly, from two percent to four percent. There was also a reduction in the percentage of patients from Prince George's County (seven to three percent) and from Washington County (from eight to five percent) with a concurrent increase in those from Frederick, Harford, and Wicomico Counties. These may reflect general shifts in population or changes in system capacity during that time. For example, the unit at Harford Memorial Hospital opened during this time period.

Living Situation Prior to Admission

Most of the patients served in HB-SNFs either lived alone or lived with spouse or children. Those living alone increased from 32 percent in 1997 to 38 percent in 2001, indicating perhaps that the patients served are less disabled, since they are able to live independently prior to admission. It is often an acute episode that triggers hospitalization and then admission to the HB-SNF. More patients lived with their spouse in 2001 (40 percent vs. 32 percent) and fewer lived with their children (12 percent vs. 16 percent) prior to admission.

Sources of Admission

To confirm the assumption that most of the patients admitted to HB-SNFs live independently at home until an acute episode that involves acute care hospitalization, one can review the source of admission. About 99 percent of admissions in both 1997 and 2001 came from acute general hospitals. This is based on the fact that Medicare's eligibility criteria to receive skilled nursing services in a hospital-based SNF require a three-day prior hospitalization.

Major Principal Diagnosis on Admission

Over half of the admissions to HB-SNFs have diagnoses relating to circulatory system, injury and poisoning, or muscular/connective tissue disorders. Those with circulatory system diagnoses (including heart disease and stroke) declined from 21 percent in 1997 to 19 percent in 2001. Those with injury and poisoning declined from 18 percent in 1997 to 16 percent in 2001. Finally those with muscular/connective tissue diagnoses increased during the same time period from 16 percent to 21 percent. The latter group includes those patients who require rehabilitation and therapy (physical, occupational, speech) after their hospitalization.

Patient Discharge Disposition

The vast majority of patients, 70 percent in 1997 and 75 percent in 2001, are discharged back to their homes. This could be a reflection that, historically, these patients would have remained in the acute care hospital for a longer stay and then be discharged home. Those referred to nursing homes declined from 10 percent in 1997 to eight percent in 2001, and those discharged to acute general hospitals declined from 12 percent in 1997 to 10 percent in 2001. Thus, it appears that the episode is resolved fairly quickly in the hospital-based SNFs and the patients can then return to their home environment.

Principal Payment Source on Admission

The primary source of payment for those in hospital-based SNFs is Medicare. In 1997, 84 percent of discharges had a primary payer source of Medicare on admission compared to 79 percent in 2001. Those covered by HMO insurance declined from 1997 to 2001. At the same time those covered by private insurance increased from five percent to 14 percent. The decline in HMO is probably a reflection of the reduction in availability of Medicare HMOs; at the same time, there appears to be an increase in private long term care insurance coverage.

Summary of Major Findings: Acute Care Hospital-Based Skilled Nursing Facility Trends and Patient Profiles

The major findings from these profiles for 1997 and 2001 include the following:

- Discharges increased by 21 percent from 10,553 to 12,765; while the overall statewide population increased slightly by less than one percent.
- Patients in acute care hospital-based SNFs were younger in 2001 than in 1997, with a five percent increase in the 0-64 year age group and a five percent decline in the 65-84 year age group.
- The mean length of stay decreased by 1.5 days and the median declined by one day to a 13-day mean and a 10-day median length of stay in 2001.
- Statewide occupancy increased from 69.7 percent in 1997 to 76.9 percent in 2001.
- Most of the patients come from the Central Maryland area, with a shift from 1997 to 2001 in Baltimore City (from 24 percent to 10 percent), and in Baltimore County (from 19 percent to 32 percent).
- Patients admitted to acute care hospital-based SNFs live fairly independently prior to admission, living alone, or with spouse or children. Those living alone prior to admission increased from 32 percent in 1997 to 38 percent in 2001.
- About 99 percent of patients in acute care hospital-based SNFs are admitted from acute general hospitals
- Three diagnostic groups (circulatory system, injury and poisoning, and muscular/connective tissue) account for the majority (55 percent) of discharges.
- Most patients (75 percent in 2001) are discharged to their private residence.
- The primary payment source (about 80 percent) for acute care hospital-based SNFs is Medicare.

In summary, a typical patient in an acute care hospital-based skilled nursing facility in 2001 can be described as a Caucasian female, aged 75-84 from the Central Maryland area. This

person lived alone or with family, and had Medicare as the primary payer. This "typical" patient was admitted from an acute care hospital, stayed about 13 days, and was discharged back home. The data analysis of discharge disposition combined with admission source further supports the notion that post-acute patients in hospital-based SNFs are not the same as traditional, long-stay nursing home residents. Such nursing home clients are traditionally frail elderly who stay for extended periods of time – thus often referred to as a nursing home "resident" rather than a "patient." Further comparison of this patient with a typical chronic hospital patient will be presented in the next section of the report.

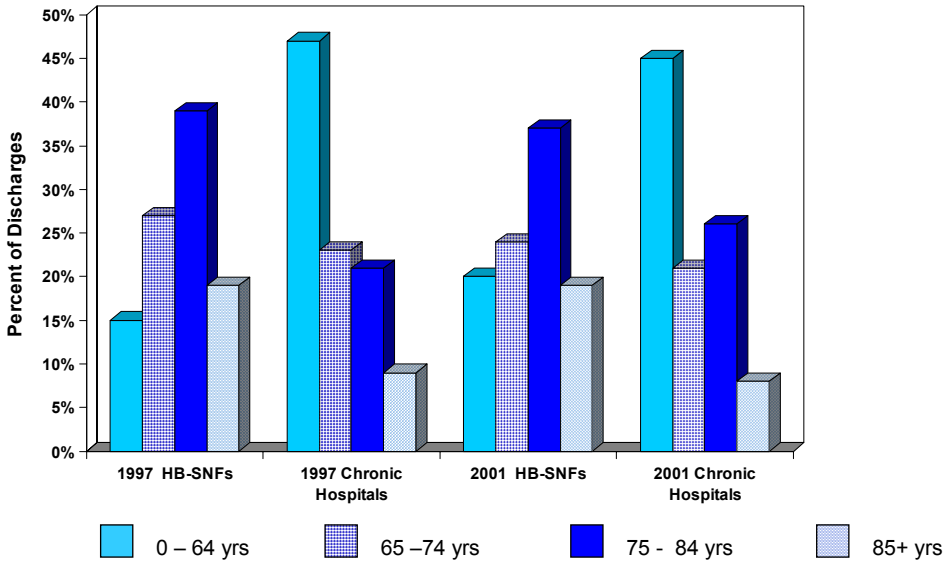
V. Post-Acute Care: Comparison and Analysis

Patient Profiles: Chronic Hospitals and Acute Care Hospital-Based Skilled Nursing Facilities

As the previous two sections illustrate, although post-acute care[45] in Maryland is provided in both chronic hospitals and acute care hospital-based skilled nursing facilities (SNFs), there are many differences in the types of patients served in the two settings. In general, chronic hospitals serve a more heterogeneous patient population than hospital-based skilled nursing facilities. A comparison of these patients is described using the data from the Commission's Maryland Subacute Care Survey for calendar year 2001. Selected characteristics which highlight the differences and similarities include: demographics (age, race, and gender); patient origin; living situation; primary payment source; source of admission; discharge destination; primary diagnosis; and mean and median lengths of stay.

First, in terms of **demographics**, chronic hospitals serve a younger, male population, about equally divided between white (52 percent) and African American (47 percent). The hospital-based SNFs have a more female (66 percent), older, and overwhelmingly white (78 percent) patient population. This comparison of chronic hospitals and hospital-based SNFs by age and race are shown in Figures 2 and 3, respectively. As Figure 2 shows, only in the 0-64 year age group do the chronic hospitals exceed the proportion of patients compared to the hospital-based skilled nursing facilities. It should be noted that in the case of chronic hospitals, there are two state-operated facilities. These may have a larger proportion of those persons who cannot afford care elsewhere and serve as a provider "of last resort".

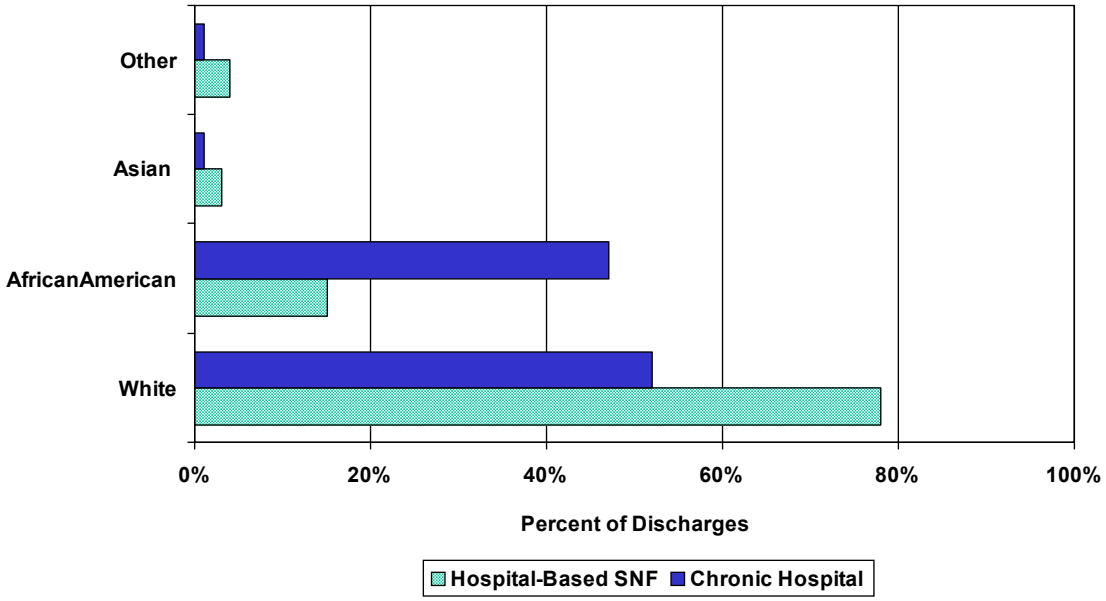
Figure 2
Patient Age Distribution for
Hospital-Based Skilled Nursing Facilities and
Chronic Hospitals: Maryland, 1997 and 2001



Source: Maryland Health Care Commission, Subacute Care Surveys, 1997 and 2001.

[45] Post-acute care is not a licensure category. Rather, it is a level of care that is best described as less intensive than general acute hospital care, but more intensive than custodial nursing home care.

Figure 3
Percent of Discharges by Race for Hospital-Based Skilled Nursing Facilities and Chronic Hospitals: Maryland, 2001

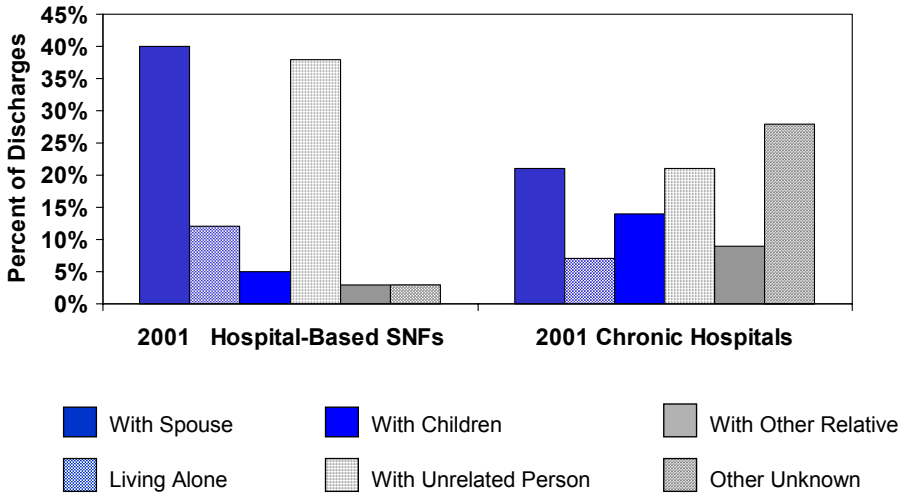


Source: Maryland Health Care Commission, Subacute Care Survey, 2001.

With respect to **patient origin**, more than half of the patients coming to chronic hospitals come from Baltimore City and Baltimore County (58 percent). Four of the five private chronic hospitals are located in Baltimore City and their beds represent 69 percent of the total chronic hospital capacity. For the hospital-based SNFs, 42 percent of the patients come from Baltimore City and Baltimore County; in this case, 10 of the 22 facilities with hospital-based SNF units or 50 percent of the statewide beds are in Central Maryland. However, for hospital-based SNFs, there are more facilities and a greater statewide distribution than for chronic hospitals.

In terms of **living situation prior to admission**, the chronic patient population is again more varied than the patient population in hospital-based SNFs, as shown in Figure 4. Of the chronic hospital population, 21 percent lived with a spouse, seven percent lived with a child, 14 percent lived with other relatives, 21 percent lived alone, nine percent lived with unrelated persons. It should be noted that this is a younger group and might include more younger disabled persons, or victims of gun wound or motorcycle accidents requiring chronic hospital care. For the hospital-based SNF population, 40 percent lived with a spouse, 12 percent lived with a child, and 38 percent lived alone—an older, but perhaps more independent and less disabled group.

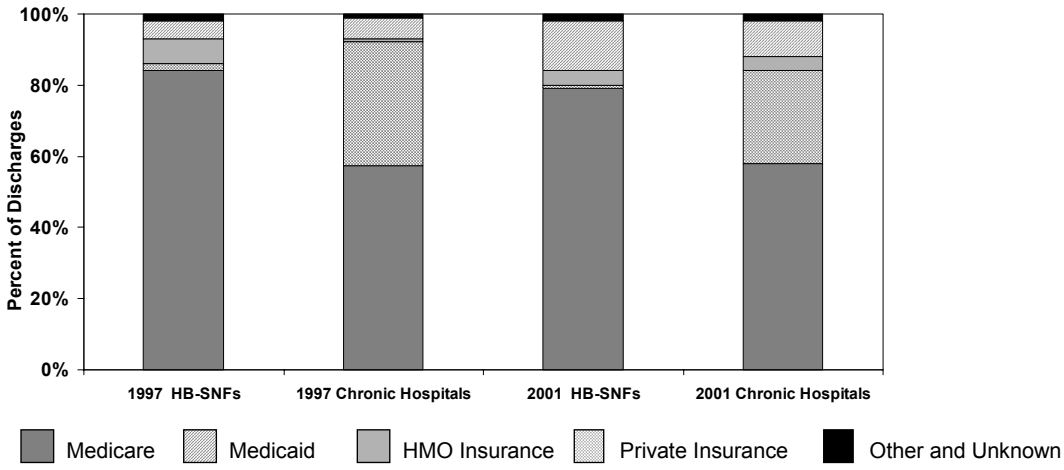
Figure 4
Living Situation Prior to Admission for Hospital-Based Skilled Nursing Facilities and Chronic Hospitals: Maryland, 2001



Source: Maryland Health Care Commission, Subacute Care Survey, 2001.

Many of the same socioeconomic factors seen in the demographic characteristics are also apparent in the area of **payment source**. Differences in the primary payment source distribution for hospital-based SNFs and chronic hospitals for both 1997 and 2001 are shown in Figure 5. In 2001, 58 percent of the chronic hospital discharges are covered by Medicare and 26 percent by Medicaid. For the hospital-based SNFs, 79 percent have Medicare as the primary payment source and one percent have Medicaid. This also relates to how these services are reimbursed, which is discussed in more detail in the following section on "Reimbursement and Related Issues."

Figure 5
Primary Payment Source Distribution for Hospital-Based Skilled Nursing Facilities and Chronic Hospitals: Maryland, 1997 and 2001

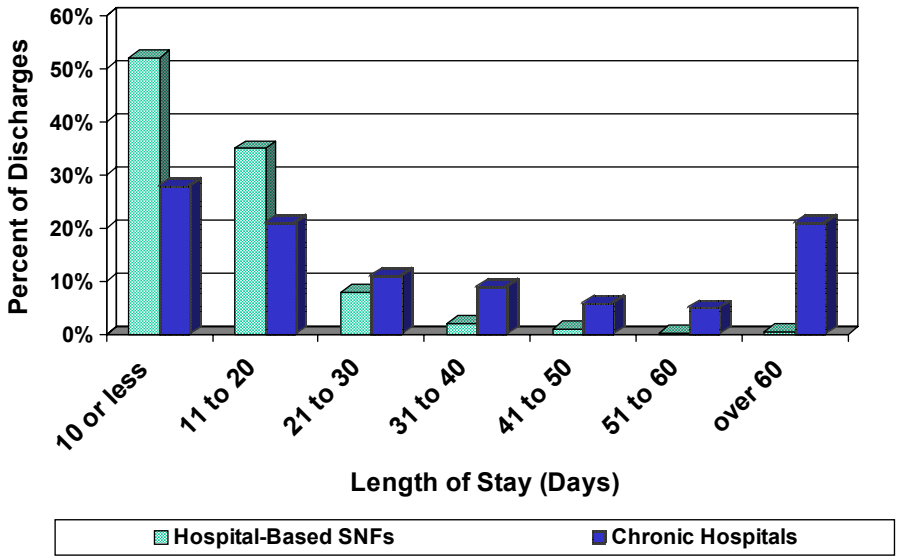


Source: Maryland Health Care Commission, Subacute Care Surveys, 1997 and 2001.

The primary **source of admission** for both post-acute settings is the acute care hospital (medical/surgical unit). For chronic hospital patients, 94 percent are admitted from acute medical/surgical units in hospitals, and three percent come from rehabilitation hospital programs. For the hospital-based SNFs, 99 percent are admitted from acute care hospitals (medical/surgical units). This is the nature of post-acute care in either setting. It is influenced by the push to reduce lengths of stay in hospitals and find alternative placements for patients outside of the acute care hospital.

Chronic hospital patients spend a longer time in this setting with a mean **length of stay** of 55 days and a median of 25 days. Hospital-based SNFs, however, have a mean length of stay of 13 days and a median of 10 days. As shown in Figure 6, more than half of the hospital-based SNF discharges have lengths of stay of 10 days or less, as compared to 25 percent of chronic hospital discharges.

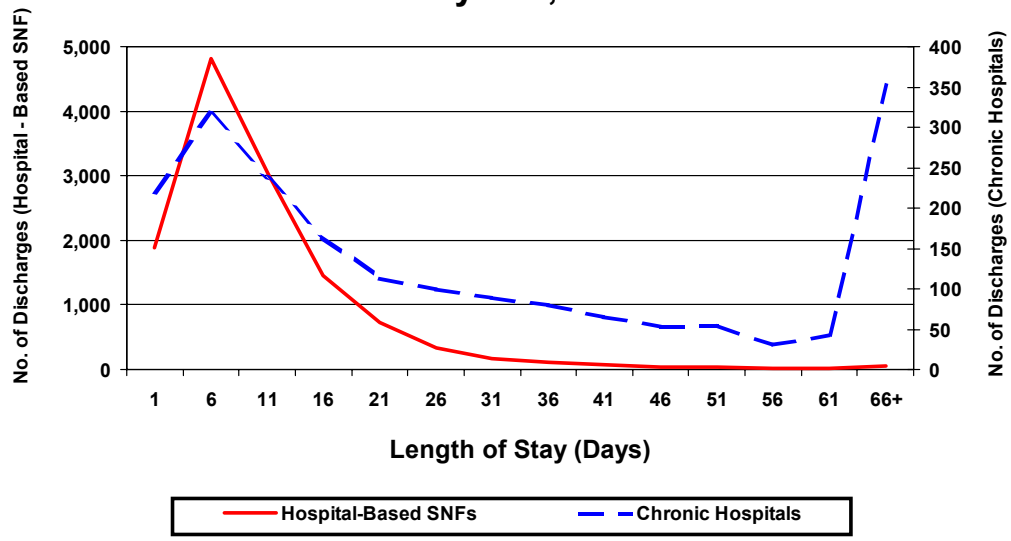
Figure 6
Percent of Discharges by Lengths of Stay for Hospital-Based Skilled Nursing Facilities and Chronic Hospitals: Maryland, 2001



Source: Maryland Health Care Commission, Subacute Care Survey, 2001.

Figure 7 compares the **length of stay distribution** for both post-acute care settings, which shows that chronic hospitals serve both short-stay and long-stay patients, while patients in hospital-based SNFs are more homogeneous in their short length of stay. This is related to reimbursement incentives discussed earlier in this report, under the section "Changing Reimbursement Systems Across the Continuum."

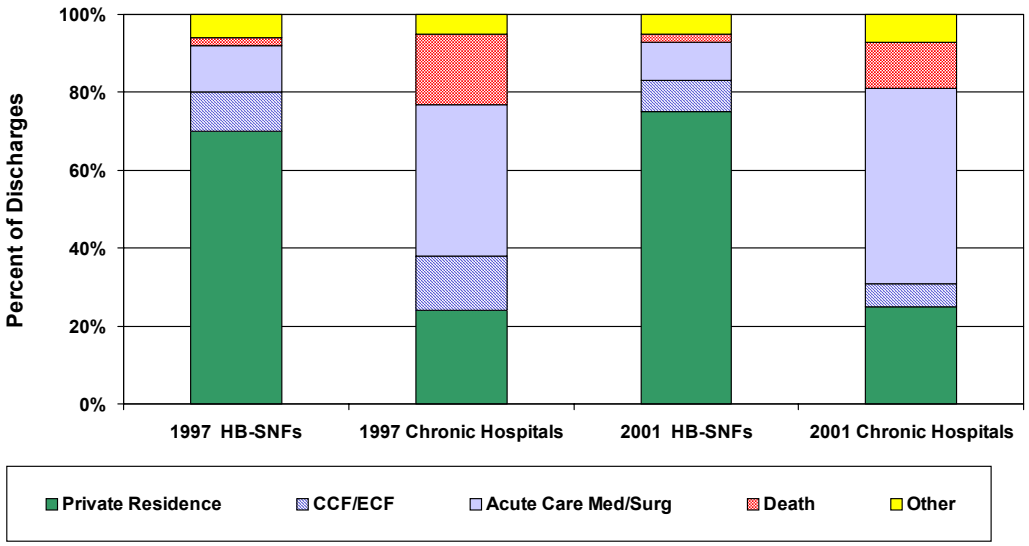
Figure 7
Length of Stay Distribution for Hospital-Based Skilled Nursing Facilities and Chronic Hospitals: Maryland, 2001



Source: Maryland Health Care Commission, Subacute Care Survey, 2001.

In terms of **discharge destination**, chronic hospital patients go to acute medical surgical units (50 percent), private residence (25 percent), and death (12 percent). On the other hand, 75 percent of discharges from hospital-based SNFs go home and only two percent die. Such data analyses seem to reflect that chronic hospitals may be serving a sicker population than acute care hospital-based skilled nursing facilities. This comparison of patient discharge destination for 1997 and 2001 for both post-acute settings is shown in Figure 8.

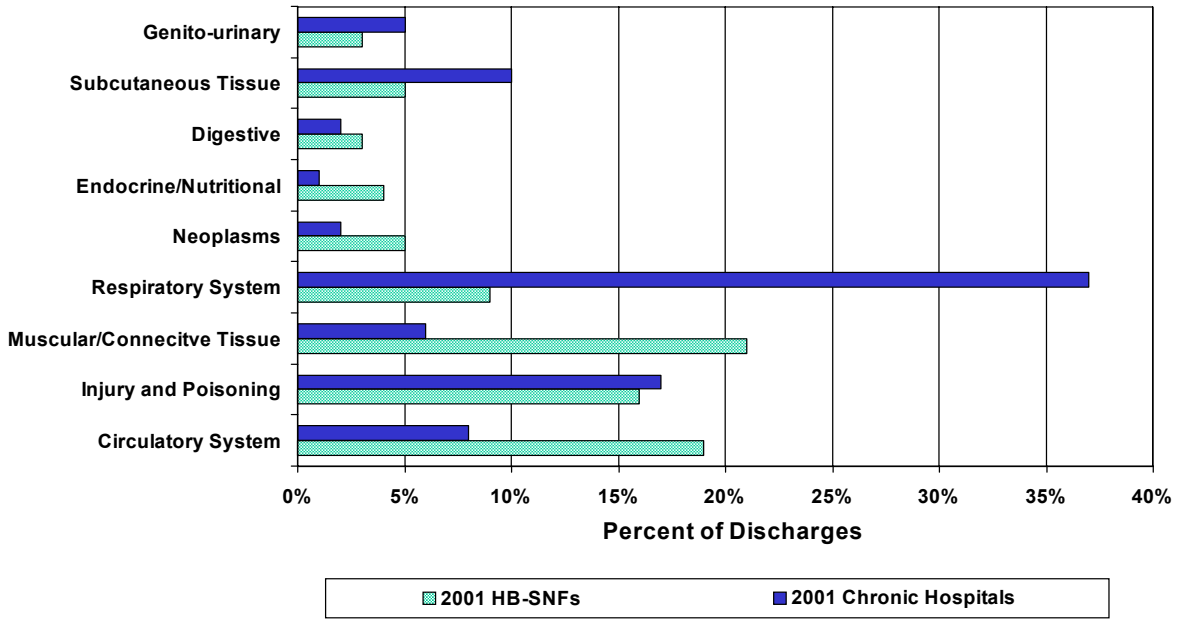
Figure 8
Patient Discharge Destination for Hospital-Based Skilled Nursing Facilities and Chronic Hospitals: Maryland, 1997 and 2001



Source: Maryland Health Care Commission, Subacute Care Surveys, 1997 and 2001.

Regarding **diagnostic information**, many chronic hospital patients suffer from respiratory diagnoses (37 percent) and many chronic hospitals offer ventilator units. Patients in hospital-based SNFs are more likely to suffer from circulatory diagnoses (19 percent) or muscular/connective tissue diagnoses (21 percent). Many of these are getting short-term rehabilitation and therapies. Comparison of patients in both these post-acute settings by primary diagnosis on admission for 2001 is shown in Figure 9.

Figure 9
Primary Diagnosis on Admission for
Hospital-Based Skilled Nursing Facilities and Chronic Hospitals:
Maryland, 2001



Source: Maryland Health Care Commission, Subacute Care Survey, 2001.

This analysis describes the similarities as well as the differences in the post-acute care settings. The similarities are reflective of some of the health system variables that have fostered the development of post-acute care. The differences are often reflective of differences in philosophies of the programs as well as reimbursement incentives, and the geographic location of the program.

Reimbursement and Related Issues

Chronic Hospitals

The five private and two state-operated chronic hospitals in Maryland are under two vastly different reimbursement systems. As described earlier in this report, the five private chronic hospitals are under the rate-setting authority of the HSCRC and are currently exempt from the federal reimbursement principles. The HSCRC establishes facility-specific chronic hospital unit rates, and Medicare and Medicaid pay 94% of those approved rates. [46]

The two state-operated chronic hospitals, Western Maryland Hospital Center and Deer's Head Medical Center, are *not* under the jurisdiction of the HSCRC and, therefore, fall under the federal reimbursement system for long term care hospitals.[47] The two state-operated chronic hospitals report directly to the Director of the Family Health Administration, Maryland Department of Health and Mental Hygiene, and, until most recently, were reimbursed under Medicare and Medicaid cost-based reimbursement principles. Medicare's new prospective payment system (PPS) for long term care hospitals[48] now applies to the two state-operated chronic hospitals only, since the five private chronic hospitals are under a waiver from the federal PPS. However, Medicaid remains under cost-based reimbursement principles.

To date, there is no uniform rate setting methodology applied by HSCRC for determining private chronic hospital unit rates, similar to the charge per case (CPC) system applied to acute care hospitals. Until most recently, the HSCRC had exempted Levindale, Deaton, and Spellman from reporting medical records abstract information on chronic hospital patients, so there was no uniform method of obtaining information on charge per admission for chronic hospital patients at those facilities. However, beginning January 1, 2003, all private chronic hospitals are required to submit case-mix data on their patients.

Moreover, the HSCRC has historically employed a variety of approaches in setting chronic hospital rates across the five private chronic hospitals. In establishing unit rates for these facilities, the HSCRC has allowed Levindale and Deaton to have more than one unit rate for their licensed chronic hospital beds. Levindale has a unit rate for chronic care and another rate for respiratory dependency care. Deaton has unit rates for chronic care, rehabilitation and respiratory dependency. While for Johns Hopkins Bayview, their chronic rate is combined for both its separately licensed chronic hospital beds and acute inpatient rehabilitation (CIR) beds. Furthermore, such gaps and inconsistencies in the information collected across all chronic hospitals limit specific data analysis and comparisons.

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[46] Medicare and Medicaid receive this six percent discount because of the terms of Maryland's waiver from the Medicare Acute Care Hospital Prospective Payment System (PPS). Private third party payers may be eligible for a two percent discount if they provide working capital deposits to hospitals or a one percent discount if they pay bills within a certain time period. Until July 1, 2003, private third party payers were eligible for a four percent SAAC (substantial, available, and affordable coverage) discount that required, among other things, participation in open enrollment.

[47] Under Medicare regulations, a hospital can be certified as a long term care hospital (LTCH) if its average length of stay among all its patients (Medicare and other) is equal to or greater than 25 days. Furthermore, "chronic hospital" is a Maryland-specific licensure classification.

[48] Department of Health and Human Services, Centers for Medicare and Medicaid Services, 42 CFR Parts 412, 413, and 476; Medicare Program; Prospective Payment System for Long Term Care Hospitals: Implementation and FY 2003 Rates; Final Rule. *Federal Register*, August 30, 2002. The new DRG-based long term care hospital prospective payment system for the two state-operated chronic hospitals took effect January 2003.

Given the different payment systems under which the private and state-operated chronic hospitals operate, it is difficult to make comparisons of rates. Even when attempting to compare Medicare rates, for instance, the daily private chronic hospital rates established by HSCRC include room, board and routine nursing costs, while the state-operated chronic hospital rates include room, board, routine nursing costs, *and* ancillary costs.

The HSCRC-approved chronic hospital rates for Deaton, Johns Hopkins, Kernan, Levindale and Spellman fall within the range of $404 to $609 per day.[49] These facility-specific rates vary for a number of reasons: the wage rates that the hospitals pay their employees is different for all hospitals; the hospitals all have different amounts of debt service in rates, depending upon the age of their facilities and the financing cost of their debt; the amount of uncompensated care varies depending upon the patient population that the facility services; and, the payer mix that each hospital serves varies.

For fiscal year 2003, the chronic hospital rate for Western Maryland Hospital Center is $468 per day, and for Deer's Head Medical Center it is $997 per day.[50] The two state-operated chronic hospitals do not have their rates "set" by a similar approach as the five private chronic hospitals but, rather, are determined based on the State's budget process. This further illustrates the differences in the payment method for the state-operated and the private chronic hospitals, making comparisons of rates more difficult.

Statewide, for 2001, 58 percent of chronic hospital discharges were Medicare, and 26 percent were Medicaid. For the private chronic hospitals, 56.8 percent of discharges were Medicare, and 27.5 percent were Medicaid. Of the total chronic hospital discharges at the two state-operated hospitals, 72 percent were Medicare and 13 percent were Medicaid.[51]

Analysis of private chronic hospital revenue for fiscal years 1997 to 2001 shows a 33.3 percent increase, from $29,691,886 in 1997 to $44,531,131 in 2001. Acute care hospital revenue (excluding specialty hospitals) increased 17.8 percent, from $5,508,904,000 in 1997 to $6,702,414,100 in 2001. The magnitude of growth in chronic revenue can be further measured by examining chronic hospital revenue as a percent of total hospital revenue, which increased slightly from 0.52 percent in 1997 to 0.64 percent in 2001. Until most recently, HSCRC had no uniform method for imposing constraints on chronic hospital charges as there is for acute care hospitals. However, effective July 1, 2003, interim constraint mechanisms have been implemented for all private chronic hospitals.[52]

[49] HSCRC rates are effective as of February 2003.
[50] These are Medicare allowed rates provided by Clifton Gunderson, Certified Public Accountants.
[51] Maryland Health Care Commission, Long Term Care Survey, 2001.
[52] Health Services Cost Review Commission, "Final Staff Recommendation on Rate Update and Rate Constraints for Chronic Care Services in Maryland," June 4, 2003.

Acute Care Hospital-Based Skilled Nursing Facility Rates

Unlike the all-payer rate setting system for private chronic hospitals, skilled nursing facility rates are determined based on the payer type. For private pay, facilities are free to set rates as they wish. For Medicare skilled nursing facility (SNF) clients, per diem rates are determined based on Medicare's Resource Utilization Groups (RUGs)-based prospective payment system (PPS) for SNFs, covering all costs (routine, ancillary, and capital) related to the services provided to beneficiaries under Part A of the Medicare program. For Medicaid nursing home clients, per diem rates are based on a prospective cost-based methodology for four cost centers, including: administrative/routine; other patient care; capital; and nursing services. Reimbursement is cost-based up to established ceilings. It is based on geographic regions. The system rewards nursing homes with efficiency payments if they come in below the established ceilings. The nursing service cost center is adjusted for case-mix based on four patient classification levels.

Community-Based Alternatives to Institutional Post-Acute Care

Institutional facilities providing long term care services are facing new challenges with the recent United States Supreme Court decision, *Olmstead v. L.C.*[53] The Court's July 1999 decision clearly puts federal, state, and local governments to the test to develop more opportunities for individuals with disabilities, through more accessible systems of cost-effective, community-based services. The *Olmstead* decision further interpreted Title II of the Americans with Disabilities Act ("ADA") and its implementing regulation, requiring states to administer their services, programs, and activities "in the most integrated setting appropriate to the needs of qualified individuals with disabilities."[54] Communications from the U.S. Department of Health and Human Services to state governments leave no doubt that the federal agency, of which the Centers for Medicare and Medicaid Services (CMS) is a part, is interpreting *Olmstead v. L.C.* as covering any individual with a disability who lives in an institutional setting[55].

In response to this federal-level interpretation, the State of Maryland has expanded its existing planning and development of community-based services and is implementing new initiatives under Medicaid. A frequently pursued mechanism for these initiatives is obtaining a "waiver."

One such initiative discussed at length in A*n Analysis and Evaluation of the CON Program, Phase 1,* is the Medicaid Home and Community-Based Services Waiver for Older Adults.[56] Briefly, this waiver provides a package of 16 home and community-based services for

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[53] All long term care facilities, including inpatient rehabilitation facilities will face these challenges following the *Olmstead* decision. However, in the case of Inpatient Rehabilitation Hospitals, patients are treated up to a level of recovery, at which point they plateau, and then are discharged to either home or another level of care.

[54] Centers for Medicare and Medicaid Services (formerly Health Care Financing Administration) website: www.hcfa.gov/medicaid/olmstead/olmshome.htm August 29, 2000

[55] The Supreme Court cautioned, however, that "nothing in the ADA condones termination of institutional settings for persons unable to handle or benefit from community settings." HFAM Networks, July/August 2000, p. 8.

[56] Maryland Health Care Commission, *An Analysis and Evaluation of the CON Program, Phase 1, Nursing Homes, January 1, 2001, pages 160 –164.*

qualified older adults (aged 50 and older) who need nursing home level of care, but live at home or in a licensed assisted living facility.

Another such initiative is the Medicaid Attendant Care Waiver. The Attendant Care Waiver, with its current working title: Living at Home: Maryland Community Choices, became effective April 1, 2001. Its goal is to create an alternative personal assistance system for Medical Assistance recipients that is consumer responsive, flexible, offers quality services, and develops partnerships. The Living at Home Waiver is currently capped at 400 participants, aged 21-59. The Maryland Department of Health and Mental Hygiene has implemented a registry for this waiver as there are no new slots for Fiscal Year 2004.

In addition to Maryland's response to the *Olmstead* decision discussed above, the State has sought other waivers from CMS. Another such waiver proposed by Maryland Medicaid's Office of Health Services and the Mental Hygiene Administration, is the Waiver for Adults with Traumatic Brain Injury ("TBI"). This waiver will serve those individuals in Maryland 22 – 64 years of age, who have been diagnosed with traumatic brain injuries, which occurred at age 22 or older. The individuals must be assessed as meeting a chronic/specialty hospital level of care or a nursing facility level of care. Additionally, they must have been inpatients in a State Mental Hygiene Administration facility, or must have been a Medicaid placement in an out-of-state facility accredited by the Commission on Accreditation of Rehabilitation Facilities, or in one of the two state-operated nursing facilities.

The waiver application was revised and re-submitted to CMS on March 22, 2002, and approved June 27, 2002. In the re-submitted application, Maryland requested coverage for residential habilitation, day habilitation, and supported employment services for waiver participants[57]. The Traumatic Brain Injury Waiver is scheduled to begin in July 2003.[58]

In conclusion, waivers are an effective health policy and planning tool, allowing states to expand covered services to include services not traditionally covered by Medicaid. As part of the waiver process, states are allowed to establish specific financial and technical eligibility criteria for the waiver. It should not be overlooked that there is a cost-effectiveness requirement to these waivers. That requirement is that it cannot cost more to serve a waiver enrollee in the community than it would cost to care for the individual in an institutional setting. The federal and Maryland state governments have jointly recognized the importance of fostering development of community-based alternatives to institutional long-term care settings. The impact of the *Olmstead* decision, as well as the recent development and implementation of waivers in Maryland on the occupancy of institutional post-acute care settings such as chronic hospitals and hospital-based SNFs, is currently not known.

[57] The initial waiver application sought coverage for case management, family training, respite care, and modifications to an individual's living environment.

[58] Maryland Medicaid Advisory Committee meeting minutes, January 13, 2003, page 9; telephone contact with Earl Beatty, Health Planner, Waiver Programs, Maryland Department of Health and Mental Hygiene, May 22, 2003.

VI. Post-Acute Care: Summary of Key Issues

• Post-acute care is an evolving level of care.

It is difficult to project future need for post acute care based solely on historical data, especially given the changing roles of post-acute care providers. The role of chronic hospitals and acute care hospital-based skilled nursing facilities in Maryland has evolved, and continues to evolve, in response to the combined effects of the changes in the health care delivery system, reimbursement systems, and patient care needs.

This phenomenon could be described as a "domino effect" – whereby systemic changes (such as changes in reimbursement and medical technology) impact the entire continuum of health care, effecting changes in each of the components or settings along the health care spectrum from acute care hospitals to community-based services. This domino effect certainly seems to have had an impact on the role of post-acute care in Maryland. Given the number of recent mergers and acquisitions across the different types of settings (from acute care hospitals to home health agencies), the development of "systems of care" has emerged in Maryland.

As described in the report, the current geographic distribution of chronic hospital services is on a regional basis. The question arises as to whether such specialty hospitals should continue to be provided and developed on a regional basis. Hospital-based SNFs are more broadly distributed. However, their development and recent closures seem to be more dependent on federal funding. During the past six months, the Commission has received notice from seven acute care hospital-based SNFs, with a total of 164 CCF/ECF beds, indicating their intention to temporarily delicense beds or close their units. This would reflect a 31 percent decline in post-acute capacity in these hospital-based SNFs.

• Reimbursement incentives are a major driving force in the provision of post-acute care.

Changes in the acute care hospital and nursing home reimbursement systems have had an impact on the types of patients served by both chronic hospitals and hospital-based SNFs. Maryland's acute care hospital rate-setting system has encouraged acute care hospitals to discharge patients no longer requiring an acute level of care to alternative lower-cost settings, such as chronic hospitals and hospital-based skilled nursing facilities, as medically appropriate.

To date, there is no uniform rate setting methodology applied by HSCRC for determining private chronic hospital unit rates, similar to the charge per case (CPC) system applied to acute care hospitals. Moreover, the HSCRC has historically employed a variety of approaches in setting chronic hospital rates across the five private chronic hospitals. Until most recently, there were no constraint mechanisms imposed on the five private chronic hospitals.

The two state-operated chronic hospitals are not under the authority of the HSCRC and, therefore, fall under the federal reimbursement for long term care hospitals. Until most recently, the state-operated chronic hospitals were reimbursed under Medicare and Medicaid cost-based reimbursement principles. While Medicaid remains under cost-based reimbursement, Medicare's new prospective payment system (PPS) for long term care hospitals, which went into

effect January 2003, now applies to these facilities. It remains unclear what impact Medicare's new PPS for long term care hospitals may have on Maryland's state-operated chronic hospitals.

Unlike the all-payer rate setting system for private chronic hospitals, skilled nursing facility rates are determined based on the type of payer. Maryland's Medicaid nursing home reimbursement system has for a long time provided incentives for nursing homes to care for residents requiring greater care needs, as measured by activities of daily living ("ADL"). More recently, Maryland's Medicaid nursing home reimbursement system has even encouraged the provision of care to certain types of ventilator-dependent residents in nursing homes. Many of these types of nursing home patients may have been in chronic hospitals ten years ago, and their absence may have contributed to the increased intensity of chronic hospital care.

Medicare's prospective payment system for skilled nursing facilities is based on a case-mix system of Resource Utilization Groups (RUGs). This pivotal change in Medicare reimbursement (phased-in over three years starting July 1, 1998) has been a major factor in the recent and anticipated closures of many of Maryland's acute care hospital-based SNFs.

- **Although post-acute care is provided in both chronic hospitals and hospital-based skilled nursing facilities, there are many differences in the types of patients served in the two settings.**

In general, Maryland's seven chronic hospitals serve a more heterogeneous patient population than Maryland's 22 acute care hospitals with hospital-based skilled nursing facilities. In terms of demographics, chronic hospitals serve a younger, male population, while hospital-based skilled nursing facilities have a more female, older, and overwhelmingly white patient population. For both types of facilities, most patients come from Baltimore City and Baltimore County: 58 percent in the case of chronic hospitals and 42 percent in the case of hospital-based SNFs. In terms of payment source, 58 percent of chronic hospital discharges are covered by Medicare, and 26 percent by Medicaid. For hospital-based SNFs, 79 percent have Medicare as the primary payment source and one percent have Medicaid. With regard to discharge destination, half of chronic hospital patients as compared to ten percent of hospital-based SNF patients go to acute care hospital medical/surgical units. Twenty-five percent of chronic hospital patients, compared to 75 percent of hospital-based SNF patients, are discharged to a private residence.

- **More complete and comparable data across all settings is required for planning and policy development.**

Planning and policy development should be data driven. The Maryland Health Care Commission (MHCC) collects patient and facility-specific utilization information for all chronic hospitals (private and state-operated facilities), as well as for the hospital-based skilled nursing facilities, through its annual Subacute Care Survey.[59]

[59] The Commission's regulatory authority for collecting data from its Subacute Care Survey is under COMAR 10.24.05.07. While implemented in 1995, the Commission's Subacute Care Survey has been modified over the recent years. Such changes have been made to avoid duplication of data collection efforts as required by the federal Minimum Data Set (MDS).

The Health Services Cost Review Commission (HSCRC), using its current statutory and regulatory authority under COMAR 10.37.06.01, began to collect patient level data for the five private chronic hospitals in January 2003. It is anticipated that the first year full year of such data will be available for analysis by June 2004.

It is important to uniformly collect data from *all* chronic hospitals, both private and state operated facilities. Initial investigation into current data reporting requirements for the state-operated chronic hospitals reveal that they do not currently report comparable patient level data as the private chronic hospitals report to the HSCRC. One possible option would be to require the state-operated chronic hospitals to complete the same data set as the private chronic hospitals, submit the data to the MHCC, and then give the data to the same HSCRC vendor to process. Alternative options for collecting similar data from the state-operated facilities warrant further exploration.

With regard to collecting patient level data from hospital-based skilled nursing facilities (SNFs), all certified nursing facilities are required[60] to conduct a comprehensive assessment of a resident's care needs, using the resident assessment instrument specified by the state. The resident assessment instrument is composed of the minimum data set (MDS), resident assessment protocols, and triggers that are necessary to accurately assess residents and establish care plans. Effective June 22, 1998, nursing facilities must not only complete resident assessments but also must electronically transmit the MDS data to a state agency or agent. In Maryland, this data is submitted to the Office of Health Care Quality.

To meet the OBRA '87 requirements, MDS data is required to be submitted on all residents in nursing facilities at time of admission (no later than 14 days following admission), annually, and upon a significant change in a resident's condition. A shorter version of the MDS has recently been developed for quarterly assessments.[61] With implementation of Medicare's SNF prospective payment system,[62] the MDS became required for all Medicare beneficiaries on days 5, 14, 30, 60 and 90 of their Medicare covered stays, in addition to the above-noted timeframe for required MDS submission to meet the OBRA '87 requirements. The hospital-based skilled nursing facilities, with average and median lengths of stay of 13 days and 10 days, respectively, are required to perform MDS assessments for their Medicare patients according to those timeframes**.** The data on these short-stay patients is not uniformly collected fully and accurately. There needs to be further study to determine whether the MDS can substitute for the Commission's Subacute Care Survey for the hospital-based skilled nursing facilities.

[60] The Omnibus Reconciliation Act (OBRA) of 1987 mandated the use of a standardized, comprehensive and reproducible assessment process. The assessment process has been a condition of participation in the Medicare/Medicaid program since October 1990.

[61] Effective July 2002, a modified, shorter version of the comprehensive MDS, the Medicare PPS Assessment Form, Version 2002 (MPAF), is an option for skilled nursing facilities.

[62] Medicare's prospective payment system (PPS) for skilled nursing facilities (SNFs) was phased-in over three years starting July 1, 1998. Medicare's SNF PPS rates are based on the assignment of beneficiaries to case-mix classification groups. Beneficiaries are assigned to groups based on the information collected and recorded on the MDS.

- **Alternative planning strategies for post-acute care services in Maryland should be evaluated.**

There is currently no bed need methodology for determining future need for chronic hospitals. Consistent with the Maryland State Health Plan (COMAR 10.24.08), the burden of proof for demonstrating need for additional capacity (whether as a new chronic health care facility or expansion of an existing facility) rests with the applicant. Certificate of Need approval rules (COMAR 10.24.08.04D) to establish a new chronic hospital service require that every chronic hospital in the jurisdiction has maintained an 85 percent occupancy rate or higher for at least 12 months. For an existing chronic hospital, it must demonstrate that it has had 85 percent occupancy or higher for at least 24 consecutive months to expand. In addition, there are specific Certificate of Need review standards for chronic hospitals (COMAR 10.24.08.05C), including a quantitative approach to demonstrate the specific unmet needs of the target population to be served.

Forecasts typically rely on historical trend analyses, as well as an assessment of other underlying factors contributing to system-wide "shifts" along the health care continuum. Given recent changes in the reimbursement systems, and anticipated changes in HSCRC's rate setting for the private chronic hospitals, forecasting chronic hospital capacity in a time of uncertainty can be difficult. Nevertheless, assumptions need to be made relative to the continued role of chronic hospitals in Maryland. For instance, as described in this report, chronic hospitals appear to serve an important role across the health care continuum. At the same time, however, Maryland's chronic hospitals are not a homogeneous group of providers. Their individual roles may have evolved in response to a variety of systemic factors (reimbursement changes and medical technology advances), as well as to their own geographic and environmental issues, such as the socioeconomic status of the people served and availability/accessibility to alternative (less costly) settings.

Acute care hospital-based SNFs are included in the Commission's overall need methodology for comprehensive care facility (CCF) and extended care facility (ECF) beds, consistent with COMAR 10.24.08. Unlike chronic hospitals, hospital-based SNFs are not a separate licensure category and, thus, are included under the CCF/ECF ("nursing home") bed need methodology. As with chronic hospitals, there is no separate methodology for hospital-based SNFs.

The nursing home bed need methodology projects the need for *all* beds licensed as either CCF or ECF. It does not differentiate short-stay versus long-stay, or hospital-based versus freestanding nursing homes. Future bed need is projected on a jurisdictional basis. The methodology is based on historical age-adjusted use rates that are modified by migration adjustments and community-based services adjustments in projecting future need.

In summary, given the changing post-acute care landscape, alternative planning strategies for post-acute care services in Maryland should be examined. When more recent data becomes available, such planning approaches will be evaluated.

VII. Recommendations for Future Study

Short-Term Initiatives

1. The Commission will continue to collect patient and facility-specific data for all chronic hospitals and hospital-based skilled nursing facilities via its annual Subacute Care Survey.

2. The Commission will establish a Work Group composed of representatives from: Health Services Cost Review Commission, Medicaid, Delmarva, Office of Health Care Quality, and Department of Health and Mental Hygiene, to evaluate the data currently being collected for post-acute care settings, and determine how the data collection process can be improved to more precisely describe the role of post-acute care providers.

3. The Commission will monitor the impact of the new federal prospective payment system (PPS) for long term care hospitals (LTCHs) on Maryland's two state-operated chronic hospitals, which went into effect in January 2003.

4. The Commission will continue to update its chronic hospital occupancy report and publish it annually in the *Maryland Register*.

Long-Term Strategies

Following the collection and analysis of patient level data from both post-acute care settings, the following long-term strategies for planning and policy development are recommended:

1. The Commission will take the necessary steps to sunset the Subacute Care Regulations (COMAR 10.24.05), once the patient-level data has been analyzed and a mechanism for ongoing data collection and reporting has been established for all chronic hospitals and hospital-based skilled nursing facilities.

2. As part of the next update of the State Health Plan for Long Term Care Services, the Commission will examine alternative planning strategies for post-acute care services.

APPENDICES

Appendix Table A-1
Utilization Trends in Private Chronic Hospitals:
Maryland, Calendar Years 1997 to 2001

	1997	1998	1999	2000	2001
Spellman					
Patient Days	2,686	2,879	4,386	8,030	9,473
Admissions	117	91	92	152	182
ALOS	23.0	31.6	47.7	52.8	52.0
Licensed Beds	12	12	30	30	33
Occupancy[63]	61%	66%	55%	73%	82%
Bayview					
Patient Days	13,263	14,296	16,739	18,780	20,023
Admissions	249	316	439	561	632
ALOS	53.3	45.2	38.1	33.5	31.7
Licensed Beds	62	62	62	62	62
Occupancy[64]	58%	63%	74%	83%	88%
Kernan					
Patient Days	1,034	3,086	4,479	4,868	6,693
Admissions	21	23	71	111	169
ALOS	49.2	134.2	63.1	43.9	39.6
Licensed Beds	6	16	16	16	16
Occupancy[65]	47%	95%	77%	83%	115%
Levindale					
Patient Days	19,225	22,143	25,310	28,175	29,530
Admissions	408	539	666	648	616
ALOS	47.1	41.1	38.0	43.5	47.9
Licensed Beds	80	80	80	80	80
Occupancy[66]	66%	76%	87%	96%	101%
Deaton					
Patient Days	41,797	35,842	36,906	38,891	33,232
Admissions	488	447	579	615	636
ALOS	85.6	80.2	62.0	63.2	49.9
Licensed Beds	180	180	180	180	180
Occupancy	64%	55%	55%	59%	51%
Total					
Patient Days	78,005	78,246	87,820	98,744	98,951
Admissions	1,283	1,416	1,847	2,087	2,235
ALOS	60.8	55.3	47.6	47.3	44.3
Licensed Beds	340	350	368	368	371
Occupancy	63%	63%	67%	73%	73%

Sources of information for Appendix Table A-1 include: Patient days, admissions, and average lengths of stay (ALOS) are based on audited financial statements from the Health Services Cost Review Commission (HSCRC). Licensed beds are based on the chronic hospital inventory maintained by the Maryland Health Care Commission. Occupancy is calculated based on the number of licensed chronic hospital beds, for calendar years 1997 through 2001, adjusted for changes in the number of beds available during the year.

[63] Spellman reconverted 18 comprehensive care facility (CCF) beds back to 18 chronic hospital beds (6/11/99). Spellman increased its chronic hospital bed capacity by converting 3 CCF beds to 3 chronic hospital beds (6/14/01).

[64] Bayview delicensed 4 chronic hospital beds and established a 4-bed comprehensive inpatient rehabilitation unit (CIR) (4/8/97). Since the Health Services Cost Review Commission does not set a separate rate for the four CIR beds, it may be assumed that the number of patient days and admissions most likely also include CIR patients, and not solely chronic hospital patients. Thus, the calculated occupancy rate, which is based only on licensed chronic hospital beds, is higher than if the 4 separately licensed CIR beds were to be included in the licensed bed capacity.

[65] Kernan Hospital relicensed 10 of the remaining 44 chronic hospital beds (9/16/98) which were on "reserve" as part of the consolidation of Kernan and Montebello Rehabilitation Hospitals (October 1996), for a new total of 16 dually licensed chronic/rehabilitation beds. Kernan's 2001 occupancy may reflect chronic hospital patient utilization in other types of licensed beds.

[66] Levindale's 2001 occupancy reflects chronic hospital patients utilizing its comprehensive inpatient rehabilitation (CIR) licensed beds.

Appendix Table A-2

Utilization Trends in State-operated Chronic Hospitals: Maryland, Fiscal Years 1997 and 2001

	Fiscal Year 1997	Fiscal Year 2001
Deer's Head		
Patient Days	3,420	3,280
Median LOS	50	25 (estimate)
Licensed Beds	66	66
Budgeted Beds	20	10
Occupancy		
Licensed Beds	14.2%	13.6%
Budgeted Beds	46.9%	89.9%
Western Maryland Center		
Patient Days	16,452	15,381
Median LOS	50	39
Licensed Beds	60	60
Budgeted Beds	55	43
Occupancy		
Licensed Beds	75.1%	70.3%
Budgeted Beds	81.9%	97.9%
Total State-operated Chronic Hospitals		
Patient Days	19,872	18,661
Licensed Beds	126	126
Budgeted Beds	75	53
Occupancy		
Licensed Beds	43.2%	40.6%
Budgeted Beds	72.6%	96.5%

Sources: The number of patient days and median lengths of stay are from the Hospital Management Information System (HMIS), as maintained by the Maryland Department of Health and Mental Hygiene, with major stakeholders including the Division of Reimbursements, Mental Hygiene Administration, and the Developmental Disabilities Administration and Local Health. The licensed number of beds is based on the Commission's inventory of chronic hospital beds, consistent with the Office of Health Care Quality. The number of budgeted chronic hospital beds for Fiscal Years 1997 and 2001 is from the Department of Health and Mental Hygiene's FY 2004 Budget Request.

Appendix Table A-3
Chronic Hospital Lengths of Stay: Mean and Median, Statewide and Facility-Specific, CY 1997 - 2001

	Mean	Median	Mean LOS						
Year	State-wide	State-wide	Johns Hopkins Bayview	The New Children's Hospital*	Gladys Spellman	Western MD	Deer's Head Center	Levindale	Deaton
1997	55	25	35	28	32	77	59	51	72
1998	54	23	31	25	44	91	84	41	68
1999	51	21	21	21	53	90	61	49	66
2000	46	23	25	*	41	87	51	50	49
2001	51	22	21	*	61	79	36	66	60

* The New Children's Hospital closed in 1999.

Source: Maryland Health Care Commission, Subacute Care Surveys, 1997 - 2001

Appendix Table A-4
Selected Sources of Direct Admissions to Chronic Hospitals
Percent Distribution, CY 1997 and CY 2001

	Acute Hospital Medical/Surgical		Comprehensive Care Facility		Rehabilitation Hospital		Private Residence	
	1997	2001	1997	2001	1997	2001	1997	2001
Spellman	94%	96%	5%	3%	-0-	-0-	-0-	-0-
WMHC	73%	95%	3%	1%	1%	-0-	5%	-0-
Deer's Head	84%	89%	2%-	1%	-0-	1%	14%	9%
Levindale	85%	93%	10%	4%	1%	1%	2%	1%
Deaton	90%	91%	3%	1%	3%	7%	3%	1%
Johns Hopkins	87%	99%	11%	-0-	1%	-0-	1%	0.2%

Source: Maryland Health Care Commission, Subacute Care Surveys, Calendar Years 1997 and 2001

Appendix Table A-5
Selected Principal Diagnoses by Categories on Admission to Chronic Hospitals
Percent Distribution, CYs 1997 and 2001, Maryland

	Respiratory System		Injury and Poisoning		Subcutaneous Tissues		Circulatory System	
	1997	2001	1997	2001	1997	2001	1997	2001
Spellman	66%	92%	1%	1%	1%	-0-	6%	2%
WMHC	30%	35%	14%	8%	1%	4%	27%	21%
Deer's Head	2%	6%	20%	15%	2%	5%	6%	17%
Levindale	49%	61%	5%	3%	11%	14%	6%	2%
Deaton	24%	35%	17%	23%	17%	15%	10%	5%
Johns Hopkins	8%	14%	13%	21%	8%	7%	27%	14%

Source: Maryland Health Care Commission, Subacute Care Surveys, Calendar Years 1997 and 2001

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