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**Healthcare Access Monitor
Final Annual Report**

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Healthcare Access Monitor Final Annual Report

Derek DeLia, Ph.D.

Executive Summary

On October 1, 2002, Memorial Hospital of Salem County (MHSC) was acquired by Community Health Systems (CHS) of Brentwood, TN. Under the Community Healthcare Asset Protection Act (CHAPA), NJSA 26:2H-7.1, the New Jersey Department of Health and Senior Services (NJDHSS) has the authority to assess the impact of the sale of MHSC on community healthcare access. The NJDHSS has entered an agreement with the Rutgers Center for State Health Policy (CSHP) to monitor the impact of the acquisition on access to healthcare in the area served by MHSC.

This report provides analysis of annual data from 1998-2004. Specifically, the report documents changes in healthcare access at MHSC in 2004 compared to 2003 and the baseline period, 1998-2002. Changes at MHSC are compared to changes at other hospitals and in different regions of New Jersey. This report also serves as the final report for the entire Healthcare Access Monitor project. As such, it provides a summary of all project findings and draws final conclusions.

To provide a comprehensive analysis of changing utilization patterns in the areas served by MHSC, Volume 2 of the project's previously submitted annual reports included utilization of services in New York and Pennsylvania hospitals by New Jersey residents. Because MHSC is located near the border with Delaware, the project team made several attempts to acquire hospital utilization data from that state as well. Unfortunately, these attempts were unsuccessful. As a result, the lack of data from Delaware stands out as an important limitation to the entire project.

The acquisition did not change the primary market areas served by MHSC, as the hospital drew most of its patients from the same set of residential zip codes from 1998 through 2004. The hospital continued to hold a near monopoly on inpatient care and same-day surgery (SDS) delivered to patients living in the most narrowly defined market area (i.e., in the zip codes that account for 75% of MHSC's inpatient and SDS volume). In more broadly defined market areas, MHSC faced competition from the same hospitals as it did in the baseline period – South Jersey-Elmer, Underwood Memorial, and South Jersey-Bridgeton.

Early in the baseline period, the hospital lost a considerable amount of volume and market share in all of its markets. Although the declining trends in total volume reversed in the post-

acquisition period, total volume and market share for most services at MHSC remain below their early baseline levels.

Overall, the demographic profile of patients at MHSC continued to match the corresponding profile for the local area. The typical demographic profile of patients served by MHSC remained a non-Hispanic, white adult living in a zip code with average income for the area.

The likelihood of using services at MHSC changed somewhat by payer since the acquisition. In the post-acquisition period, local patients with coverage through BlueCross-BlueShield or commercial indemnity carriers increased their likelihood of receiving services at MHSC. At the same time, patients covered by Medicaid and self-pay patients who received hospital services were less likely to do so at MHSC after the acquisition. Because it is derived from Uniform billing records, the Medicaid category contains primarily Medicaid fee-for-service patients, since Medicaid HMO patients are often recorded under the general HMO category. This pattern differs from the finding of last year's Volume 1 report, which showed an increase in the likelihood of using services at MHSC for all three of these payer groups from baseline to 2003.

Several Major Diagnostic Categories (MDC's) show substantial change in the likelihood of receiving care at MHSC from baseline to the post-acquisition period. Patients in the following three MDCs increased their likelihood of receiving care at MHSC by 5 percentage points or more from baseline to post-acquisition.

1. MDC 24: Human Immunodeficiency Virus Infections (16 percentage point increase)
2. MDC 19: Mental Diseases & Disorders (10 percentage point increase)
3. MDC 17: Myeloproliferative, Poorly Differentiated Neoplasm (8 percentage point increase)

Patients in the following five MDCs decreased their likelihood of receiving care at MHSC by 5 percentage points or more from baseline to post-acquisition.

1. MDC 2: Eyes (21 percentage point decrease)
2. MDC 22: Burns (13 percentage point decrease)
3. MDC 20: Alcohol/Drug Use & Alcohol/Drug Induced Organic Mental Disorders (8 percentage point decrease)
4. MDC 10: Endocrine, Nutritional, and Metabolic disorders (5 percentage point decrease)
5. MDC 12: Male Reproductive System (5 percentage point decrease)

In 2002 and 2003, MHSC reported a large decrease in the delivery of charity care to the low-income uninsured. The decrease was traced to technical problems in the transmission of charity care information to the state that occurred as the new management reconfigured the hospital's information systems. From the end of 2003 through the end of 2005 the hospital increased its charity care delivery. Year-end data in this report showed that, while much of the increase represented a backlog in the submission of prior year claims, the dollar amount of new claims for that year exceeded amounts reported in all prior years from 1998 to 2003. Preliminary data for 2005 (analyzed in the final quarterly report) showed charity care delivery at the hospital continued to rise in the first three quarters and leveled off in the fourth quarter. Moreover, the volume of service provided by MHSC to self-pay/uninsured patients rose or remained stable throughout the post-acquisition period.

Early in the evaluation concern was also raised about access to clinic visits at MHSC. Specifically, these visits declined slightly in 2002 and precipitously in 2003. Discussions with hospital officials revealed that the hospital changed its clinic billing and reporting practices during the course of the acquisition. Internal data provided by MHSC showed that clinic visits declined only slightly in 2002 and remained stable in 2003 and 2004. Also, preliminary utilization data analyzed in the last quarterly report showed that the number of clinic visits at MHSC increased rapidly in 2004 and 2005. By the end of 2005, these visits were approaching the maximum level achieved during the baseline period.

Utilization of services at MHSC by Hispanic patients declined dramatically in 2003 and remained low in 2004. Discussions with hospital officials revealed that new computer systems introduced at the hospital misclassified many Hispanic patients as non-Hispanic Caucasian. As shown in this report, the undercount of Hispanic patients appeared to be evident in year-end 2004 data. However, the last quarterly report showed a large increase in Hispanic utilization during all four quarters of 2005. By the final quarter of that year, the number of Hispanic inpatient admissions and same-day surgeries slightly exceeded baseline levels.

For many years, the rate of ambulatory care sensitive (ACS) admissions, a local-area marker of problems with access to primary care, among non-elderly adults living near MHSC showed potential problems with access to care. Specifically, this rate was relatively high and growing throughout most of the study period. While primary care access involves delivery of services beyond the scope of a community hospital, this trend combined with the decline in clinic visits originally reported by MHSC raised questions about the role of the hospital in maintaining primary care access. However, preliminary data showed this rate had reached a peak by the third quarter of 2005 and declined in the final quarter of that year. The rate of ACS admissions for children in MHSC's local market area did not show any signs of compromised access during the study period.

The Healthcare Access Monitor examined several other access indicators over the course of the project. These include utilization of services by Medicaid patients, non-Hispanic black patients, patient transfers, emergency department visits, and type of admission by Major Diagnostic Category. Although some of these measures fluctuated during the study period, none of these showed consistent patterns of declining access to care at MHSC since the acquisition.

Healthcare Access Monitor Second Annual Report, Vol. 1

Derek DeLia, Ph.D.

Introduction

On October 1, 2002, Memorial Hospital of Salem County (MHSC) was acquired by Community Health Systems (CHS) of Brentwood, TN. Under the Community Healthcare Asset Protection Act (CHAPA), NJSA 26:2H-7.1, the New Jersey Department of Health and Senior Services (NJDHSS) has the authority to assess the impact of the sale of MHSC on community healthcare access. The NJDHSS has entered an agreement with the Rutgers Center for State Health Policy (CSHP) to monitor the impact of the acquisition on access to healthcare in the area served by MHSC. Under this agreement, the CSHP is producing a series of quarterly and annual Healthcare Access Monitor Reports.

This document, which is the final project report, focuses on changes in access to care at MHSC in 2004 compared to 2003 and the pre-acquisition, or baseline, period from 1998 to 2002. At the end of this report a summary of all project findings and final conclusions about access to care at MHSC will be provided.

Much of the data in this report has been presented in previously submitted Quarterly Reports. However, quarterly data used in those reports, while more timely, are considered preliminary and subject to revision. Therefore, it is important to determine whether the results in the Quarterly Reports are consistent with what is obtained from final year-end data. Also, the Annual Report provides more detailed analyses of market activity and specific access indicators such as charity care utilization.

Following the methodology of previous annual reports, this one describes the use of hospital services at MHSC compared to utilization in the area surrounding the hospital and compared to broader trends in New Jersey. Prior annual reports divided the analysis into two volumes. Volume 1 has been based on predetermined sets of analysis, while Volume 2 provided a comprehensive set of reference tables and highlighted areas for further exploration in later reports. Since this report is the final one for the project, there is no need for an exploratory Volume 2 as stated in the project Memorandum of Agreement with the NJDHSS.

This year's Volume 1 report provides descriptive and econometric analysis of leading access indicators (defined in the text) using New Jersey data through 2004. It focuses on healthcare access among vulnerable populations and includes measures of charity care, ambulatory care sensitive (ACS) admissions, inpatient utilization, outpatient utilization, and patient transfers. Wherever possible, these measures are broken out by race/ethnicity and by reimbursement categories associated with vulnerable populations (i.e., self-pay/uninsured, Medicaid).

This report is divided into five sections. Section 1 provides a comprehensive analysis of the market in which MHSC operates. This analysis includes measures of market share and competition under alternative definitions of market boundaries. Section 2 analyzes the demographics of MHSC's local market area compared to its patient base. Section 3 analyzes the factors that determine whether local patients use services at MHSC instead of other nearby providers. Section 4 examines leading healthcare access indicators. This section describes how utilization of services at MHSC compares to utilization in the local area and in other parts of New Jersey before and after the acquisition. Appendix A provides a more detailed analysis of trends in preventable hospitalizations near MHSC relative to other parts of NJ. This section adds to the analysis of preventable hospitalizations appearing in section 4 by controlling for demographic trends that may affect preventable hospitalization rates in different areas. Each section begins with a brief review of methodology before presenting results of the analyses. The concluding section provides a discussion of implications of the findings in this report and the project overall.

SECTION 1: MARKET ANALYSIS

Methods

This section describes the structure and concentration of MHSC's local market area in 2003 compared to the baseline period. The local market for services offered by MHSC is defined using patient origin data (UB-92) for inpatient admissions and same-day surgeries (SDSs) in New Jersey. It is well recognized that patients may also use services from outside of New Jersey. Because of problems involving data availability and timeliness, out-of-state hospital use has been covered in annual Volume 2 reports throughout the project. The implications of out-of-state utilization on project findings are discussed at the end of the report.

It is well recognized among health economists that including all patients who use services at a given hospital in the market definition is problematic because a small number of patients from far-away areas can skew the results. Therefore, the market definition is based on the areas in which the large majority of patients reside. Common cutoff percentages for defining this majority are 75%, 85%,

and 90%. To test for sensitivity of findings to market definition, a comparative analysis using each of these cutoffs is performed.

For each market definition, major competitors of MHSC are listed. A major competitor is defined as any hospital that claims at least 10% of the discharges or SDS's in at least one of the zip codes that define the local market area for MHSC.

The importance of MHSC to the patients in its local market area is measured by its share of admissions and SDS's among all patients who live in the relevant set of zip codes under each market definition. The level of competition under each market definition is measured by the Hirschman-Herfindahl Index (HHI). The HHI is a routinely used measure of market concentration, which is considered fundamental to the analysis of competition and market power.¹ Specifically, the HHI is defined as the sum of the squares of the market shares for all hospitals that serve patients in a given area. If a single hospital provided service to all patients in an area, then the HHI for that area would equal 1. If many hospitals divided the market area evenly, then the HHI would be close to zero. In theory, the benchmark case of perfect competition would produce an HHI value exactly equal to zero.

Results

Table 1 lists the zip codes that define the market area for MHSC and the hospitals that are considered competitors of MHSC under each of the market definitions. The data in this table is virtually identical to the data that describes MHSC's market areas and competitors during the baseline period and in 2003, which were reported in prior annual reports. In only one case, the hospital's core service area appeared to change slightly. This occurred with the addition of one zip code (08001) to the 90% market area in 2003. Since this zip code appeared in only one market definition in one year, it is not included in analysis of market trends over time. The hospitals listed in Table 1 as the core competitors for MHSC in each market area are also the same as those appearing in prior reports.

Table 1: Local Market Boundaries and Competitor Hospitals for MHSC under Alternative Market Definitions, 2004

| | 75% Rule | 85% Rule | 90% Rule |
|-----------------------------------|---------------------|--|--|
| Zip codes | 08069, 08070, 08079 | 08069, 08070, 08079, 08098 | 08069, 08070, 08079, 08098, 08067, 08302 |
| Competitor hospitals ^a | None | 1. South Jersey-Elmer 2. Underwood Memorial | 1. South Jersey-Elmer 2. Underwood Memorial |

| | | | |
|--|--|--|---------------------------|
| | | | 3. South Jersey-Bridgeton |
|--|--|--|---------------------------|

Source: NJ Uniform Billing (UB-92) Records

^a A competitor hospital captures at least 10% of the share of patients from any of the zip codes defining the market.

Table 2 shows MHSC's share of the local market and the level of market concentration, measured by the HHI, under each market definition. During the baseline period, MHSC accounted for the large majority of inpatient and SDS volume in the 75% and 85% markets. In both cases, market share fell from 1998 to 1999 but remained approximately constant through the remainder of the baseline period to 2002. Little change occurred in MHSC's market share in the two post-acquisition years in these two market areas. A similar pattern is found in the HHI, which declined in 1999 but did not change appreciably from 1999 to 2004.

In the broader 90% market, MHSC has consistently held a much smaller market share throughout the study. As in the other more narrowly defined markets, the hospital's market share fell in 1999 and remained fairly stable thereafter. The steadily declining HHI value suggests that the 90% market became less concentrated (i.e., more competitive) over time due in part to the loss in market share by MHSC.

Table 2: Market Share for MHSC and Hirschman-Herfindahl Index for the Local Market under Alternative Market Definitions

| Year | 75% Rule | | 85% Rule | | 90% Rule | |
|------|--------------------|------------------|--------------------|------------------|--------------------|------------------|
| | Share ^a | HHI ^b | Share ^a | HHI ^b | Share ^a | HHI ^b |
| 1998 | 84% | 0.70 | 80% | 0.64 | 44% | 0.32 |
| 1999 | 80% | 0.65 | 76% | 0.58 | 38% | 0.31 |
| 2000 | 79% | 0.64 | 75% | 0.58 | 38% | 0.30 |
| 2001 | 81% | 0.66 | 77% | 0.60 | 40% | 0.30 |
| 2002 | 79% | 0.63 | 75% | 0.57 | 38% | 0.29 |
| 2003 | 80% | 0.64 | 76% | 0.58 | 39% | 0.28 |
| 2004 | 80% | 0.65 | 76% | 0.58 | 40% | 0.24 |

Source: NJ Uniform Billing (UB-92) Records

^a Share refers to the market share of MHSC.

^b HHI is the Hirschman-Herfindahl Index.

Ultimately, the acquisition of MHSC by CHS did not expand or contract the core market areas served by the hospital. Moreover, the structure and level of competition in these markets appears to have changed only slightly.

SECTION 2: DEMOGRAPHIC ANALYSIS –PATIENTS AT MHSC VS. THE LOCAL AREA

Methods

This section describes the demographic composition of patients receiving care from MHSC compared to all patients who live in MHSC's local market area. As described in prior reports, these demographics did not change substantially during the baseline years, 1998-2002. This report focuses on changes in patient demographics from the final baseline year (2002) to 2003 and 2004. Results for the 75% market are emphasized, since the results for the 85% and 90% markets are similar. Following the approach from the First Annual Report, patient demographic variables are derived from UB data. These variables include age and race/ethnicity of patients who were admitted as inpatients or had same-day surgery (SDS). Since the UB records do not include information about patient income, an area-level income measure is used. Specifically, median family income is calculated using zip code-level projections of U.S. Census data calculated by Claritas, Inc. These data reflect median income for each zip code in 1999 as recorded in the Decennial Census for 2000.

Although there is no way to measure income changes within zip codes over time, it is possible to determine whether the patient mix at MHSC is shifting toward more or less affluent zip codes in the post-acquisition period. Following the approach from the First Annual Report, the income measure for patients at MHSC and in the local market area is calculated as follows. Each patient is assigned an income equal to the median income for his or her residential zip code. A weighted average of these assigned incomes is then calculated based on the number of MHSC's patients living in each zip code. This constructed variable measures whether patients who use services at MHSC come from relatively richer or poorer zip codes compared to patients in the local market area overall and whether the difference changes from baseline to 2003 and 2004.

Data from NJ birth record files are used also to supplement the analysis of demographic data. Specifically, the percentage of births to immigrant mothers is used as a proxy for the local immigrant population at the zip code level. For analysis at the patient level, the measure of immigrant populations is constructed in the same way as the income measure. The percentage of births to foreign-born mothers is calculated for each zip code and a similar weighted percentage is calculated to derive a hospital-level measure of services provided to individuals from high immigrant zip codes. As in the case for income, this immigrant patient index provides only a rough proxy for comparing services to immigrant populations at MHSC versus the local market area. For the last annual report, geocoded birth record data were available for the baseline period only. At the time this report was

being prepared, birth record data became available for 2003 but not 2004. Therefore, this report tracks changes in the estimated proportion of services to immigrant populations from 2002 to 2003.

Analysis of these data in the first annual report showed that there were few changes in the demographic composition of patients at MHSC and in the local market area from 1998 to 2002. Therefore, this report focuses on comparisons between 2002, 2003, and 2004.

Results

In most cases, the demographic composition of patients at MHSC and in the local market area continued to remain stable in the years just before and after the acquisition (Table 3). A minor exception has to do with the percentage of patients falling into the non-elderly adult category (ages 19-64), which increased slightly at MHSC from 2002 to 2004. This increase reflects a similar small change at the market level. As well, the percentage of patients classified as Hispanic declined at MHSC and in the local market area from 2002 to 2004, a trend that affects a number of access measures analyzed below. All other demographic variables in Table 3 remained roughly constant.

Table 3: Patient Demographics: MHSC vs. the Local Market under the 75% Market Definition, 2002 to 2004

| | MHSC | | | 75% Market | | |
|--------------------------------------|----------|----------|----------|------------|----------|----------|
| | 2002 | 2003 | 2004 | 2002 | 2003 | 2004 |
| Percentage of Patients Ages 0-5 | 2% | 2% | 2% | 3% | 2% | 2% |
| Percentage of Patients Ages 6-18 | 3% | 3% | 3% | 3% | 4% | 3% |
| Percentage of Patients Ages 19-64 | 52% | 54% | 55% | 54% | 55% | 56% |
| Percentage of Patients Ages 65+ | 43% | 41% | 40% | 40% | 39% | 39% |
| | | | | | | |
| Percentage Black non-Hispanic | 20% | 21% | 20% | 21% | 21% | 21% |
| Percentage Hispanic | 4% | 3% | 1% | 5% | 3% | 2% |
| Percentage Other non-White | 1% | 0% | 1% | 3% | 1% | 3% |
| | | | | | | |
| Assigned Patient Income ^a | \$49,720 | \$49,345 | \$49,667 | \$50,453 | \$50,400 | \$50,695 |

^aAssigned income is an approximation for patient income based on the median income in the patient's zip code in 1999. See the text for details.

The previous Annual Report documented an increase in the immigrant patient index at MHSC from 2000 to 2002 (from 0.04 to 0.10). A similar increase was found in the local market area under all

three definitions. In 2003, the immigrant patient index at MHSC remained approximately constant at 0.10. This findings is consistent with trends in all three geographic market areas, which did not experience an appreciable change in this index either.

SECTION 3: USE OF SERVICES AT MHSC BY AREA PATIENTS

Methods

This section analyzes the factors that determine whether an individual from the local market area who utilizes hospital services does so at MHSC. This analysis complements and expands the demographic analysis in section 2. In that section, the analysis focused on whether patients at MHSC had certain demographic characteristics and whether those characteristics differed from patients in the local market area. In this section, the analysis focuses on whether patients with various demographic and clinical characteristics are likely to use services at MHSC instead of other hospitals. Service use is defined as same day surgery (SDS) or inpatient admission as recorded in UB-92 data. The analysis focuses on utilization patterns from the baseline period (1998-2002) compared to the post-acquisition period (2003-2004). At issue is whether the factors that predict service use at MHSC change in the post-acquisition period.

Separate analyses were done for each definition of the local market area. However, results are reported for the 75% market only, since the 85% and 90% markets show similar results.

For each hospital service user residing in the local market area, the probability of use at MHSC is hypothesized to depend on the following patient characteristics:

1. Age
2. Length of stay (LOS)²
3. Race/ethnicity
4. Distance in miles from zip code of residence to MHSC, which serves as a proxy for patient travel time
5. Median family income in the patient's zip code, which serves as a crude proxy for patient income
6. Expected payer
7. Year of service delivery
8. Major Diagnostic Category (MDC)

Chi-squared tests are used to determine whether the likelihood of service use at MHSC varies significantly by each of these characteristics.

It is likely that many patient characteristics will be statistically related to each other and therefore confound the relationship between each characteristic and the use of services at MHSC – e.g., patients with longer lengths of stay may also be older than average. To isolate the contribution of each patient characteristic on the use of services at MHSC, the analysis also includes estimation of logistic regression models.³ These models estimate the marginal effect of each characteristic (holding other ones constant) on the use of services at MHSC. Specifically, this analysis determines which patient characteristics influence the odds that services are obtained at MHSC instead of another alternative hospital.

Some of the independent variables (i.e., patient characteristics) in the logistic regression models are expressed as mutually exclusive groups of indicator variables, which take the values 0 or 1 only. For example, patient LOS can fall into one of four categories measuring the number of days spent overnight in the hospital – 0 (i.e., SDS), 1-2, 3-5, or greater than 5. To avoid perfect collinearity in the regression model, the indicator variable for SDS is omitted from the logit regression. As a result, the remaining LOS variables are interpreted as contrast effects relative to SDS. Similarly, the omitted, or reference, categories are non-Hispanic whites for race/ethnicity, non-elderly adults for age, Blue Cross/Blue Shield (BCBS) and commercial (non-HMO) insurance for payer, 1998 for year, and MDC 6: Digestive System for MDC. (MDC-6 was chosen for the reference category since it represents the highest percentage of patients (15%) in the local market area.)

As in the first two annual reports, logistic regression coefficients are expressed as odds ratios. In other words, the results describe how each variable affects the odds that an individual receives care at MHSC instead of another facility. It is important to note that the odds of an event are not the same as the probability. For example, if the probability of receiving care at MHSC is $\frac{2}{3}$, then the odds are 2 to 1. This distinction should be kept in mind when comparing descriptive results with the results of the logistic regression model.

Results

Table 4 shows the percentage of patients who receive services from MHSC instead of other hospitals. The table shows overall percentages and percentages stratified by patient characteristics for each market area. The percentage of patients in the 75% market area who received their care at MHSC was not significantly different in the baseline and post-acquisition periods (80% post-

acquisition versus 81% at baseline). The percentages of patients receiving care at MHSC in the 85% and 90% markets also did not change appreciably between the two periods.

**Table 4: Comparison of Likelihood of Receiving Care at MHSC
by Patient Characteristics, 1998-2002 vs. 2003-2004**

| Variable | 75% Market | |
|--|------------------------|------------------------|
| | 1998-2002 ^a | 2003-2004 ^a |
| Overall | 0.81 | 0.80 |
| Length of Stay | | |
| SDS | 0.81 | 0.78 |
| 1-2 days | 0.81 | 0.83 |
| 3-5 days | 0.82 | 0.82 |
| More than 5 Days | 0.77 | 0.76 |
| Race/Ethnicity | | |
| Non-Hispanic White | 0.86 | 0.83 |
| Non-Hispanic Black | 0.84 | 0.84 |
| Hispanic | 0.81 | 0.45 |
| Other Non-white | 0.08 | 0.29 |
| Patient Age | | |
| 0-5 Years | 0.81 | 0.77 |
| 6-18 Years | 0.68 | 0.74 |
| 19-64 Years | 0.75 | 0.75 |
| 65 Years or Older | 0.89 | 0.88 |
| Distance in Miles from Patient Zip Code to MHSC | | |
| 2 | 0.80 | 0.80 |
| 5 | 0.83 | 0.80 |

| | | |
|--|------|------|
| 8 | 0.79 | 0.79 |
| | | |
| Median Family Income in the Patient's Zip Code | | |
| \$46,280 | 0.80 | 0.80 |
| \$47,722 | 0.79 | 0.79 |
| \$59,867 | 0.83 | 0.80 |
| | | |
| Payer | | |
| Commercial/BCBS | 0.78 | 0.83 |
| Medicaid | 0.68 | 0.64 |
| Self-pay | 0.79 | 0.75 |
| Medicare | 0.87 | 0.86 |
| HMO | 0.79 | 0.78 |
| Other | 0.63 | 0.33 |
| | | |
| Major Diagnostic Category | | |
| MDC 1: Nervous System and Sense Organs | 0.81 | 0.77 |
| MDC 2: Eyes | 0.85 | 0.64 |
| MDC 3: Ear, Nose, Mouth and Throat | 0.58 | 0.54 |
| MDC 4: Respiratory System | 0.92 | 0.92 |
| MDC 5: Circulatory System | 0.76 | 0.77 |
| MDC 6: Digestive System | 0.90 | 0.90 |
| MDC 7: Hepatobiliary/Genitourinary | 0.88 | 0.84 |
| MDC 8: Musculoskeletal System and Connective Tissue | 0.74 | 0.73 |
| MDC 9: Skin, Subcutaneous Tissue and Breast | 0.85 | 0.83 |
| MDC 10: Endocrine, Nutritional, and Metabolic | 0.86 | 0.81 |
| MDC 11: Kidney and Urinary Tract | 0.84 | 0.83 |
| MDC 12: Male Reproductive System | 0.78 | 0.73 |
| MDC 13: Female Reproductive System | 0.84 | 0.87 |
| MDC 14: Pregnancy, Childbirth & The Puerperium | 0.83 | 0.82 |
| MDC 15: Newborns and Other Neonates | 0.82 | 0.78 |
| MDC 16: Blood, Blood Forming Organs and Immunological | 0.82 | 0.87 |
| MDC 17: Myeloproliferative, Poorly Differentiated Neoplasm | 0.75 | 0.83 |
| MDC 18: Infectious & Parasitic Diseases, Systemic Or Unspecified Sites | 0.93 | 0.91 |
| MDC 19: Mental Diseases & Disorders | 0.05 | 0.15 |

| | | |
|---|------|------|
| MDC 20:Alcohol/Drug Use & Alcohol/Drug Induced Organic Mental Disorders | 0.33 | 0.25 |
| MDC 21: Injuries, Poisonings & Toxic Effects of Drugs | 0.81 | 0.85 |
| MDC 22: Burns | 0.63 | 0.50 |
| MDC 23: Factors Influencing Hlth Stat & Othr Contacts With Hlth Servcs | 0.82 | 0.82 |
| MDC 24: Human Immunodeficiency Virus Infections | 0.63 | 0.79 |
| MDC 25: Multiple Significant Trauma | 0.44 | 0.50 |

In the post-acquisition period, relative length-of-stay patterns at MHSC were generally similar to that observed at baseline (Table 4).⁴ The only exception is that local area patients receiving SDS were slightly less likely to receive care at MHSC after the acquisition (i.e., 81% of SDS patients went to MHSC at baseline versus 78% in the post-acquisition period). A similar pattern is seen in the logistic regression analysis, which adjusts for other patient characteristics (Table 5). In particular, the size and statistical significance of the odds ratios are similar in both time periods. The one exception is the change in odds of a short inpatient stay at MHSC (1-2 days) relative to a SDS. At baseline, the odds that a patient with a short inpatient stay received care at MHSC were smaller than the corresponding odds for a SDS patient. In the post-acquisition period, these odds were statistically no different from each other reflecting the slight drop in the likelihood of receiving SDS at MHSC described in Table 4.

Since the acquisition, the percentage of Hispanic patients in the local market area receiving care from MHSC decreased dramatically (Table 4). At the same time, the percentage of “other non-white” patients increased their likelihood of using services at MHSC. This pattern appears to reflect a previously reported problem with the coding of patient ethnicity at the hospital. Specifically, MHSC made changes to its information systems, which lead to a misclassification of Hispanic patients. Using 2004 data only, 57% of Hispanics in the local market area used services at MHSC. While this percentage is larger than the one for 2003 (33%), it remains smaller than the one observed at baseline (81%). Logistic regression analysis reflects a similar pattern in the data for Hispanic and “other non-white” patients.

In non-adjusted data, the likelihood of non-Hispanic black patients using services at MHSC did not change from baseline to the post-acquisition period (Table 4). Also, in both periods, the likelihood of using services at MHSC for non-Hispanic blacks is almost the same as the likelihood for non-Hispanic whites. However, a large change does appear in the logistic regression analysis, which adjusts for several other factors that affect the use of MHSC instead of another hospital (Table 5). At

baseline, the odds that a non-Hispanic black patient received care from MHSC were 28% higher than the odds for non-Hispanic white patients. After the acquisition, the odds for non-Hispanic black patients were 18 times as high as the odds for non-Hispanic white patients. This may be because blacks are more likely to have factors that are associated with receiving care from other hospitals. When these factors are taken into account, blacks are actually more reliant on services at MHSC. It is not clear, however, why such a change in characteristics among non-Hispanic blacks would take place between baseline and the post-acquisition period. This change could be due to the ongoing problem with the classification of Hispanic patients, which may confound the multivariate analysis of race and ethnicity.

In the post-acquisition years, there was a slight shift in utilization patterns by age in the local market area. Specifically, children ages 5 and under were slightly less likely to use services at MHSC while children ages 6-18 became more likely to receive care at MHSC. Utilization patterns by adults did not change. These patterns do not change when controlling for other variables in the logistic regression analysis (Table 5).

Zip code-based measures of local utilization patterns did not show any changes between baseline and the post-acquisition periods. The acquisition does not appear to have affected the distances MHSC's patients travel for service or the median income of their patient base as crudely measured in this report (Tables 4, 5).

The likelihood of using services at MHSC did change somewhat by payer since the acquisition (Table 4). In the post-acquisition period, local patients with commercial/BCBS coverage increased their likelihood of receiving services at MHSC. At the same time, patients covered by Medicaid and self-pay patients who received hospital services were less likely to do so at MHSC after the acquisition. Because it is derived from Uniform billing records, the Medicaid category contains primarily Medicaid fee-for-service patients, since Medicaid HMO patients are often recorded under the general HMO category. This pattern differs from the finding of last year's Volume 1 report, which showed an increase in the likelihood of using services at MHSC for all three of these payer groups. Similar patterns appear in the logistic regression analysis controlling for other patient characteristics (Table 5).

Last year's Volume 1 report found that local patients in the "other" payer group were much less likely to use services at MHSC in 2003 than at baseline. This group includes those insured through CHAMPUS, the NJ State Health Benefits Plan, other government insurance, union insurance, workers' compensation, no fault insurance, and other miscellaneous sources of coverage. While this patient group is still less likely to use services at MHSC compared to baseline, the size of the

difference has been reduced (i.e., a difference of 44 percentage points in 2003 relative to baseline versus a difference of 30 percentage points in 2003/2004 compared to baseline).

Several MDCs show substantial change in the likelihood of receiving care at MHSC from baseline to the post-acquisition period (Tables 4). Patients in the following three MDCs increased their likelihood of receiving care at MHSC by 5 percentage points or more from baseline to post-acquisition.

4. MDC 24: Human Immunodeficiency Virus Infections (16 percentage point increase)
5. MDC 19: Mental Diseases & Disorders (10 percentage point increase)
6. MDC 17: Myeloproliferative, Poorly Differentiated Neoplasm (8 percentage point increase)

In logistic regression analysis, the odds of receiving care for these services at MHSC also increased in the post-acquisition period relative to baseline.

Patients in the following five MDCs decreased their likelihood of receiving care at MHSC by 5 percentage points or more from baseline to post-acquisition.

6. MDC 2: Eyes (21 percentage point decrease)
7. MDC 22: Burns (13 percentage point decrease)
8. MDC 20: Alcohol/Drug Use & Alcohol/Drug Induced Organic Mental Disorders (8 percentage point decrease)
9. MDC 10: Endocrine, Nutritional, and Metabolic disorders (5 percentage point decrease)
10. MDC 12: Male Reproductive System (5 percentage point decrease)

Declines in the odds of receiving treatment for these diagnoses also appeared in the logistic regression model (Table 5).

Table 5: Comparison of Odds Ratios from Logistic Regression Predicting the Likelihood of Receiving Care at MHSC, 1998-2002 vs. 2003-2004

| Variable | 75% market | |
|---|------------|-----------|
| | 1998-2002 | 2003-2004 |
| Length of Stay (SDS is Reference Category) | | |
| 1-2 days | 0.95* | 1.15 |
| 3-5 days | 0.92 | 0.88 |
| More than 5 days | 0.66* | 0.64* |
| Patient age (Age 19-64 is Reference Category) | | |
| 0-5 years | 1.31 | 1.11 |
| 6-18 years | 1.03 | 1.29 |
| 65 years or older | 2.97* | 3.18* |
| Race/Ethnicity (Non-Hispanic White is Reference Category) | | |
| Non-Hispanic black | 1.28* | 18.03* |
| Hispanic | 0.94 | 0.34* |
| Other non-white | 0.01* | 0.08* |
| Distance from patient zip code to MHSC | | |
| | 1.02* | 1.00 |
| Median family income in the patient's zip code | | |
| | 1.00* | 1.00 |
| Expected Payer (Commercial/BCBS is the Reference Category) | | |
| Medicaid | 0.9 | 0.46* |
| Self-pay | 1.90* | 0.96 |
| Medicare | 0.95 | 0.69* |
| HMO | 0.77* | 0.67 |
| Other | 0.48* | 0.11* |
| Year (1998 is the Reference Year) | | |
| 1999 | 0.78* | n/a |
| 2000 | 0.77* | n/a |
| 2001 | 0.66* | n/a |
| 2002 | 0.63* | n/a |

| Major Diagnostic Category (MDC 6 - Digestive System is the Reference Category) | | |
|---|--------|--------|
| MDC 1: Nervous System and Sense Organs | 0.44* | 0.36* |
| MDC 2 : Eyes | 0.49 | 0.16* |
| MDC3: Ear, Nose, Mouth and Throat | 0.21* | 0.13* |
| MDC 4: Respiratory System | 1.16 | 1.14 |
| MDC 5: Circulatory System | 0.29* | 0.35* |
| MDC 7: Hepatobiliary/Genitourinary | 0.99 | 0.71* |
| MDC 8: Musculoskeletal System and Connective Tissue | 0.40* | 0.39* |
| MDC 9: Skin, Subcutaneous Tissue and Breast | 0.71* | 0.55 |
| MDC 10: Endocrine, Nutritional, and Metabolic | 0.65 | 0.47* |
| MDC 11: Kidney and Urinary Tract | 0.58* | 0.52* |
| MDC 12: Male Reproductive System | 0.38* | 0.30* |
| MDC 13: Female Reproductive System | 0.98 | 0.87 |
| MDC 14: Pregnancy, Childbirth & The Puerperium | 1.11 | 0.70 |
| MDC 15: Newborns and Other Neonates | 0.82 | 0.52* |
| MDC 16: Blood, Blood Forming Organs and Immunological | 0.47* | 0.64 |
| MDC 17: Myeloproliferative, Poorly Differentiated Neoplasm | 0.30* | 0.52 |
| MDC 18: Infectious & Parasitic Diseases, Systemic Or Unspecified Sites | 1.55* | 1.29 |
| MDC 19: Mental Diseases & Disorders | 0.01* | 0.03* |
| MDC 20:Alcohol/Drug Use & Alcohol/Drug Induced Organic Mental Disorders | 0.05* | 0.04* |
| MDC 21: Injuries, Poisonings & Toxic Effects of Drugs | 0.56* | 0.70 |
| MDC 22: Burns | 0.55 | 0.15 |
| MDC 23: Factors Influencing Hlth Stat & Othr Contacts With Hlth Servcs | 0.49* | 0.72 |
| MDC 24: Human Immunodeficiency Virus Infections | 0.28* | 0.80 |
| MDC 25: Multiple Significant Trauma | 0.10* | 0.22 |
| | | |
| Number of observations | 33,130 | 13,789 |

* Odds ratio is statistically different from 1 at the 5% level.

Statistical tests are based on standard errors that account for clustering of errors within zip codes.

SECTION 4: LEADING ACCESS INDICATORS

Methods

This section presents analysis of annual trends in leading access indicators that also appear in the series of Quarterly Healthcare Access Monitor reports. The analysis in this section provides greater detail than the quarterly reports on the provision of charity care and healthcare access among population subgroups. In particular, the charity care data in this report come from detailed, fully adjudicated charity care claim filings rather than the charity care summary reports that are used for quarterly analysis. These numbers reflect the total value of charity care claims priced at Medicaid reimbursement rates (excluding add-ons for Graduate Medical Education). They have been adjusted for inflation using the Consumer Price Index with 2000 as the base period. As in the quarterly reports, charity care claims are analyzed on the basis of claim date rather than service date. The median time between these two dates has been approximately two to three months from 1999 to 2004, although the actual time could be much shorter or longer for individual claims.

Analysis of same-day surgeries (SDS's) and inpatient admissions are based on final UB-92 data. Analysis of emergency department (ED) and clinic visits are based on B-2 aggregate utilization reports. These data are considered more accurate than the B-2 utilization data used for quarterly reports, because they are submitted as final year-end reports and are edited by the NJDHSS.

Following the approach used in the quarterly reports, analysis of access indicators at the market level uses the 75% rule to define the market. This definition is not very constraining, however, since access measures at the market level are always contrasted with access measures at the county level giving a more complete geographical perspective.

Charts referred to in the text that summarize the main findings are presented at the end of the main body of the report. A comprehensive set of tables for all leading access indicators appears in Appendix B.

Results

Charity Care

From 2003 to 2004, the value of charity care filings at MHSC grew by more than 3½ times from approximately \$650,000 in 2003 to more than \$2.5 million in 2004. This is the highest amount of charity care reported at the hospital for the entire study period (1998-2004). The increase in charity care delivery at the hospital occurred broadly among patients who are children, non-elderly adults,

and elderly (Charts 1, 2, & 3). The rapid rise in charity care at MHSC is consistent with recent Quarterly Healthcare Access Monitor Reports, which examined preliminary charity care claim filings for 2004.

By comparison, charity care delivery at South Jersey-Elmer (SJE), which is the only other acute care hospital in Salem County, fell in 2004 (Chart 4). As a result, MHSC has regained and expanded its dominant position in terms of charity care provision in Salem County. In contrast, MHSC had fallen behind SJE in this access measure in the last two years of the baseline period.

The recent growth in charity care at MHSC also outpaced other competing hospitals in more broadly defined markets (Table 6). In 2004, charity care delivery at Underwood Memorial Hospital fell by 17%. At South Jersey Regional Medical Center, charity care filings increased by 20% in 2004. Although this growth is substantial, it is much less than that experienced by MHSC (Chart 5).

Table 6: Value of Charity Care Provided by MHSC and its Competitors^a

| Year | MHSC | South Jersey - Elmer | Underwood Memorial | SJ Healthcare Regional Medical Center |
|------|-------------|----------------------|--------------------|---------------------------------------|
| 1999 | \$966,535 | \$365,219 | \$3,067,478 | \$5,994,512 |
| 2000 | \$877,809 | \$231,497 | \$2,507,252 | \$5,164,133 |
| 2001 | \$189,310 | \$204,601 | \$1,914,869 | \$3,894,086 |
| 2002 | \$320,870 | \$444,940 | \$3,797,610 | \$5,191,865 |
| 2003 | \$654,696 | \$606,011 | \$3,984,911 | \$8,157,274 |
| 2004 | \$2,529,055 | \$562,865 | \$3,301,478 | \$9,828,417 |

Source: NJ Hospital Charity Care Claim Files

^aDollar amounts reflect the value of charity care claims priced at Medicaid reimbursement rates excluding add-ons for Graduate Medical Education. These amounts are adjusted for inflation using the Consumer Price Index with 2000 as the base year.

As described in previous Healthcare Access Monitor reports, MHSC experienced technical problems with the filing of charity care claims in late 2002, which continued through 2003. Much of the recent growth in charity care claims at the hospital represents a backlog of claims for the prior years that appeared in the 2004 records. Specifically, 46% of the hospital's charity care claims in 2004 have service dates from 2003 or earlier. Similarly, 38% of the claims reported in 2003 have service dates from 2002 or earlier. Nevertheless, even if these old claims are excluded, the total amount of

charity care provided in 2004 (\$1.37 million in year 2000 purchasing power) still exceeds all prior levels from 1998-2003.

Ambulatory Care Sensitive (ACS) Admissions

The ambulatory care sensitive (ACS) admission rate per 1,000 children in MHSC's local market area continued a slowly declining trend that began during the baseline period (Chart 6). This rate also declined for children living in Salem County and southern New Jersey as it grew slightly statewide. The ACS admission rate for children in the local market area remained below that of South Jersey and New Jersey overall, but above the rate for Salem County.

Patterns in the rate of ACS admissions for children varied somewhat by race and ethnicity. The ACS admission rate for non-Hispanic black children in the local market area declined in 2004 though less rapidly than it did in 2003 (Chart 7). This trend mirrors the one observed at the county level. A slight decline in the ACS admission rate for non-Hispanic black children was seen at broader geographic levels as well.

In the two most recent years, there were no ACS admissions reported for Hispanic children living in MHSC's local market area and in Salem County (Tables B-15 & B-21). This appears to be a continuing result of previously reported difficulties faced by MHSC in coding patient ethnicity.

The ACS admission rate among non-Hispanic white children continues to be higher in the local market area than in other parts of the state (Chart 8). However, this rate decreased in 2004 reflecting similar decreases in Salem county and southern NJ.

Throughout the study period, the ACS admission rate for non-elderly adults in the local market area has been higher than that observed for all other geographic areas examined (Chart 9). Since 2002, this rate has risen steadily in the local market area and in Salem County. Trends in this measure for southern New Jersey and statewide have been mostly flat.

For black non-Hispanic non-elderly adults, the rate of ACS admissions at the local area has consistently exceeded the corresponding rate in other geographic areas (Chart 10). Unlike the rate of ACS admissions for all adults in the local area, the trend in this measure over time has been fairly erratic over time. In addition, this rate remained approximately constant from 2003 to 2004.

The ACS admission rate for non-Hispanic white non-elderly adults in the local market area and in Salem County has experienced been very erratic in recent years (Table B-31). As in the case for children, this pattern is likely related to problems with ethnicity coding at MHSC that were described above.

Inpatient Admissions and Same-Day Surgeries

After declining during the pre-acquisition years, inpatient admissions and same-day surgeries (SDS's) have increased for all patients at MHSC since 2002 (Chart 11). The same pattern has appeared in the local market area and Salem County throughout the study period. However, the total volume of inpatient admissions and SDS's remains below the volume reported in 1998 for the hospital and both of these areas.

Chart 12 shows the percentage change in self-pay admissions and SDS's for MHSC, Salem County, and NJ relative to their respective 1998 levels. Since 2002, this volume has grown at MHSC and Salem County reversing a declining trend in the years leading up to the acquisition. From 2002 to 2004, the growth in this volume at MHSC also exceeded the corresponding growth statewide. In 2004, growth in self-pay volume leveled off at both the hospital and county levels.

Medicaid admissions and SDS's at MHSC also declined before the acquisition and has since rebounded (Chart 13). As described earlier, Medicaid volume in this report includes mostly Medicaid fee-for-service patients, since Medicaid managed care patients in the UB-92 data are typically counted under the general HMO category. In 2004, Medicaid volume at the hospital reached its highest level for any year of the study (Chart 13, Table B-34). Trends are similar at the county and state levels.

Inpatient admissions and SDS's for non-Hispanic black patients at MHSC followed a pattern similar to that reported for admissions and SDS's overall (Table B-36). Specifically, volume fell during the pre-acquisition period and grew thereafter but remains below the 1998 level. As a percentage of total inpatient and SDS volume at MHSC, the corresponding volume for non-Hispanic black patients has remained constant and slightly above the 1998 percentage since the acquisition (Chart 14).

Inpatient admissions and SDS's reported for Hispanic patients at MHSC has fallen off considerably at MHSC, the local market area, and Salem County in 2003 and 2004 (Chart 14, Table B-37). Apparently, the reporting of utilization by Hispanic patients at MHSC, and its likely effects on area-level measures of Hispanic utilization, continue to be problematic.

Inpatient Length of Stay

Average inpatient length of stay (LOS) generally declined throughout the study period at MHSC as it did for patients in many areas throughout the state (Chart 15). Nevertheless, average LOS for patients at MHSC remains lower than for other patients in different areas of the state.

After fluctuating throughout most of the study period, average LOS among (mostly fee-for-service) Medicaid patients at MHSC increased in 2004. This coincides with a slight increase at the local market level and slight declines in Salem County and statewide. By 2004, Medicaid LOS at MHSC was approaching the corresponding level for all Medicaid patients in Salem County. With the exception of Hispanics, trends in LOS for other potentially vulnerable populations, particularly self-pay and non-Hispanic blacks, were similar to broader trends in 2004.

Transfers

Consistent with prior access monitor reports, data on patient transfers from MHSC to other acute care hospitals do not suggest any problems with access to care. Although general patient transfers (excluding cardiac patients and newborns) from MHSC to other acute care hospitals grew slightly during the study period, similar growth was reported by other hospitals that are similar to MHSC in size and local population density. Cardiac transfers from MHSC fell during the study period as they had for comparison hospitals (Table B-46). Newborn transfers from MHSC were too rare to indicate any problem with access (Table B-47).

Hospital emergency department and clinic visits

After growing by 8.7% in 2003, emergency department (ED) visits at MHSC slowed to 0.8% in 2004 (Chart 17, Table B-48). In contrast, ED visits at South Jersey-Elmer (SJE) grew by 4.3% in 2003 and 9% in 2004. As a result, MHSC's share of countywide ED visits fell from 60% in 2003 to 58% in 2004 – a number substantially smaller than the 66% share held by the hospital in 1998.

As reported in previous Healthcare Access Monitor reports, a change in billing practices at MHSC precluded a clear evaluation of access to clinic services at the hospital since the acquisition. Internal data provided by MHSC show trends that are very different from what appears in their original B-2 utilization reports (Chart 18). Specifically, the hospital submitted revised data to the NJDHSS in a memo dated February 11, 2005. On May 16, 2005 the Rutgers Center for State Health Policy received additional clinic data from the NJDHSS.

Table 7 and Chart 18 show the differences in clinic visits as reported in these three sources of data. From 1999 through 2001, data from the B-2 utilization report and the MHSC memo are identical. (Additional data from the NJDHSS do not contain information from before 2003.) Differences in these three data sources appear in 2002, 2003, and 2004. Specifically, data from the original B-2 reports show a decline in clinic volume from 2000 to 2003 and an increase in 2004. In contrast, data from MHSC show higher volumes with some fluctuation from 2000 to 2004. Clinic visit counts provided by the NJDHSS for 2003 and 2004 are always between the values recorded in the B-2 data and provided by the hospital.

Table 7: Comparison of Clinic Visit Data by Data Source

| Year | Original B-2 Data ^a | Revised Data from MHSC ^b | Revised Data from NJDHSS ^c |
|------|--------------------------------|-------------------------------------|---------------------------------------|
| 1998 | 2,431 | N/A | N/A |
| 1999 | 1,995 | 1,995 | N/A |
| 2000 | 2,433 | 2,433 | N/A |
| 2001 | 2,413 | 2,413 | N/A |
| 2002 | 1,978 | 1,994 | N/A |
| 2003 | 845 | 2,164 | 1,946 |
| 2004 | 1,315 | 2,019 | 1,798 |

^a Tabulation of original hospital cost report (B-2) data by the Rutgers Center for State Health Policy.

^b Revised clinic visit data reported on February 11, 2005 in a memo from MHSC to NJDHSS.

^c Revised clinic visit data sent via email on May 16, 2005 from NJDHSS to Rutgers Center for State Health Policy.

In comparison, clinic volume at SJE has always been low and has declined in recent years (Chart 18). In 2004, SJE reported only 2 clinic visits (Table B-49). At the time of this writing, an inquiry to the hospital about the reason for such a drop in their clinic visits remained unanswered.

SUMMARY AND CONCLUSION

Memorial Hospital of Salem County (MHSC) was acquired by Community Health Systems (CHS) in October of 2002. This acquisition transferred ownership of a not-for-profit community hospital to an out-of-state for-profit hospital chain. This change in ownership raised concern that access to care among the most vulnerable, and often least profitable, patients in the local community

would be compromised. Over the course of 3½ years, the Healthcare Access Monitor has documented trends in access to care among vulnerable populations – defined generally as the poor, uninsured, and members of racial/ethnic minorities – since the acquisition compared to access trends in the pre-acquisition, or baseline, period from 1998 through 2002. Trends in and around the hospital were compared to broader regional and statewide trends to adjust for broader utilization trends that may have coincided with the acquisition. The most recent year-end data, analyzed in this report, covers hospital activity through 2004. The final quarterly report, submitted previously, analyzed preliminary data through the last quarter of 2005.

The acquisition did not change the primary market areas served by MHSC, as the hospital drew most of its patients from the same set of residential zip codes from 1998 through 2004. Early in the baseline period, the hospital lost a considerable amount of volume and market share within these zip codes. As shown in prior reports, a rising number of patients from the local market area began to use services at other hospitals. At the same time, MHSC experienced a decline in patients from outside of the local market area coming to its facility. Eventually, the declining trends in total volume reversed in the post-acquisition period. Nevertheless, total volume and market share for most services at MHSC remain below their early baseline levels.

To provide a comprehensive analysis of changing utilization patterns in the areas served by MHSC, Volume 2 of the project's previously submitted annual reports included utilization of services in New York and Pennsylvania hospitals by New Jersey residents. Because MHSC is located near the border with Delaware, the project team made several attempts to acquire hospital utilization data from that state as well. Unfortunately, these attempts were unsuccessful. As a result, the lack of data from Delaware stands out as an important limitation to the evaluation of access to care at MHSC.

Delivery of hospital charity care to the low-income uninsured is one of the key access indicators monitored throughout the project. Early on, it had appeared that MHSC was providing substantially less charity care in 2002 and 2003 compared to earlier baseline levels. The drop in charity care was traced to technical problems in the transmission of charity care information to the state that occurred as the new management implemented new information systems. From the end of 2003 through the end of 2005, the hospital increased its charity care delivery. Year-end data in this report showed that, while much of the increase represented a backlog in the submission of prior year claims, the dollar amount of new claims for that year exceeded amounts reported in all prior years from 1998 to 2003. Preliminary data for 2005 (analyzed in the final quarterly report) showed charity care delivery at the hospital continued to rise in the first three quarters and leveled off in the fourth quarter. Moreover, the volume of service provided by MHSC to self-pay/uninsured patients rose or remained stable throughout the post-acquisition period.

Early in the evaluation concern was also raised about access to clinic visits at MHSC. These services are considered an important indicator of access, since poor and uninsured patients often

rely on hospital outpatient clinics for ambulatory care. Outpatient clinic visits at the hospital declined slightly in 2002 (the last year under independent ownership) and declined precipitously in 2003 (the first year as part of CHS). Subsequent discussions with management of MHSC uncovered a misunderstanding about the licensure of several clinics within the hospital. According to hospital officials, five out of seven clinics operating within the facility are licensed separately. Before the acquisition, services at these five clinics were billed through the hospital and then the bills were written off. At the end of 2002, services provided by these clinics were no longer billed through the hospital, and therefore, no longer appeared in the hospital's utilization reports. Internal data provided by MHSC showed that clinic visits declined somewhat in 2002 and remained stable through 2004. Also, preliminary utilization data analyzed in the last quarterly report showed that the number of clinic visits at MHSC increased rapidly in 2004 and 2005. By the end of 2005, these visits were approaching the maximum level achieved during the baseline period.

Utilization of services at MHSC by Hispanic patients declined dramatically in 2003 and remained low in 2004. Discussions with hospital officials revealed that new computer systems introduced at the hospital misclassified many Hispanic patients as non-Hispanic Caucasian. As shown in this report, the undercount of Hispanic patients appeared to be evident in year-end 2004 data. However, the last quarterly report showed a large increase in Hispanic utilization during all four quarters of 2005. By the final quarter of that year, the number of Hispanic inpatient admissions and same-day surgeries slightly exceeded baseline levels.

For many years, the rate of ambulatory care sensitive (ACS) admissions, a local-area marker of problems with access to primary care, among non-elderly adults living near MHSC showed potential problems with access to care. Specifically, this rate was relatively high and growing throughout most of the study period. While primary care access involves delivery of services beyond the scope of a community hospital, this trend combined with the decline in clinic visits originally reported by MHSC raised questions about the role of the hospital in maintaining primary care access. However, preliminary data showed this rate had reached a peak by the third quarter of 2005 and declined in the final quarter of that year. The rate of ACS admissions for children in MHSC's local market area did not show any signs of compromised access during the study period.

The Healthcare Access Monitor examined several other access indicators over the course of the project. These include utilization of services by Medicaid patients, non-Hispanic black patients, patient transfers, emergency department visits, and type of admission by Major Diagnostic Category. Although some of these measures fluctuated during the study period, none of these showed consistent patterns of declining access to care at MHSC since the acquisition.

Endnotes

¹ Carlton, Dennis and Jeffrey Perloff. Modern Industrial Organization. (Scott, Foresman, & Co.: Glenview, IL). 1990.

² LOS is hypothesized to be a determinant of hospital choice, because LOS is related to severity of illness and patients with severe conditions will be admitted to hospitals based on hospital reputation and technological capabilities. However, the relationship may also move in the opposite direction as some hospitals may manage LOS more aggressively than others. Sensitivity analysis shows that exclusion of the LOS variable does not change the results pertaining to the other variables in the model.

³ The use of some zip code level variables for analysis at the individual level raises the possibility that errors in the regression model are correlated within zip codes, which would lead to biased estimates of standard errors. To compensate, the model is estimated using the cluster option in Stata 8.0, which adjusts for error correlation within zip codes.

⁴ MHSC is not licensed to provide extensive inpatient psychiatric care, which tends to require longer lengths of stay. However, the regression findings remain the same even when psychiatric admissions are excluded from the analysis.

Appendix A: Additional Analysis of Ambulatory Care Sensitive Admissions

Methods

This appendix updates analysis of ambulatory care sensitive (ACS) admissions that appeared in previous annual reports. In this report, emphasis is placed on the extent of change that occurred in 2004. Specifically, the analysis shows how differences in ACS admissions between MHSC's local market area and other parts of NJ are affected by corresponding differences in local demographic variables. Specifically, linear regression models are used to predict the number of ACS admissions, measured at the zip code level, as a function of zip code level demographic variables from 1998-2004.¹ These variables include the total population, non-Hispanic black population, Hispanic population, and other non-white population all measured at the zip code level.²

For a variety of statistical reasons, the dependent variable is measured as the natural logarithm of the total number of (age and sex adjusted) ACS admissions rather than the population-based ACS admission rate.³ Demographic variables are also measured in natural logarithms, which allow the estimated coefficients to be interpreted as elasticities. For example, a slope coefficient of 0.9 for total population would mean a 10% increase in total population is associated with a 9% increase in the number of ACS admissions.

Additionally, two sets of variables are included in the model to measure differences in ACS admission trends between the local market area and other parts of NJ that are not attributable to differences in demographic trends. First, dummy variables for the years 1999-2004 are included to measure statewide trends in ACS admissions.⁴ Rising coefficient values for these variables over time would indicate a rising statewide trend in ACS admissions and vice versa (holding demographics constant). Then, interaction variables are added to measure how trends in the local market area differ from the statewide trend.⁵ Rising coefficient values for these variables would indicate a trend in ACS admissions that rises faster than the corresponding statewide trend. In the analysis below, the market area is defined based on the 90% rule. Similar results are obtained when the model is estimated using markets defined by the 75% and 85% rules.

Results

The regression model shows that after controlling for demographic variables, statewide ACS admissions for children rose in 1999 and then fell back to their 1998 level until 2003 when they rose

again (Table 8). In 2004, ACS admissions were also higher than in 1998 but not higher than in 2004 (i.e., the coefficient 0.25 in 2004 is not statistically different from the coefficient 0.28 in 2003). Compared to their level in 1998, ACS admissions for non-elderly adults were 28% higher in 2004.⁶ More importantly for evaluation purposes, the trend in ACS admissions for children in the area near MHSC is no different from the statewide trend in any year before or after the acquisition. This is shown in Table 8 where the interaction variables designed to measure differences in ACS admission trends between the local market area and the state (i.e., Market area*Year 1999, Market area*Year 2000, etc.) were insignificant for all years of the study.

Table 8: Fixed Effects Model of ACS Admissions for Zip Codes in New Jersey, 2003

| Variable | Children | Adults |
|-------------------------------|----------|--------|
| Total population | 0.09 | 0.16 |
| Non-Hispanic black population | 0.17* | -0.08* |
| Hispanic population | -0.17 | 0.01 |
| Other, non-white population | 0.19* | -0.06 |
| Year 1999 | 0.29* | 0.02 |
| Market area*year 1999 | -0.09 | 0.15 |
| Year 2000 | 0.10 | 0.04 |
| Market area*year 2000 | -0.12 | 0.20 |
| Year 2001 | 0.14 | 0.01 |
| Market area*year 2001 | -1.41 | 0.07 |
| Year 2002 | 0.09 | 0.07 |
| Market area*year 2002 | -0.10 | 0.22 |
| Year 2003 | .28* | 0.09* |
| Market area*year 2003 | -0.28 | 0.29 |
| Year 2004 | 0.25* | 0.08 |
| Market area*year 2004 | -0.39 | 0.32 |
| Intercept | 7.17* | 9.82* |
| | | |
| Number of zip codes | 641 | 641 |
| Number of observations | 4,357 | 4,364 |
| | | |
| R ² within | 0.01 | 0.01 |
| R ² between | 0.66 | 0.41 |
| R ² overall | 0.50 | 0.37 |

All continuous variables measured in logs.

* Coefficient is statistically different from zero at the 5% level.

After controlling for demographic variables, statewide ACS admissions for non-elderly adults remained stable throughout the baseline period from 1998-2002 (Table 8). In 2003, ACS admissions for non-elderly adults increased relative to their 1998 level but in 2004 were not significantly different from the 1998 value. As in the case for children, however, the trend in ACS admissions among children living near MHSC always reflected the statewide trend from 1998 through 2004.

It is worth noting that the demographic variables contained in the model explain a significant amount of the variation in ACS admissions between zip codes for children, i.e. 66%, but explain less than half (41%) of the variation for adults (Table 8). However, these variables account for only 1% of the variation in ACS admissions within zip codes over time.

¹ Since the data include all zip codes in NJ, models are estimated using fixed effects as recommended in Greene, William. *Econometric Analysis*. Prentice Hall: Upper Saddle River, N.J. 1997.

² Ideally, the model would also include a measure of the local immigrant population, which might be approximated with the percentage of births to immigrant women. Unfortunately, data on immigrant births for the full time series are not currently available.

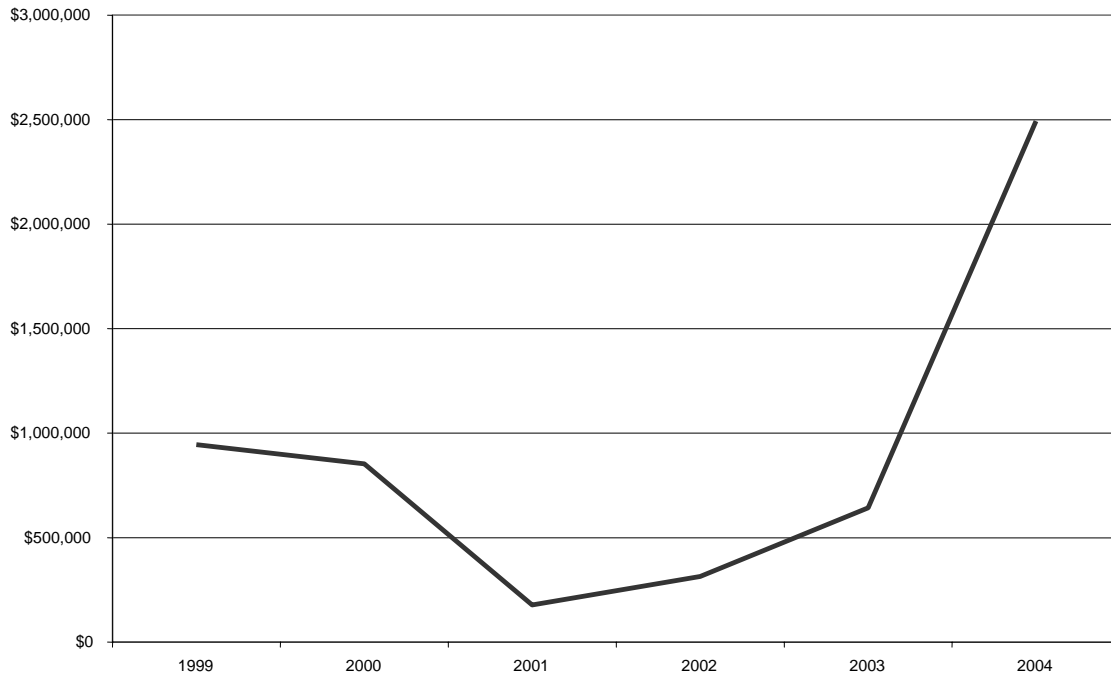
³ A detailed discussion of these issues is found in DeLia, Derek, "Distributional Issues in the Analysis of Preventable Hospitalizations". *Health Services Research* 38(6): 1761-1779, 2003.

⁴ The year 1998 is omitted to avoid perfect collinearity. Coefficients for the remaining year variables measure contrasts relative to 1998.

⁵ Interaction variables are constructed by multiplying each of the year dummy variables by an indicator variable that takes the value 1 if the zip code is in the local market area and 0 otherwise.

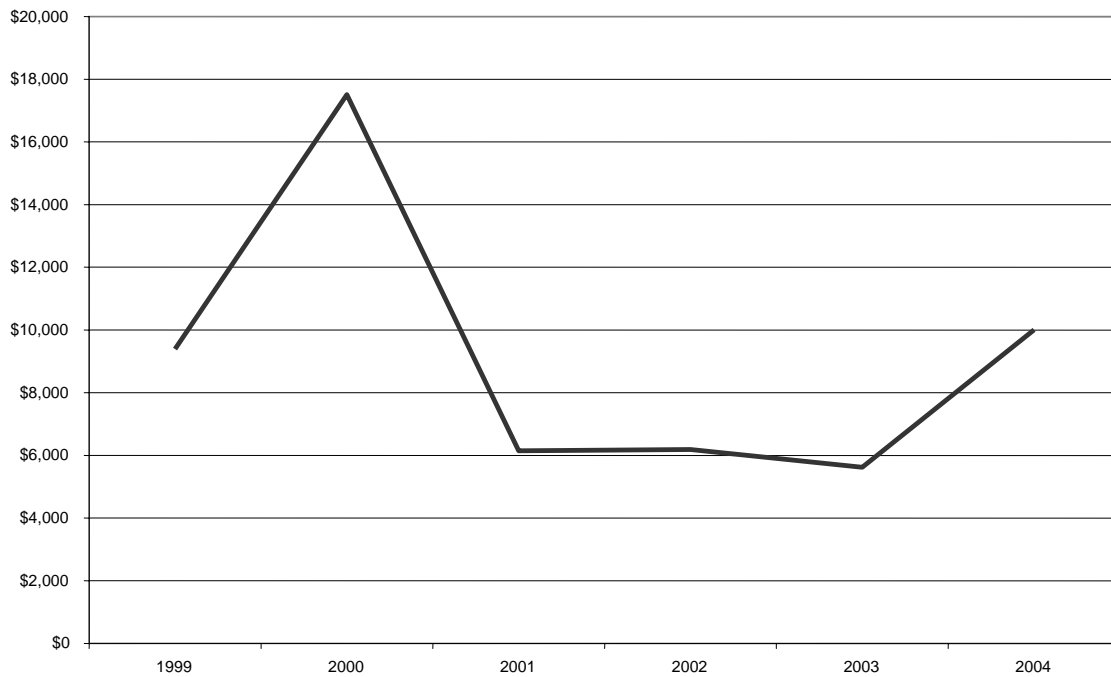
⁶ Since the dependent variable is measured in logs, the year coefficients must be re-transformed to express results in terms of actual admissions. For example, the transformation for the 1999 dummy variable is $\exp(0.25)-1 = 0.28$, or 28% increase relative to 1998.

Chart 1. Dollars of Charity Care Provided by MHSC to Non-Elderly Adults



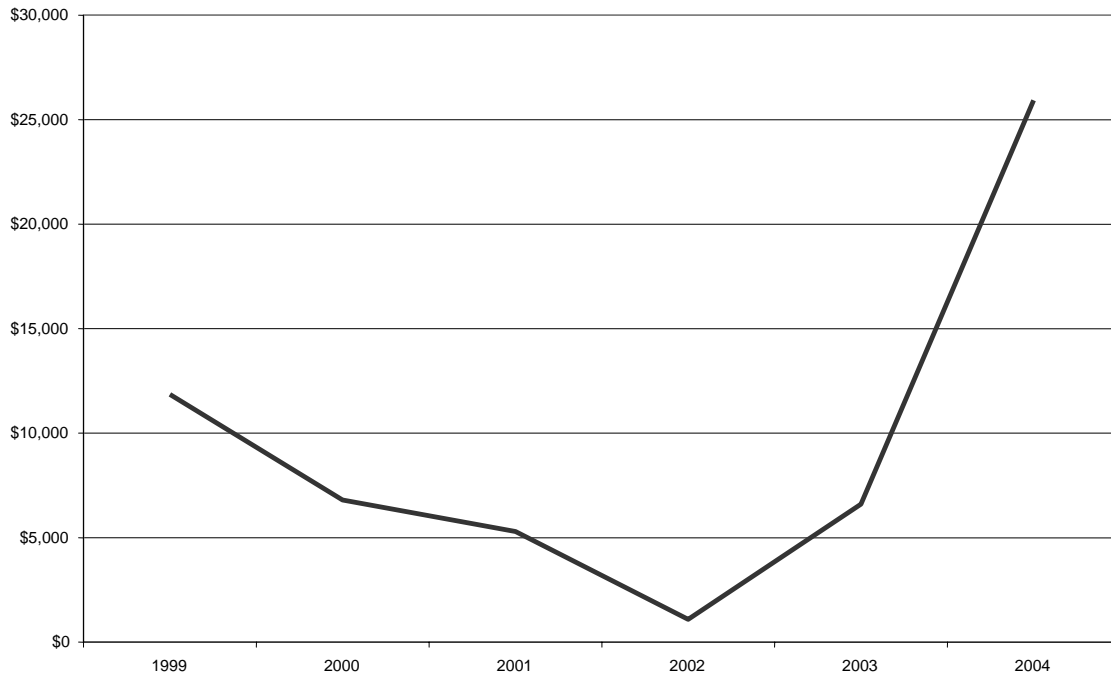
Source: Table B-5 in this report

Chart 2. Dollars of Charity Care Provided by MHSC to Children



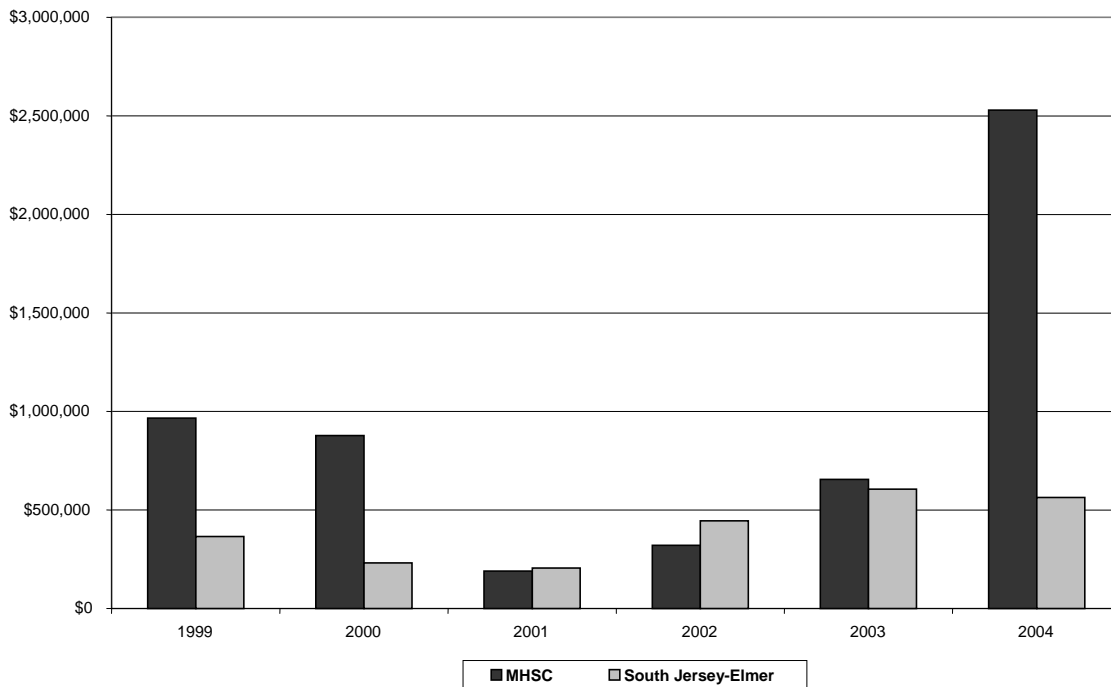
Source: Table B-4 in this report

Chart 3. Dollars of Charity Care Provided by MHSC to Elderly Adults



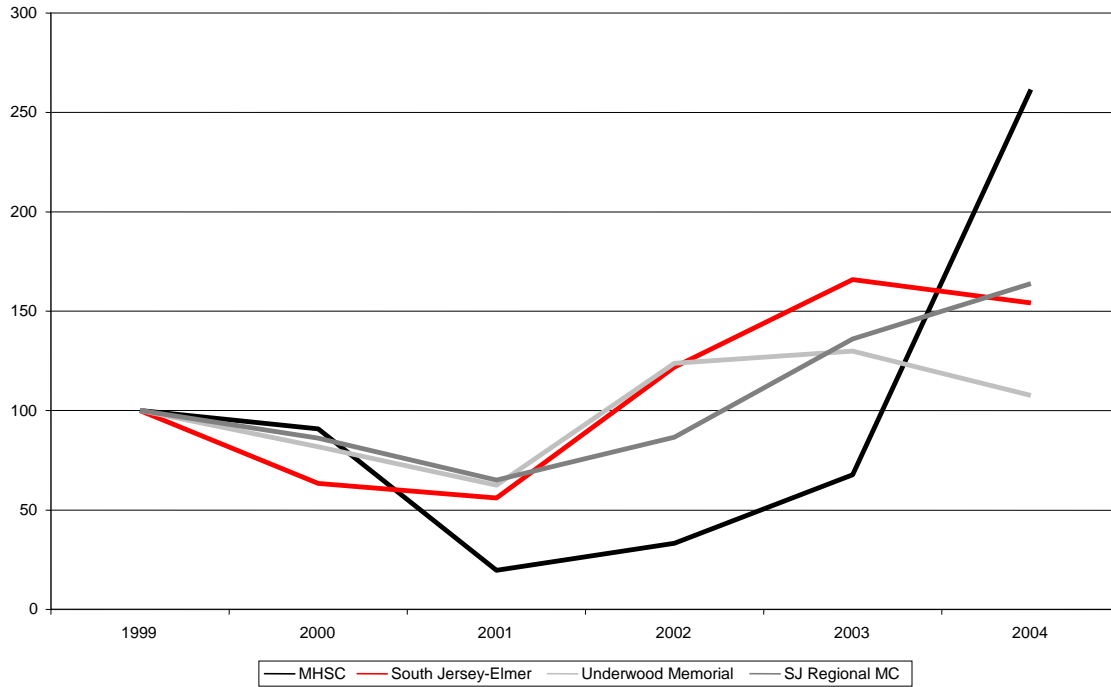
Source: Table B-6 in this report

Chart 4. Dollars of Charity Care Provided by MHSC and South Jersey-Elmer



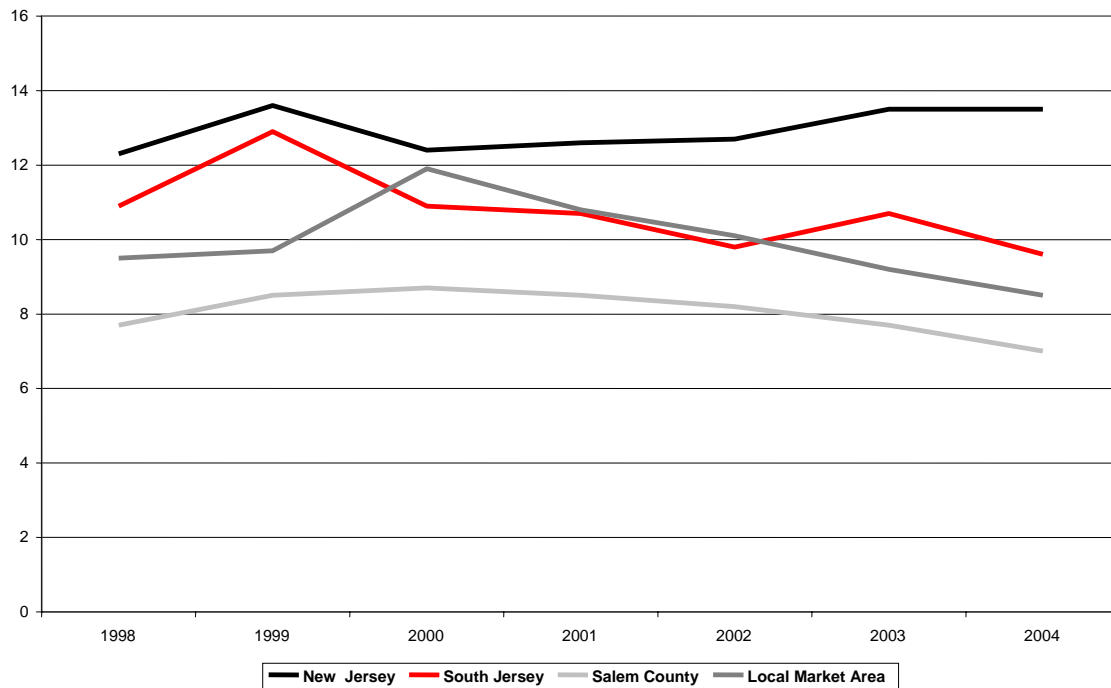
Source: Table B-1 in this report

Chart 5. Change in Dollars of Charity Care Provided Relative to 1999



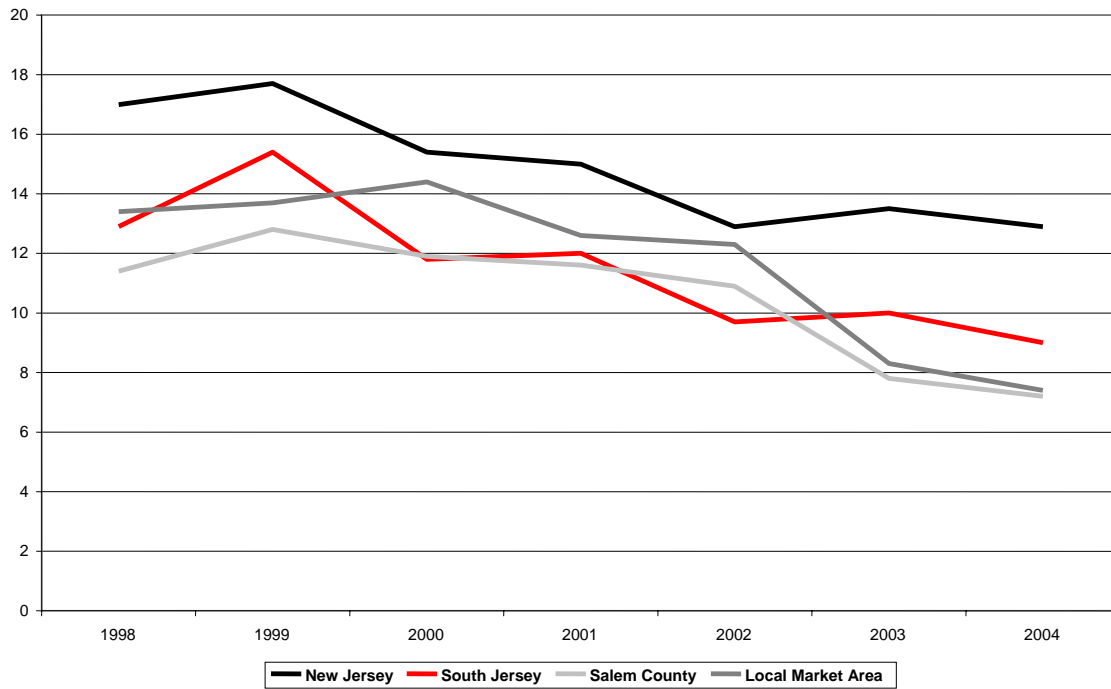
Source: Tabulation of Charity Care Data by Rutgers Center for State Health Policy

Chart 6. Ambulatory Care Sensitive Admission Rates per 1,000 Children



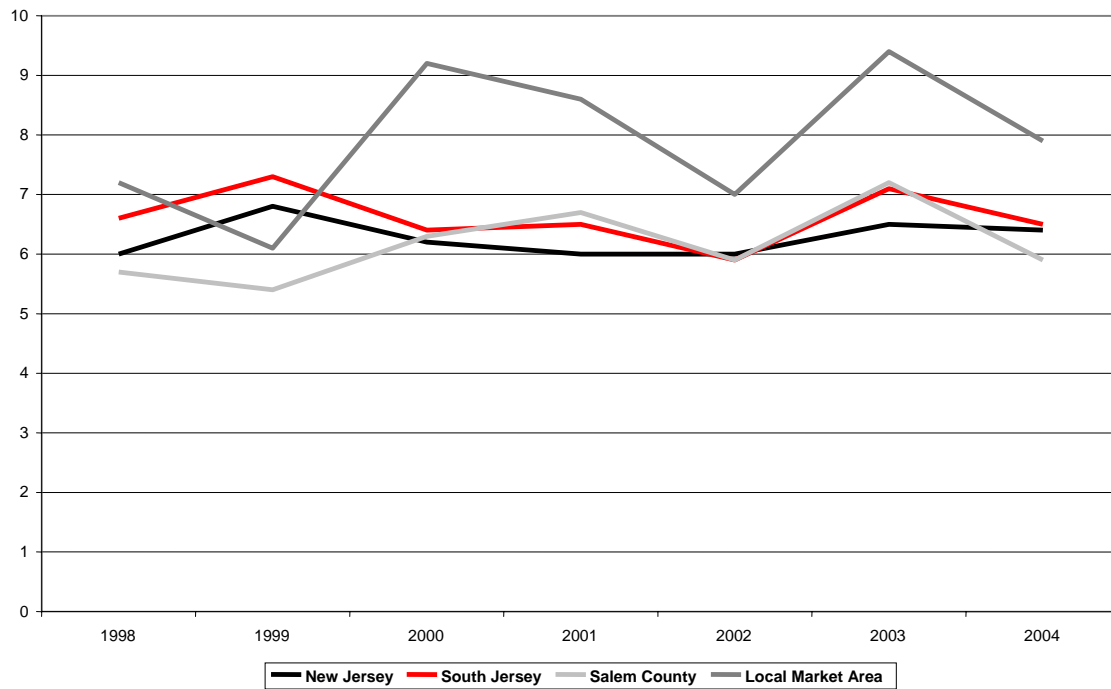
Source: Table B-19 in this report

Chart 7. Ambulatory Care Sensitive Admission Rates per 1,000 Non-Hispanic Black Children



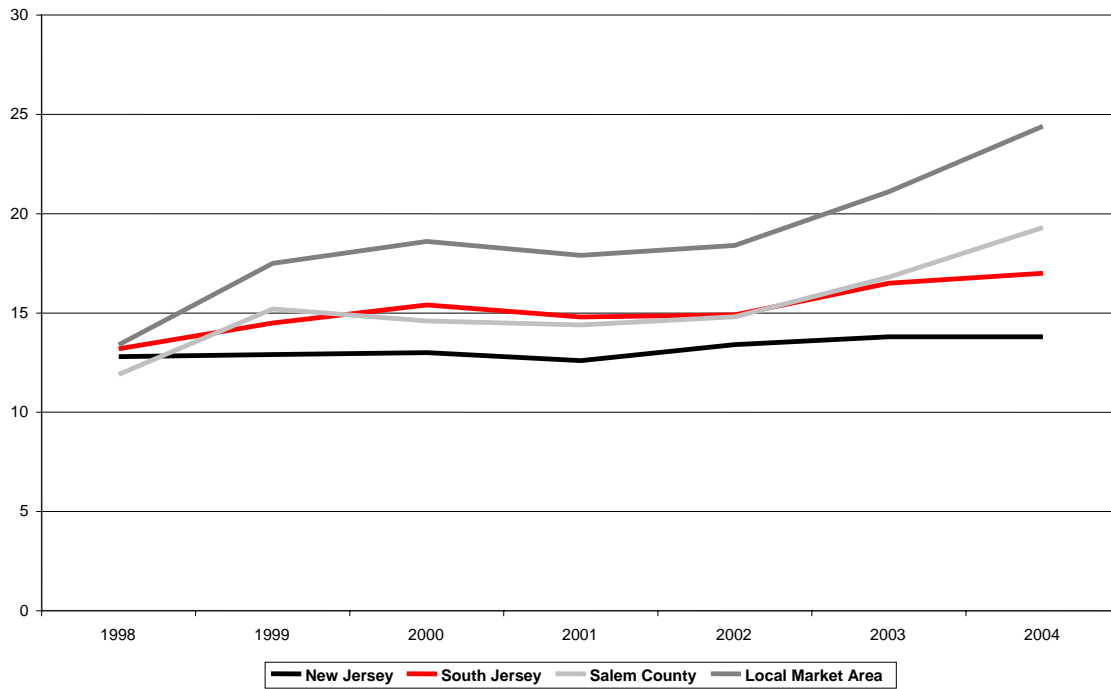
Source: Table B-20 in this report

Chart 8. Ambulatory Care Sensitive Admission Rates per 1,000 Non-Hispanic White Children



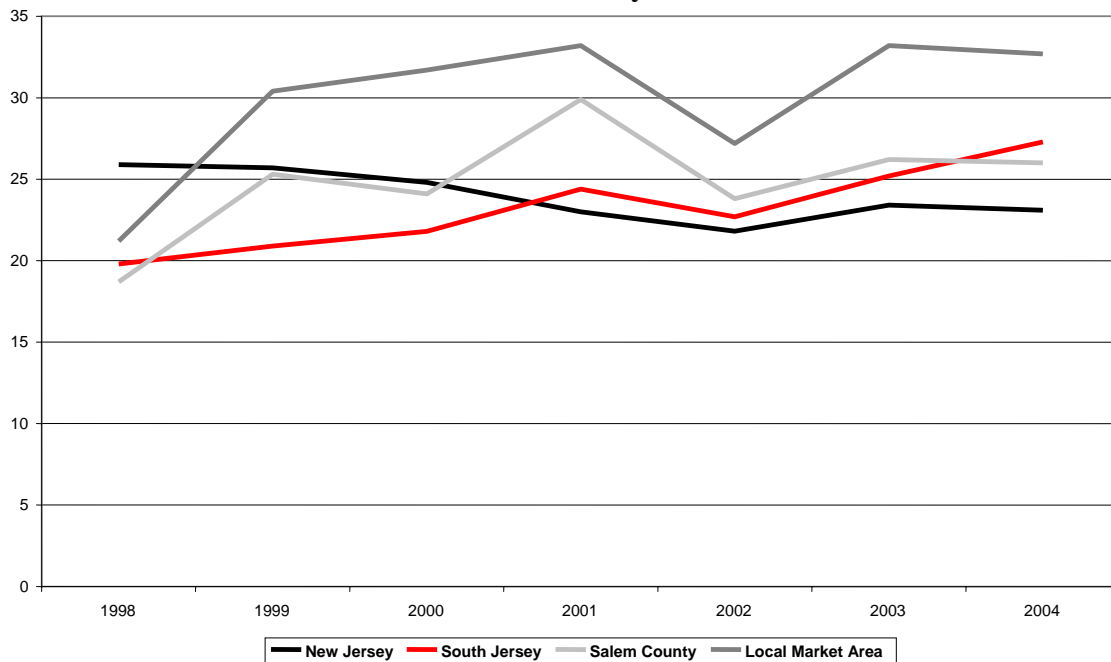
Source: Table B-22 in this report

Chart 9. Ambulatory Care Sensitive Admission Rates per 1,000 Non-Elderly Adults



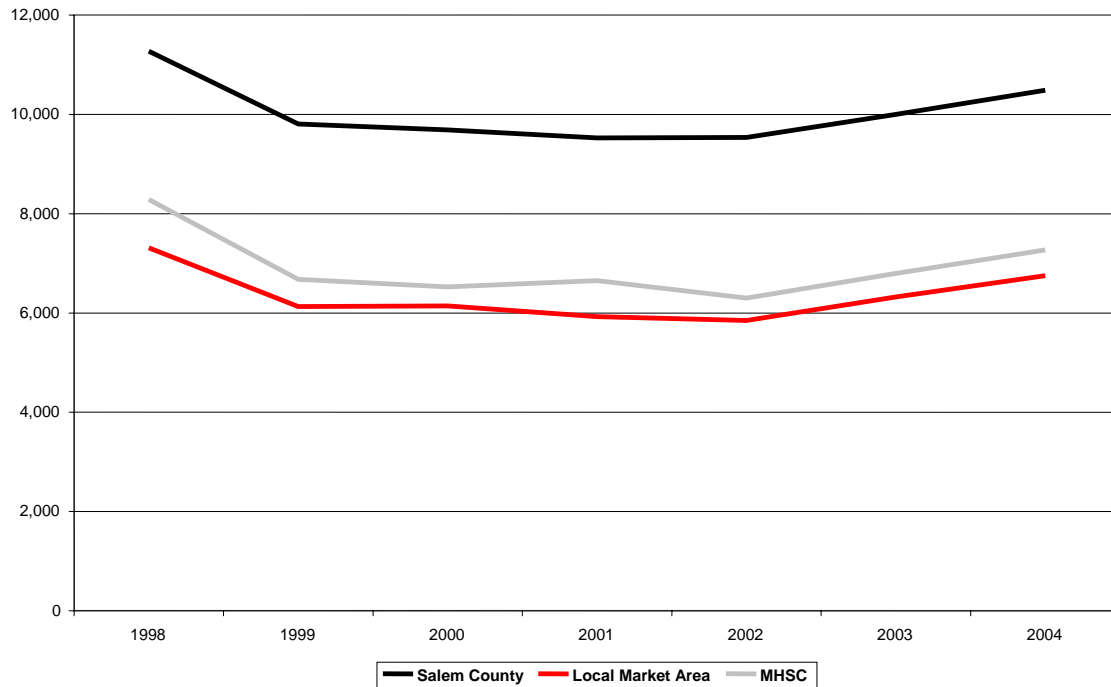
Source: Table B-29 in this report

Chart 10. Ambulatory Care Sensitive Admission Rates per 1,000 Non-Hispanic Black Non-Elderly Adults



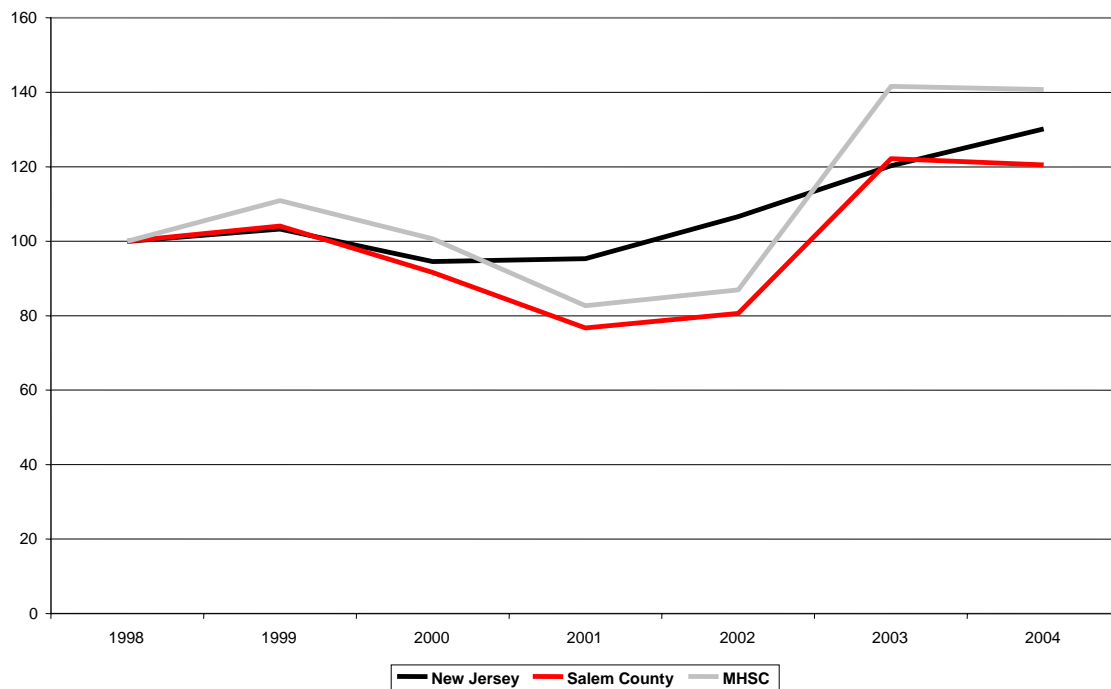
Source: Table B-30 in this report

Chart 11. Inpatient Admission and Same-Day Surgery



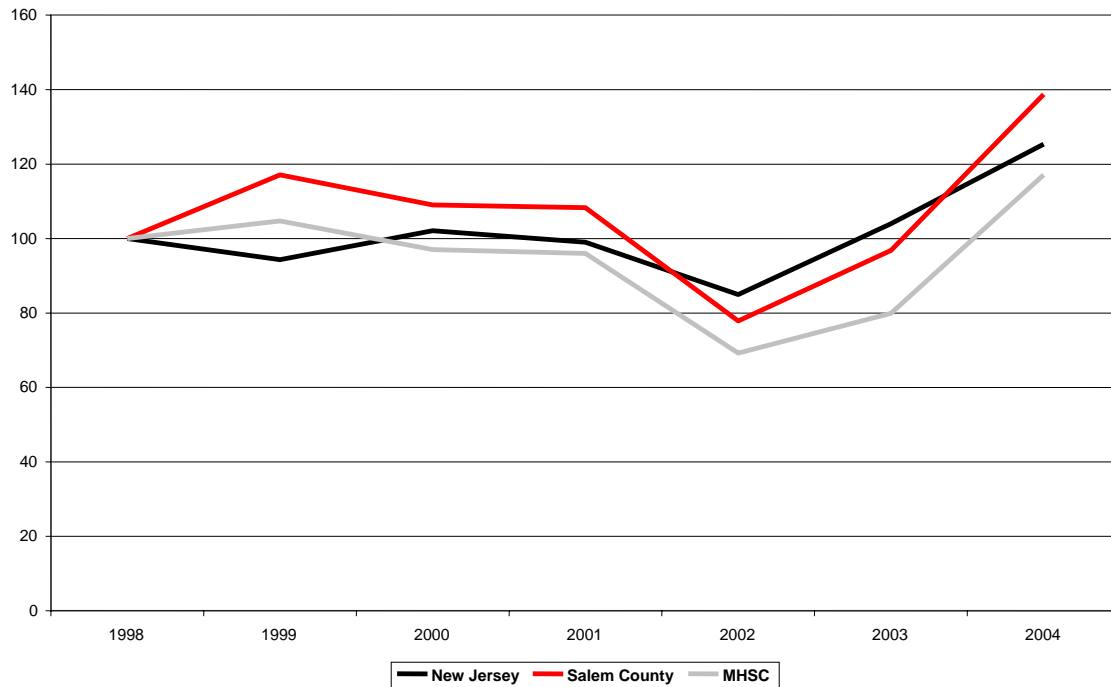
Source: Table B-35 in this report

Chart 12. Change in Inpatient Admission and Same-Day Surgery Volume for Self-Pay Patients



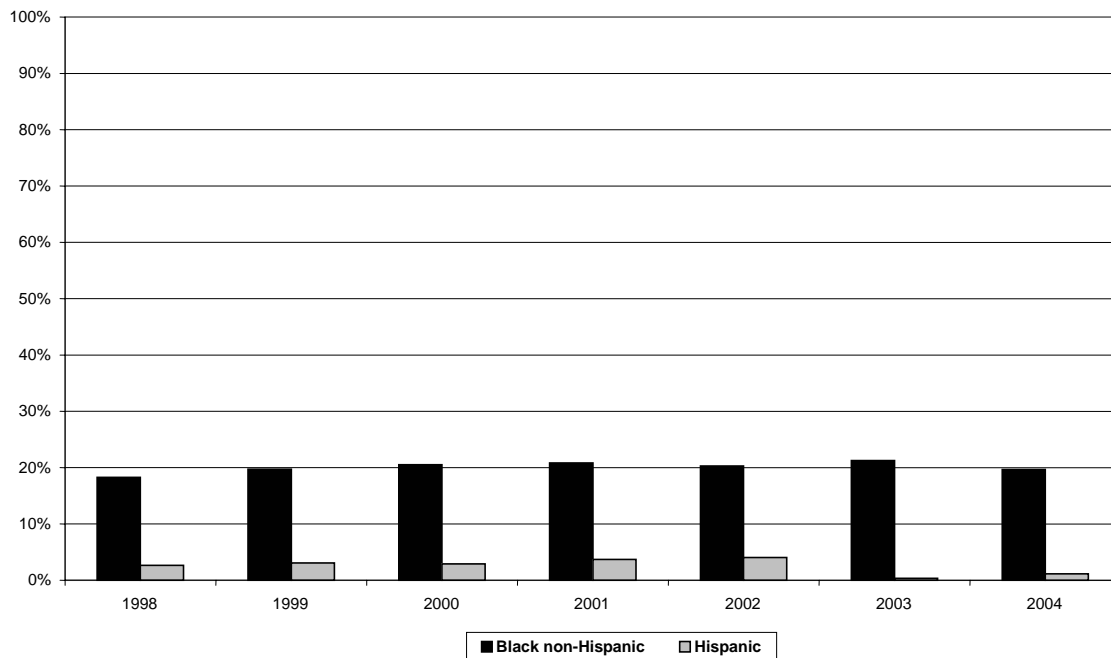
Source: Tabulation of UB-92 Data by Rutgers Center for State Health Policy

Chart 13. Change in Inpatient Admission and Same-Day Surgery Volume for Medicaid Patients



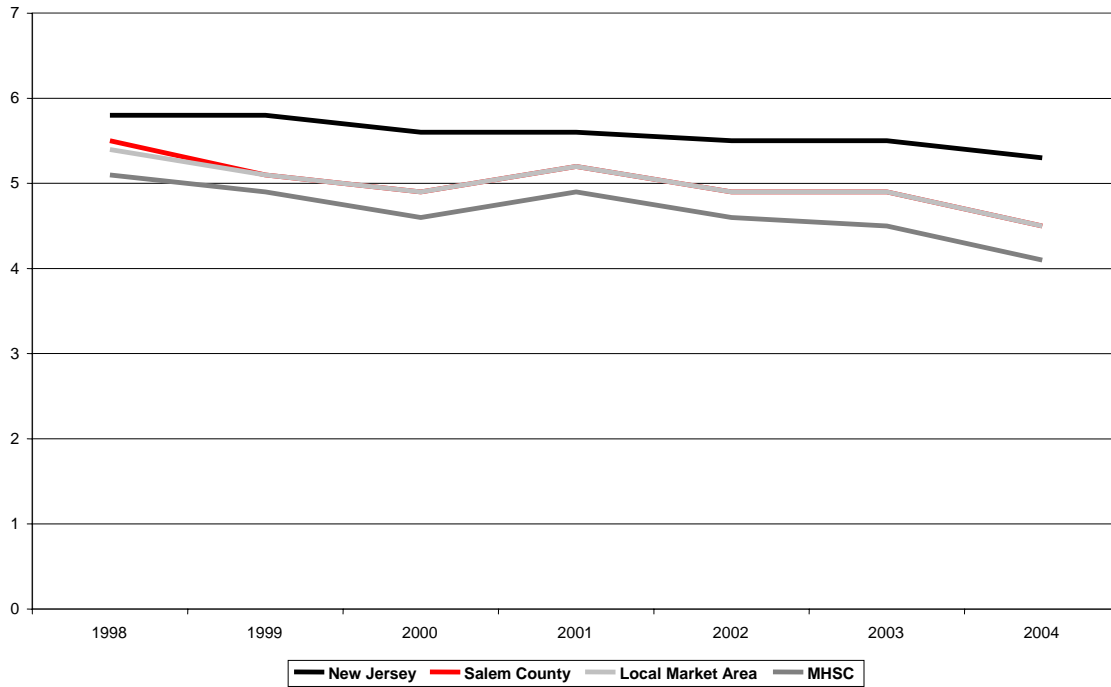
Source: Tabulation of UB-92 Data by Rutgers Center for State Health Policy

Chart 14. Percentage of Inpatient Admission and Same-Day Surgery Volume Delivered to Non-Hispanic Black and Hispanic Patients



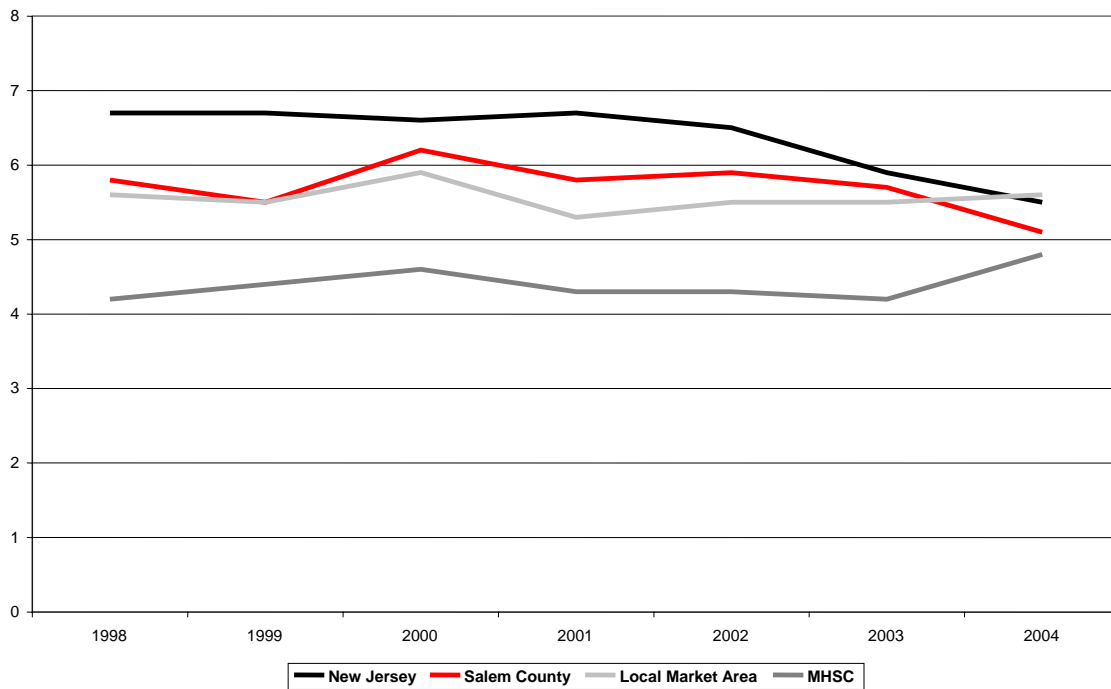
Source: Tabulation of UB-92 Data by Rutgers Center for State Health Policy

Chart 15. Average Length of Stay among All Inpatients in NJ Hospitals



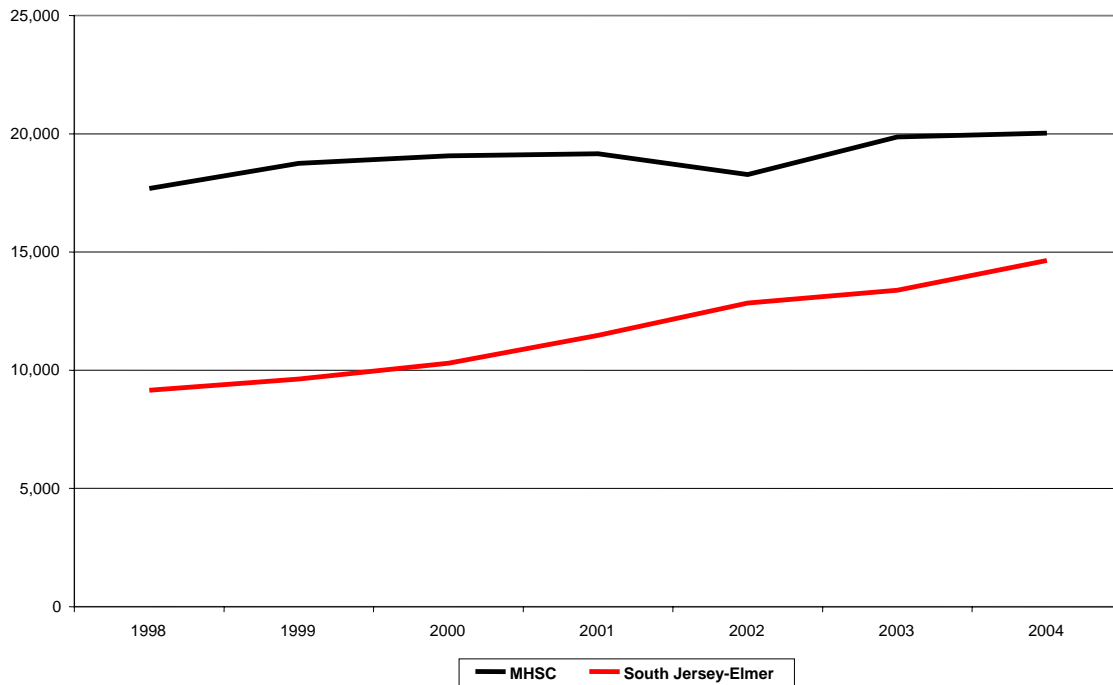
Source: Table B-39 in this report

Chart 16. Average Length of Stay among Medicaid Inpatients in NJ Hospitals



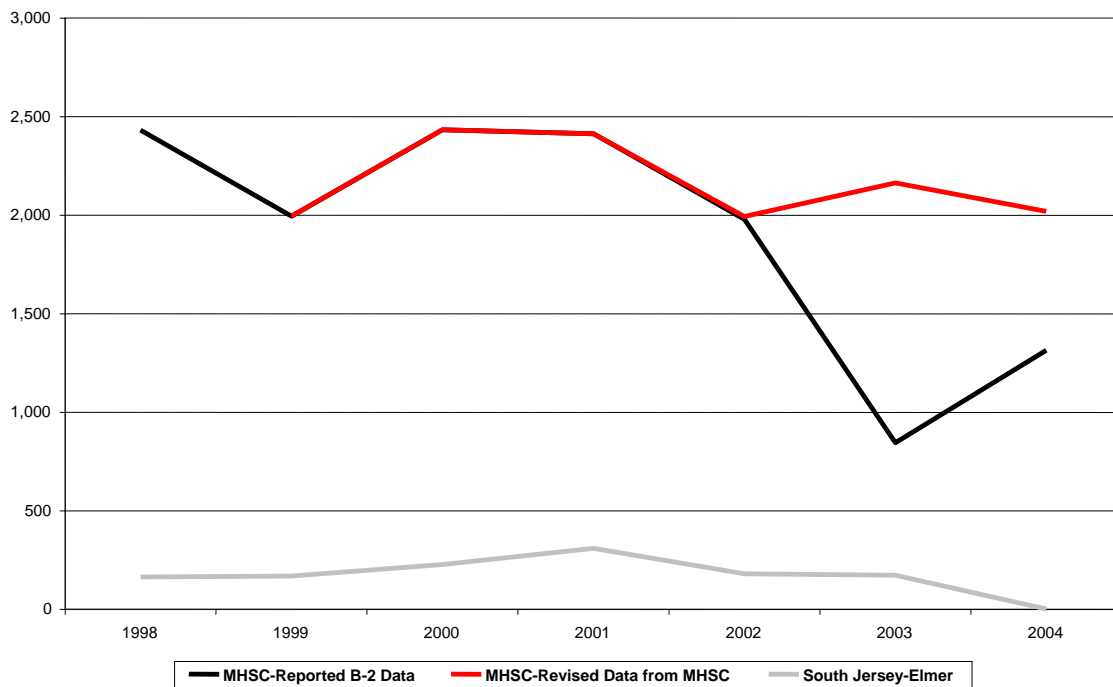
Source: Table B-44 in this report

Chart 17. Emergency Department Visits at MHSC and South Jersey-Elmer



Source: Table B-48 in this report

Chart 18. Hospital Clinic Visits at MHSC and South Jersey-Elmer



Source: South Jersey-Elmer data and MHSC B-2 data from Table B-49 in this report. MHSC revised hospital data February 11, 2005 memo from MHSC to DHSS.

Table B-1 - Total Dollars of Charity Care Claims

| Year | Hospitals in New Jersey | Hospitals in South Jersey | Hospitals in Salem County | Patients of MHSC | Patients of SJ - Elmer |
|------|----------------------------|------------------------------|------------------------------|---------------------|---------------------------|
| 1999 | \$470,264,220 | \$29,105,141 | \$1,331,754 | \$966,535 | \$365,219 |
| 2000 | \$464,178,787 | \$27,022,819 | \$1,109,306 | \$877,809 | \$231,497 |
| 2001 | \$464,175,201 | \$28,975,972 | \$393,911 | \$189,310 | \$204,601 |
| 2002 | \$578,793,894 | \$40,002,658 | \$765,810 | \$320,870 | \$444,940 |
| 2003 | \$741,602,315 | \$50,277,376 | \$1,260,707 | \$654,696 | \$606,011 |
| 2004 | \$760,233,968 | \$48,277,447 | \$3,091,920 | \$2,529,055 | \$562,865 |

Source: Tabulation of Charity Care Claims data by the Rutgers Center for State Health Policy.

Table B-2 - Total Inpatient Charity Care Admissions

| Year | Hospitals in New Jersey | Hospitals in South Jersey | Hospitals in Salem County | Patients of MHSC | Patients of SJ - Elmer |
|------|----------------------------|------------------------------|------------------------------|---------------------|---------------------------|
| 1999 | 58,744 | 3,949 | 184 | 129 | 55 |
| 2000 | 58,529 | 3,584 | 181 | 142 | 39 |
| 2001 | 59,956 | 4,327 | 49 | 19 | 30 |
| 2002 | 66,074 | 5,460 | 104 | 45 | 59 |
| 2003 | 78,442 | 6,644 | 132 | 54 | 78 |
| 2004 | 76,663 | 6,182 | 321 | 259 | 62 |

Source: Tabulation of Charity Care Claims data by the Rutgers Center for State Health Policy.

Table B-3 - Total Outpatient Charity Care Admissions

| Year | Hospitals in New Jersey | Hospitals in South Jersey | Hospitals in Salem County | Patients of MHSC | Patients of SJ - Elmer |
|------|----------------------------|------------------------------|------------------------------|---------------------|---------------------------|
| 1999 | 2,263,771 | 199,777 | 9,380 | 7,645 | 1,735 |
| 2000 | 2,187,458 | 182,513 | 10,094 | 7,606 | 2,488 |
| 2001 | 2,147,049 | 153,312 | 4,823 | 2,855 | 1,968 |
| 2002 | 2,513,746 | 177,605 | 5,892 | 2,580 | 3,312 |
| 2003 | 3,406,129 | 262,165 | 8,839 | 5,319 | 3,520 |
| 2004 | 3,736,571 | 261,899 | 19,071 | 14,883 | 4,188 |

Source: Tabulation of Charity Care Claims data by the Rutgers Center for State Health Policy.

Table B-4 - Children Dollars of Charity Care Claims

| Year | Hospitals in New Jersey | Hospitals in South Jersey | Hospitals in Salem County | Patients of MHSC | Patients of SJ - Elmer |
|------|----------------------------|------------------------------|------------------------------|---------------------|---------------------------|
| 1999 | \$18,127,004 | \$668,515 | \$15,003 | \$9,393 | \$5,609 |
| 2000 | \$15,355,032 | \$512,059 | \$20,192 | \$17,509 | \$2,683 |
| 2001 | \$19,570,672 | \$704,387 | \$7,228 | \$6,142 | \$1,086 |
| 2002 | \$21,019,465 | \$855,326 | \$15,263 | \$6,183 | \$9,080 |
| 2003 | \$21,452,114 | \$790,630 | \$12,804 | \$5,618 | \$7,186 |
| 2004 | \$16,811,920 | \$585,785 | \$11,905 | \$10,006 | \$1,900 |

Source: Tabulation of Charity Care Claims data by the Rutgers Center for State Health Policy.

Table B-5 - Adult Dollars of Charity Care Claims

| Year | Hospitals in New Jersey | Hospitals in South Jersey | Hospitals in Salem County | Patients of MHSC | Patients of SJ - Elmer |
|------|----------------------------|------------------------------|------------------------------|---------------------|---------------------------|
| 1999 | \$430,519,459 | \$27,976,056 | \$1,304,883 | \$945,283 | \$359,600 |
| 2000 | \$426,621,195 | \$25,799,323 | \$1,082,233 | \$853,498 | \$228,735 |
| 2001 | \$417,000,010 | \$27,471,852 | \$380,630 | \$177,872 | \$202,758 |
| 2002 | \$521,831,089 | \$37,815,627 | \$749,454 | \$313,594 | \$435,860 |
| 2003 | \$680,904,244 | \$48,259,179 | \$1,240,723 | \$642,480 | \$598,243 |
| 2004 | \$699,792,232 | \$46,343,595 | \$3,054,096 | \$2,493,131 | \$560,965 |

Source: Tabulation of Charity Care Claims data by the Rutgers Center for State Health Policy.

Table B-6 - Elderly Dollars of Charity Care Claims

| Year | Hospitals in New Jersey | Hospitals in South Jersey | Hospitals in Salem County | Patients of MHSC | Patients of SJ - Elmer |
|------|----------------------------|------------------------------|------------------------------|---------------------|---------------------------|
| 1999 | \$21,617,758 | \$460,569 | \$11,868 | \$11,859 | \$9 |
| 2000 | \$22,202,560 | \$711,437 | \$6,881 | \$6,802 | \$79 |
| 2001 | \$27,604,519 | \$799,733 | \$6,053 | \$5,296 | \$756 |
| 2002 | \$35,943,340 | \$1,331,705 | \$1,094 | \$1,094 | \$0 |
| 2003 | \$39,245,956 | \$1,227,567 | \$7,180 | \$6,598 | \$582 |
| 2004 | \$43,629,816 | \$1,348,066 | \$25,918 | \$25,918 | \$0 |

Source: Tabulation of Charity Care Claims data by the Rutgers Center for State Health Policy.

Table B-7 - Children Inpatient Charity Care Admissions

| Year | Hospitals in New Jersey | Hospitals in South Jersey | Hospitals in Salem County | Patients of MHSC | Patients of SJ - Elmer |
|------|----------------------------|------------------------------|------------------------------|---------------------|---------------------------|
| 1999 | 3,815 | 208 | 6 | 4 | 2 |
| 2000 | 3,222 | 154 | 5 | 5 | 0 |
| 2001 | 4,376 | 214 | 2 | 2 | 0 |
| 2002 | 3,976 | 249 | 2 | 1 | 1 |
| 2003 | 3,536 | 203 | 3 | 1 | 2 |
| 2004 | 2,394 | 138 | 1 | 1 | 0 |

Source: Tabulation of Charity Care Claims data by the Rutgers Center for State Health Policy.

Table B-8 - Adult Inpatient Charity Care Admissions

| Year | Hospitals in New Jersey | Hospitals in South Jersey | Hospitals in Salem County | Patients of MHSC | Patients of SJ - Elmer |
|------|----------------------------|------------------------------|------------------------------|---------------------|---------------------------|
| 1999 | 53,111 | 3,696 | 177 | 124 | 53 |
| 2000 | 53,282 | 3,354 | 174 | 135 | 39 |
| 2001 | 53,056 | 3,993 | 47 | 17 | 30 |
| 2002 | 59,331 | 5,034 | 102 | 44 | 58 |
| 2003 | 71,752 | 6,292 | 127 | 52 | 75 |
| 2004 | 70,913 | 5,873 | 317 | 255 | 62 |

Source: Tabulation of Charity Care Claims data by the Rutgers Center for State Health Policy.

Table B-9 - Elderly Inpatient Charity Care Admissions

| Year | Hospitals in New Jersey | Hospitals in South Jersey | Hospitals in Salem County | Patients of MHSC | Patients of SJ - Elmer |
|------|----------------------------|------------------------------|------------------------------|---------------------|---------------------------|
| 1999 | 1,818 | 45 | 1 | 1 | 0 |
| 2000 | 2,025 | 76 | 2 | 2 | 0 |
| 2001 | 2,524 | 120 | 0 | 0 | 0 |
| 2002 | 2,767 | 177 | 0 | 0 | 0 |
| 2003 | 3,154 | 149 | 2 | 1 | 1 |
| 2004 | 3,356 | 171 | 3 | 3 | 0 |

Source: Tabulation of Charity Care Claims data by the Rutgers Center for State Health Policy.

Table B-10 - Children Outpatient Charity Care Admissions

| Year | Hospitals in New Jersey | Hospitals in South Jersey | Hospitals in Salem County | Patients of MHSC | Patients of SJ - Elmer |
|------|----------------------------|------------------------------|------------------------------|---------------------|---------------------------|
| 1999 | 80,568 | 5,353 | 180 | 144 | 36 |
| 2000 | 73,371 | 3,439 | 190 | 126 | 64 |
| 2001 | 99,426 | 4,818 | 101 | 71 | 30 |
| 2002 | 120,196 | 5,262 | 238 | 103 | 135 |
| 2003 | 134,116 | 6,503 | 175 | 102 | 73 |
| 2004 | 114,121 | 6,436 | 176 | 121 | 55 |

Source: Tabulation of Charity Care Claims data by the Rutgers Center for State Health Policy.

Table B-11 - Adult Outpatient Charity Care Admissions

| Year | Hospitals in New Jersey | Hospitals in South Jersey | Hospitals in Salem County | Patients of MHSC | Patients of SJ - Elmer |
|------|----------------------------|------------------------------|------------------------------|---------------------|---------------------------|
| 1999 | 2,111,103 | 191,643 | 9,161 | 7,464 | 1,697 |
| 2000 | 2,032,344 | 175,068 | 9,856 | 7,433 | 2,423 |
| 2001 | 1,953,372 | 144,725 | 4,625 | 2,698 | 1,927 |
| 2002 | 2,256,814 | 167,642 | 5,607 | 2,430 | 3,177 |
| 2003 | 3,121,848 | 249,734 | 8,614 | 5,185 | 3,429 |
| 2004 | 3,446,743 | 249,033 | 18,765 | 14,632 | 4,133 |

Source: Tabulation of Charity Care Claims data by the Rutgers Center for State Health Policy.

Table B-12 - Elderly Outpatient Charity Care Admissions

| Year | Hospitals in New Jersey | Hospitals in South Jersey | Hospitals in Salem County | Patients of MHSC | Patients of SJ - Elmer |
|------|----------------------------|------------------------------|------------------------------|---------------------|---------------------------|
| 1999 | 72,100 | 2,781 | 39 | 37 | 2 |
| 2000 | 81,743 | 4,006 | 48 | 47 | 1 |
| 2001 | 94,251 | 3,769 | 97 | 86 | 11 |
| 2002 | 136,736 | 4,701 | 47 | 47 | 0 |
| 2003 | 150,165 | 5,928 | 50 | 32 | 18 |
| 2004 | 175,707 | 6,430 | 130 | 130 | 0 |

Source: Tabulation of Charity Care Claims data by the Rutgers Center for State Health Policy.

Table B-13 - Total ACS Admissions: All children

| Year | Residents of New Jersey | Residents of South Jersey | Residents of Salem County | Residents of the Local Area |
|------|----------------------------|------------------------------|------------------------------|--------------------------------|
| 1998 | 23,158 | 2,112 | 116 | 86 |
| 1999 | 25,769 | 2,447 | 118 | 83 |
| 2000 | 23,445 | 2,080 | 128 | 102 |
| 2001 | 24,537 | 2,115 | 124 | 91 |
| 2002 | 23,701 | 1,920 | 125 | 94 |
| 2003 | 25,244 | 2,059 | 114 | 83 |
| 2004 | 25,109 | 1,816 | 96 | 71 |

Source: Tabulation of UB-92 data by the Rutgers Center for State Health Policy.

Table B-14 - Total ACS Admissions: Black non-Hispanic children

| Year | Residents of New Jersey | Residents of South Jersey | Residents of Salem County | Residents of the Local Area |
|------|----------------------------|------------------------------|------------------------------|--------------------------------|
| 1998 | 5,954 | 478 | 38 | 36 |
| 1999 | 6,185 | 568 | 41 | 36 |
| 2000 | 5,419 | 432 | 40 | 38 |
| 2001 | 5,344 | 449 | 35 | 31 |
| 2002 | 4,630 | 376 | 40 | 37 |
| 2003 | 4,859 | 396 | 28 | 24 |
| 2004 | 4,600 | 347 | 24 | 20 |

Source: Tabulation of UB-92 data by the Rutgers Center for State Health Policy.

Table B-15 - Total ACS Admissions: Hispanic children

| Year | Residents of New Jersey | Residents of South Jersey | Residents of Salem County | Residents of the Local Area |
|------|----------------------------|------------------------------|------------------------------|--------------------------------|
| 1998 | 4,647 | 298 | 4 | 2 |
| 1999 | 5,376 | 308 | 11 | 8 |
| 2000 | 5,238 | 277 | 7 | 6 |
| 2001 | 5,468 | 375 | 12 | 9 |
| 2002 | 5,862 | 379 | 12 | 11 |
| 2003 | 5,686 | 328 | 0 | 0 |
| 2004 | 6,281 | 318 | 0 | 0 |

Source: Tabulation of UB-92 data by the Rutgers Center for State Health Policy.

Table B-16 - Total ACS Admissions: White non-Hispanic children

| Year | Residents of New Jersey | Residents of South Jersey | Residents of Salem County | Residents of the Local Area |
|------|----------------------------|------------------------------|------------------------------|--------------------------------|
| 1998 | 8,479 | 993 | 66 | 45 |
| 1999 | 9,508 | 1,083 | 56 | 35 |
| 2000 | 8,685 | 956 | 70 | 54 |
| 2001 | 8,631 | 1,000 | 75 | 50 |
| 2002 | 8,223 | 879 | 67 | 43 |
| 2003 | 8,922 | 1,042 | 78 | 56 |
| 2004 | 8,702 | 936 | 60 | 44 |

Source: Tabulation of UB-92 data by the Rutgers Center for State Health Policy.

Table B-17 - Total ACS Admissions: Self-pay children

| Year | Residents of New Jersey | Residents of South Jersey | Residents of Salem County | Residents of the Local Area |
|------|----------------------------|------------------------------|------------------------------|--------------------------------|
| 1998 | 1,902 | 167 | 14 | 9 |
| 1999 | 2,064 | 187 | 15 | 13 |
| 2000 | 1,684 | 128 | 14 | 14 |
| 2001 | 1,749 | 107 | 8 | 7 |
| 2002 | 1,777 | 108 | 7 | 5 |
| 2003 | 1,701 | 109 | 5 | 1 |
| 2004 | 1,541 | 85 | 4 | 3 |

Source: Tabulation of UB-92 data by the Rutgers Center for State Health Policy.

Table B-18 - Total ACS Admissions: Medicaid children

| Year | Residents of New Jersey | Residents of South Jersey | Residents of Salem County | Residents of the Local Area |
|------|----------------------------|------------------------------|------------------------------|--------------------------------|
| 1998 | 2,914 | 217 | 15 | 10 |
| 1999 | 3,031 | 310 | 15 | 11 |
| 2000 | 2,722 | 203 | 10 | 10 |
| 2001 | 2,280 | 179 | 7 | 6 |
| 2002 | 1,972 | 194 | 9 | 9 |
| 2003 | 3,867 | 386 | 14 | 11 |
| 2004 | 4,813 | 579 | 14 | 8 |

Source: Tabulation of UB-92 data by the Rutgers Center for State Health Policy.

Table B-19 - Total ACS Admission Rate per 1,000: All children

| Year | Residents of New Jersey | Residents of South Jersey | Residents of Salem County | Residents of the Local Area |
|------|----------------------------|------------------------------|------------------------------|--------------------------------|
| 1998 | 12.3 | 10.9 | 7.7 | 9.5 |
| 1999 | 13.6 | 12.9 | 8.5 | 9.7 |
| 2000 | 12.4 | 10.9 | 8.7 | 11.9 |
| 2001 | 12.6 | 10.7 | 8.5 | 10.8 |
| 2002 | 12.7 | 9.8 | 8.2 | 10.1 |
| 2003 | 13.5 | 10.7 | 7.7 | 9.2 |
| 2004 | 13.5 | 9.6 | 7.0 | 8.5 |

Source: Tabulation of UB-92 & U.S. Census data by the Rutgers Center for State Health Policy.

Table B-20 - Total ACS Admission Rate per 1,000: Black non-Hispanic children

| Year | Residents of New Jersey | Residents of South Jersey | Residents of Salem County | Residents of the Local Area |
|------|----------------------------|------------------------------|------------------------------|--------------------------------|
| 1998 | 17.0 | 12.9 | 11.4 | 13.4 |
| 1999 | 17.7 | 15.4 | 12.8 | 13.7 |
| 2000 | 15.4 | 11.8 | 11.9 | 14.4 |
| 2001 | 15.0 | 12.0 | 11.6 | 12.6 |
| 2002 | 12.9 | 9.7 | 10.9 | 12.3 |
| 2003 | 13.5 | 10.0 | 7.8 | 8.3 |
| 2004 | 12.9 | 9.0 | 7.2 | 7.4 |

Source: Tabulation of UB-92 & U.S. Census data by the Rutgers Center for State Health Policy.

Table B-21 - Total ACS Admission Rate per 1,000: Hispanic children

| Year | Residents of New Jersey | Residents of South Jersey | Residents of Salem County | Residents of the Local Area |
|------|----------------------------|------------------------------|------------------------------|--------------------------------|
| 1998 | 15.6 | 14.4 | 5.1 | 2.9 |
| 1999 | 17.5 | 14.9 | 14.9 | 13.1 |
| 2000 | 16.5 | 12.8 | 8.6 | 9.8 |
| 2001 | 16.2 | 15.2 | 12.6 | 12.7 |
| 2002 | 18.0 | 16.5 | 12.8 | 14.9 |
| 2003 | 17.2 | 14.1 | 0.0 | 0.0 |
| 2004 | 18.5 | 13.5 | 0.0 | 0.0 |

Source: Tabulation of UB-92 & U.S. Census data by the Rutgers Center for State Health Policy.

Table B-22 - Total ACS Admission Rate per 1,000: White non-Hispanic children

| Year | Residents of New Jersey | Residents of South Jersey | Residents of Salem County | Residents of the Local Area |
|------|----------------------------|------------------------------|------------------------------|--------------------------------|
| 1998 | 6.0 | 6.6 | 5.7 | 7.2 |
| 1999 | 6.8 | 7.3 | 5.4 | 6.1 |
| 2000 | 6.2 | 6.4 | 6.3 | 9.2 |
| 2001 | 6.0 | 6.5 | 6.7 | 8.6 |
| 2002 | 6.0 | 5.9 | 5.9 | 7.0 |
| 2003 | 6.5 | 7.1 | 7.2 | 9.4 |
| 2004 | 6.4 | 6.5 | 5.9 | 7.9 |

Source: Tabulation of UB-92 & U.S. Census data by the Rutgers Center for State Health Policy.

Table B-23 - Total ACS Admissions: All non-elderly adults

| Year | Residents of New Jersey | Residents of South Jersey | Residents of Salem County | Residents of the Local Area |
|------|----------------------------|------------------------------|------------------------------|--------------------------------|
| 1998 | 64,335 | 6,118 | 454 | 298 |
| 1999 | 66,329 | 6,727 | 548 | 381 |
| 2000 | 67,752 | 7,287 | 557 | 406 |
| 2001 | 68,231 | 7,352 | 550 | 387 |
| 2002 | 70,480 | 7,460 | 611 | 443 |
| 2003 | 74,190 | 8,232 | 688 | 497 |
| 2004 | 75,253 | 8,416 | 711 | 525 |

Source: Tabulation of UB-92 data by the Rutgers Center for State Health Policy.

Table B-24 - Total ACS Admissions: Black non-Hispanic non-elderly adults

| Year | Residents of New Jersey | Residents of South Jersey | Residents of Salem County | Residents of the Local Area |
|------|----------------------------|------------------------------|------------------------------|--------------------------------|
| 1998 | 17,479 | 1,242 | 109 | 87 |
| 1999 | 17,671 | 1,327 | 144 | 126 |
| 2000 | 17,363 | 1,417 | 146 | 131 |
| 2001 | 16,633 | 1,612 | 165 | 132 |
| 2002 | 16,119 | 1,600 | 158 | 129 |
| 2003 | 17,478 | 1,815 | 175 | 152 |
| 2004 | 17,397 | 1,941 | 159 | 144 |

Source: Tabulation of UB-92 data by the Rutgers Center for State Health Policy.

Table B-25 - Total ACS Admissions: Hispanic non-elderly adults

| Year | Residents of New Jersey | Residents of South Jersey | Residents of Salem County | Residents of the Local Area |
|------|----------------------------|------------------------------|------------------------------|--------------------------------|
| 1998 | 7,429 | 396 | 12 | 8 |
| 1999 | 8,258 | 519 | 21 | 16 |
| 2000 | 8,725 | 550 | 14 | 14 |
| 2001 | 10,420 | 677 | 16 | 9 |
| 2002 | 11,073 | 656 | 23 | 20 |
| 2003 | 10,306 | 601 | 8 | 5 |
| 2004 | 11,293 | 639 | 19 | 16 |

Source: Tabulation of UB-92 data by the Rutgers Center for State Health Policy.

Table B-26 - Total ACS Admissions: White non-Hispanic non-elderly adults

| Year | Residents of New Jersey | Residents of South Jersey | Residents of Salem County | Residents of the Local Area |
|------|----------------------------|------------------------------|------------------------------|--------------------------------|
| 1998 | 29,799 | 3,085 | 302 | 189 |
| 1999 | 30,234 | 3,184 | 359 | 226 |
| 2000 | 31,416 | 3,696 | 367 | 248 |
| 2001 | 29,533 | 3,865 | 341 | 232 |
| 2002 | 29,887 | 3,967 | 401 | 279 |
| 2003 | 32,740 | 4,592 | 454 | 304 |
| 2004 | 34,695 | 5,280 | 479 | 329 |

Source: Tabulation of UB-92 data by the Rutgers Center for State Health Policy.

Table B-27 - Total ACS Admissions: Self-pay non-elderly adults

| Year | Residents of New Jersey | Residents of South Jersey | Residents of Salem County | Residents of the Local Area |
|------|----------------------------|------------------------------|------------------------------|--------------------------------|
| 1998 | 11,546 | 988 | 42 | 29 |
| 1999 | 11,591 | 873 | 87 | 67 |
| 2000 | 10,796 | 889 | 70 | 53 |
| 2001 | 9,882 | 801 | 65 | 46 |
| 2002 | 11,635 | 1,038 | 71 | 56 |
| 2003 | 13,868 | 1,517 | 126 | 103 |
| 2004 | 14,674 | 1,422 | 122 | 94 |

Source: Tabulation of UB-92 data by the Rutgers Center for State Health Policy.

Table B-28 - Total ACS Admissions: Medicaid non-elderly adults

| Year | Residents of New Jersey | Residents of South Jersey | Residents of Salem County | Residents of the Local Area |
|------|----------------------------|------------------------------|------------------------------|--------------------------------|
| 1998 | 7,022 | 716 | 65 | 55 |
| 1999 | 7,425 | 729 | 83 | 70 |
| 2000 | 7,999 | 783 | 66 | 60 |
| 2001 | 7,649 | 799 | 70 | 56 |
| 2002 | 5,968 | 593 | 49 | 41 |
| 2003 | 6,953 | 799 | 59 | 51 |
| 2004 | 7,645 | 1,026 | 82 | 69 |

Source: Tabulation of UB-92 data by the Rutgers Center for State Health Policy.

Table B-29 - Total ACS Admission Rate per 1,000: All non-elderly adults

| Year | Residents of New Jersey | Residents of South Jersey | Residents of Salem County | Residents of the Local Area |
|------|----------------------------|------------------------------|------------------------------|--------------------------------|
| 1998 | 12.8 | 13.2 | 11.9 | 13.4 |
| 1999 | 12.9 | 14.5 | 15.2 | 17.5 |
| 2000 | 13.0 | 15.4 | 14.6 | 18.6 |
| 2001 | 12.6 | 14.8 | 14.4 | 17.9 |
| 2002 | 13.4 | 14.9 | 14.8 | 18.4 |
| 2003 | 13.8 | 16.5 | 16.8 | 21.1 |
| 2004 | 13.8 | 17.0 | 19.3 | 24.4 |

Source: Tabulation of UB-92 & U.S. Census data by the Rutgers Center for State Health Policy.

Table B-30 - Total ACS Admission Rate per 1,000: Black non-Hispanic non-elderly adults

| Year | Residents of New Jersey | Residents of South Jersey | Residents of Salem County | Residents of the Local Area |
|------|----------------------------|------------------------------|------------------------------|--------------------------------|
| 1998 | 25.9 | 19.8 | 18.7 | 21.2 |
| 1999 | 25.7 | 20.9 | 25.3 | 30.4 |
| 2000 | 24.8 | 21.8 | 24.1 | 31.7 |
| 2001 | 23.0 | 24.4 | 29.9 | 33.2 |
| 2002 | 21.8 | 22.7 | 23.8 | 27.2 |
| 2003 | 23.4 | 25.2 | 26.2 | 33.2 |
| 2004 | 23.1 | 27.3 | 26.0 | 32.7 |

Source: Tabulation of UB-92 & U.S. Census data by the Rutgers Center for State Health Policy.

Table B-31 - Total ACS Admission Rate per 1,000: Hispanic non-elderly adults

| Year | Residents of New Jersey | Residents of South Jersey | Residents of Salem County | Residents of the Local Area |
|------|----------------------------|------------------------------|------------------------------|--------------------------------|
| 1998 | 13.2 | 13.8 | 15.3 | 17.6 |
| 1999 | 14.1 | 17.3 | 28.4 | 28.6 |
| 2000 | 14.2 | 17.3 | 15.1 | 23.0 |
| 2001 | 15.5 | 18.4 | 13.9 | 13.3 |
| 2002 | 16.8 | 18.1 | 17.9 | 21.9 |
| 2003 | 15.1 | 16.2 | 6.0 | 5.4 |
| 2004 | 15.8 | 16.8 | 15.9 | 16.9 |

Source: Tabulation of UB-92 & U.S. Census data by the Rutgers Center for State Health Policy.

Table B-32 - Total ACS Admission Rate per 1,000: White non-Hispanic non-elderly adults

| Year | Residents of New Jersey | Residents of South Jersey | Residents of Salem County | Residents of the Local Area |
|------|----------------------------|------------------------------|------------------------------|--------------------------------|
| 1998 | 7.3 | 7.9 | 9.5 | 10.6 |
| 1999 | 7.3 | 8.2 | 12.0 | 13.1 |
| 2000 | 7.5 | 9.4 | 11.7 | 14.4 |
| 2001 | 6.8 | 9.3 | 10.6 | 13.5 |
| 2002 | 7.1 | 9.5 | 11.8 | 14.8 |
| 2003 | 7.7 | 11.1 | 13.7 | 16.6 |
| 2004 | 8.0 | 12.9 | 15.9 | 19.6 |

Source: Tabulation of UB-92 & U.S. Census data by the Rutgers Center for State Health Policy.

Table B-33 - Total Admissions and Same-Day Surgeries: Self-pay patients

| Year | Residents of New Jersey | Residents of Salem County | Residents of the Local Area | Patients of MHSC |
|------|----------------------------|------------------------------|--------------------------------|---------------------|
| 1998 | 95,977 | 537 | 356 | 329 |
| 1999 | 99,120 | 559 | 373 | 365 |
| 2000 | 90,763 | 492 | 339 | 331 |
| 2001 | 91,457 | 412 | 258 | 272 |
| 2002 | 102,310 | 433 | 285 | 286 |
| 2003 | 115,407 | 656 | 476 | 466 |
| 2004 | 124,870 | 647 | 465 | 463 |

Source: Tabulation of UB-92 data by the Rutgers Center for State Health Policy.

Table B-34 - Total Admissions and Same-Day Surgeries: Medicaid patients

| Year | Residents of New Jersey | Residents of Salem County | Residents of the Local Area | Patients of MHSC |
|------|----------------------------|------------------------------|--------------------------------|---------------------|
| 1998 | 64,005 | 434 | 347 | 299 |
| 1999 | 60,396 | 508 | 390 | 313 |
| 2000 | 65,354 | 473 | 392 | 290 |
| 2001 | 63,355 | 470 | 357 | 287 |
| 2002 | 54,391 | 338 | 257 | 207 |
| 2003 | 66,551 | 420 | 303 | 239 |
| 2004 | 80,218 | 602 | 432 | 350 |

Source: Tabulation of UB-92 data by the Rutgers Center for State Health Policy.

Table B-35 - Total Admissions and Same-Day Surgeries: All patients

| Year | Residents of New Jersey | Residents of Salem County | Residents of the Local Area | Patients of MHSC |
|------|----------------------------|------------------------------|--------------------------------|---------------------|
| 1998 | 1,306,939 | 11,271 | 7,310 | 8,285 |
| 1999 | 1,312,572 | 9,808 | 6,127 | 6,677 |
| 2000 | 1,333,076 | 9,685 | 6,142 | 6,526 |
| 2001 | 1,335,049 | 9,529 | 5,923 | 6,654 |
| 2002 | 1,338,960 | 9,537 | 5,848 | 6,297 |
| 2003 | 1,361,950 | 9,999 | 6,324 | 6,793 |
| 2004 | 1,393,103 | 10,489 | 6,750 | 7,269 |

Source: Tabulation of UB-92 data by the Rutgers Center for State Health Policy.

Table B-36 - Total Admissions and Same-Day Surgeries: Black non-Hispanic patients

| Year | Residents of New Jersey | Residents of Salem County | Residents of the Local Area | Patients of MHSC |
|------|----------------------------|------------------------------|--------------------------------|---------------------|
| 1998 | 184,074 | 1,697 | 1,339 | 1,515 |
| 1999 | 181,848 | 1,603 | 1,283 | 1,316 |
| 2000 | 176,813 | 1,664 | 1,324 | 1,337 |
| 2001 | 168,435 | 1,682 | 1,306 | 1,386 |
| 2002 | 159,068 | 1,581 | 1,231 | 1,277 |
| 2003 | 167,298 | 1,720 | 1,357 | 1,443 |
| 2004 | 175,742 | 1,761 | 1,414 | 1,431 |

Source: Tabulation of UB-92 data by the Rutgers Center for State Health Policy.

Table B-37 - Total Admissions and Same-Day Surgeries: Hispanic patients

| Year | Residents of New Jersey | Residents of Salem County | Residents of the Local Area | Patients of MHSC |
|------|----------------------------|------------------------------|--------------------------------|---------------------|
| 1998 | 108,761 | 238 | 185 | 219 |
| 1999 | 124,722 | 223 | 177 | 207 |
| 2000 | 141,508 | 220 | 181 | 189 |
| 2001 | 179,614 | 332 | 231 | 246 |
| 2002 | 187,867 | 357 | 270 | 256 |
| 2003 | 172,253 | 99 | 63 | 22 |
| 2004 | 185,003 | 213 | 139 | 84 |

Source: Tabulation of UB-92 data by the Rutgers Center for State Health Policy.

Table B-38 - Total Admissions and Same-Day Surgeries: White non-Hispanic patients

| Year | Residents of New Jersey | Residents of Salem County | Residents of the Local Area | Patients of MHSC |
|------|----------------------------|------------------------------|--------------------------------|---------------------|
| 1998 | 789,478 | 8,525 | 5,445 | 6,512 |
| 1999 | 759,865 | 7,146 | 4,314 | 5,118 |
| 2000 | 784,827 | 7,003 | 4,283 | 4,959 |
| 2001 | 706,181 | 6,784 | 4,064 | 4,908 |
| 2002 | 682,402 | 6,708 | 3,973 | 4,700 |
| 2003 | 712,815 | 7,296 | 4,488 | 5,235 |
| 2004 | 761,468 | 7,777 | 4,741 | 5,347 |

Source: Tabulation of UB-92 data by the Rutgers Center for State Health Policy.

Table B-39 - Average Inpatient Length-of-Stay: All patients

| Year | Residents of New Jersey | Residents of Salem County | Residents of the Local Area | Patients of MHSC |
|------|----------------------------|------------------------------|--------------------------------|---------------------|
| 1998 | 5.8 | 5.5 | 5.4 | 5.1 |
| 1999 | 5.8 | 5.1 | 5.1 | 4.9 |
| 2000 | 5.6 | 4.9 | 4.9 | 4.6 |
| 2001 | 5.6 | 5.2 | 5.2 | 4.9 |
| 2002 | 5.5 | 4.9 | 4.9 | 4.6 |
| 2003 | 5.5 | 4.9 | 4.9 | 4.5 |
| 2004 | 5.3 | 4.5 | 4.5 | 4.1 |

Source: Tabulation of UB-92 data by the Rutgers Center for State Health Policy.

Table B-40 - Average Inpatient Length-of-Stay: Black non-Hispanic patients

| Year | Residents of New Jersey | Residents of Salem County | Residents of the Local Area | Patients of MHSC |
|------|----------------------------|------------------------------|--------------------------------|---------------------|
| 1998 | 6.4 | 5.1 | 5.0 | 4.9 |
| 1999 | 6.3 | 5.2 | 5.2 | 4.9 |
| 2000 | 6.0 | 4.9 | 4.9 | 4.5 |
| 2001 | 6.1 | 5.3 | 5.3 | 4.9 |
| 2002 | 6.1 | 5.0 | 5.0 | 4.6 |
| 2003 | 6.0 | 4.8 | 4.7 | 4.5 |
| 2004 | 5.7 | 4.7 | 4.6 | 4.2 |

Source: Tabulation of UB-92 data by the Rutgers Center for State Health Policy.

Table B-41 - Average Inpatient Length-of-Stay: Hispanic patients

| Year | Residents of New Jersey | Residents of Salem County | Residents of the Local Area | Patients of MHSC |
|------|----------------------------|------------------------------|--------------------------------|---------------------|
| 1998 | 5.1 | 4.3 | 3.7 | 3.5 |
| 1999 | 5.0 | 4.3 | 4.5 | 4.0 |
| 2000 | 4.8 | 4.7 | 4.5 | 3.5 |
| 2001 | 4.8 | 4.7 | 4.2 | 4.5 |
| 2002 | 4.9 | 4.3 | 4.2 | 3.9 |
| 2003 | 4.8 | 4.5 | 4.5 | 2.8 |
| 2004 | 4.8 | 4.9 | 4.7 | 4.6 |

Source: Tabulation of UB-92 data by the Rutgers Center for State Health Policy.

Table B-42 - Average Inpatient Length-of-Stay: White non-Hispanic patients

| Year | Residents of New Jersey | Residents of Salem County | Residents of the Local Area | Patients of MHSC |
|------|----------------------------|------------------------------|--------------------------------|---------------------|
| 1998 | 5.9 | 5.5 | 5.4 | 5.2 |
| 1999 | 5.9 | 5.1 | 5.1 | 4.9 |
| 2000 | 5.7 | 4.9 | 4.9 | 4.7 |
| 2001 | 5.7 | 5.2 | 5.3 | 5.0 |
| 2002 | 5.6 | 5.0 | 4.9 | 4.7 |
| 2003 | 5.5 | 5.0 | 4.9 | 4.5 |
| 2004 | 5.3 | 4.5 | 4.4 | 4.1 |

Source: Tabulation of UB-92 data by the Rutgers Center for State Health Policy.

Table B-43 - Average Inpatient Length-of-Stay: Self-pay patients

| Year | Residents of New Jersey | Residents of Salem County | Residents of the Local Area | Patients of MHSC |
|------|----------------------------|------------------------------|--------------------------------|---------------------|
| 1998 | 5.2 | 4.9 | 4.5 | 4.3 |
| 1999 | 5.1 | 4.2 | 4.3 | 3.7 |
| 2000 | 4.8 | 3.9 | 4.0 | 3.4 |
| 2001 | 4.9 | 4.6 | 4.5 | 4.2 |
| 2002 | 5.0 | 4.8 | 5.0 | 3.9 |
| 2003 | 4.9 | 4.4 | 4.4 | 3.7 |
| 2004 | 4.8 | 4.6 | 4.4 | 3.7 |

Source: Tabulation of UB-92 data by the Rutgers Center for State Health Policy.

Table B-44 - Average Inpatient Length-of-Stay: Medicaid patients

| Year | Residents of New Jersey | Residents of Salem County | Residents of the Local Area | Patients of MHSC |
|------|----------------------------|------------------------------|--------------------------------|---------------------|
| 1998 | 6.7 | 5.8 | 5.6 | 4.2 |
| 1999 | 6.7 | 5.5 | 5.5 | 4.4 |
| 2000 | 6.6 | 6.2 | 5.9 | 4.6 |
| 2001 | 6.7 | 5.8 | 5.3 | 4.3 |
| 2002 | 6.5 | 5.9 | 5.5 | 4.3 |
| 2003 | 5.9 | 5.7 | 5.5 | 4.2 |
| 2004 | 5.5 | 5.1 | 5.6 | 4.8 |

Source: Tabulation of UB-92 data by the Rutgers Center for State Health Policy.

Table B-45 - Total Transfers: All Patients excluding Cardiac and Newborns

| Year | MHSC | Comparison Hospitals |
|------|------|----------------------|
| 1998 | 96 | 666 |
| 1999 | 98 | 788 |
| 2000 | 113 | 821 |
| 2001 | 106 | 828 |
| 2002 | 105 | 830 |
| 2003 | 108 | 760 |
| 2004 | 114 | 853 |

The comparison group of hospitals contains facilities that are similar to MHSC in terms of size and population density of the local area. These are South Jersey Hospital - Elmer, Hackettstown Community Hospital, William B. Kessler Memorial Hospital, Newton Memorial Hospital, Kennedy Memorial Hospital - Washington Twp., Hunterdon MedicalCenter, and Virtua/West Jersey Hospital - Marlton.

Source: Tabulation of UB-92 data by the Rutgers Center for State Health Policy.

Table B-46 - Total Transfers: Cardiac Patients

| Year | MHSC | Comparison Hospitals |
|------|------|----------------------|
| 1998 | 211 | 3,582 |
| 1999 | 189 | 3,171 |
| 2000 | 209 | 3,343 |
| 2001 | 231 | 3,356 |
| 2002 | 187 | 3,580 |
| 2003 | 187 | 3,557 |
| 2004 | 158 | 3,410 |

The comparison group of hospitals contains facilities that are similar to MHSC in terms of cardiac treatment capabilities and population density of the local area. These are Palisades Medical Center, Rancocas Hospital, St. Joseph's Hospital - Wayne, and Virtua Health - Burlington.

Source: Tabulation of UB-92 data by the Rutgers Center for State Health Policy.

Table B-47 - Total Transfers: Newborn Patients

| Year | MHSC | Comparison Hospitals |
|------|------|----------------------|
| 1998 | 20 | 185 |
| 1999 | 0 | 221 |
| 2000 | 0 | 244 |
| 2001 | 4 | 226 |
| 2002 | 5 | 186 |
| 2003 | 24 | 228 |
| 2004 | 18 | 168 |

The comparison group of hospitals contains facilities that are similar to MHSC in terms of newborn treatment capabilities and population density of the local area. These are Bayonne Medical Center, Burdette Tomlin Memorial Hospital, St. James Hospital, South Jersey Hospital - Bridgeton, Southern Ocean County Hospital, St. Joseph's Wayne Hospital, St. Mary's Hospital - Passaic, and Warren Hospital.

Source: Tabulation of UB-92 data by the Rutgers Center for State Health Policy.

Table B-48 - Total Emergency Department Visits

| Year | Hospitals in New Jersey | Hospitals in South Jersey | Hospitals in Salem County | Patients of MHSC | Patients of SJ - Elmer |
|------|----------------------------|------------------------------|------------------------------|---------------------|---------------------------|
| 1998 | 2,658,976 | 325,768 | 26,835 | 17,684 | 9,151 |
| 1999 | 2,774,756 | 335,416 | 28,387 | 18,753 | 9,634 |
| 2000 | 2,852,867 | 347,712 | 29,365 | 19,070 | 10,295 |
| 2001 | 3,014,851 | 361,515 | 30,634 | 19,155 | 11,479 |
| 2002 | 3,085,336 | 369,165 | 31,119 | 18,276 | 12,843 |
| 2003 | 3,196,496 | 385,184 | 33,261 | 19,871 | 13,390 |
| 2004 | 3,186,182 | 381,514 | 34,671 | 20,032 | 14,639 |

Source: Tabulation of hospital cost report (B-2) data by the Rutgers Center for State Health Policy.

Table B-49 - Total Clinic Visits

| Year | Hospitals in New Jersey | Hospitals in South Jersey | Hospitals in Salem County | Patients of MHSC | Patients of SJ - Elmer |
|------|----------------------------|------------------------------|------------------------------|---------------------|---------------------------|
| 1998 | 3,100,375 | 60,979 | 2,431 | 2,431 | 164 |
| 1999 | 2,960,549 | 51,751 | 2,164 | 1,995 | 169 |
| 2000 | 2,887,383 | 69,375 | 2,660 | 2,433 | 227 |
| 2001 | 2,990,945 | 71,926 | 2,722 | 2,413 | 309 |
| 2002 | 3,076,505 | 69,173 | 2,158 | 1,978 | 180 |
| 2003 | 3,116,989 | 64,985 | 1,018 | 845 | 173 |
| 2004 | 3,063,706 | 71,899 | 1,317 | 1,315 | 2 |

Source: Tabulation of hospital cost report (B-2) data by the Rutgers Center for State Health Policy.