

Medicaid Fee-For-Service Physician Participation and Reimbursement Analysis

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Executive Summary

This report was commissioned by the House Appropriations Committee of the Virginia House of Delegates to investigate the outcome of reimbursement rate increases for the services provided by Virginia physicians to Medicaid recipients. The effects of the reimbursement rate increase were analyzed within the context of the following policy questions:

- *Have recent increases in Virginia Medicaid reimbursement rates resulted in an increase in the number of Virginia physicians participating in Medicaid Fee-For-Service?*
- *Are reimbursement rate increases a cost-effective mechanism to increase Medicaid Fee-For-Service physician participation?*
- *What is the relative of importance of incentives for physician participation versus physician supply in Virginia planning districts?*
- *Are there innovations in payment policies, the operation of Medicaid, or health system structure that may promote greater physician participation?*

Data from the Virginia Department of Medical Assistance Services and the Virginia Department of Health Professions were used to determine the number of Medicaid Fee-For-Service (FFS) participating OB/GYNs in every municipality before and after the September 2004 reimbursement rate increase for obstetric and gynecological services. Data obtained from the U.S. Census Bureau and the Virginia Health Indicators dataset were compiled to construct comprehensive demographic data for all municipalities. Information from the Virginia Association of Planning District Commissions was used to group each municipality into one of the twenty-two planning districts.

The Virginia Quantitative Analysis, which used the aforementioned datasets, shows that following the reimbursement rate increase, which cost Virginia \$33.2 million total for FY2005 and FY2006, the number of Medicaid FFS participating OB/GYNs increased by 44%, from 1,067 to 1,537 participating physicians. The eight planning districts defined as Adequately Served or Partially Underserved gained 265 and 135 Medicaid FFS participating OB/GYNs,

respectively, following the reimbursement rate increase; this represents 85% of the total number of additional participating OB/GYNs. Participation in these areas is driven by incentives, as shown by the high response rate to the September 2004 reimbursement rate increase, and the generally high number of participating OB/GYNs before the reimbursement rate increase.

The fourteen planning districts that are classified as Medically Underserved Areas (MUAs) gained just 15% of the 470 additional Medicaid FFS participating OB/GYNs, 70 in all. Reimbursement rate increases are relatively ineffective at increasing physician participation in these areas, as MUAs have a smaller number of health care providers in absolute and relative terms. Increasing Medicaid physician participation in MUAs is therefore largely a function of increasing the number of physicians practicing in these areas.

The Nine-State Comparative Analysis of Medicaid programs focuses on the top-three, middle-three, and bottom-three states in terms of the Medicaid FFS reimbursement rates for health care services. The purpose of the comparative analysis was to see if other states have experienced outcomes similar to those in Virginia after increasing reimbursement rates, as well as to search for policies states have been adopted to increase physician participation in Medicaid.

Future policy designed to increase physician participation should not rely solely on reimbursement rate increases, but should also include measures to specifically address the chronically inadequate supply of physicians in MUAs. This report gives several policy recommendations that if implemented could increase the supply of potential Medicaid participating physicians in the MUAs of Virginia. These recommendations fall into three general categories: Non-Governmental Action, Supply Specific Remedies, and Potential for Expanded Managed Care.

Possible non-governmental actions include utilization of the existing Virginia Association of Free Clinics infrastructure to expand Medicaid recipient access to medical services. Another possible action is the creation of a non-governmental entity such as the Nevada Rural Hospital Partners, a non-profit association of rural hospitals, with the specific intent of promoting the viable expansion of hospitals and medical practices into rural communities.

Supply specific remedies include: increasing the number of physicians graduating from Virginia medical schools, expansion of the existing Virginia State Loan Repayment Program, and the creation of a “Home Grown Health Professionals” program that provides grants and loans for residents of MUAs that return to provide health services in underserved communities.

The final recommendation is for policymakers to further explore opportunities to expand Medicaid managed care plans into rural and underserved communities, especially as these areas continue to evolve and develop with the potential implementation of other recommendations from this report.

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Lastly, we express our gratitude to Susan Massart and the House Appropriations Committee for being an open and receptive audience to this report.

Introduction

The purpose of this project is to develop specific legislative proposals for the House Appropriations Committee of the Virginia House of Delegates on the issue of access to physician care for Medicaid recipients. Specifically, this project aims to examine the issue of physician participation in Medicaid Fee-For-Service (FFS) and the resulting access to health care for Medicaid recipients in the Commonwealth, which it does through two analyses: The Virginia Quantitative Analysis and the Nine-State Comparative Analysis. Flowing from the purpose of this study is the primary policy question of this report: Have recent increases in Virginia Medicaid reimbursement rates resulted in an increase in the number of Virginia physicians who participate in Medicaid Fee-For-Service?

The Virginia Quantitative Analysis seeks to address the primary policy question by examining a targeted population of physicians who were subject to a significant reimbursement rate increase. Specifically, the quantitative analysis focuses on the number of OB/GYNs who were participating in Virginia Medicaid FFS before and after the September 2004 increase of 34% in reimbursement rates for OB/GYN services. The aggregate change in the number of OB/GYNs participating in Medicaid FFS following the reimbursement rate increase will directly speak to effect that the increase had on physician participation.

To add perspective to the aggregate change in the number of OB/GYNs participating in Medicaid FFS following the reimbursement rate increase, the quantitative analysis also seeks to address two secondary policy questions. Initial results of the quantitative analysis lend credence to the conclusion that reimbursement rates tend to increase physician participation; however, the question remains: Are reimbursement rate increases a cost-effective mechanism to increase Medicaid Fee-For-Service physician participation? To address this secondary policy question,

the quantitative analysis examines where and in what quantities OB/GYNs began participating after the reimbursement rate increase and for what cost.

By examining which areas saw additional physician participation following the reimbursement rate increase, disparities emerged that beg the question: What is the relative importance of incentives versus supply in Virginia Planning Districts? The quantitative analysis examines the percent increase in physician participation by planning district and medical service level to answer this secondary policy question. Specifically, the analysis examines whether the low levels of Medicaid participation in certain planning districts stems from insufficient reimbursement rates or insufficient supply of physicians, which is an issue that cannot be adequately addressed by reimbursement rate increases.

Given that the Virginia Quantitative Analysis finds evidence supporting structural concerns, the third and final secondary policy question asks: “Are there innovations in payment policy, operation of Medicaid, or health system structure that may promote greater physician participation?” Consequently, it becomes pertinent to look at the practices of other states in their endeavor to resolve the issue of inadequate Medicaid FFS physician participation.

The Nine-State Comparative Analysis examines the efforts of the comparison group, comprised of the three high-tier, three middle-tier, and three low-tier states, to increase physician Medicaid participation.¹ The efforts of the comparison group are diverse and enlightening and include methods such as increasing reimbursement rates, transitioning towards managed care plans, and creating non-governmental programs. The analysis also examines whether these programmatic changes were successful in reaching recipients in rural areas, and whether these mechanisms and innovations could benefit Virginia’s Medicaid recipient population.

¹ The rankings for each of the nine states are based on the Medicaid FFS reimbursement rate rankings from the Public Citizen Health Research Group’s 2007 report, “Unsettling Scores.”

Finally, this report synthesizes the key findings of the Virginia Quantitative Analysis and the Nine-State Comparative Analysis to draw conclusions concerning the primary and secondary policy questions. Building upon the conclusions, the report proposes several potential policy recommendations that fall into three broad categories: Non-Governmental Action, Supply Specific Remedies, and Potential for Expanded Managed Care.

Virginia Quantitative Analysis

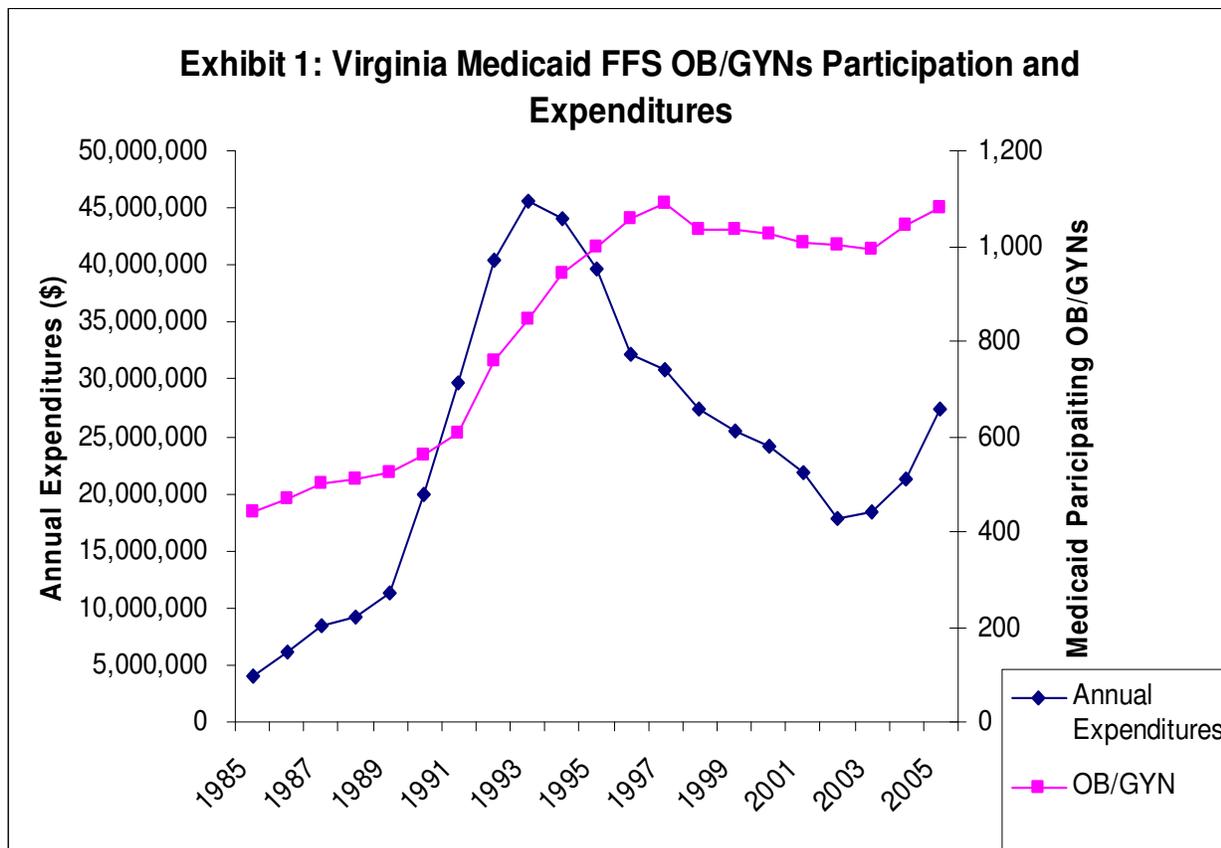
Background

As of 2006, Virginia's Medicaid reimbursement rates rank 35th in the nation.² Considering anecdotal evidence that Medicaid recipients struggle to find participating physicians and physicians' claims that Medicaid reimbursement rates are insufficient to justify participation, the question arises as to whether Medicaid physician participation can be increased by increasing reimbursement rates. The economic logic being that a physician will not participate in Medicaid FFS if the reimbursement rates are set below his marginal cost; however, an increase in reimbursement rates to a level above the marginal cost of physicians will, theoretically, induce physician participation. More specifically, to reiterate the primary policy question of this analysis: Have recent increases in Virginia Medicaid reimbursement rates resulted in an increase in the number of Virginia physicians participating in Medicaid Fee-For-Service?

To address this question, the following analysis will focus on the effects of the 34% reimbursement rate increase for Medicaid FFS OB/GYN services in September 2004. This specific case study was chosen for four reasons: 1) the reimbursement rate increase of 34% stands alone as the single largest reimbursement rate increase in recent history; 2) anecdotal

² Arellano, et al, 2007

evidence from Medicaid recipients suggests they were unable to find participating OB/GYNs willing to see them; 3) OB/GYNs claimed that reimbursement rates were insufficient to induce participation, thus the reason for their inadequate participation; and 4) there is sufficient data on Medicaid FFS physician participation since the reimbursement rate increase in September 2004 to analyze the effect of the reimbursement rate increase on physician participation.



Source: Virginia Department of Medical Assistance Services.

Moreover, initial investigation of historic OB/GYN FFS Medicaid participation lends credence to the anecdotal complaints of both Virginia Medicaid recipients and OB/GYNs, and warrants further analysis. Exhibit 1 demonstrates that the number of OB/GYNs participating in

Medicaid FFS tends to increase as annual Medicaid FFS OB/GYN expenditures increase. Additionally, the number of participating OB/GYNs decreases as expenditures decrease, as illustrated by the downturn in total expenditures between 1993 and 2003. However, the general trends concerning physician participation and annual expenditures are insufficient to fully address the primary policy question as well as the secondary policy questions concerning physician Medicaid FFS participation.

The primary purpose of this analysis is to answer the question of whether recent increases in Virginia Medicaid reimbursement rates resulted in increases in the number of Virginia physicians who participate in Medicaid Fee-For-Service. Secondary policy questions addressed by this analysis include: 1) Are reimbursement rate increases a cost-effective mechanism to increase Medicaid FFS physician participation in Virginia; and 2) What is the relative importance of incentives versus supply in each of Virginia's planning districts? Finally, the results and key findings of this analysis will shed light on the last secondary policy question and will transition to the Nine-State Comparative Analysis, which will specifically address the remaining policy question: Are there innovations in payment policy, operation of Medicaid, or health system structure that may promote greater physician participation?

Data

In order to address the primary and secondary questions of this analysis, it was necessary to collect several data sets that fit into two broad categories. The first set of data is individual level data (i.e. data pertaining to individual physicians practicing in Virginia). The first individual level dataset employed in this analysis lists all Virginia physicians who have participated in Medicaid FFS since January 1, 2004; this was obtained from the Virginia

Department of Medical Assistance Services (DMAS). Included in this data set were 45,551 physicians who have participated in Medicaid since January 1, 2004.

However, among the total number of physicians there are 15,468 physicians who, as of October 22, 2007, are no longer participating in Medicaid along with 10,816 out-of-state physicians. Additionally, some physicians practice in multiple locations and are therefore duplicated in the data set. The most critical portions of this data include the license number of each physician, the U.S. Census Bureau FIPS code for the location of each primary practice, the date the physician began participating in Medicaid, the date the physician stopped participating in Medicaid, and the specialty code or codes of each physician.

The second data set, containing individual level data, is the Virginia Department of Health Professions Doctor Profile Database. This database contains information on each of the 39,823 physicians licensed by the Virginia Board of Medicine. The information in the database includes the license number, name, address of practice, self-reported specialty code, year of graduation from medical school, acceptance of Medicare beneficiaries, and acceptance of new Medicaid recipients for each physician. When combined with the dataset from DMAS, the individual level data provides for analysis that can be both individual and aggregate in nature and is primarily directed towards addressing the primary policy question.

The second category of data used in this analysis is locality based data, which is better suited to addressing the secondary policy questions concerning the cost-effectiveness of the reimbursement rate increase and geographic variance in physician participation. The primary dataset obtained for this portion of the analysis comes from the U.S. Census Bureau, containing key demographic data for each of Virginia's 134 cities and counties. Most prominent among the data for each city and county are the Federal Information Processing Standard (FIPS) code,

population density, per capita income, and percentages of the population that hold a high school diploma, that are female, and that are below the Federal Poverty Line (FPL).

To augment the analysis, several other datasets were merged with the Census data including data from DMAS concerning Medicaid FFS, Managed Care, and total expenditures by locality. The VA Health Indicators dataset, constructed from data from the Virginia Department of Health and the U.S. Census Bureau, was also utilized. The relevant information in this data set are the medical service level classification for each locality (i.e. whether a city or county is a/an Medically Underserved, Partially Under-Served, or Adequately Served Area) and the percentage of the population that suffers from fair or poor health. The service level of a municipality or region is determined by the weighting of four criteria: the number of primary care physicians per 1,000 people, the infant mortality rate, the number of residents below the FPL, and the percentage of the population over the age of 65.³

Methodology

To move from the raw datasets described above to functional individual and municipality level datasets, several critical steps were taken. First, in order to isolate the individual level data necessary for the analysis, the DMAS dataset containing all physicians participating in Medicaid FFS was filtered by primary and secondary specialty code. Physicians who did not report performing OB/GYN related services as their primary or secondary specialty were removed from the dataset.

The list of Medicaid FFS participating OB/GYNs was then merged with the DHP Licensure dataset by license number in order to obtain additional information for each participating physician. Having compiled this information into one dataset, dummy variables

³ U.S. Department of Health and Human Services

were created to indicate whether a participating OB/GYN was participating before and after the reimbursement rate increase based on the dates that physicians began and stopped participating in Medicaid FFS. From these dummy variables, three additional dummy variables were created to code for whether physicians had always participated in Medicaid FFS, began participating after the reimbursement rate increase, or stopped participating after the reimbursement rate increase.

From this functional dataset, the FIPS codes were used to aggregate OB/GYN participation by municipality and then planning district. The aggregation of OB/GYN participation by municipality before and after the reimbursement rate increase allowed for the calculation of the total change in number of participating physicians in each municipality and thus each planning district. The results of this calculation were cross-checked for validity against the difference in the number of physicians who began participating in Medicaid FFS after the reimbursement rate increase and the number of physicians who stopped participating over the same time period.

The calculations from the aggregation of individual level data into municipality level data provide raw data that are not scaled to any relevant factor and thus lack perspective. In order to gain this perspective, the change in each municipality should be normalized by the size of its relevant population, which is the number of Medicaid FFS eligible women. Unfortunately, this information was not available for this specific analysis, thus a proxy for the number of Medicaid FFS eligible women was developed using data obtained from the U.S. Census Bureau and DMAS. The proxy was constructed for each municipality as follows:

$$\text{\# of Medicaid FFS Eligible Women (MEW) = Total Population x \% Women x \% Below 100\% FPL x \% FFS}$$

Although this proxy is admittedly inexact, it provides the analysis with a consistent normalizing factor to give perspective to the number of OB/GYNs participating in each municipality and planning district. The most glaring concern for the validity of this proxy is the use of the percent of the population below 100% FPL when this is not the eligibility standard in Virginia. However, the tiered eligibility standard in Virginia complicates any analysis because it contains three different levels of eligibility for women depending on their status as non-working, working, or pregnant. Despite this, the percent of the population under the FPL provides a benchmark for comparative analysis, given that the Medicaid eligibility ranges from 24% FPL for non-working women with children to 166% FPL for pregnant women. Therefore, the proxy should be treated as a normalizing factor only and not as independent data capable of standing alone for the purposes of policy making.

Having normalized OB/GYN participation, municipalities and planning districts were directly compared in regards to the change in OB/GYN participation. Moreover, to provide supporting evidence that did not rely on the potentially biased MEW proxy, the percent change in the number of OB/GYNs participating was calculated for each municipality and planning district. The results of this analysis were compiled into tables by municipality and planning district and then into maps by planning district.

To add an additional layer to the analysis, the medical service level and percent of population in fair or poor health of each municipality from the VA Health Indicators dataset were merged with the municipality level dataset. This data adds important information to the present analysis for two reasons. First, the analysis lacked a total number of OB/GYNs within each municipality, thus the medical service level acts as a proxy for supply of physicians in each municipality since an area is designated as an MUA based in part on the number of primary care

physicians per 1,000 people.⁴ Moreover, this information enables the analysis to determine the impact of reimbursement rates on Medically Underserved municipalities and planning districts. Second, the percentage of the population that is in fair or poor health serves as a proxy for the demand for medical services in each municipality.

Additionally, a linear regression was performed to determine which factors directly contributed to the change in the number of participating OB/GYNs in each municipality. The regression took the following form:

$$(\Delta \text{ Number of Participating OB/GYNs})/1000 \text{ MEW} = \beta_0 + \beta_1 \text{ Population Density}_i + \beta_2 \text{ Per Capita Income}_i + \beta_3 \% \text{ HS Diploma}_i + \beta_4 \text{ Medical Service Level}_i + \beta_5 \% \text{ Fair or Poor Health}_i + \beta_6(\text{Number of Participating OB/GYNs Before 9/04})/1000 \text{ MEW}_i + \varepsilon_i$$

Results

Before the September 2004 increase in FFS reimbursement rates for obstetrics and gynecological services, a total of 1,067 OB/GYNs participated in Medicaid FFS in Virginia. Using Medicaid data from DMAS and licensure data from the Department of Health Professions, we found that from September 2004 through 2006, an additional 470 OB/GYNs were participating in Medicaid FFS, for a total of 1,537 participating throughout the Commonwealth.

Table 1 summarizes Virginia Medicaid FFS participation by OB/GYNs before and after the September 2004 reimbursement rate increase for each of Virginia's 22 planning districts. The "Before" and "After" columns provide the number of FFS participating OB/GYNs per 1,000 MEW before and after the reimbursement rate increase. The table also provides a categorical measure of overall medical service level in each planning district as determined by the 2006 Virginia Health Indicators dataset.

⁴ U.S. Department of Health and Human Services

Planning District	Before	After	% Change	Service Level
1 – Lenowisco	3.02	3.81	26.32%	Partially Underserved
2 - Cumberland Plateau	1.83	2.14	16.67%	Underserved
3 - Mount Rogers	2.66	4.15	56.00%	Underserved
4 – New River Valley	3.79	4.83	27.27%	Partially Underserved
5 – Fifth	8.34	10.75	28.89%	Partially Underserved
6 - Central Shenandoah	3.41	4.13	21.05%	Adequately Served
7 – Lord Fairfax	3.97	4.88	23.08%	Adequately Served
8 - Northern Virginia	6.42	9.95	54.92%	Adequately Served
9 – Rappahannock-Rapidan	1.71	1.92	12.50%	Underserved
10 - Thomas Jefferson	5.80	7.41	27.66%	Underserved
11 - Central Virginia	2.10	2.99	42.31%	Partially Underserved
12 - West Piedmont	1.92	2.64	37.04%	Underserved
13 – Southside	1.68	3.19	90.00%	Underserved
14 – Piedmont	0.33	0.33	0.00%	Underserved
15 - Richmond Region	4.18	5.66	35.33%	Underserved
16 – RADCO	6.57	11.50	75.00%	Underserved
17 - Northern Neck	1.93	1.93	0.00%	Underserved
18 - Middle Peninsula	1.79	2.81	57.14%	Underserved
19 – Crater	1.40	1.51	8.33%	Underserved
20 - Hampton Roads	3.04	4.09	34.39%	Underserved
21 - Norfolk/Virginia Beach	3.56	5.14	44.44%	Partially Underserved
22 - Accomack-Northampton	0.62	0.94	50.00%	Underserved

Source: Virginia Department of Medical Assistance Services; U.S. Census Bureau, 2005; Virginia Health Indicators, 2006.

Before the reimbursement rate increase, the number of physicians per 1,000 MEW ranged from a low of 0.33 in Piedmont to a high of 8.34 in the Fifth planning district. None of the planning districts experienced a decrease in the number of participating OB/GYNs, and all but two planning districts (Piedmont and Northern Neck) experienced an increase in the number of participating physicians pursuant to the reimbursement rate increase. Physician participation after the reimbursement rate increase ranges from a low of 0.33 per 1,000 Medicaid eligible women in the Piedmont planning district to highs of 11.5 and 10.75 per 1,000 Medicaid eligible women in the RADCO and Fifth planning districts, respectively. The largest percentage increases in the number of FFS participating OB/GYNs were found in the Southside (90.0%),

RADCO (75.0%), Middle Peninsula (57.1%), Mount Rogers (56.0%) and Northern Virginia (54.9%) planning districts. The smallest percentage changes were in the Piedmont and Northern Neck (0%), Crater (8.3%), Rappahannock-Rapidan (12.5%) and Cumberland Plateau (16.7%) planning districts.

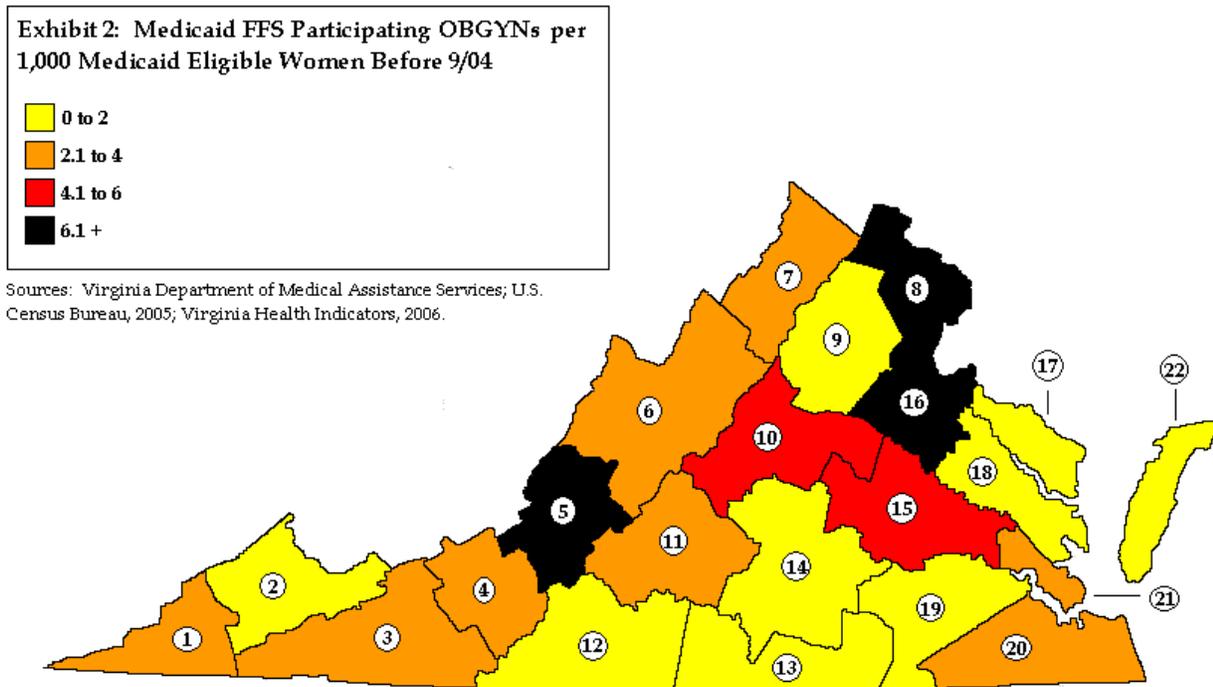


Exhibit 2 provides a graphical representation of the distribution of Medicaid FFS participating OB/GYNs before the September 2004 reimbursement rate increase. Virginia's planning districts are designated by their numerical identification and geographic boundary. Each planning district has been shaded to correspond with a categorical breakdown of FFS participating OB/GYNs per 1,000 MEW. Planning districts with a concentration of between 0 and 2 participating OB/GYNs per 1,000 MEW included Cumberland Plateau, Rappahannock-Rapidan, West Piedmont, Southside, Piedmont, Northern Neck, Middle Peninsula, Crater and

Accomack-Northampton. Planning districts with participating OB/GYNs between 2.1 and 4 per 1,000 MEW included Lenowisco, Mount Rogers, New River Valley, Central Shenandoah, Lord Fairfax, Central Virginia, Hampton Roads and Norfolk/Virginia Beach. The Thomas Jefferson and Richmond Regional planning districts had between 4.1 and 6 participating OB/GYNs per 1,000 MEW. The Northern Virginia, RADCO, and Fifth planning districts were the only planning districts with concentrations of participating OB/GYNs greater than 6 per 1,000 MEW, with 6.42, 6.57, and 8.34, respectively.

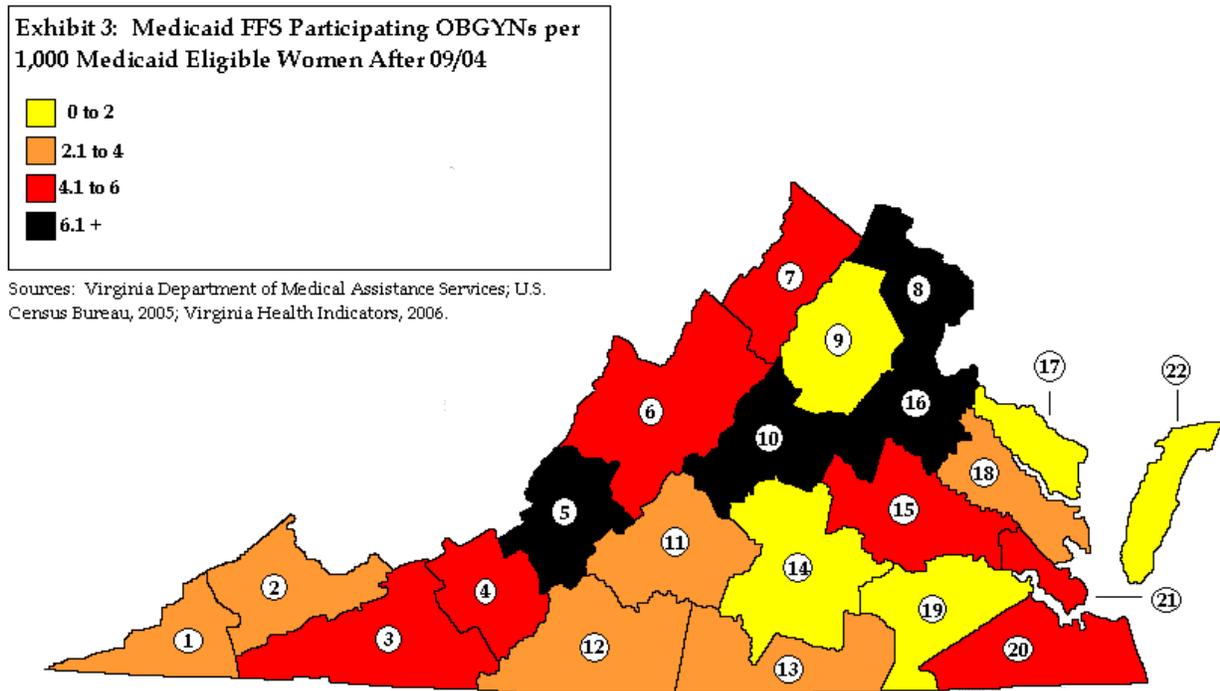


Exhibit 3 provides the distribution of Medicaid FFS participating OB/GYNs per 1,000 MEW after the September 2004 reimbursement rate increase. Planning districts with between 0 and 2 participating OB/GYNs per 1,000 MEW after September 2004 include Piedmont, Northern Neck, Crater, and Accomack-Northampton. Six planning districts had a participating OB/GYN

concentration between 2.1 and 4 per 1,000 MEW: Lenowisco, Cumberland Plateau, Central Virginia, West Piedmont, Southside, and Middle Peninsula. The Mount Rogers, New River Valley, Central Shenandoah, Lord Fairfax, Richmond Region, Hampton Roads, Norfolk/Virginia Beach planning districts each had between 4.1 and 6 participating OB/GYNs per 1,000 MEW following the reimbursement rate increase. The Fifth, Northern Virginia, Thomas Jefferson, and RADCO planning districts had 6.1 or more participating OB/GYNs per 1,000 MEW after September 2004.

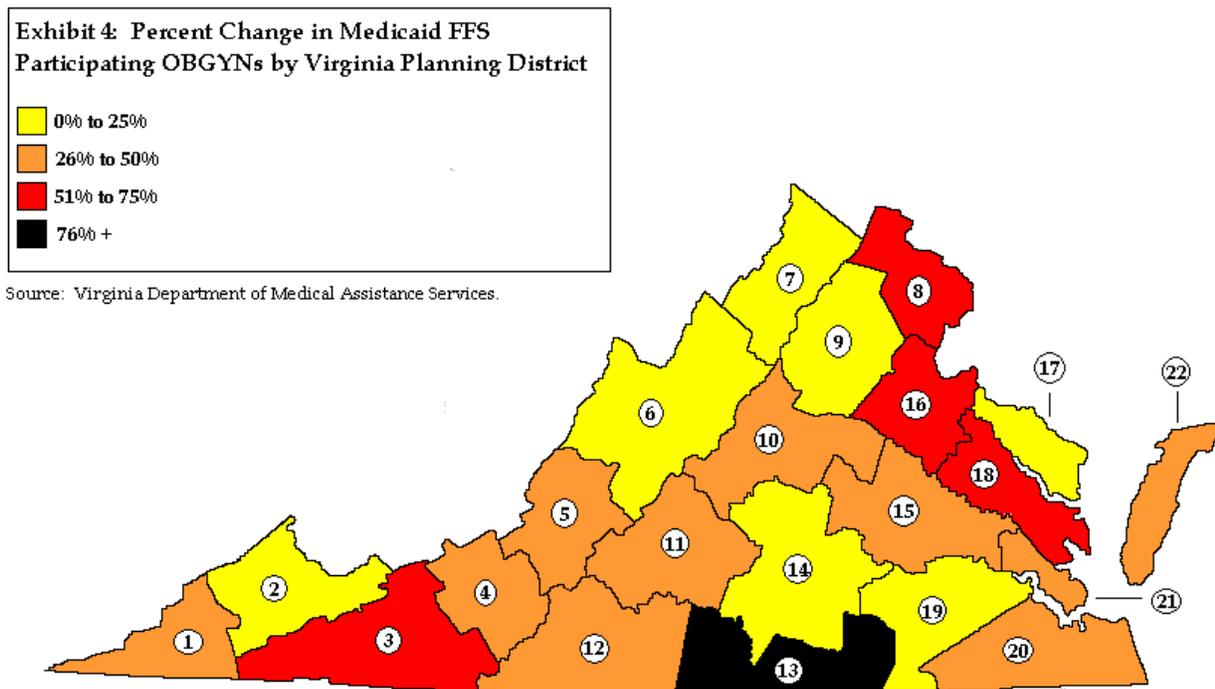
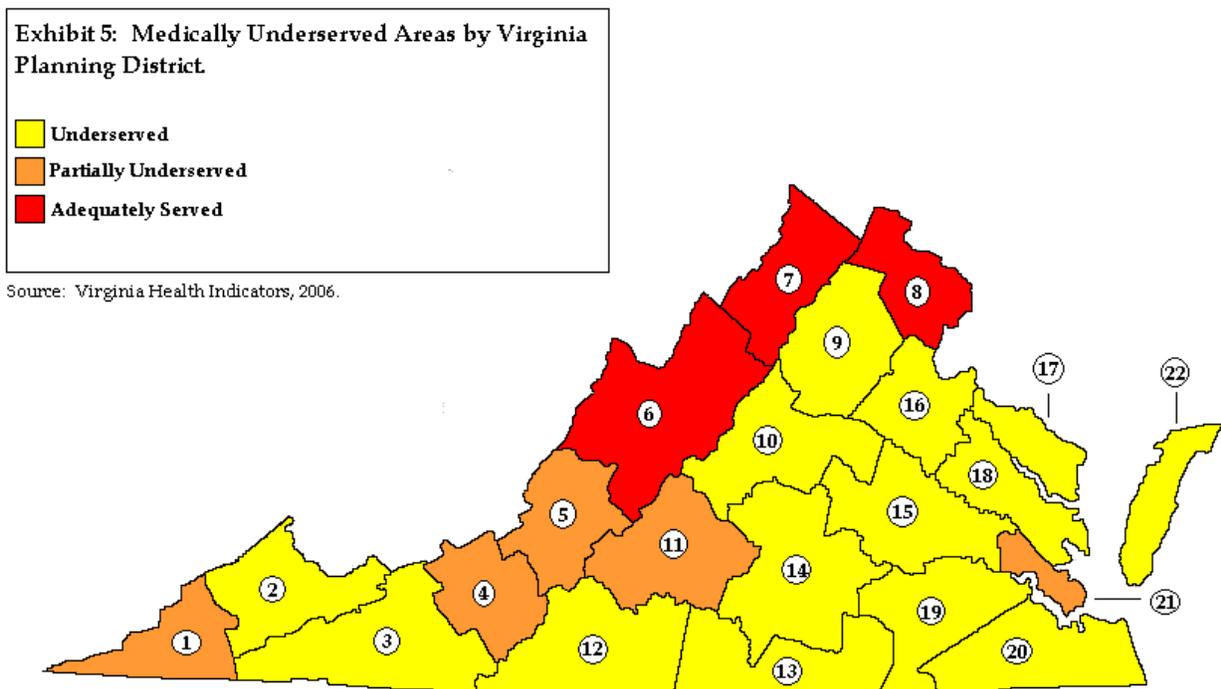


Exhibit 4 shows the percentage change in Medicaid FFS-participating OB/GYNs in each of Virginia’s planning districts following the reimbursement rate increase. The largest gain was in the Southside planning district, which saw a 90% increase; this gain is tempered by noting that the district increased from 1.7 to 3.2 participating OB/GYNs per 1,000 MEW, ranking 13th

among the twenty-two planning districts. Large gains, between 51% and 75 %, were observed in Northern Virginia, RADCO, Middle Peninsula, and Mount Rogers. Ten planning districts experienced a moderate increase, between 26 and 50%, in the number of participating OB/GYNs following the reimbursement rate increase, while seven planning districts saw only a minimal increase, 0 – 25%.



The 2006 Virginia Health Indicators dataset designated each county and city within Virginia with a categorical value for the overall level of medical services. Each municipality was listed as either Adequately Served, Partially-Underserved, or Underserved Area. For the purposes of our analysis, the service level for Virginia planning districts was calculated as the mean service level of the municipalities within its boundaries. Exhibit 5 provides a graphical

representation of medical service levels in each planning district and is shaded to correspond with the Adequately Served/Partially Underserved/Underserved Area categorization. Of Virginia’s twenty-two planning districts, fourteen are considered Medically Underserved Areas (MUAs). Lenowisco, New River Valley, Fifth, Central Virginia, and Hampton Roads planning districts are Partially Underserved Areas. Only three planning districts, Northern Virginia, Central Shenandoah and Lord Fairfax, are characterized as Adequately Served Areas.

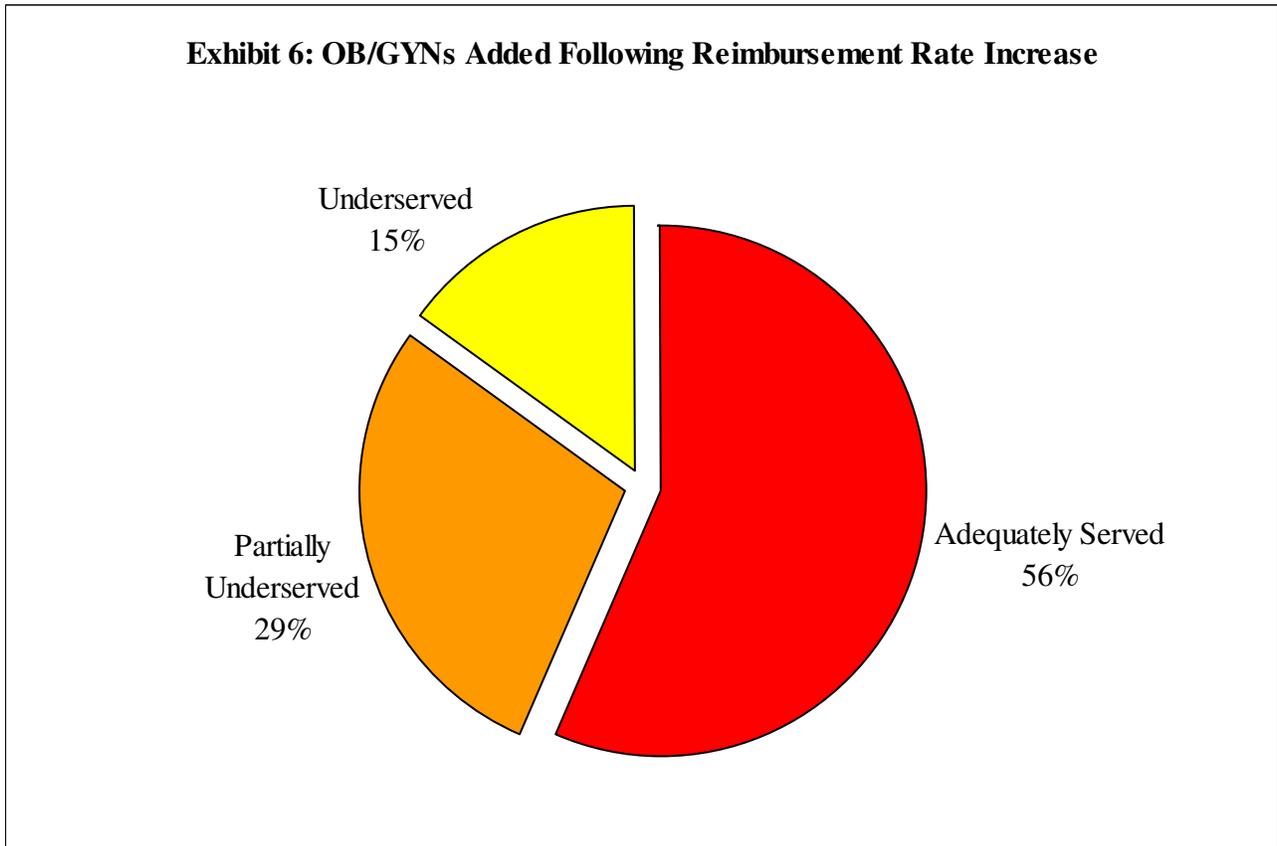
Table 6 summarizes the number of Medicaid FFS participating OB/GYNs before and after September 2004, the number added after the reimbursement rate increase, and the percentage change by medical service level. Adequately Served planning districts added a total of 265 participating OB/GYNs following the reimbursement rate increase; this represents a 44.7% increase in the number of participating physicians. Partially Underserved planning districts added an additional 135 participating OB/GYNs, a 48.6% increase. Underserved planning districts experienced an increase of 70 participating OB/GYNs, which represents only a 35.7% increase in the number participating within those planning districts.

Table 6: OB/GYN FFS Medicaid Participation by Medical Service Level				
Service Level	Before 9/04	After 9/04	Added	% Change
Adequately Served	593	858	265	44.69 %
Partially Underserved	278	413	135	48.56 %
Underserved	196	266	70	35.71 %
Total	1,067	1,537	470	44.05 %

Source: Virginia Department of Medical Assistance Services; U.S. Census Bureau, 2005; Virginia Health Indicators, 2006.

Exhibit 6 illustrates that Adequately Served planning districts gained 56% of the 470 participating OB/GYNs added after the reimbursement rate increase, compared to 29% in

Partially Underserved planning districts and 15% in MUAs. These findings provide evidence that Adequately Served planning districts benefited most from the reimbursement rate increase, while MUAs, those in most need of additional participating physicians, benefited the least.



Source: Virginia Department of Medical Assistance Services; U.S. Census Bureau, 2005; Virginia Health Indicators, 2006.

Additionally, a regression analysis was performed to analyze the relationship between the observed increase in physician participation following the reimbursement rate increase and various characteristics of Virginia municipalities. Factors incorporated in the analysis for each municipality include: population density, per-capita income, number of OB/GYNs participating per 1,000 MEW before the reimbursement rate increase, general level of medical service, and

percentage of the population with high school diplomas, reporting fair or poor health, and that are MEW.

The resulting analysis found that 60% of the variance between municipalities in the change in the number of participating OB/GYNs following the reimbursement rate increase can be explained by the number of participating OB/GYNs in each municipality *before* the reimbursement rate increase. Specifically, the regression analysis found that for each participating OB/GYN per 1,000 MEW before September 2004, municipalities experienced an increase of 1 OB/GYN per 10,000 MEW after the reimbursement rate increase.

When this factor was removed and regression analysis was repeated, per capita income was found to be significantly and positively related to the increase in physician participation. When the regression was run without per-capita income, the analysis found that municipalities with higher percentages of high school graduates and higher levels of medical service experienced the greatest gains in OB/GYN participation. In sum, municipalities with greater OB/GYN participation before the reimbursement rate increase, higher population density, wealthier and better educated residents, and higher levels of medical service saw the largest increases in the number of participating OB/GYNs after September 2004.

Key Findings from Virginia Quantitative Analysis

The previous analysis has highlighted several findings of importance for Virginia policymakers. In order to provide clarity, key findings will be used to address the primary and secondary policy questions outlined in the introduction to this section.

Primary Question: Have recent increases in Virginia Medicaid reimbursement rates resulted in an increase in the number of Virginia physicians participating in Medicaid Fee-For-Service?

Yes. In September 2004 the reimbursement rate for obstetric and gynecological services was increased by 34%. Using Medicaid data from the DMAS and licensure data from the DHP, this report finds that the number of Medicaid FFS participating OB/GYNs increased by 44%, from 1,067 to 1,537, following the reimbursement rate increase.

Secondary Question: Are reimbursement rate increases a cost-effective mechanism to increase Medicaid Fee-For-Service physician participation?

The September 2004 reimbursement rate increase for obstetric and gynecological services cost Virginia Medicaid \$33.2 million total for FY2005 and FY2006 and yielded 470 additional Medicaid FFS participating OB/GYNs. Adequately Served planning districts captured 56% of the 470 additional OB/GYNs, and Partially Underserved planning districts captured 29%.⁵ Medically Underserved planning districts captured only 70 of the 470 additional OB/GYNs, 15% of the total increase. If the goal of policymakers is to increase the number of participating physicians, reimbursement rate increases are an effective, albeit costly, mechanism for achieving this goal. However, reimbursement rate increases are relatively ineffective if the goal is to increase the number of participating physicians in MUAs. Addressing Medicaid FFS physician participation in MUAs will require the use of mechanisms other than reimbursement rate increases.

Secondary Question: What is the relative importance of incentives for physician participation versus physician supply in Virginia planning districts?

Underserved planning districts experienced a significantly smaller increase in the number of Medicaid FFS participating OB/GYNs than Adequately Served and Partially Underserved planning districts following the September 2004 reimbursement rate increase. The number of

⁵ "Changes to Provider Reimbursement Rates", 2006.

participating OB/GYNs increased by 36% in Underserved planning districts versus 45% and 49% increases in Adequately Served and Partially Underserved planning districts, respectively.

Broadly, this suggests two different trends driving physician participation in Medicaid FFS. First, it appears that incentives drive physician participation in Adequately Served and Partially Underserved planning districts. Generally, these planning districts had relatively large numbers of participating OB/GYNs before the September 2004 reimbursement rate increase. The reimbursement rate increase significantly increased the number of participating OB/GYNs in these areas, and 85% of the 470 additional participating OB/GYNs were added in these eight planning districts. Adequately Served and Partially Underserved areas represent 64% of total MEW and 74% of Virginia's total population; thus, these areas experienced a disproportionately large increase in the number of Medicaid FFS participating OB/GYNs. This suggests that increasing participation in Adequately Served and Partially Underserved planning districts is a matter of improving the incentives for participation, and reimbursement rates are an effective means of accomplishing such an end.

The second trend driving physician participation in Medicaid FFS is physician supply; this trend is found primarily in Underserved planning districts. Underserved planning districts experienced the smallest increase in participating OB/GYNs, and captured a significantly smaller number of the total increase in participating OB/GYNs following the September 2004 reimbursement rate increase. As these planning districts generally had the smallest number of participating OB/GYNs before the reimbursement rate increase, increasing the number of participating physicians in Underserved planning districts appears to be an issue of addressing the supply of physicians. Uniform reimbursement rate increases are an ineffective means of increasing physician supply because they primarily address the incentives for participation not

location. Alternative approaches are required to realize increases in physician participation in Underserved planning districts that are comparable to those found in Adequately Served and Partially Underserved areas.

Secondary Question: Are there innovations in payment policies, the operation of Medicaid, or health system structure that may promote greater physician participation?

As posited in the previous analysis and discussion, incentives for participation are the primary driver in increasing physician participation in Adequately Served and Partially Underserved planning districts. Reimbursement rate increases are most effective in addressing Medicaid FFS participation in these areas. Physician participation in MUAs is explained largely by the limited supply of physicians in those areas. Reimbursement rate increases, which do not address the underlying issue of physician supply, are relatively ineffective at increasing the number of physicians participating in MUAs.

In order to address this policy question, the following Nine-State Comparative Analysis was performed to investigate the efforts of other states to improve Medicaid physician participation in Medically Underserved areas.

Nine-State Comparative Analysis: Physician Participation Issues and Solutions

This section will explore the methods other states have used to increase physician participation in their Medicaid programs. The analysis focuses on the specific efforts of a nine state comparison group with the intention of providing support for the preliminary conclusion that the reimbursement rate increase for OB/GYN services increased participation in Virginia Medicaid FFS, albeit disproportionately and at a significant cost, and determining whether there

are innovations in payment policies, the operation of Medicaid, or health system structure that may promote physician participation in a more equitable and efficient manner.

Ranking of States Based on Medicaid Fees

Using The Public Citizen Health Group’s “Unsettling Scores: A Ranking of State Medicaid Programs” the states with the three highest, the three lowest, and the three median reimbursement rates were selected as a comparison group. According to the “Unsettling Scores” rankings, Arizona, Delaware, and Nevada rank highest in reimbursement rates; Washington, Alabama, and New Hampshire comprise the median; and New York, New Jersey, and Rhode Island have the lowest reimbursement rates. Virginia’s reimbursement rates are below the median, ranking 35th in the nation.⁶

	% in FFS	# of FFS Recipients	Total Points: Reimbursement	% in Managed Care	# of Managed Care Enrollees
<i>Virginia</i>	37	318,200	96.1	63	541,800
Top-Tier					
Delaware	24	39,984	200.4	76	126,616
Nevada	18	46,224	185.3	82	210,576
Arizona	10	139,440	184.2	90	1,254,960
Middle-Tier					
New Hampshire	25	34,950	116.5	75	104,850
Alabama	37	339,771	115.7	63	578,529
Washington	13	155,441	111.7	87	1,040,259
Bottom-Tier					
Rhode Island	34	73,474	59.5	66	142,626
New York	39	1,906,710	44	61	2,982,290
New Jersey	31	338,923	12.2	69	754,377

Source: Arellano and Wolfe, 2007.

⁶ Arellano, et al, 2007.

Increases in Reimbursement Rates for Medicaid Fee-For-Service

There is corroborating evidence from the states in the comparison group that an increase in reimbursement rates tends to lead to an increase in physician participation. From the 1970s until 1998, Delaware's Medicaid dental program functioned almost exclusively through state-operated, school-linked public health clinics employing a small number of full-time and contracted dentists. The first private dentist began participating in the program in 1997.⁷

That same year, the Dental Health Administrative and Consulting Service, a private consulting entity commissioned by the Department of Health and Human Services, released a report on dental care access for Medicaid recipients and others receiving state services. The report recommended that Delaware increase reimbursement rates for dentists participating in Medicaid. Effective January 1, 1998, Medicaid began reimbursing dentists on a FFS basis at 85% of each dentist's submitted charges. The resulting payment of sufficient, yet discounted rates has yielded an increase in access to dental services without requiring additional programmatic change. Immediately following the January 1998 reimbursement rate increases, the number of dentists participating in Medicaid FFS increased from 1 to 75. As of August 2004, 130 of the approximately 378 licensed dentists in the state were enrolled in the Medicaid program.⁸

Alabama, a middle-tier state in the reimbursement rankings, has also experimented with Medicaid reimbursement rates. In the fall of 2000, Alabama increased the reimbursement rates for primary care physicians and dentists with the goal of improving access to these services. Under the "Smile Alabama" initiative, reimbursement rates for dentists were increased to match

⁷ Schneider, 2007.

⁸ Ibid.

Blue Cross rates, and 35 additional dentists began accepting Medicaid recipients. This addition represented a 44% increase in the number of Medicaid FFS participating dentists in Alabama.⁹

Access to Care for Patients via Managed Care and Alternative Methods

Another policy mechanism used to increase physician participation is the creation of Medicaid Managed Care Organizations (MMCOs). Many states have transitioned toward MMCOs as they offer comprehensive benefits to recipients at a predictable cost.¹⁰ Washington, a middle-tier state, has 87% of its Medicaid recipients enrolled in managed care despite having a substantial rural population.¹¹ Washington was able to transition its Medicaid recipients to managed care through an explicit policy to increase capitation rates, which encouraged the development of a larger number of MMCOs.¹²

Arizona, a top-tier state and a leader in Medicaid innovation, also has a substantial rural population and requires all Medicaid recipients to enroll in the Arizona Health Care Cost Containment (AHCCC) system, the state-sponsored managed care program. Until 1982, when Arizona established its Medicaid program, the state utilized a county-based system for indigent health care. Rising health care costs and the state legislature's imposition of stringent limits on the counties' ability to raise property taxes resulted in an outcry for the implementation of Medicaid.¹³ Over time, the AHCCC has become a national model and continued to remain ahead of the curve.

New Hampshire also exhibits innovation in the implementation of managed care. Despite being a middle-tier state, New Hampshire has enrolled 75% of its Medicaid recipients in

⁹ Ormond and Wigton, 2002.

¹⁰ Draper, Hurley, and Short, 2004.

¹¹ Kaiser Family Foundation, 2007.

¹² Holahan, Rangarajan, and Schirmer, 1999.

¹³ Sparer, 1999.

managed care.¹⁴ In a 2001 survey on state methods for determining capitation rates, New Hampshire reported a competitive bidding process in its negotiations of rates with managed care providers. New Hampshire strategically uses FFS data as a basis for establishing acceptable rate ranges in the course of negotiations.¹⁵

New York is the second state in the analysis that employs a competitive bidding process to determine capitation rates for managed care providers. In November 1995, as part of its health plan procurement, New York instituted a competitive bidding process where the state established acceptable rate bands based on fee-for-service expenditures for comparable populations, adjusted downward for expected managed care savings. To facilitate competition, plans were not informed of the rate bands. The state accepted all plan bids in the rate range; those that were below the range were brought up to the bottom of the range, and those that bid too high were given the opportunity to contract at the highest acceptable rate in the range. However, managed care providers complained of exceedingly low capitation rates as a result of competitive bidding, thus causing the Legislative Assembly to increase capitation rates by an additional 2% in New York City and 7% in upstate New York.¹⁶

Rhode Island, a bottom-tier state, began the transition from FFS to their managed care program, RItE Care, in August of 1994. The implementation of RItE Care resulted in increased capitation rates for neonatal and obstetric care providers, increased the number of Medicaid recipients utilizing private practices, and increased the number of pregnant women receiving adequate prenatal care.¹⁷ New Jersey, a bottom-tier state, has had a similar experience with Medicaid. In September 1995 all 400,000 Medicaid recipients receiving Aid to Families with

¹⁴ Kaiser Foundation, 2006.

¹⁵ Holahan and Suzuki, 2003.

¹⁶ Holahan, Zuckerman, Evans, and Rangarajan, 1998.

¹⁷ American Journal of Public Health, April 1999.

Dependent Children-Related Medicaid (AFDC-Related Medicaid) were moved into managed care.¹⁸

However, not all states have enjoyed purely positive results from their efforts to increase physician participation through managed care. Alabama, a state with a substantial rural population, experimented with managed care through a pilot program in Mobile County. In 1997, Alabama instituted the *Better Access for You* (BAY) plan, a capitated Medicaid managed care program authorized by a Section 1115 waiver. By February 1998, the BAY Health Plan had 41,000 enrollees. However, in October 1999 the community health centers withdrew from the plan network citing inadequate reimbursement for their services, forcing the state to terminate the project.¹⁹

Finally, Nevada, a top-tier state, is notable for being the only state in the comparison group that has a non-governmental organization involved in providing Medicaid services. The Nevada Rural Hospital Partners (NRHP) began in 1987 with eleven small, rural hospitals that voluntarily cooperated and collaborated by sharing financial and technological resources, labor, and training to improve the viability of rural hospitals and to improve the access and quality of health care for rural residents. Currently, there are fourteen regular NRHP members and two associate NRHP Foundation members. Each member hospital pays annual dues in return for membership services and benefits, such as grant-funded programs.²⁰

Key Findings from Nine-State Comparative Analysis

The Nine-State Comparative Analysis demonstrates the importance of reimbursement rates and capitation rates for physician participation and delivery of medical services to Medicaid recipients. In FFS, an increase in reimbursement rates has been shown to encourage physician

¹⁸ New Jersey Department of Human Services

¹⁹ Ormond and Wigton, 2002.

²⁰ Nevada Rural Hospital Partners

participation in Medicaid as demonstrated by increased dentist participation in Delaware and Alabama. Increased capitation rates may be an incentive for managed care providers to expand into rural regions as illustrated in the state of Washington. Furthermore, utilization of the existing health infrastructure as a mechanism for transitioning Medicaid recipients into managed care plans, as demonstrated by Arizona, could be a possible method for transitioning Virginia Medicaid FFS recipients into managed care plans.

This report also recognizes that Medicaid physician participation and recipient access are dependent upon each state's unique demographic and geographic characteristics. A possible factor that has contributed to Rhode Island and New Jersey's ability to transition Medicaid recipients to managed care plans is their geographic size. Each state has a relatively small land area with a high population density. Therefore, it is highly probable that most Medicaid recipients are within close proximity to a managed care-sponsored hospital or health center. However, for states with a larger land area and a sizable number of rural counties, such as Virginia, the potential for complete managed care penetration is severely diminished. Despite similar problems, Washington was successful in transitioning to a managed care dependent system by increasing capitation rates, while Arizona achieved success through utilization of its preexisting public health care infrastructure.

Table 8: Summary of Medicaid Actions and Outcomes in Nine-State Comparative Analysis

	Actions in Managed Care/ Fee-For-Services	Outcomes	Rural Outreach?	Lessons Learned/ Implications for VA
<i>Top-Tier</i>				
Delaware	No changes in physician fees. However, increased reimbursement rates for dentists participating in Medicaid to 85 percent of dentists' submitted charges	Number of participating doctors increased from 1 to 75 and currently 130 dentists out of approximately 378 licensed dentists	None observed	Increase in reimbursement rates led to increase in supply of providers
Nevada	No actions in managed care or FFS per se; non-governmental consortium of rural and frontier hospitals	Consortium has flourished from 11 original members to 14 full-time and 2 associate members; increased access by rural residents	Yes	NGOs have potential to make substantial impact through consortium programs; encourage rural hospital and health clinic consortiums in Virginia through fiscal policy
Arizona	State government utilized existing public hospitals and clinics to transition Medicaid recipients into managed care plans	90 percent of Medicaid recipients enrolled in managed care plan despite substantial rural population	Yes	Develop special capitation rates for VA free clinic system as mechanism to allow managed care providers to branch into rural areas
<i>Middle-Tier</i>				
New Hampshire	Uses competitive bidding to negotiate capitation rates for Managed Care providers	State has a cost-effective capitation rate that benefits both consumers and suppliers	Yes	Competitive bidding results in cost-effective capitation rates; propose to General Assembly to utilize competitive bidding when annually negotiating capitation rates
Alabama	No changes in physician fees. However, increased reimbursement rates for dentists participating in Medicaid to match Blue Cross rates	35 new dentists participating in Medicaid in addition to the 80 dentists previously participating	None observed	Increase in reimbursement rates led to increase in supply of providers
Washington	Explicitly pursued policy of increased capitation rates	MCOs given incentives to develop Medicaid plans and provider networks	Yes	Increase in capitation rates is an incentive for managed care providers to branch out into rural areas

Bottom-Tier				
Rhode Island	Increased capitation rates to neonatal and obstetric care providers	Increase in the number of Medicaid recipients utilizing private practices and number of women receiving prenatal care	No	Increase in capitation rates led to increase in supply of providers
New York	Uses competitive bidding to negotiate capitation rates with managed care providers	State has a cost-effective capitation rate that is acceptable to managed care providers and will provide access to managed care enrollees	Yes	Competitive bidding results in cost-effective capitation rates; propose to General Assembly to utilize competitive bidding when annually negotiating capitation rates
New Jersey	Transitioned Medicaid FFS recipients into managed care plans in Sept 1995	New Jersey successfully moved 400,000 previously FFS patients into managed care plans.	No	None pertinent to VA; New Jersey is a highly urban state with very few (if any) rural counties

Conclusions

The analysis of the September 2004 reimbursement rate increase and its impact on OB/GYN participation in Virginia Medicaid FFS found that OB/GYN participation increased 44% by the end of 2006. This finding is given further credence by the Nine-State Comparative Analysis, which elucidates how targeted reimbursement rate increases in Delaware, Alabama, and Rhode Island increased the number of Medicaid FFS participating providers within the affected range of medical services. In general, it appears that reimbursement rate increases for specialized medical services increase the number of physicians participating in a specific field.

Despite the aggregate positive increase in participation, the cost-effectiveness of reimbursement rate increases is unclear. Virginia Medicaid spent an additional \$33.2 million

total in association with the reimbursement rate increase in FY2005 and FY2006. An additional 470 OB/GYNs participated in Medicaid FFS after the September 2004 reimbursement rate increase. However, 85% of the OB/GYNs that began to participate after the reimbursement rate increase were added to planning districts that were already Adequately Served or Partially Underserved, with 56% and 29% added to each, respectively. Conversely, the fourteen Medically Underserved planning districts captured only 15% of the total gain, adding 70 Medicaid FFS participating OB/GYNs subsequent to the reimbursement rate increase. Regression analysis found that the areas benefiting most from reimbursement rate increases were those with higher numbers of OB/GYNs participating before September 2004, higher population densities, higher per-capita incomes, higher numbers of high school graduates, and higher levels of general medical service.

The significantly higher physician response rates following the reimbursement rate increase observed in Adequately Served and Partially Underserved planning districts suggests that Medicaid FFS participation in these areas is a function of incentives. These eight planning districts generally enjoyed high rates of participation among OB/GYNs prior to September 2004, ranging from a low of 2.1 participating OB/GYNs per 1,000 MEW in the Central Virginia planning district to a high of 8.34 OB/GYNs per 1,000 MEW in the Fifth planning district.

Gains after September 2004 were proportionally and significantly larger in Adequately Served and Partially Underserved planning districts than in Medically Underserved planning districts. Reimbursement rate increases are a more effective mechanism for increasing participation in these areas precisely because Adequately Served and Partially Underserved districts enjoy a larger number of potential participants. The cost-effectiveness of reimbursement rate increases in augmenting the number of participating physicians is less clear,

and expanding capitated managed care plans in these areas may be a more cost-effective approach to addressing recipient access to medical services.

Policies directed toward increasing the supply of physicians are needed to address physician participation in Medically Underserved planning districts. Medically Underserved planning districts had lower OB/GYN participation rates before September 2004, and following the reimbursement rate increase Medically Underserved planning districts experienced an increase of 36% in total OB/GYN participation, significantly smaller than the 45% and 49% gains seen in Adequately Served and Partially Underserved planning districts, respectively. Clearly, reimbursement rate increases fail to address the underlying issue of low physician supply in these areas, and are therefore an insufficient means of increasing physician participation.

As shown in the Nine-State Comparative Analysis, states have pursued several courses of action attempting to address this fundamental problem that do not depend upon broad-based fee increases. Across the board, states preferred to implement innovative structural changes in order to increase physician participation, physician supply, and recipient access. Policy actions taken by other states include primarily the expansion of MMCOs into rural and underserved areas, and the creation of non-governmental organizations that constitute a network of health care providers catering to Medicaid recipients and other low-income individuals. In the following section, several policy options focused on addressing the supply of physicians will be explored, utilizing the aforementioned findings and conclusions as a guide.

Policy Recommendations

Several distinct trends that emerge from the Virginia Quantitative Analysis and the Nine-State Comparative Analysis should be considered in future policy development. The broadest trend is that increased reimbursement rates tend to induce increased physician participation; however, there is serious question as to whether the mechanism of increased reimbursement rates can adequately remedy the supply shortage facing MUAs. Therefore, future policy designed to increase physician participation should not be limited to reimbursement rate increases, but should also include measures to specifically address the chronically inadequate supply of physicians in MUAs.

The following policy recommendations are potential actions that could be incorporated into future policy designed to increase the aggregate number of physicians participating in Medicaid and reduce the discrepancy in medical service levels enjoyed by Medicaid recipients and populations at large across the state. The recommendations are broadly grouped into three categories: Non-Governmental Action, Supply Specific Remedies, and Potential for Expanded Managed Care.

Non-Governmental Action

Virginia enjoys one of the best free health clinic systems in the country as a direct result of the minimal Medicaid eligibility afforded to low-income adults in the Commonwealth. The Virginia Association of Free Clinics (VAFC) was established in 1993 as a private, non-profit organization with the specific intent of providing health care to the more than 1,061,000 uninsured Virginians. The VAFC is comprised of 48 free clinics across the state, and it serves as

a crucial safety net by being of one of the largest providers of health care to Virginia's uninsured population.²¹

The VAFC has created an unparalleled infrastructure with its system of 48 clinics, volunteer force of 9,200 individuals, and partnerships with health-related organizations. Within this infrastructure the VAFC and its free clinics are able to capitalize upon the donated or significantly discounted time, services, medications, and facilities available to them to provide over \$85 million of medical services per year at an extremely efficient rate of \$5.40 worth of services for every \$1 spent. In addition, over 75% of the funding for free clinics comes from private sources, while the state provided less than \$1.5 million in FY2007.

However, free clinics are primarily designed to provide care to uninsured individuals, not Medicaid recipients, and the VAFC system does not reach many of the MUAs in Virginia. This disparity leaves the door open for two potential state sponsored non-governmental actions to meet uninsured and Medicaid recipient demand for healthcare in MUAs. First, the state could increase the ability of the existing Free Clinic System to promulgate into MUAs by increasing yearly contributions to the System. In return, the VAFC could agree to serve Medicaid recipients on a FFS basis.

Another option that would not require the VAFC to alter its practices would be the creation of a non-governmental association such as the Nevada Rural Hospital Partners (NRHP). The NRHP is a non-profit association of rural hospitals with the direct intent of promoting the viable expansion of hospitals into rural communities. A similar association in Virginia could work with the VAFC, the Virginia Department of Health's Division of Rural Health and Primary Care, and DMAS to explicitly facilitate the development of hospitals and medical practices in MUAs to increase access to medical services. In return for the assistance provided, the

²¹ Virginia Association of Free Clinics

association and its member hospitals and medical practices would agree to participate in Medicaid FFS. This approach would benefit not only Medicaid recipients in MUAs but also the general population in these areas as the supply of health professionals, and thus access to medical care, would be increased.

Supply Specific Remedies

In the long run, the most cost effective approach for Virginia might be to increase the number of doctors graduating from Virginia medical schools. There is clearly excess demand for medical schools given that the prestigious medical schools of Virginia accept only a small fraction of the total applicants each year. By increasing the number of new doctors entering practice from Virginia medical schools each year it is probable that additional doctors would decide to practice in MUAs. However, given the relative allure of urban and suburban communities, with higher per capita incomes and higher population densities, increasing the number of physicians graduating medical school in Virginia may be ineffective unless physicians had compelling incentives to practice in MUAs.

A second option that more directly attempts to address the supply issue facing MUAs is an expansion of the currently under funded Virginia State Loan Repayment Program (VA LRP). The VA LRP uses state funds to provide participating health professionals up to \$25,000 per year in education related loan forgiveness for physicians and nurses who elect to practice in MUAs for a minimum of two years.²² Despite the theoretical appeal of directing health professionals to MUAs via an incentive based system like the VA LRP, the program is under funded and underutilized. In light of the \$15 million per year spent to bring 70 Medicaid FFS participating OB/GYNs to MUAs under the September 2004 reimbursement rate increases, serious

²²Virginia Department of Health

consideration should be given to expanding this program as it may offer significant cost-effectiveness over increased reimbursement rates.

The third policy option that could be pursued to increase the number of physicians and nurses practicing in MUAs can be viewed as an extension of the VA LRP. Providing loan forgiveness to health professionals practicing in MUAs serves the purpose of increasing access to health services in the community that receives the health professional. However, if the community is not receptive to the health professional who sets up practice in the area because he or she is perceived as an outsider, the citizens of the community are no better served. Therefore, a program could be developed that encourages children from MUAs to become health care professionals and return to practice in their Underserved communities through contingent scholarships and grants.

Additional consideration should be given to further incentivize health professionals to practice in the most desperately Underserved planning districts, which in the case of OB/GYNs would be the Piedmont, Accomack-Northampton, Crater, Rappahanock-Rapidan, Northern Neck, and Cumberland Plateau planning districts. These five planning districts would be prime locations for either a targeted expansion of the VA LRP or a pilot project to determine the effectiveness of a “Home Grown Health Professionals” program.

Potential for Expanded Managed Care

The specific population of interest in this study is the Virginia Medicaid FFS recipient population, which represents 37% of all Virginia Medicaid recipients.²³ Given that more than half of Virginia Medicaid recipients are already enrolled in managed care, the demonstrated success of other states to expand their Medicaid managed care programs, and the fact that

²³ Arellano et al, 2007.

Medicaid recipients enrolled in Medallion II are guaranteed access to physicians and hospital care, the logical question arises: Why not increase the percentage of Virginia Medicaid recipients enrolled in Medallion II?

As it stands now Medallion II enrollment and availability is most predominant in areas where managed care has traditionally thrived –Adequately Served Areas.²⁴ The reason for this is traditional Managed Care Organizations (MCOs) function as a system of health care providers and an affiliated hospital, which are predominantly found in areas with high levels of medical service. However, Medicaid managed care has struggled to penetrate MUAs where the basic infrastructure necessary to create an MCO is non-existent. Thus, expanding Medicaid managed care is not a realistic possibility for some of the most underserved areas in Virginia.

Despite the current inability of Medallion II to spread into southwestern Virginia, where it is currently unavailable, the potential for managed care expansion should be further investigated. It may be possible that more flexible MCOs such as modified Preferred Provider Organizations (PPOs) or Point-Of-Service Plans (POSSs) could offer the flexibility needed for Medallion II to penetrate the MUAs of southwestern Virginia while also guaranteeing recipients' access to participating physicians. As managed care, the practice of medicine, and the areas untouched by Medallion II continue to evolve, additional research should be conducted to evaluate the potential for managed care to offer a solution to the access issue, currently a characteristic of many of these communities.

²⁴ “Managed Care Coverage Map,” 2006.

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Appendices

Appendix A: Summary of Medicaid Fee-For-Service Participating OB/GYNs by Virginia Planning District and Municipality

Planning District	Municipality	Before	After	Change	% Change
1 – Lenowisco		19	24	5	26%
	LEE	2	2	0	0%
	SCOTT	0	0	0	0%
	WISE	4	6	2	50%
	NORTON CITY	13	16	3	23%
2 - Cumberland Plateau		12	14	2	17%
	BUCHANAN	5	6	1	20%
	DICKENSON	1	1	0	0%
	RUSSELL	1	1	0	0%
	TAZEWELL	5	6	1	20%
3 - Mount Rogers		25	39	14	56%
	BLAND	0	0	0	0%
	CARROLL	0	0	0	0%
	GRAYSON	0	0	0	0%
	SMYTH	4	6	2	50%
	WASHINGTON	13	18	5	38%
	WYTHE	4	11	7	175%
	BRISTOL CITY	0	0	0	0%
	GALAX CITY	4	4	0	0%
4 - New River Valley		33	42	9	27%
	FLOYD	1	1	0	0%
	GILES	2	2	0	0%
	MONTGOMERY	26	34	8	31%
	PULASKI	1	1	0	0%
	RADFORD CITY	3	4	1	33%
5 – Fifth		90	116	26	29%
	ALLEGHANY	1	2	1	100%
	BOTETOURT	0	0	0	0%
	CRAIG	0	0	0	0%
	ROANOKE	7	9	2	29%
	CLIFTON FORGE CITY	0	0	0	0%
	COVINGTON CITY	1	1	0	0%
	ROANOKE CITY	74	97	23	31%
	SALEM CITY	7	7	0	0%

6 - Central Shenandoah		38	46	8	21%
	AUGUSTA	15	19	4	27%
	BATH	1	1	0	0%
	HIGHLAND	0	0	0	0%
	ROCKBRIDGE	0	0	0	0%
	ROCKINGHAM	0	0	0	0%
	BUENA VISTA CITY	0	0	0	0%
	HARRISONBURG CITY	16	17	1	6%
	LEXINGTON CITY	2	3	1	50%
	STAUNTON CITY	4	6	2	50%
	WAYNESBORO CITY	0	0	0	0%
7 - Lord Fairfax		26	32	6	23%
	CLARKE	0	0	0	0%
	FREDERICK	0	0	0	0%
	PAGE	0	0	0	0%
	SHENANDOAH	7	7	0	0%
	WARREN	3	5	2	67%
	WINCHESTER CITY	16	20	4	25%
8 - Northern Virginia		264	409	145	55%
	ARLINGTON	34	54	20	59%
	FAIRFAX	71	114	43	61%
	LOUDOUN	25	39	14	56%
	PRINCE WILLIAM	27	67	40	148%
	ALEXANDRIA CITY	23	27	4	17%
	FAIRFAX CITY	16	21	5	31%
	FALLS CHURCH CITY	43	48	5	12%
	MANASSAS CITY	25	39	14	56%
	MANASSAS PARK CITY	0	0	0	0%
9 - Rappahannock-Rapidan		8	9	1	13%
	CULPEPER	2	3	1	50%
	FAUQUIER	4	4	0	0%
	MADISON	0	0	0	0%
	ORANGE	2	2	0	0%
	RAPPAHANNOCK	0	0	0	0%
10 - Thomas Jefferson		47	60	13	28%
	ALBEMARLE	3	7	4	133%
	FLUVANNA	0	0	0	0%
	GREENE	0	0	0	0%
	LOUISA	0	0	0	0%
	NELSON	0	0	0	0%
	CHARLOTTESVILLE CITY	44	53	9	20%
11 - Central Virginia		26	37	11	42%

	AMHERST	0	0	0	0%
	APPOMATTOX	0	0	0	0%
	BEDFORD	4	5	1	25%
	CAMPBELL	0	0	0	0%
	LYNCHBURG CITY	19	28	9	47%
	BEDFORD CITY	3	4	1	33%
12 - West Piedmont		27	37	10	37%
	FRANKLIN	2	6	4	200%
	HENRY	2	2	0	0%
	PATRICK	1	1	0	0%
	PITTSYLVANIA	0	0	0	0%
	DANVILLE CITY	15	18	3	20%
	MARTINSVILLE CITY	7	10	3	43%
13 – Southside		10	19	9	90%
	BRUNSWICK	1	4	3	300%
	HALIFAX	5	6	1	20%
	MECKLENBURG	4	9	5	125%
14 – Piedmont		2	2	0	0%
	AMELIA	0	0	0	0%
	BUCKINGHAM	0	0	0	0%
	CHARLOTTE	0	0	0	0%
	CUMBERLAND	0	0	0	0%
	LUNENBURG	0	0	0	0%
	NOTTOWAY	0	0	0	0%
	PRINCE EDWARD	2	2	0	0%
15 - Richmond Region		150	203	53	35%
	CHARLES CITY	0	0	0	0%
	CHESTERFIELD	22	43	21	95%
	GOOCHLAND	1	1	0	0%
	HANOVER	12	15	3	25%
	HENRICO	54	78	24	44%
	NEW KENT	0	0	0	0%
	POWHATAN	0	0	0	0%
	RICHMOND CITY	61	66	5	8%
16 – RADCO		44	77	33	75%
	CAROLINE	0	0	0	0%
	KING GEORGE	1	1	0	0%
	SPOTSYLVANIA	2	2	0	0%
	STAFFORD	5	11	6	120%
	FREDERICKSBURG CITY	36	63	27	75%
17 - Northern Neck		5	5	0	0%
	LANCASTER	5	5	0	0%

	NORTHUMBERLAND	0	0	0	0%
	RICHMOND	0	0	0	0%
	WESTMORELAND	0	0	0	0%
18 - Middle Peninsula		7	11	4	57%
	ESSEX	2	4	2	100%
	GLOUCESTER	5	7	2	40%
	KING AND QUEEN	0	0	0	0%
	KING WILLIAM	0	0	0	0%
	MATHEWS	0	0	0	0%
	MIDDLESEX	0	0	0	0%
19 – Crater		12	13	1	8%
	DINWIDDIE	0	0	0	0%
	GREENSVILLE	0	0	0	0%
	PRINCE GEORGE	0	0	0	0%
	SURRY	0	0	0	0%
	SUSSEX	0	0	0	0%
	COLONIAL HEIGHTS CITY	1	1	0	0%
	HOPEWELL CITY	2	2	0	0%
	PETERSBURG CITY	7	9	2	29%
	EMPORIA	2	1	-1	-50%
20 - Hampton Roads		157	211	54	34%
	ISLE OF WIGHT	0	0	0	0%
	SOUTHAMPTON	0	0	0	0%
	CHESAPEAKE CITY	37	53	16	43%
	FRANKLIN CITY	4	5	1	25%
	NORFOLK CITY	65	78	13	20%
	PORTSMOUTH CITY	4	9	5	125%
	SUFFOLK CITY	10	15	5	50%
	VIRGINIA BEACH CITY	37	51	14	38%
21 - Norfolk/Virginia Beach		63	91	28	44%
	JAMES CITY	7	10	3	43%
	YORK	1	1	0	0%
	HAMPTON CITY	13	16	3	23%
	NEWPORT NEWS CITY	41	63	22	54%
	POQUOSON CITY	0	0	0	0%
	WILLIAMSBURG CITY	1	1	0	0%
22 - Accomack-Northampton		2	3	1	50%
	ACCOMACK	0	0	0	0%
	NORTHAMPTON	2	3	1	50%

Appendix B. Alphabetical List of Acronyms Used in Report

ADFC-Related Medicaid	Aid to Dependent Families with Children-Related Medicaid
AHCCC	Arizona Health Care Cost Containment
BAY Plan	Alabama Better Access for You
FFS	Fee-for-Service
FIPS	Federal Information Processing Standards
FPL	Federal Poverty Line
FY	Fiscal Year
MCO	Managed Care Organization
MEW	Medicaid FFS Eligible Women
MMCO	Medicaid Managed Care Organization
MUA	Medically Underserved Area
NRHP	Nevada Rural Hospital Partners
OB/GYN	Obstetrician/Gynecologist
POS Plan	Point-of-Service Plan
PPO	Preferred Provider Organization
VA DHP	Virginia Department of Health Professionals
VA DMAS	Virginia Department of Medical Assistance Services
VA DOH	Virginia Department of Health
VA LRP	Virginia State Loan Repayment Program
VAFC	Virginia Association of Free Clinics