



Impacts of Health Reform in Shelby County, Tennessee

An Examination of Changes in Health Insurance
Coverage, Use of Health Care Resources, and the
Economic Contribution of Health Care

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MAJOR POINTS

The Patient Protection and Affordable Care Act (PPACA), enacted into law in March 2010, will have substantial direct and indirect impacts on the health care enterprise of Shelby County, Tennessee. Based upon 2008 information, 145,434 residents of Shelby County are uninsured. The most prominent changes will include:

- *expanding health insurance coverage to 74,234 nonelderly County residents who are currently uninsured through eligibility expansions for private insurance and Medicaid and the creation of an expanded competitive market through health insurance exchanges, which will reduce the proportion of the County's nonelderly residents without health insurance from 17.9 percent to 8.7 percent;*
- *changing the volume, sites, and payer mix of health care services used in the County, with substantial increase in the number of ambulatory care visits, a modest reduction in emergency room visits, and significant change in the payer mix of hospital admissions with increases in publicly- and privately-insured cases and a reduction in uninsured admissions;*
- *reducing the amount of uncompensated care and bad debt provided by hospitals, community-based providers, and physicians from \$1.3 billion to \$655 million, a 51.0 percent decrease; and*
- *increasing the funding Shelby County will receive in 2014 from state and federal governments by \$198.6 million, with a subsequent increase of \$451.3 million in economic output, \$160.8 million in additional earnings, and 3,480 additional jobs.*

These changes, while generally promoting more effective and efficient health care in the County, will present challenges. These include:

- *the continuing need for and the challenges to the current safety-net services for the 71,200 nonelderly Shelby County residents who will remain uninsured;*
- *the need for continuing support for substantial uncompensated care, especially as private and public payment rates, including disproportionate share funds, are reduced;*
- *the need for additional health care manpower, especially primary care providers, to meet the increased demand for ambulatory care services; and*
- *the increase in state funding for Medicaid services as the number of enrollees increases as a result of eligibility expansion as well as substantial crowd-out of private coverage.*

EXECUTIVE SUMMARY

The Patient Protection and Affordable Care Act (PPACA) enacted in March 2010 defines a comprehensive health care reform that, once fully implemented, will impact virtually every portion of the health care system. It is the purpose of this report to analyze and summarize the impacts of this reform on the health care enterprise of Shelby County, Tennessee. The major goals of the study were to assess (1) the impact of changes in insurance eligibility on the number of uninsured in Shelby County; (2) the changes in health care utilization in the County that result from the expanded insurance coverage; (3) the impact of expanded coverage on the County's health system financing and uncompensated care; and (4) the economic impact of reform on the overall economy of Shelby County.

Health Insurance Expansion. Based upon an analysis of the 2008 American Community Survey, we estimate that 145,434 nonelderly residents of Shelby County under the age of 65 were uninsured in 2008, corresponding to 17.9 percent of the County population. Of those with insurance, one-third had public (predominantly TennCare) and two-thirds had private (individual or group) coverage.

Of these, we estimate that approximately 74,234 additional nonelderly residents of Shelby County—51.0 percent of the previously uninsured—will gain health insurance because of (1) the changes in young adult eligibility to assure that young adults up the age of 26 can remain on their parents' health insurance policies (1,717 persons); (2) the expansion of Medicaid to cover all residents with incomes under 133.0 percent of the Federal Poverty Level (37,159 persons); and (3) the implementation of insurance exchanges to provide a competitive private insurance market with subsidies for lower income persons (35,358 persons).

While this increase is substantial, there will remain an estimated 71,200 nonelderly residents without insurance after these three interventions are implemented. This represents 8.7 percent of the nonelderly population and 49.0 percent of the previously uninsured. Thus, the challenges presented to and by the uninsured will be reduced but not eliminated as a result of these three reforms. The need for safety-net programs will remain although the smaller number of residents dependent upon these programs may make public political support more tenuous. In addition, the substantial increase in Medicaid enrollees resulting directly from eligibility expansion as well as significant crowd-out of private coverage will have significant impact on state financing of health care at a time during which states, including Tennessee, are reducing health care funding to meet financial challenges. Greater reliance on Medicaid will also place limits on access to care, as Medicaid beneficiaries have substantial barriers to access compared to those with private coverage.

Increases in Health Care Service Utilization. The increase in the number of County residents who have health insurance will change the utilization of ambulatory care, hospital, and emergency room services. Providing insurance to 74,234 additional residents will lead to over 145,000 more ambulatory care visits per year, with the greatest increase in visits for primary care (84,548 visits) and a small decline in hospital outpatient visits (742 visits).

The increases in outpatient care will require additional primary care manpower. Parts of Shelby County are currently considered primary care shortage areas. Increasing the number of primary care visits by 84,548 per year will require an additional 23.5 full-time primary care physicians at a time when fewer new physicians are choosing careers in primary care.

Insurance expansion is also projected to cause a small reduction in both the number of hospital discharges (-0.6 percent) and in total bed days of care (-1.5 percent). The payer mix will change, with greater proportions of discharges and inpatient days of care from Medicaid and privately insured persons and a substantial decline from the uninsured.

The implications of the projected change in hospital payer mix are also significant and will vary from facility to facility. The impact on the Regional Medical Center (The MED) may be very substantial; as half or more of the patients with uninsured admissions to the MED become insured, many will have the option of seeking care in other non-safety-net community hospitals, reducing the total volume of admissions but increasing the proportion of those remaining who are uninsured.

Overall emergency department (ED) use is projected to fall by 12.0 percent, driven by a reduction in the number of uninsured with high utilization rates. Little change is expected in the proportion of ED visits that are emergent.

Health System Finances and Uncompensated Care. In 2008, the acute care hospitals in Shelby County provided \$784.7 million in uncompensated hospital services, of which 95.5 percent was for the uninsured. Community-based clinics and office-based physicians in Shelby County provided an additional \$337 million and \$180 million in uncompensated care, respectively. Thus, the total level of uncompensated care in the County in 2008 was approximately \$1.33 billion.

Uncompensated care for all provider groups will decrease substantially after expansion of health insurance coverage. Overall levels of uncompensated care will decline by \$671 million, or 51.0 percent. Bad debt from insured patients will rise modestly (by approximately 8.0 percent), reflecting the greater number of patients with insurance.

The impact of reform on hospital and physician finances will be complex, depending upon the relative impacts of reducing the demand for free or discounted care and the projected payment reductions. Overall hospital charges may fall by over \$120 million (reflecting the lower charge per admission for the newly insured than for the previously uninsured plus the modest decline in the number of admissions), whereas actual revenues will increase by over \$55 million (reflecting the greater collection rate for those who become insured, whether covered by private insurance or Medicaid, than that for when they were uninsured).

The overall level of uncompensated care in Shelby County will, however, remain substantial—over \$650 million. The financial significance of this may become more important as payment rates by insurers decline and as Medicaid and Medicare disproportionate share (DSH) funding is withdrawn.

Economic Impacts. Under PPACA, health expenditures in Shelby County are expected to increase by \$186.8 million (1.8 percent) in 2010 and by \$387.7 million (3.0 percent) in 2014. The additional \$92.3 million in state and federal spending in Shelby County due to PPACA-related changes is estimated to generate a total of \$209.8 million in output (the value of goods and services produced as a result of and including the initial spending of the \$92.3 million), \$74.8 million in additional earnings, and 1,829 additional jobs. In 2014, the additional \$198.6 million in state and federal spending in Shelby County due to PPACA-related changes is expected to generate a total of \$451.3 million in output (the value of goods and services produced as a result of and including the initial spending of the \$198.6 million), \$160.8 million in additional earnings, and 3,480 additional jobs.

The 2010 Patient Protection and Affordable Care Act (PPACA) is filled with a complex array of health care reforms that impact the nation. Confusion surrounding PPACA has only increased as a result of the November 2010 elections. The probability of substantial changes to the Act is highly correlated to the changing political environment in Washington and with the outcomes of pending legal challenges. Thus, determining, with any degree of accuracy, the impact of PPACA on the nation, the state, or Shelby County is at best a speculative process. Given these disclaimers and many more that cannot be determined, this report has attempted to estimate the impact of the new law on the number of uninsured in the County, the utilization of health care resources, the health care finances in the County, and the impact of changes in health care financing on the overall economy.

I. INTRODUCTION

President Barack Obama signed the Patient Protection and Affordable Care Act (PPACA)¹ and the follow-up Health Care and Education Affordability Reconciliation Act into law in March 2010.² These laws define a comprehensive health care reform that, once fully implemented, will impact virtually every portion of the health care system at the national and local levels. It is the purpose of this report to analyze and summarize the impacts of this reform on the health care enterprise of Shelby County, Tennessee. The major goals of the study were to assess (1) the impact of changes in insurance eligibility on the number of uninsured in Shelby County; (2) the changes in health care utilization in the County that result from the expanded insurance coverage; (3) the impact of expanded coverage on the County's health system financing and uncompensated care; and (4) the impact of reform on the overall economy of Shelby County.

Our findings for these four goals will be presented in Sections II through V of this report. In each section, we will present information related to the current status in Shelby County, followed by projected changes after reform, and, finally, by the implications of these changes for the County's health care enterprise. In approaching these goals, we will also provide background information on health care in Shelby County that is crucial to understanding the changes that may be produced by reforms.

We applied certain constraints to our analyses. These included limiting the scope of the assessment to (1) the major structural changes in the insurance market, including expanded coverage for young adults, expanded Medicaid coverage, and implementation of insurance exchanges; (2) limiting the analyses to residents under the age of 65, as those older are eligible for Medicare with near universal coverage and are affected differently by the PPACA reforms; and (3) implementation of the law as currently enacted, understanding that many important details will be determined through the ongoing political, regulatory, and legal processes. Our analyses in the various sections of the report will be based upon different data sets that best fit each topic, and in many cases, we have extrapolated data from national or statewide studies to Shelby County. In addition, like all projections of the future, the estimates that we will offer are, by necessity, only approximations of what may happen.

¹We will refer in this report to both laws collectively as the Patient Protection and Affordable Care Act (PPACA). The full text of the PPACA can be found at http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=111_cong_bills&docid=f:h3590enr.txt.pdf. For a summary of the health reform law, see *Focus on Health Reform: Summary of New Health Reform Law* (Washington, DC: Kaiser Family Foundation, March 26, 2010).

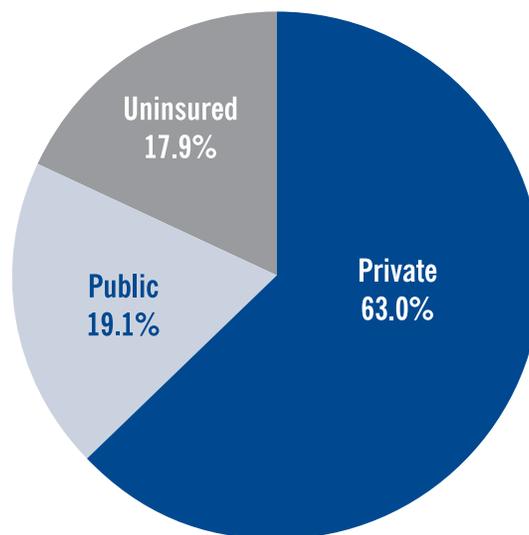
²The text of the Health Care and Education Affordability Reconciliation Act can be found at http://docs.house.gov/rules/hr4872/111_hr4872_amndsub.pdf.

II. CHANGES IN HEALTH INSURANCE ELIGIBILITY

The PPACA will expand health insurance eligibility by several interrelated pathways. These include (1) assuring coverage of young adults up to age 26 on their parents' policies; (2) expanding Medicaid coverage for persons with incomes up to 133.0 percent of the Federal Poverty Level (FPL); (3) facilitating the purchase of individual policies in the market by establishing competitive exchanges, with subsidies for lower income employers and individuals; (4) establishing high-risk insurance pools for those who would be otherwise uninsurable; (5) establishing employer and individual mandates for coverage, with financial penalties for noncompliance; and (6) reducing the overall cost of health care that will, presumably, reduce health insurance premiums. Some of these reforms have already gone into effect, e.g., expanded coverage for young adults, while others will not be fully implemented until 2016 and beyond.³

The Uninsured of Shelby County. Chart 1 shows the distribution of health insurance coverage for the nonelderly population of Shelby County, based upon data from the 2008 American Community Survey (ACS).⁴

Chart 1. Insurance Status of Residents of Shelby County Under Age 65



Source: Authors' analysis of the 2008 American Community Survey.

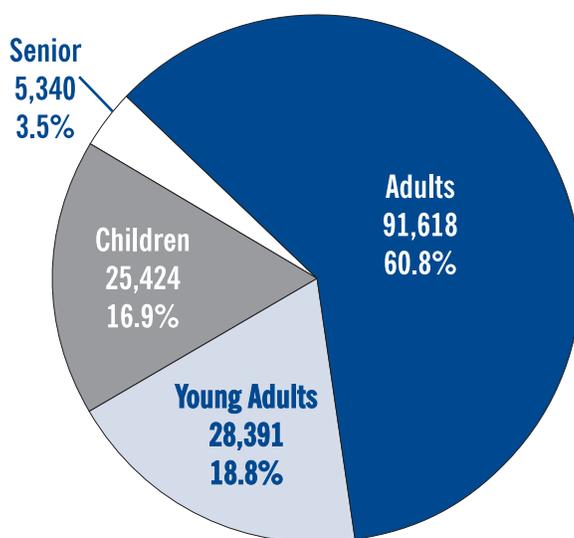
³For a complete timeline of changes, see "Timeline for Health Care Reform Implementation" (Washington, DC: The Commonwealth Fund).

⁴The American Communities Survey (ACS) is a national survey of three million households per year that provides annual data on various topics, including demographics, health insurance, income, housing, etc., for population centers of 65,000 persons or more. The ACS assessment of insurance status is based upon coverage at the time of the interview. For a full discussion of the ACS, see M. Davern, B. C. Quinn, G. M. Kenney, and L. A. Blewett, "The American Community Survey and Health Insurance Coverage Estimates: Possibilities and Challenges for Health Policy Researchers," *Health Services Research* 44.2 (2009): 593.

We estimate that 145,434 residents of Shelby County under the age of 65 were uninsured at the time of the 2008 ACS survey, corresponding to 17.9 percent of the County population.⁵ Of those with insurance, one-third had public (predominantly TennCare) and two-thirds had private (individual or group) coverage.

Charts 2A and 2B show the age distribution of the uninsured. The greatest number of uninsured were adults between the ages of 26 and 64 (91,618) (Chart 2A), while the young adult age group (19–25 years) had the highest percentage of uninsured (28,391 persons of a total of 86,749 persons, or 32.7 percent) (Chart 2B).

Chart 2A. Distribution of the Uninsured in Shelby County by Age

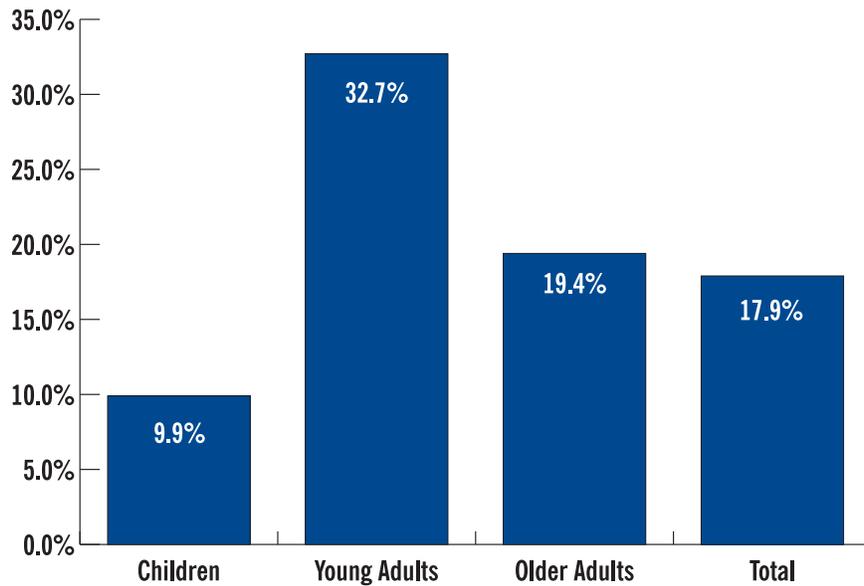


Source: Authors' analysis of the 2008 American Community Survey. Figures indicate the percentage of uninsured persons in each age group.

Charts 3A and 3B show the income distribution of the uninsured; 34.0 percent of the County's uninsured had incomes under the Federal Poverty Level (FPL \$22,050 per year for a family of 4), 61.0 percent had incomes under 133.0 percent of the FPL, and 91.0 percent had incomes under 200.0 percent of the FPL (Chart 3A). Of those with incomes under 100.0 percent of the FPL, 31.0 percent were uninsured (Chart 3B). Those with incomes under 133.0 percent of the FPL will be eligible for insurance under Medicaid expansion, and those with higher incomes will be eligible for coverage under the insurance exchanges, with subsidies for those with incomes up to 400.0 percent of the FPL.

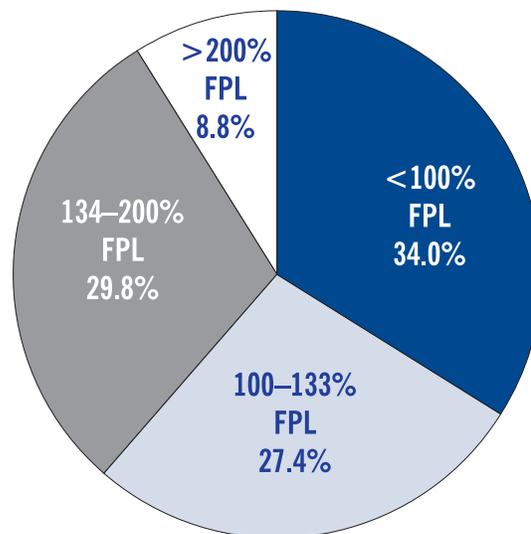
⁵Of those over 65 years of age, only 5,340 (1.3 percent) were uninsured.

Chart 2B. Proportion of Each Age Group That Was Uninsured



Source: Authors' analysis of the 2008 American Community Survey. Figures indicate the percentage of uninsured persons in each age group.

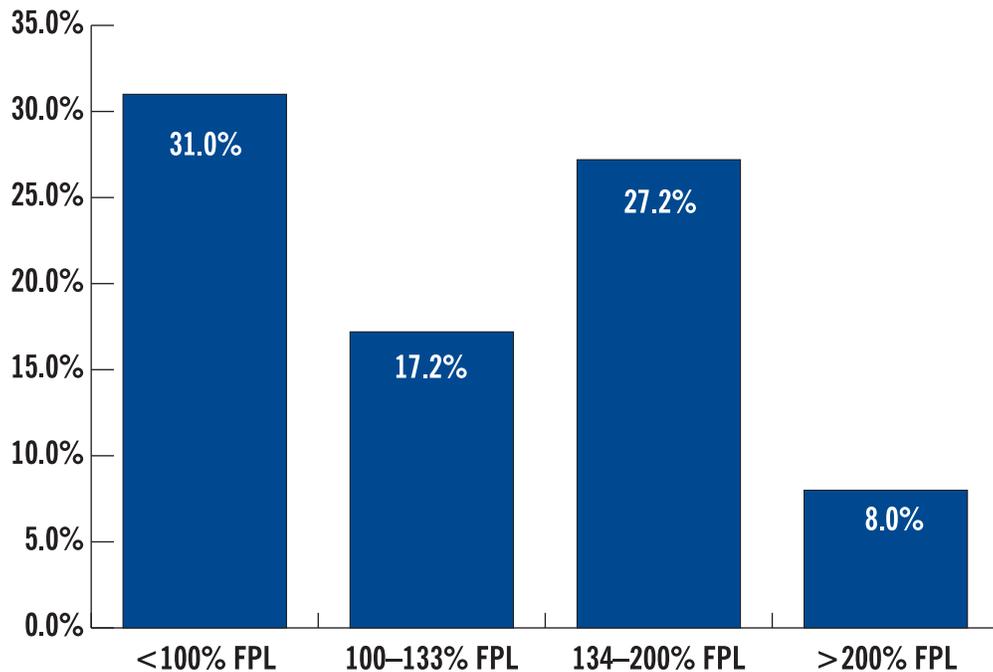
Chart 3A. Distribution of the Nonelderly Uninsured in Shelby County by Income



FPL=Federal Poverty Level.

Source: Authors' analysis of the 2008 American Community Survey. Figures indicate the percentage of uninsured persons in each income group.

Chart 3B. Proportion of Each Income Category That Was Uninsured



FPL = Federal Poverty Level.

Source: Authors' analysis of the 2008 American Community Survey. Figures indicate the percentage of uninsured persons in each income group.

Expanded Private Coverage for Young Adults. In this section, we estimate the number of young adults in Shelby County who are currently uninsured and the number who may gain new private health insurance coverage following the changes in federal law.

Young adults are a particularly important target for health insurance reform. They represent one of the largest and fastest growing groups of uninsured.⁶ Over 13 million young adults in the nation are currently uninsured; this corresponds to an uninsured rate of 29.0 percent. Among those not in college, the uninsured rate is 38.0 percent. In Shelby County, as shown in Chart 2B, this group also had the highest proportion of uninsured members (32.7 percent), a rate slightly higher than the reported national level.

This high uninsured rate is the result of several factors. Many young adults lose coverage under their parents' plan when they become 19 years old; 60.0 percent of firms that offer family coverage to employees do not cover dependent children over the ages of 18 or 19 who do not attend college.⁷ Those who are employed commonly have lower paying jobs that do not offer employer-sponsored coverage, and the proportion of those who are offered coverage who enroll is lower than that for other groups because of the relative expense and a lower perceived need for coverage.

⁶J. L. Nicholson, S. R. Collins, B. Mahato, et al., *Why Young Adults Become Uninsured and How New Policies Can Help*, 2009 Update (Washington, DC: The Commonwealth Fund, August 2009).

⁷G. M. Kenney, J. E. Pelletier, and L. J. Blumberg, *How Will the Patient Protection and Affordable Care Act of 2010 Affect Young Adults?* (Washington, DC: The Urban Institute, July 2010).

State Medicaid eligibility rules typically become stricter at this age, with more restrictive income thresholds, making public coverage less available. Current Tennessee Medicaid eligibility rules⁸ stipulate that children up to 1 year old may be covered if their household income is up to 185.0 percent of the FPL (currently \$3,400 per month for a family of 4). Up to age 6, children are eligible for TennCare coverage if their family income is 133.0 percent of the FPL or lower (\$2,444 per month for a family of 4). However, children age 6 and older must live in households with incomes at or below 100.0 percent of the FPL (\$1,838 per month for a family of 4). Above the age of 18, eligibility is tightly restricted to those with low incomes and unusually poor health status.

PPACA includes several provisions to expand coverage to the young adult group.⁹ Beginning on September 23, 2010 (6 months post-enactment), all health plans that offer dependent coverage were required to cover young adults up to the age of 26. This includes persons who are eligible for (but not enrolled in) independent coverage through an employer, who are married (although spouses and children are not covered), who do not live with their parents, and who are not claimed as dependents for income tax purposes. Tennessee passed legislation in 2008 that required dependent coverage on parents' plans for young adults up to the age of 24.¹⁰ In addition, this group will be aided by the general provisions of the reform, including raising the Medicaid income threshold, establishing insurance exchanges with low-income subsidies, etc.

[Current Insurance Status of Young Adults in Shelby County.](#) Chart 4 shows the health insurance status of the 343,095 residents of Shelby County under the age of 26. In 2008, there were 86,700 persons in Shelby County between the ages of 19 and 25, that is, those who will be impacted by the reform law.

The distribution of insurance coverage varied significantly among the age subgroups. Private insurance coverage peaked in the 6-to-18-year age group, with 61.1 percent of individuals having private insurance. Private insurance coverage was lower in the 19-to-23-year age group (52.0 percent) and in the 24-to-25-year age group (53.0 percent), consistent with losing coverage under their parents' policies. The fact that 52.0 to 53.0 percent of these young adults still had private insurance suggests that coverage under parents' policies was replaced for most young adults by coverage through employer-sponsored or individual policies.

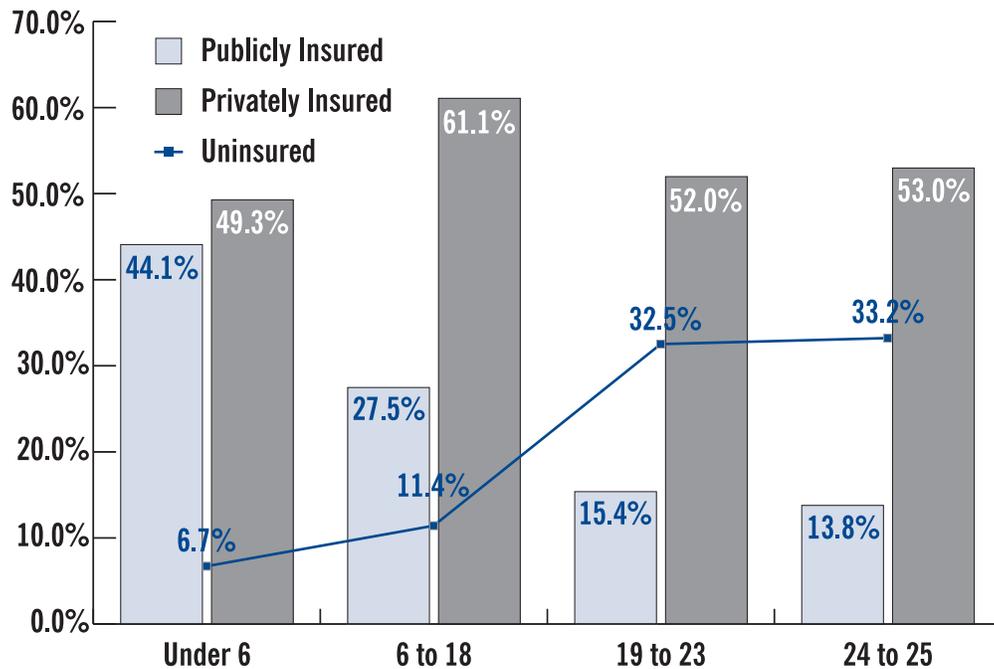
Public insurance, predominantly Medicaid, coverage was most common for young children under the age of 6. There was a substantial decrease in the percentage of children covered between the under-6 and 6-to-18 age groups (a 37.6 percent drop), and then between the 6-to-18 and 19-to-23 age groups (a 44.0 percent drop), so that only 13.8 percent of the oldest age group

⁸TennCare Bureau, State of Tennessee, "TennCare Eligibility Categories," <http://www.tennessee.gov/tenncare/mem-categories.html>.

⁹Kenney, Pelletier, and Blumberg, *How Will the Patient Protection and Affordable Care Act of 2010 Affect Young Adults?*

¹⁰Tennessee law allows coverage for unmarried and financially-dependent young adults up to 24 years of age (Tenn. Code Annotated 56-7-2302). In this analysis, we base projections on the entire 19–26-year-old age group, as Tennessee law would have had no effect on the 2008 ACS data used in this report.

Chart 4. Insurance Status for Children and Young Adults in Shelby County



Source: Authors' analysis of the 2008 American Community Survey.

had public coverage. This is consistent with more restrictive income requirements as children age and with general ineligibility for Medicaid after age 19.

Within the young adult population under the age of 26, the proportion uninsured increased dramatically with age (the solid line in Chart 4). The proportion increased from 6.7 percent among those less than 6 years old to 33.2 percent among those aged 24–25. This increase was driven predominantly by declines in public coverage.

[Expanded Private Insurance Coverage for Young Adults.](#) Our estimate of the number of young adults between the ages of 19 and 25 who will become privately insured is based upon the following formula:

$$\begin{array}{r}
 \text{Newly} \\
 \text{Privately} \\
 \text{Insured}
 \end{array}
 =
 \begin{array}{r}
 \text{Young adults in} \\
 \text{Shelby County,} \\
 \text{19 to 25}
 \end{array}
 \times
 \frac{\begin{array}{r} \text{Children 6 to 18} \\ \text{covered by parents} \end{array}}{\begin{array}{r} \text{Children 6 to 18 in} \\ \text{Shelby County} \end{array}}
 -
 \begin{array}{r}
 \text{Currently} \\
 \text{privately-insured} \\
 \text{young adults}
 \end{array}$$

The number of young adults (first right-hand term) represents the maximum number of individuals who would be eligible for the new benefit. According to the ACS, 86,700 young adults lived in the County in 2008, of whom 28,391 were uninsured.

The second right-hand term represents the proportion of 19-to-25-year olds who have parents who would be able to cover them; only young adults whose parents have coverage that includes dependents are eligible. For this analysis, we assumed that the proportion of those 19 to 25 eligible for parental coverage is equal to the proportion of 6-to-18-year olds with private insurance. The ACS data indicated that 54.5 percent of all 6-to-18-year olds in Shelby County were covered under a parent’s private insurance coverage. The 95.0 percent confidence interval for private insurance ranged from 53.8 percent to 55.1 percent.

Next, we subtracted the number of currently privately-insured young adults (45,344) from the total estimated number of young adults who will be eligible for private coverage. While some currently insured young adults will choose to be covered under their parents’ insurance policies after the reforms are implemented, we assumed this fact would not change the total number of privately-insured or uninsured young adults.

Not all eligible young adults will enroll in their parents’ policies. The proportion of children 6 to 18 years old who had parents with private insurance and who were actually enrolled provides the likely proportion of young adults who have parents willing and able to add them to their policies. Based upon ACS results, 90.0 percent of children eligible for parental coverage were enrolled, that is, the take-up ratio for this group was 0.9.

Table 1 summarizes the calculation steps described above. We estimate that 1,717 young adults will gain private coverage from the change in private insurance eligibility, corresponding to 6.1 percent of the estimated 28,391 uninsured young adults in Shelby County.¹¹

Table 1. Calculation of New Privately-Insured Young Adults in Shelby County

Measure	Value	Result
Young Adults in Shelby County	86,700	86,700
X Proportion with Parental Coverage	54.5%	47,252
– Number with Current Private Insurance	45,344	1,908
X Take-Up Ratio	90.0%	1,717

Source: Authors’ calculations based upon the 2008 American Community Survey.

We also calculated insurance for the lower and upper boundaries of the 95.0 percent confidence interval for the percentage of 6-to-18-year olds who were insured under their parents’ policies—53.8 percent and 55.1 percent, respectively. At the lower end, we estimate that 1,171 (4.1

¹¹The number of young adults covered by private insurance will also be impacted by crowd out resulting from the expansion of public coverage as described below.

percent of the uninsured) young adults may gain private coverage. We predict an upper estimate of 2,185 (7.7 percent of the uninsured) newly privately-insured young adults.

Expanded Public Insurance Coverage for Uninsured of All Ages. The PPACA includes broad changes to public insurance through Medicaid.¹² It mandates expansion of Medicaid coverage to all adults up to 133.0 percent of the FPL (approximately \$2,444 per month for a family of 4) in 2014. A standard 5.0 percent deduction from income raises the effective eligibility floor to 138.0 percent of the FPL (approximately \$2,536 per month for a family of 4). This Medicaid expansion is intended to reduce the current interstate variation in eligibility and the role of family status (e.g., greater eligibility for parents than for nonparents) in determining Medicaid eligibility as well as to expand overall coverage.

From 2014 through 2016, the federal government will pay 100.0 percent of the cost for the newly eligible who enroll; the matching rate will then fall to 90.0 percent in 2020 and beyond. States have the option to expand coverage early up to the new limits, with the federal government paying its share based upon the current level of the percentage of a state's Medicaid expenses paid by the federal government—the Federal Medical Assistance Percentage or FMAP.¹³ It is not known if Tennessee will opt for early expansion of Medicaid eligibility.

It is estimated that Medicaid enrollment will increase by 15.9 million persons nationally by 2019, including 15 million newly eligible and 0.9 million previously eligible but newly enrolled.¹⁴ Of these, 11.2 million would have been previously uninsured, resulting in a 45.0 percent reduction in the number of poor uninsured persons. The remaining 4.7 million would have previously had private insurance but switched to public coverage when they became eligible. This represents a 29.6 percent crowd out rate as discussed below. Corresponding estimates for Tennessee suggest that Medicaid enrollment will increase by 330,932, of which 245,691 (74.2 percent) were previously uninsured.

Income and Medicaid Eligibility for Residents of Shelby County. To estimate the number of currently uninsured persons who will gain public coverage under the PPACA reforms, we used ACS data to determine the insurance status of Shelby County nonelderly residents who have incomes not more than 133.0 percent of the FPL, that is, those potentially newly eligible for Medicaid. In this report, we will use the term “Medicaid” to include only the forms of TennCare that function as part of the national Medicaid system, that is, those that will be affected by the reform law.

¹²For a full description of the impacts of the reform law on Medicaid, see *Medicaid and Children's Health Insurance Program Provisions in the New Health Reform Law* (Washington, DC: Kaiser Family Foundation, April 2010).

¹³Tennessee's FMAP for 2010 is 75.37 percent.

¹⁴J. Holahan and I. Headen, *Medicaid Coverage and Spending in Health Reform: National and State-by-State Results for Adults at or Below 133% FPL* (Washington, DC: Kaiser Family Foundation, May 2010).

Table 2 shows the number of Shelby County residents by age group with reported incomes under 133.0 percent of the FPL with and without health insurance.¹⁵ As shown, 205,302 residents of Shelby County under the age of 65 would meet the new means test for Medicaid. Of this group, 65,191 or 31.8 percent (15.8 percent, 36.4 percent, and 46.8 percent of children, young adults, and older adults, respectively) were uninsured and, hence, eligible for new coverage under the reform law.

Table 2. Insurance Coverage for Shelby County Residents with Incomes Under 133.0 Percent of the Federal Poverty Level

Age Group	With Coverage	Without Coverage	Total
Children (Under 19)	75,880 (84.2%)	14,231 (15.8%)	90,111
Young Adults (19–25)	17,962 (63.6%)	10,285 (36.4%)	28,247
Adults (26–64)	46,269 (53.2%)	40,675 (46.8%)	86,944
Total	140,111 (68.2%)	65,191 (31.8%)	205,302

Source: Authors' analysis of the 2008 American Community Survey.

Newly Publicly Insured Under Medicaid Expansion. The number of eligible residents who will actually enroll in Medicaid is affected by the take-up rate, that is, the proportion of people eligible for coverage who will actually enroll. Although many residents will gain access to health insurance through a Medicaid expansion, many will choose not to enroll for a variety of reasons. Take-up ratios vary widely in the literature.¹⁶ A recent simulation study of the federal reform plan utilized two rates computed by the Congressional Budget Office (CBO).¹⁷ The CBO estimated the take-up rate to be 57.0 percent under current conditions. Requirements in PPACA that are intended to simplify enrollment, including developing consumer-friendly, simplified, coordinated, and technology-driven application processes, are anticipated to increase this take-up rate in the future.¹⁸ Under these conditions, the CBO estimated the take-up rate to increase to 75.0 percent. These changes have been estimated to increase Medicaid enrollment by an additional 5.9 million persons nationally and by 143,000 in Tennessee by 2019.¹⁹

In this analysis, we used both take-up rates to provide a range of estimates of the number of new Medicaid enrollees in Shelby County. Table 3 shows the calculations using the CBO's 57.0 percent take-up rate. We estimate that 37,159 residents would gain public health insurance,

¹⁵These data include only residents for whom poverty status could be determined from the ACS data.

¹⁶R. Kronick and T. Gilmore, "Insuring Low Income Adults: Does Public Coverage Crowd-Out Private?" *Health Affairs* 21.1 (2002): 225.

¹⁷Holahan and Headen, *Medicaid Coverage and Spending in Health Reform*.

¹⁸Kaiser Family Foundation, *Explaining Health Reform: Eligibility and Enrollment Processes for Medicaid, CHIP and Subsidies in the Exchanges* (Washington, DC: Kaiser Family Foundation, August 2010).

¹⁹Holahan and Headen, *Medicaid Coverage and Spending in Health Reform*.

Table 3. Calculation of New Publicly Insured Residents

Age Group	Number Eligible	Number Enrolled	% Reduction in Uninsured
Children (Under 19)	14,231	8,112	31.9%
Young Adults (19-25)	10,285	5,862	20.7%
Adults (26-64)	40,675	23,185	25.3%
Total	65,191	37,159	25.6%

Note: Calculations include only residents for whom the poverty level could be determined from ACS and are based upon a 57.0 percent take-up rate.

Source: Authors' analysis of the 2008 American Community Survey.

corresponding to a 25.6 percent reduction in the overall number of uninsured in the County; 8,112 children, 5,862 young adults, and 23,185 older adults will gain public coverage through the expansion of Medicaid eligibility.

Applying the CBO's higher take-up ratio of 75.0 percent (not shown in Table 3), the number of newly-eligible, publicly-insured individuals would be 48,893, corresponding to a 33.6 percent reduction in the number of uninsured in the County.

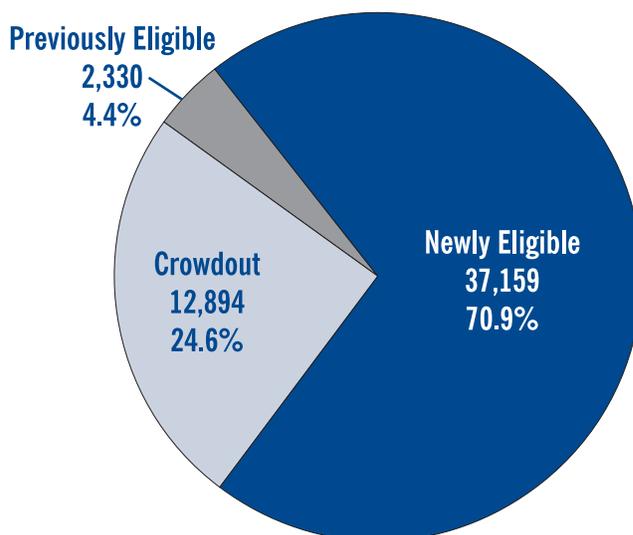
Other Factors Impacting Medicaid Enrollment. Two factors in addition to the expanded eligibility criteria will increase Medicaid enrollment. First, some previously eligible persons who were not enrolled may now enroll; Holahan and Headen (cited above) estimate that, nationally, this represents 5.9 percent of the new Medicaid enrollees. Applying this proportion to Shelby County suggests that an additional 2,330 previously eligible but uninsured persons will enroll in Medicaid.

The second factor is crowd out, or the substitution of public coverage for private coverage. Thus, expanding public coverage eligibility can be expected to reduce the extent of private coverage while increasing public coverage. Holahan and Headen estimate that Medicaid expansion will increase Medicaid enrollment by 330,932 persons in Tennessee, of which 25.8 percent were previously insured and 74.2 percent were previously uninsured; that is, crowd out would increase Medicaid enrollment by 85,248. Applying these percentages to Shelby County, health care reform would increase the Medicaid rolls by 50,053 persons (computed as $37,159/0.7424$) of which 12,894 persons were previously insured (computed as $50,053 - 37,159$).

Thus, the overall increase in Medicaid enrollment in Shelby County is projected to be 52,383, of which only 70.9 percent (or 37,159) are newly eligible and currently uninsured (Chart 5).²⁰

²⁰A smaller proportion of persons on Medicaid will convert to private coverage, that is, reverse crowd out. The RAND study cited above estimates this to occur for fewer than 10.0 percent of Medicaid enrollees.

Chart 5. Sources of New Medicaid Enrollees



Insurance Exchanges. A major change that will take place only after 2014 is the development of insurance exchanges.²¹ The exchanges are designed to provide individuals and eligible employers with a choice of insurance plans that compete based upon price and quality. Premiums for low-income consumers with incomes up to 400.0 percent of the FPL will be subsidized; it is estimated that 664,100 Tennesseans will be eligible for subsidies, 44.0 percent of whom are currently uninsured.²² In addition, businesses with fewer than 25 employees will be eligible for tax credits (up to 35 percent of insurance costs) to subsidize employee insurance coverage; in Tennessee, 66,500 small businesses will be eligible.

National estimates suggest that as many as 25.0 percent of the currently uninsured will gain coverage through these exchanges.²³ If national proportions apply to Shelby County, as many as 35,358 (that is, 25 percent of 145,434 total uninsured) additional residents may gain coverage by this mechanism.

Summary and Policy Implications. The net impacts of the changes in insurance eligibility considered here are presented in Table 4. Overall, we estimate that approximately 74,234—51.0 percent of the previously uninsured—additional nonelderly residents of Shelby County will gain health insurance because of the changes in young adult eligibility, the expansion of Medicaid, and

²¹States are required to have exchanges in place by January 2014 or accept federal plans. Tennessee is currently exploring options for its exchange. For more information, see <http://www.tn.gov/nationalhealthreform/exchange.html>.

²²Families USA, *Lower Taxes, Lower Premiums. The New Health Insurance Tax Credit in Tennessee* (Washington, DC: Families USA, September 2010).

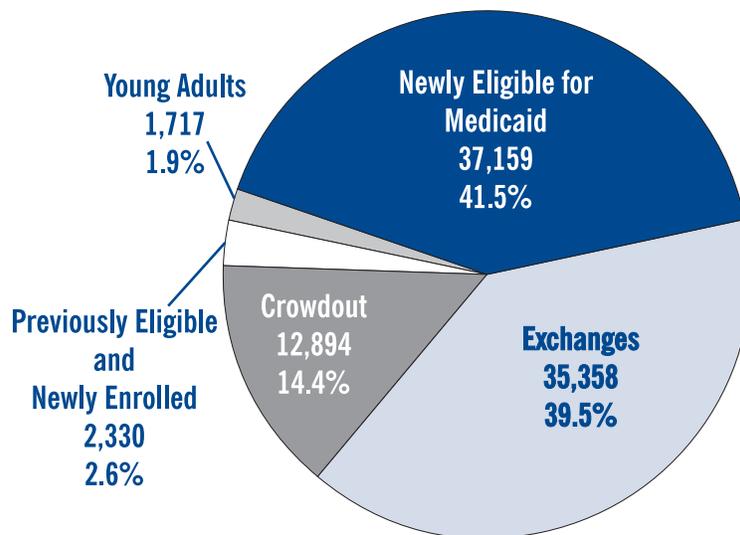
²³The Lewin Group, *Patient Protection and Affordable Care Act (PPACA): Long-Term Costs for Governments, Employers, Families and Providers* (Falls Church, VA: The Lewin Group, June 2010).

Table 4. Projected Changes in the Number of Uninsured in Shelby County

Intervention	Number of Newly Insured	Cumulative Number, Newly Insured	Number Remaining Uninsured	% Population Remaining Uninsured
Baseline	—	—	145,434	17.9%
Young Adult Eligibility for Private Coverage	1,717	1,717	143,717	17.6%
Medicaid Expansion	37,159	38,876	106,558	13.1%
Insurance Exchanges	35,358	74,234	71,200	8.7%

the implementation of insurance exchanges.²⁴ The proportion of the newly enrolled from each insurance source is depicted in Chart 6.

Chart 6. The Sources of New Insurance for the Previously Eligible and Newly Enrolled



While this increase in insurance coverage is substantial, potentially reducing the percentage of nonelderly residents without insurance from 17.9 percent to 8.7 percent, there will remain an estimated 71,200 residents without insurance after these three interventions are implemented. This represents 8.7 percent of the nonelderly population and 49.0 percent of the previously uninsured. If the higher take-up rate of 75.0 percent and the upper level of the number of young adults to gain parental coverage are used, the number of uninsured drops to 58,998 (7.2 percent of the nonelderly population).

²⁴The data shown in Table 4 include only the direct results of insurance expansion and do not include the indirect effects discussed in the text, that is, the new Medicaid enrollees resulting from crowd out or from enrollment of previously eligible but unenrolled persons.

Other PPACA-related changes will modify all of these factors and expand the number of newly insured. These include factors that will increase enrollment including, as examples, federal subsidies for persons with incomes under 250.0 percent of the FPL to reduce deductibles and co-payments; mandates (with penalties) on individuals and business to have and to offer coverage; prohibitions against denials because of pre-existing medical conditions; establishment of high-risk pools to cover the otherwise uninsurable population; and the possibility of lower premiums as health care costs decline. Other factors may reduce enrollment, such as higher insurance premiums for some groups²⁵ and the possibility that small businesses will stop offering coverage. The quantitative impact of these factors is not known.

Thus, the challenges presented to and by the uninsured will be reduced but not eliminated as a result of the three reforms analyzed in this report. The smaller number of uninsured will reduce the burden they pose to public and private safety-net systems, as assessed in the next section. The smaller number of residents dependent upon these programs may, however, make public political support more tenuous. The implications for the Regional Medical Center (The MED) are considered in more detail in subsequent sections of this report.

Our estimates of the number of Shelby County residents who are and who will remain uninsured probably represent a significant underestimate of the problem. The ACS estimates the number of persons uninsured at the time of the survey, whereas it is well known that many more people had been uninsured at some time during the past year or several years.²⁶ Data from the Medical Expenditure Panel Survey suggests that the number of persons uninsured at some time in the past year was approximately 40.0 percent higher than those documented to be uninsured at a single point in time. Hence, the number of Shelby County residents who, under the current law, had been uninsured at some time in the past year may be as high as 206,000, and the number who will remain uninsured at some time during the year may be as high as 100,000.

In addition, the data presented above include only those who report being uninsured. A substantial additional number of residents have been and will be underinsured, that is, they have health insurance that is inadequate to cover the costs of their health care needs with subsequent high out-of-pocket expenses. It is estimated that 20.0 percent of these who are insured are underinsured.²⁷ If this proportion is applied to Shelby County, approximately 134,000 residents are currently underinsured, and this number will rise to 149,000 after PPACA is implemented.

²⁵The Congressional Budget Office (CBO) estimates that premiums in the non-group market will increase by 10.0 to 13.0 percent as a result of reform changes. Premiums for the small group market are expected to rise by 1.0 to 2.0 percent, and those for the large group market are expected not to change or to fall by up to 3.0 percent (CBO Letter to Sen. Evan Bayh, November 30, 2009). Recent experiences by some small groups in Shelby County suggest that the premium increases may exceed these projections, with greater than expected impacts on insurance coverage including more crowd out and more people remaining uninsured.

²⁶K. Klein, S. Glied, and D. Ferry, *Entrances and Exits: Health Insurance Churning, 1998–2000* (Washington, DC: The Commonwealth Fund, September 2005).

²⁷C. Schoen, S. R. Collins, J. L. Kriss, and M. M. Doty, “How Many Are Underinsured? Trends Among U.S. Adults, 2003 and 2007,” *Health Affairs Web Exclusive*, June 10, 2008.

Different subgroups of the population, such as those with mental illness and severe disabilities, will be impacted in different ways. Among other factors, the impact will vary with the distributions of income among the groups and any special provisions in the law that impact eligibility or the benefit packages.

The increase in Medicaid enrollees will have significant impact on state financing of health care. Although the federal government will pay all of the costs for the newly eligible through 2016, states will pay 10.0 percent of the costs of newly eligible thereafter and their regular proportion (based on the state's current FMAP) of previously eligible but newly enrolled. Thus, the expansion is not free for states who are now acting to reduce Medicaid expenditures; every state enacted some law to reduce costs in 2010–2011.²⁸ Based upon current Medicaid per capita expenditures, the 90.0 percent federal match for newly eligible enrollees, and the current FMAP for other enrollees, the incremental cost to the state for all new enrollees would be approximately \$25.6 million per year. Covering the newly eligible before 2014 at the current FMAP would cost the state approximately \$41.9 million per year.²⁹

This cost is raised by the expansion of Medicaid enrollment through crowd out and enrollment of the previously eligible uninsured residents. As suggested above (Chart 5), Medicaid enrollment in Shelby County will rise by 52,383, of which only 37,159 are newly eligible and previously uninsured. Thus, state expenditures for Medicaid will increase substantially beyond that accounted for by expanding insurance and for which the state will bear financial responsibility based on the current FMAP.

Greater reliance on Medicaid will also place limits on access to care. Although Medicaid beneficiaries have greater access to care than do the uninsured, they do have substantial barriers to access compared to those with private coverage. Medicaid recipients—representing half of the projected expansion in Shelby County—traditionally receive fewer services, especially specialty services, than do the privately insured. This is likely the result of lower provider payment rates that limit access,³⁰ as well as other behavioral factors. Thus, the substantial expansion of insurance coverage does not necessarily assure full access to needed and effective medical care.

²⁸V. K. Smith, K. Gifford, E. Ellis, et al., *Hoping for Economic Recovery, Preparing for Health Reform: A Look at Medicaid Spending, Coverage and Policy Trends* (Washington, DC: Kaiser Family Foundation, September 2010).

²⁹The overall impact of health care reform on state budgets is the net result of many factors, many of which are beyond the scope of this study. For a detailed analysis see Stan Dorn and Matthew Buettgens, "Net Effects of the Affordable Care Act on State Budgets," Washington, DC: The Urban Institute, December 2010.

³⁰In 2004–2005, 21.0 percent of physicians nationally accepted no new patients with Medicaid, compared to 3.4 percent and 4.3 percent not accepting new Medicare or privately insured patients, respectively. P. J. Cunningham and J. H. May, "Medicaid Patients Increasingly Concentrated Among Physicians," Center for Studying Health System Change, Tracking Report No. 16, 2006.

III. CHANGES IN THE USE OF HEALTH CARE SERVICES

In this section, we estimate the changes in health care resource use expected in Shelby County related to the increases in insurance coverage estimated in the prior section. In this analysis, we assume that the health care resource use of the currently uninsured is lower than that of the insured³¹ and that once the uninsured receive coverage, their utilization will increase.³² The extent of the increase in service use is controversial. Studies have reported that in a broad-based study population the increase in use after gaining insurance is to the level of the previously insured.³³ Other studies examining the longitudinal impact of Medicare enrollment³⁴ have documented that once the uninsured gain insurance their utilization rises to levels exceeding those of the previously insured. The Congressional Budget Office has concluded that the newly insured increase their utilization by 25.0 to 60.0 percent to reach levels of 75.0 to 90.0 percent of the previously insured.³⁵ As a best guess scenario, we assumed that gaining insurance will increase utilization from the level of the uninsured to the level of the privately insured for each type of service.

Ambulatory Care Use. The impact of the PPACA on ambulatory care visits in Shelby County is limited by the absence of reliable data at the county level. We, therefore, applied national figures to the County.

According to the National Ambulatory Care Medical Survey,³⁶ persons without insurance and those with private insurance have 91.2 and 287.7 visits per 100 population per year to physician offices, respectively, for a utilization ratio of 3.15. This ratio varies from 2.87 for medical specialty services, to 3.13 for primary care, and to 3.64 for surgical specialty visits. In contrast, the uninsured had slightly more visits to hospital outpatient clinics than did the privately insured (utilization ratio of 0.96).

³¹In the classic studies by Jack Hadley and associates at the Urban Institute, those who were without insurance coverage for the full year consumed 38.0 percent of the health care financial resources used by the full-year insured. J. Hadley, J. Holahan, T. Coughlin, and D. Miller, "Covering the Uninsured in 2008: Current Costs, Sources of Payment, and Incremental Costs," *Health Affairs Web Exclusive*, August 2008.

³²The ACS records insurance coverage at the time of the interview. Thus, we cannot distinguish between those who were uninsured the full year and those uninsured for only part of the year. Because of this, we will utilize data reported in the literature for all uninsured and assume that the proportion of full- and part-year uninsured in Shelby County was approximately the same as in other studied populations.

³³L. Ward and R. Franks, "Changes in Health Care Expenditures Associated with Gaining or Losing Health Insurance," *Annals of Internal Medicine* 146 (2007): 768.

³⁴J. M. McWilliams, A. M. Zaslavsky, and J. Z. Ayanian, "Use of Health Services by Previously Uninsured Medicare Beneficiaries," *New England Journal of Medicine* 357 (2007): 143.

³⁵CBO, Letter to Senator Evan Bayh.

³⁶S. M. Schappert and E. A. Rechsteiner, *Ambulatory Medical Care Utilization Estimates for 2006* (Atlanta, GA: Centers for Disease Control and Prevention, August 2008).

Table 5 shows the expected increase in ambulatory visits in Shelby County. The newly insured were assigned to the public or private insurance groups based upon the proportions described above and were assigned the utilization rate of the previously privately insured.

Table 5. Projected Changes in Ambulatory Care Visits in Shelby County

Type of Visit	Uninsured Rate (% of All Visits)	Insured Rate (% of All Visits)	Number of Newly Insured	Uninsured Visits	Insured Visits	Change in Number of Visits (% Change)
Primary Care	53.5 (46.6%)	167.4 (53.9%)	74,234	-39,713	124,261	84,548 (212.9%)
Medical Specialty	21.7 (18.9%)	62.4 (20.1%)	74,234	-16,108	46,320	30,212 (187.6%)
Surgical Specialty	15.9 (13.8%)	57.9 (18.7%)	74,234	-11,803	42,979	31,177 (31.2%)
Hospital Outpatient	23.8 (20.7%)	22.8 (7.3%)	74,234	-17,667	16,924	- 742 (-4.2%)
Total	114.9	310.5	74,234	-85,290	230,484	145,194 (170.2%)

Calculations are based on the “best guess” parameters described in the text. Rates are per 100 persons per year.

Providing insurance to 74,234 residents may lead to over 145,000 more ambulatory care visits. The distribution of sites of care will also change, with the greatest increase in visits for primary care (84,548 visits) and a small decrease in hospital outpatient visits (742 visits).

Hospitals. Our analysis of hospital inpatient discharges after health system reform was based upon the current utilization rates for each insurance category, as reported in the 2009 Tennessee Joint Annual Report of Hospitals (JARH).³⁷ The use by the newly insured was projected to be the same as for the privately insured, as described above. Results are shown in Table 6.

Baseline hospitalization rates varied significantly by insurance type. Rates were substantially higher for those with public insurance than for those either privately insured or without medical insurance, while rates for the uninsured were higher than for the privately insured.

As shown in Table 6, insurance expansion is projected to cause a small reduction in both the number of discharges (-0.6 percent) and the total bed days of care (-1.5 percent). The payer mix will show a large change, with greater proportions of discharges and care for Medicaid and privately uninsured persons and a substantial decline from the uninsured. The change in overall volume results from an increase in private and public patient discharges and a marked reduction in uninsured discharges.

³⁷The Tennessee Joint Annual Report of Hospitals is an annual report required by law submitted to the Tennessee Department of Health by every hospital describing its facilities and detailing its financial and utilization statistics. Hospital utilization data for publicly insured persons includes only Tennessee Medicaid recipients and not, for example, Medicare or CoverTN beneficiaries.

Table 6. Hospital Utilization by Payer Under Current and Post-Reform Insurance Levels

Insurance	Current		Post-Reform		Change	
	Discharges	Bed Days of Care	Discharges	Bed Days of Care	Discharges	Bed Days of Care
Total	76,426	412,589	75,973	406,553	-453	-6,036
% Change	—	—	—	—	-0.6%	- 1.5%
Medicaid	29,216	169,670	31,824	182,679	2,608	13,009
% of Total	38.2%	41.1%	41.9%	45.0%	3.7%	3.9%
% Change	—	—	—	—	8.9%	7.7%
Private	36,025	179,672	38,627	192,650	2,602	12,978
% of Total	47.1%	43.6%	50.8%	47.4%	3.7%	3.8%
% Change	—	—	—	—	7.2%	7.2%
Uninsured	11,185	63,247	5,522	31,224	-5,663	-32,023
% of Total	14.6%	15.3%	7.3%	7.7%	-7.4%	- 7.7%
% Change	—	—	—	—	-50.6%	-50.6%

Note: Only general acute care hospitals are included. Exclusions are Medicare and workman's compensation discharges and discharges for St. Jude's, Baptist Women's, the VA, mental health, and rehabilitation hospitals.

Source: Authors' analysis of 2009 Joint Annual Report of Hospitals.

Emergency Department (ED). We assessed the projected change in the use of emergency rooms using the same approach as we used for the inpatient assessment above. We considered three different types of ED use: total, emergent care, and non-emergent care.³⁸

Our analysis was based upon Shelby County ED utilization figures extracted from the 2007 Hospital Discharge Data System (HDDS).³⁹ As shown in Table 7, ED use varied widely with the type of health insurance. ED use of all types was lowest among the privately insured and highest among the publicly insured. This high rate among the publicly insured reflects the greater health burden of the publicly insured as well as their limited access to effective primary care; national data has indicated that 29.2 percent of all ambulatory care visits of the uninsured were ED visits, compared to 7.4 percent for the full population.⁴⁰

Table 7 also shows projected ED utilization after the projected expansion of health insurance. The results are based upon the projected number of newly insured apportioned between the pub-

³⁸Total and emergent care included visits for which ED care was required and ambulatory care treatment could not have prevented the condition. Non-emergent visits included those with initial complaints, presenting symptoms, vital signs, medical history, and age that indicated that immediate medical care was not required within 12 hours. J. Billings, N. Parikh, and T. Mijanovich, *Emergency Department Use: The New York Study* (Washington, DC: The Commonwealth Fund, November 2000).

³⁹As required by Tennessee law, all hospitals licensed by the Tennessee Department of Health must report to the Department all patient-level discharge information, including discharges from EDs. As required by Tennessee law, all hospitals licensed by the Tennessee Department of Health must report to the Department all patient-level discharge information, including discharges from EDs.

⁴⁰Schappert and Rechsteiner, *Ambulatory Medical Care Utilization Estimates for 2006*.

Table 7. Emergency Department Use Rates in Shelby County Under Current and Post-Reform Levels of Insurance

Insurance	Current			Post-Reform		
	Total	Rate Per 1,000 Population	Emergent (%)	Total	Emergent (%)	% Change
Total	270,182	331.7	11.5%	252,688	11.7%	- 6.5%
Public	140,481	900.7	10.1%	145,865	10.3%	3.8%
Private	74,356	144.9	14.5%	79,727	14.5%	7.2%
Uninsured	55,345	380.6	11.0%	27,097	11.0%	-51.0%

Source: Authors' analysis of 2007 Hospital Discharge Data System.

lic and private populations. The newly insured, whether through public or private policies, were assigned the same ED utilization rate as those currently insured by private policies, as described above (page 16) for outpatient and inpatient utilization.

Overall ED use is projected to decrease by 6.5 percent, the net result of the 51.0 percent reduction in use by the uninsured partially mitigated by increases by the privately insured and the publically insured groups. There is little change expected in the proportion of ED visits that are emergent.

Summary and Policy Implications. Insurance expansion will have significant impacts on health care resource use. This includes changes in the number of ambulatory care and emergency room visits and in the inpatient payer mix, with smaller changes in the overall volume of hospital care. The substantial increase in primary care visits (Table 5) may be expected to improve overall population health by enhancing preventive services and by increasing continuity and effectiveness of outpatient care for chronic illnesses. This, in turn, may reduce ED visits.

The increases in outpatient care will require additional primary care manpower. According to the American College of Physicians,⁴¹ the reform proposal will require 14,145 more primary care physicians in the nation by the end of 2010. Indeed, after the Massachusetts health insurance expansion, many newly insured were unable to find a primary care physician.⁴²

This is an important concern for Shelby County. Based upon the federal Health Provider Shortage Area criteria,⁴³ all of 26 Tennessee counties and parts of an additional 28 counties—including

⁴¹American College of Physicians, *How Is a Shortage of Primary Care Physicians Affecting the Quality and Cost of Medical Care?* (Philadelphia: American College of Physicians, 2008).

⁴²J. Zhu, P. Brawarsky, S. Lipsitz, H. Huskamp, and J. S. Haas, "Massachusetts Health Reform and Disparities in Coverage, Access and Health Status," *Journal of General Internal Medicine* 25.12(2010): 1356–1362.

⁴³A shortage area is defined as an area with more than 3,500 people per primary care physician or more than 3,000 people per physician if there is high need or if the current manpower has insufficient capacity to meet the current need.

Shelby County—are considered primary care shortage areas.⁴⁴ The Memphis referral area, which includes all of Shelby County as well as surrounding areas, has 60.0 primary care physicians per 100,000 population in comparison to the national average of 71.9 physicians; 212 additional primary care physicians would be needed to reach the national average at 2006 workloads.⁴⁵ This includes shortages of general internists, family physicians, and general pediatricians. Increasing the number of primary care visits by 84,548 per year (Table 5) would require an additional 23.5 full-time primary care physicians, based upon published workload standards,⁴⁶ at a time when fewer new physicians are choosing careers in primary care.

PPACA includes changes intended to expand primary care access. These include increasing Medicaid payments to Medicare levels for primary care doctors in 2013 and 2014 (currently Medicaid rates are approximately two-thirds of Medicare rates); providing a 10.0 percent increase in Medicare rates between 2010 and 2015 for some primary care physicians, nurse practitioners, clinical nurse specialists, and physician assistants; reallocating unused residency slots toward new primary care opportunities; increasing funding for federally-qualified health centers; and facilitating training in community clinic settings. Reducing the number of uninsured should reduce demand for free or reduced cost care, but this benefit will be limited by the increased number with Medicaid beneficiaries who pay lower rates. In addition, the proportion of the overall patient workload of most primary care practitioners from Medicare and Medicaid is relatively low, so that the planned increases in these payment rates will have only a small impact on primary care physicians' total income.⁴⁷ After the two-year period during which the increase in Medicaid primary care payment rates are paid by the federal government, these costs revert to the states that may reduce the payment rates. No payment change is included for specialty rates, suggesting a continuing or increasing problem of access for specialty services.

The primary care manpower challenge may also be approached by expanding the use of non-physician health care providers. Modifying state practice acts to permit more independent functions by advanced practice nurses, nurse practitioners, physician assistants, clinical pharmacists, and others will provide one ready option to help meet this need.

The implications of the projected change in hospital payer mix are also significant and will vary from facility to facility. The impact on the Regional Medical Center may be very substantial. Based upon the 2009 JARH, 26.9 percent of the discharges from the MED were from uninsured patients. For all other acute care hospitals, only 5.9 percent of discharges were of the uninsured. If 51.0 of the patients with uninsured admissions to the MED become insured, many—especially the 52.0 percent of these projected to gain private coverage—will have the option of seeking care in other non-safety-net community hospitals. This will have clear consequences to both the vol-

⁴⁴For more information on primary care physician manpower in Tennessee, see D M. Mirvis, "Where Have All the Primary Care Docs Gone?" *Tennessee Medicine* 102 (2009): 33.

⁴⁵*The Dartmouth Atlas of Health Care*, www.dartmouthatlas.org.

⁴⁶R. J. Baron, "What's Keeping Us So Busy in Primary Care?" *New England Journal of Medicine* 362 (2010): 1632.

⁴⁷F. L. Mullan, testimony before the House Committee on Education and Labor, June 23, 2009.

ume and the finances of the MED if patients with coverage choose to seek care elsewhere, reducing total volume and resulting in an even greater proportion of those remaining being uninsured.

IV. HEALTH SYSTEM FINANCES AND UNCOMPENSATED CARE

Expanding insurance coverage will also have substantial impact on the financing of health care in Shelby County. Each newly insured will increase overall health care spending by as much as \$3,464 per year based upon estimates from the Centers for Medicare and Medicaid Services.⁴⁸ This will impact revenues of hospitals and physicians as well as the level of uncompensated care.

Uncompensated Care. Uncompensated care is, in simplest terms, care provided by hospitals, physicians, and community-based providers for which payment is not received from or on behalf of the patient who receives the care. It is most commonly considered to include both “charity care” and “bad debt.” Tennessee law, as of July 2007, defines “bad debt” as charges for which bills are submitted but which are considered to be uncollectible after reasonable collection efforts are made.⁴⁹ “Charity care” is defined as reductions in charges for care made by the provider because of the indigence (defined as income under 100.0 percent of the federal poverty level) or medical indigence (defined as having used or committed all available or expected resources to pay for medical bills, regardless of absolute income) of the patient, as determined by the provider, for whom no other party is legally responsible (e.g., a guardian or local welfare agency).

The distinction between these two categories is flexible and depends upon, for example, the providers’ definitions of “charity care” and their policies for when and how aggressively to collect for services. Hence, uncompensated care is commonly computed as the sum of charity care and bad debt, as we will do in this report.

Table 8 shows the uncompensated charges reported for the 11 acute-care, general hospitals in Shelby County reported in the 2009 JARH. Hospitals provided \$822 million in uncompensated care, of which 98.4 percent was for the uninsured. Of this, 70.0 percent was allocated by hospitals to charity care and the remainder to bad debt for the uninsured or the insured.

Although the only directly reported data are for hospitals, studies by Hadley et al.⁵⁰ estimated the uncompensated care for physicians and other providers who also provide uncompensated care; over 70.0 percent of physicians provided some reduced-rate or free care.⁵¹ They estimated that community-based providers provide 41.7 percent of the uncompensated care provided by hospitals and that office-based physicians provide 22.3 percent of the uncompensated care provided by hospitals.

⁴⁸R. Berenson and S. Zuckerman, *How Will Hospitals Be Affected by Health Care Reform?* (Washington, DC: The Urban Institute, July 2010).

⁴⁹For more information on uncompensated care in Tennessee, see D. M. Mirvis, “The Uncompensated Care Problem: The Robin Hood Model of Health Care Financing,” *Tennessee Medicine* 103 (2010): 29.

⁵⁰Hadley, Holahan, Coughlin, and Miller, “Covering the Uninsured in 2008.”

⁵¹S. Zuckerman and R. Berenson, *How Will Physicians Be Affected by Health Care Reform?* (Washington, DC: The Urban Institute, July 2010).

Table 8. Uncompensated Care in Shelby County

	Current	Projected	Change
Hospital Total	\$ 821,723,680	\$413,330,498	-\$408,393,182
Charity	\$ 574,220,803	\$283,479,563	-\$290,741,240
Bad Debt—Uninsured	\$ 234,427,774	\$115,731,584	-\$118,696,190
Bad Debt—Insured	\$ 13,075,103	\$ 14,119,351	\$ 1,044,248
Community—Based Providers	\$ 337,206,457	\$166,471,048	-\$170,735,408
Physicians	\$ 180,328,633	\$ 89,024,086	-\$ 91,304,547
Grand Total	\$1,339,258,770	\$654,706,281	-\$670,433,137

Source: Analysis of the 2009 Tennessee Joint Annual Report of Hospitals.

Data in Table 8 also show these findings for Shelby County estimated by using the same ratio of uncompensated hospital care to uncompensated care by other providers from the national data of Hadley et al. cited above. Community-based clinics and office-based physicians in Shelby County provided an estimated \$337 million and \$180 million in uncompensated care, respectively. The total level of uncompensated care in the County in 2008 was, thus, approximately \$1.34 billion.

As shown in Table 8, uncompensated care for all provider groups will decrease substantially after expansion of health insurance coverage. Overall levels of uncompensated care will decrease by \$670 million, or 51.0 percent. Bad debt from insured patients will rise modestly (by approximately 8.0 percent), reflecting the greater number of patients in the two insured categories.

Hospital and Physician Finances. The impacts of the reform law on physician and hospital finances is complex and depends upon the balance between forces that will increase and decrease revenues. Insurance expansion is expected to increase hospital revenues by as much as \$40 billion nationally by 2019.⁵² Counterbalancing this increase, however, will be reductions in Medicare payment rates (by up to \$20 billion); withdrawals of Medicare and Medicaid disproportionate share (DSH) funding; crowd out of private for public coverage with lower payment rates; and changes in payer mix. Thus, most hospitals will see an increase in revenue, although the increase may be less than expected.

Table 9 shows the impact of insurance expansion on projected hospital charges and revenues for the acute care hospitals of Shelby County. The data in Table 9 suggest that after insurance expansion, overall hospital charges will fall by over \$120 million, whereas actual revenues will increase by over \$55 million. The decline in charges mainly reflects the lower charge per admission for the newly insured than for the uninsured, plus the modest decline in the number of admissions (Table 6). The increase in revenue is the result of the much greater collection rate for the newly insured, whether covered by private insurance (collection rate of 38.5 percent) or Medicaid

⁵²Berenson and Zuckerman, *How Will Hospitals Be Affected by Health Care Reform?*

Table 9. Changes in Hospital Revenue after PPACA

Insurance	Current		Projected		Change	
	Charges	Revenue	Charges	Revenue	Charges	Revenue
Total	\$4,216,089	\$1,163,465	\$4,095,990	\$1,218,744	-\$120,099	\$55,279
Private	\$2,425,394	\$ 933,799	\$2,600,582	\$1,001,248	\$175,189	\$67,449
Medicaid	\$1,021,356	\$ 174,438	\$1,112,542	\$ 190,012	\$ 91,186	\$15,574
Uninsured	\$ 769,339	\$ 55,228	\$ 382,866	\$ 27,485	-\$386,473	-\$27,744

Note: All values are in \$1,000 units.

Source: Analysis of 2009 Joint Annual Report of Hospitals.

(collection rate of 17.1 percent), than the rate for when they were uninsured (collection rate of 7.1 percent).

As suggested earlier, the impact will vary, perhaps substantially, based upon the current and future case mix; for example, hospitals with a high proportion of uninsured (for example, the MED) may see a drop in total volume and an increase in the proportion of uninsured as the newly insured elect other hospitals for their care.

For most physicians, reducing the number of uninsured will reduce the demand for free or reduced-rate care; over 70.0 percent of physicians currently offer such care to the uninsured and underinsured.⁵³ For those who do not offer discounted care, greater insurance coverage may increase the volume of patients they are willing to see.

However, as much of the increase in coverage will be through Medicaid expansion, reimbursement rates will remain lower than desired; nationally, Medicaid rates for all physician services are only 72.0 percent of Medicare rates.⁵⁴ As described above, the law also increases primary care payments for Medicaid to Medicare levels and increases Medicare primary care payment rates to mitigate some of this impact. However, Medicare rates remain below charges or commercial payment rates, the overall impact on physician income is small, and the law does not change specialist rates. In addition, if significant shifts occur from private to public coverage, that is, a large amount of crowd out, revenues could fall. Thus, the net impact will vary from physician to physician.⁵⁵

Summary and Policy Implications. The data presented in this section suggest that expanding insurance coverage in Shelby County will have significant implications for health system financing. The major impact will be a substantial reduction in uncompensated care provided by hospitals,

⁵³Zuckerman and Berenson, *How Will Physicians Be Affected by Health Care Reform?*

⁵⁴Kaiser Family Foundation, www.statehealthfacts.org.

⁵⁵Some data suggest that physicians collect more from uninsured patients for outpatient care than from the highly discounted payments they receive from the insured. If so, expanding insurance coverage may reduce some physicians' income. J. Gruber and D. Rodriguez, "How Much Uncompensated Care Do Doctors Provide?" *Journal of Health Economics* 26 (2007): 1151.

as well as community-based clinics and office-based physicians. This is reflected in the increased revenue for hospitals (Table 9) despite a decline in charges (due to both the modest decline in number of admissions and days of care and the lower charge level for the newly insured compared to the uninsured); the collection rate for the newly insured (estimated to be 38.5 percent) substantially exceeds that for the uninsured (7.2 percent).

The reduction in uncompensated care does not, however, directly translate into increased revenue. If all patients for whom the \$822 million in hospital uncompensated charges had been provided had private insurance (with a collection rate of 38.5 percent), the actual revenue to hospitals would have been \$316 million. If they had public insurance, with a collection rate of 17.1 percent, revenue would have been \$141 million.

The reduction in uncompensated care may also have implications for the tax status of not-for-profit hospitals. One criterion for not-for-profit status is the level of care to the needy and otherwise underserved. A 51.0 percent decrease in uncompensated care may raise questions about the tax status of some hospitals, especially as the new regulations for documenting community service contained in PPACA are implemented.

It is also important to note that the overall level of uncompensated care in the County will remain substantial—over \$650 million. The financial significance of this may become more important as payment rates by insurers fall and as Medicaid and Medicare DSH funding is withdrawn, the major governmental sources of support for uncompensated care; these cuts are expected to exceed \$36 billion by 2019.⁵⁶ DSH funds were intended to compensate hospitals with large proportions of Medicaid or uninsured patients; hence, part of the reform law was to reduce these payments as the number of uninsured declines. Tennessee Medicaid DSH funding is currently \$305 million. The scheduled reduction, however, may exceed the realized decrease in the number of uninsured and in uncompensated care, so that hospitals that continue to bear the uncompensated care burden may suffer. In addition, DSH funds are commonly used for other community-wide safety-net services and to compensate for Medicaid underpayments, which are projected to increase as the number of Medicaid enrollees increases.

⁵⁶C. Burke and E. Martin, *Health Reform: Uncertainty Over Federal DSH Payments Poses Risk of the Uninsured* (New York: Nelson A. Rockefeller Institute of Government, October 2010).

V. ECONOMIC IMPACTS

In addition to changes in the financing of the health care enterprise, health system reform will impact the overall economy of Shelby County. The purpose of this section of the report is to examine these effects.

The additional spending for health care takes many forms—both public and private. Public spending funded by taxes that come to Shelby County serves as an economic injection into the County. By contrast, additional private spending that is local in origin simply displaces spending on other things and is not a new injection. In addition, the implementation of PPACA and its ability to withstand significant modification will depend upon the outcome of efforts to contain health-related cost increases. Cost containment efforts will impact all segments of the local market.

The additional health-related spending stimulated by PPACA will generate millions of new dollars in the local economy. These extra outlays will increase revenues for all types of health care service providers, including the health care industry, its employees and staff physicians, and its suppliers. In turn, the health industry employers, their employees and physicians will spend large portions of their revenues and salaries on goods and services in the local economy. As a result, there will be increases in jobs, earnings, and the production of goods and services in all sectors of the local economy. This process of multiple rounds of spending and respending in the local economy is called the economic multiplier process.

The methodology employed to calculate the economic impact of additional spending was an economic multiplier model developed by the U.S. Bureau of Economic Analysis (BEA). The Regional Input-Output Modeling System (RIMS II) model includes output (i.e., goods and services produced as a result of the economic activity in question), earnings, and employment multipliers for the state of Tennessee. Specifically, the methodology incorporates into its estimation the linkages between the industry in question, other local industries, and local households.

Table 10 presents estimated total health care expenditures in Shelby County assuming both PPACA reform and the scenario of no reform (baseline). Under the scenario of no reform, total 2010 expenditures are estimated to be nearly \$10.2 billion; under PPACA, the 2010 expenditures are estimated to be nearly \$10.4 billion, for a net increase of \$186.8 million (1.8 percent). For 2014, when PPACA is supposed to be almost fully implemented, total expenditures without reform are projected to be almost \$12.8 billion, while under PPACA reform total expenditures are projected to be nearly \$13.2 billion, for a net difference of \$387.7 million (3.0 percent).

Table 11 shows the anticipated distribution of the net increases in health care expenditures in Shelby County under PPACA reform. In 2010, the net increase in expenditures from private funds is projected to be \$94.5 million and the net increase in expenditures from public funds is projected to be \$92.3 million. In 2014, the net increase in expenditures from private funds is expected to be \$189.1 million versus a net increase in public spending of \$198.6 million.

**Table 10. Total Health Care Expenditures in Shelby County
(Current Dollars in Millions)**

	2010	2014
No Reform (Baseline)	\$10,191.0	\$12,793.0
PPACA Reform	\$10,378.0	\$13,181.0
Difference (PPACA Reform—No Reform)	\$ 186.8	\$ 387.7

Source: Authors' estimates based upon growth projections from the Center for Medicare and Medicaid Services.

**Table 11. Net Increases in Health Care Expenditures Under PPACA in
Shelby County by Source of Funds (Current Dollars in Millions)**

Source of Funds	2010	2014
Total Private Funds	\$ 94.5	\$189.1
Consumer Payments	\$ 81.4	\$162.8
Out-of-Pocket Payments	\$ 20.7	\$ 37.8
Private Health Insurance	\$ 60.7	\$125.0
Employer-Sponsored Private Insurance	\$ 57.6	\$114.1
Exchanges	— ^A	\$ 9.9
Other Private Health Insurance	\$ 3.1	\$ 1.0
Other Private Funds	\$ 13.1	\$ 26.4
Total Public Funds	\$ 92.3	\$198.6
Federal	\$ 70.6	\$146.6
Medicare	\$ 38.4	\$ 77.0
Medicaid and SCHIP ^B	\$ 20.5	\$ 45.0
Other Federal	\$ 11.7	\$ 24.6
State and Local	\$ 21.7	\$ 52.0
Medicaid and SCHIP ^B	\$ 10.2	\$ 29.4
Other State and Local	\$ 11.5	\$ 22.6
Total Public and Private Funds	\$186.8	\$387.7

A= Insurance Exchanges will not be available until 2014.

B= Includes State Children's Health Insurance Program (SCHIP) (Title XIX and XXI).

Source: Distribution and totals derived from "National Health Expenditures in Exhibit 1 of National Health Spending Projections: The Estimated Impact of Reform Through 2019," *Health Affairs* 29.10 (2010).

Between 2010 and 2014, net expenditures from all sources of funds will increase under PPACA, except for the category "other private health insurance" which is projected to decline by \$2.1 million (a 66.6 percent decrease from a base of \$3.1 million). The net increase in expenditures from total private funds is projected to double by 2014 (100.1 percent) versus an increase of 115.0 percent in public spending.

Even though both private and public spending will increase, public spending will increase at a more rapid rate. The largest percentage increase in spending is expected from state and local Medicaid and State Children's Health Insurance Program (SCHIP) funds, 188.5 percent or \$19.2 million. In dollar amounts, the largest increase between 2010 and 2014 will be consumer-related payments (primarily via employer-sponsored private health insurance) at \$81.4 million. Federal spending will increase from \$70.6 million to \$146.6 million. State and local spending in Shelby County will increase from \$21.7 million to \$52.0 million over the same four-year period.

PPACA will have a positive economic impact on the local economy. This impact will come from the estimated changes in publicly-funded health care expenditures. It should be noted that economic impacts occur only when new money is introduced into the economy or existing money is removed from the economy. With regard to PPACA, while privately-funded expenditures increase during both periods, they are local dollars and represent a change in the distribution of total spending in the local economy. Therefore, there is no economic impact from additional private health care spending. Additional private spending is only a redistribution of spending to health care and not a new injection of money into the local economy.

Publicly-funded changes due to PPACA will come from both the state and federal governments via Medicare, Medicaid (TennCare), and SCHIP (see Table 11). For 2010, it is estimated that Shelby County will receive an additional \$92.3 million from the state and federal governments due to changes brought about by PPACA. In 2014, this amount is estimated to grow to \$198.6 million.

The net new publicly-funded spending increases that will occur in Shelby County in 2010 and 2014 due to PPACA were used with the RIMS II economic impact modeling system to estimate the economic impacts of PPACA-related changes on Shelby County.⁵⁷ The results shown in Table 12 indicate that for 2010, the additional \$92.3 million in state and federal spending in Shelby County due to PPACA-related changes is estimated to generate a total of \$209.8 million in output (the value of goods and services produced as a result of and including the initial spending of the \$92.3 million), \$74.8 million in additional earnings, and 1,829 additional jobs. In 2014, the additional \$198.6 million in state and federal spending in Shelby County due to PPACA-related changes is expected to generate a total of \$451.3 million in output (the value of goods and services produced as a result of and including the initial spending of the \$198.6 million), \$160.8 million in additional earnings, and 3,480 additional jobs.

Summary and Policy Implications. The economic impact of the PPACA on Shelby County is driven by the impact of an injection of hundreds of millions of dollars of federal and state spending for health care. At a time when the economies of Tennessee and Shelby County are struggling to recover from the recession, creating employment and income opportunities locally will be a positive outcome of the new spending. Increases in economic activity will generate tax revenues

⁵⁷The RIMS II multipliers used in the analysis are specific to the Memphis Metropolitan Statistical Area (MSA). Therefore, the impacts shown are for the entire MSA.

**Table 12. Economic Impact of PPACA on Shelby County, Tennessee
(Current Dollars in Millions)**

	2010	2014
Change in Total Output (Value of Goods and Services Produced)	\$209.8	\$451.3
Change in Earnings	\$ 74.8	\$160.8
Total Increase in Employment (Jobs)	1,829	3,480

Source: Authors' analysis of the RIMS II economic multiplier model.

for state and local governments and will solidify the local economic recovery. Clearly, Memphis and Shelby County will benefit from the stimulus driven by additional health care spending.

A large injection of new spending on health care in Shelby County will generate additional rounds of spending throughout the economy. The additional health coverage combined with the additional spending will be a positive factor in the growth of the local economy. The increase in jobs in the economy will also begin the recovery of the labor market and focus the community's attention on the importance of the health care industry to the local area. Expanded health care expenditures may be the engine that propels the community forward in the future.

It is expected that the increase in demand for resources at the federal, state, and local levels during the post-recession period will generate financial stress for all levels of government. Providing additional health care protection for thousands of Tennessee residents comes with a cost for taxpayers. Additional health care coverage is also costly for households and employers who have to spend more money providing coverage for the new health care recipients. Added health care spending will generate jobs and spending in the health care industry, benefiting the growth of the health care sector, but not without consequences for the already stretched providers.

Many issues remain unresolved, and they may increase or decrease the anticipated gains for Shelby County. Highly complex and contentious issues such as pay for performance, reimbursement rates, sanctions for failure to participate, tax credits to offset insurance costs, and the crowding out of private insurance are a few of the factors that will ultimately determine the impact of PPACA on Shelby County. Time and many unknown decisions will determine how these factors will change our initial assessment of the economic impact of PPACA.

VI. CONCLUSION

The 2010 Patient Protection and Affordable Care Act (PPACA) is filled with a complex array of health care reforms that impact the nation. Traditional relationships, affiliations, and associations between purchasers, providers, and insurers are being modified by a new maize of government rules and regulations. Confusion surrounding PPACA has only increased as a result of the November 2010 elections and pending legal challenges. The probability of substantial changes to the Act is highly correlated to the changing political environment in Washington. Thus, determining, with any degree of accuracy, the impact of PPACA on the nation, the state, or Shelby County is, at best, a speculative process.

Given these disclaimers and many more that cannot be determined, this report has attempted to estimate the impact of the new law on the number of uninsured in the County, the utilization of health care resources, the health care finances in the County, and the impact of changes in health care financing on the overall economy. The most prominent changes will include (1) expanding health insurance coverage to 74,234 nonelderly County residents who are currently uninsured; (2) substantial increases in the number of ambulatory care and modest reductions in emergency room visits, and significant changes in the payer mix of hospital admissions with increases in publicly and privately insured cases and a reduction in uninsured admissions; (3) major reductions in the amount of uncompensated care and bad debt provided by hospitals, community-based providers, and physicians; and (4) Shelby County will receive an additional \$198.6 million in 2014 from the state and federal governments due to changes brought about by PPACA that are expected to generate a total of \$451.3 million in economic output, \$160.8 million in additional earnings, and 3,480 additional jobs.

These changes, while generally promoting more effective and efficient health care in the County, will present challenges, including (1) the continuing need for and the challenges to the current safety-net services for the 71,200 nonelderly County residents who will remain uninsured; (2) the need for continuing support for substantial uncompensated care, especially as private and public payment rates, including disproportionate share funds, are reduced; (3) the need for additional health care manpower, especially primary care providers, to meet the increased demand for ambulatory health care services; and (4) the increase in state funding for newly eligible and enrolled Medicaid beneficiaries.