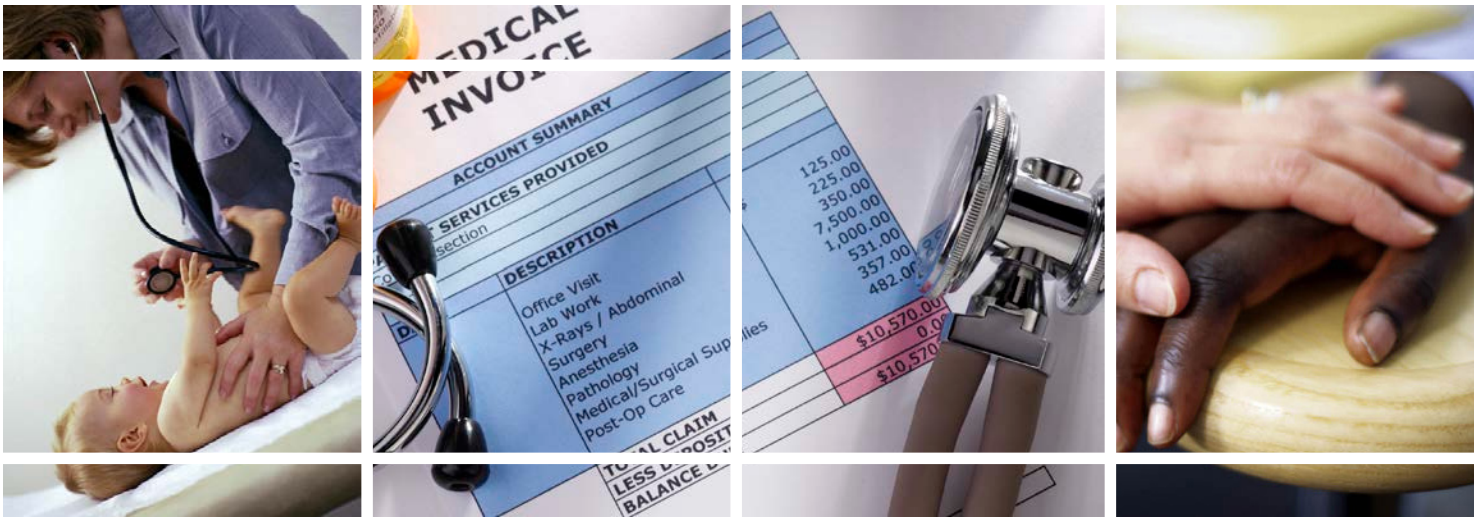
JLARC
JOINT LEGISLATIVE AUDIT AND REVIEW COMMISSION

REPORT TO THE
GOVERNOR AND THE GENERAL ASSEMBLY OF VIRGINIA



Review of the Impact of Medicaid Rates on Access to Health Care in Virginia

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COMMONWEALTH of VIRGINIA

Joint Legislative Audit and Review Commission
201 North 9th Street, General Assembly Building, Suite 1100
Richmond, Virginia 23219

Hal E. Greer
Director

(804) 786-1258

February 14, 2014

The Honorable John M. O'Bannon III, Chair
Joint Legislative Audit and Review Commission
General Assembly Building
Richmond, Virginia 23219

Dear Delegate O'Bannon:

Senate Joint Resolution 92 of the 2012 General Assembly directed the Joint Legislative Audit and Review Commission to review the effect of Medicaid payment policies on access to health care services and to propose metrics for measuring Medicaid enrollees' access to care over time.

The final report was briefed to the Commission and authorized for printing on November 12, 2013. On behalf of the Commission staff, I would like to thank the staff at the Department of Medical Assistance Services, Department of Health Professions, Department of Health, Department of Behavioral Health and Developmental Services, and Virginia Health Information, for assistance during this review. I would also like to acknowledge the staff of the Virginia Hospital and Healthcare Association, who have been very accommodating to our research team.

Sincerely,

Hal E. Greer

Hal E. Greer
Director

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Abbreviations Used in This Report

ACA	Affordable Care Act
CMS	Centers for Medicare and Medicaid Services
CAHPS	Consumer Assessment of Healthcare Providers and Systems
CPT	Medical procedure code
CSB	Community Services Boards
DBHDS	Department of Behavioral Health and Developmental Services
DHP	Department of Health Professions
DMAS	Department of Medical Assistance Services
DOC	Department of Corrections
DPB	Department of Planning and Budget
DRG	Diagnostic related group
DSH	Disproportionate Share Hospital
FFS	Fee-for-service
FPL	Federal poverty level
FQHCs	Federally Qualified Health Centers
GME	Graduate Medical Education
HCBS	Home and community-based services
HEDIS	Healthcare Effectiveness Data and Information Set
IME	Indirect Medical Education
MACPAC	Medicaid and CHIP Payment and Access Commission
MedPAC	Medicare Payment Advisory Commission
MCO	Managed care organization
MIRC	Medicaid Innovation and Reform Commission
OB/GYNs	Obstetricians and gynecologists
PCP	Primary care physician
PPS	Prospective payment system
RBRVS	Resource-Based Relative Value Scale
SSI	Supplemental Security Income
TANF	Temporary Assistance for Needy Families
UVA	University of Virginia Medical Center
VCU	Virginia Commonwealth University Health System
VDH	Virginia Department of Health
VHI	Virginia Health Information
VIEW	Virginia Initiative for Employment not Welfare

JLARC Report Summary:

Review of the Impact of Medicaid Rates on Access to Health Care in Virginia

Key Findings

- Medicaid enrollees appear able to access prescription drugs, acute hospital-based care, and nursing home care. Access to these services appears comparable to the general population both statewide and regionally (Chapter 2).
- Enrollees appear generally able to access primary care, outpatient hospital services, and hospital-based psychiatric care, but enrollees living in certain regions may have difficulty obtaining these services. Enrollees appear to have the lowest access to specialty care, outpatient mental health care, and dental care for children (Chapter 2).
- Medicaid payments to most physicians have not changed much during the past 10 years. Physicians have received approximately 70 to 80 percent of Medicare rates since FY 2008 for emergency and primary care services, but more for some specialty services such as obstetrics and gynecology. Hospitals and nursing homes have been reimbursed for an average of 78 and 94 percent of the cost of providing care, respectively, over the past 10 years (Chapter 3).
- Numerous studies and surveys have found that increasing Medicaid reimbursement rates has a moderate, positive effect on provider willingness to treat Medicaid patients (Chapter 4).
- No comprehensive information on access to care for Medicaid enrollees is currently available to State policymakers. Access to care should be assessed on an ongoing basis, especially in light of significant anticipated changes to Virginia's Medicaid program (Chapter 6).

Senate Joint Resolution 92 of the 2012 General Assembly directed the Joint Legislative Audit and Review Commission (JLARC) to review the impact of Medicaid payment policies on access to health care services in Virginia. The mandate requires JLARC to (1) review Medicaid payment policies for providers, including hospitals, physicians, and nursing homes; (2) identify whether Medicaid payment policies impact access to services; and (3) propose metrics for measuring Medicaid enrollees' access to care over time.

Research methods used during this review include analyses of data on the availability of providers that treat Medicaid enrollees and the types and amount of services used by enrollees; interviews with staff of the Department of Medical Assistance Services (DMAS), which oversees the State's Medicaid program; interviews with staff from agencies that oversee other health care services or that license health care providers; interviews with providers and the associations that represent them; and an extensive review of the research literature.

STATE'S MEDICAID PROGRAM FUNDS HEALTH CARE SERVICES FOR MORE THAN ONE MILLION VIRGINIANS

Virginia's Medicaid program funds health care services for eligible individuals who do not have financial means to obtain them on their own. In Virginia, eligible recipients cannot have financial resources that exceed certain thresholds. They tend to be children and their families, pregnant women, and individuals who are elderly or disabled.

Virginia's program is administered by DMAS and covers a wide variety of health care services. Federal law requires states to cover certain services such as physician, laboratory and X-ray, and acute hospital care. Virginia also provides many optional services, such as prescription drugs, vision and dental care, and physical therapy. Virginia's Medicaid enrollees obtain these services through one of two delivery models: fee-for-service or managed care. DMAS administers the fee-for-service model directly but contracts with other organizations to administer managed care. Virginia currently has seven managed care organizations that coordinate care for Medicaid enrollees.

In FY 2012, the State spent $7 billion to pay for health care services for more than one million enrollees, making it the largest State program in terms of expenditures. Half of this appropriation ($3.5 billion) was from the State general fund. This equated to approximately 20 percent of the total general fund appropriation.

The vast majority of Medicaid expenditures are in 10 major service categories, which represented 90 percent of total Medicaid spending in FY 2011. An assessment of access to care was performed on the services that represent most of the largest sources of expenditures (Table, page iii).

MEDICAID ENROLLEES APPEAR GENERALLY ABLE TO ACCESS SIX OF THE NINE MAJOR SERVICES REVIEWED

Medicaid enrollees in Virginia appear to have the highest level of access to prescription drugs, acute hospital care, and nursing home care, as compared to other services (Figure, page iii). Access to these services is expected to be comparable to access for the general population, because all hospitals, most pharmacies, and the majority of nursing homes provide services to Medicaid enrollees. Regional variation for these services tends to be minimal and affects the general population in the same way as Medicaid enrollees.

Enrollees also appear generally able to access primary care and hospital-based outpatient and psychiatric care, but some enrollees may have more difficulty obtaining these services than others. The

Ten Service Categories Account for the Vast Majority of Health Care Expenditures by Virginia's Medicaid Program (FY 2011)

Major service category	FY 2011 Expenditures ($M)	% of Total Expenditures	Included in JLARC Review
Inpatient hospital care (acute and psychiatric)	$1,336.6	19.7%	✓
Home and community based waiver services[a]	1,053.6	15.6	
Nursing facility care	821.9	12.1	✓
Prescription drugs	583.5	8.6	✓
Outpatient mental health services	513.5	7.6	✓
Outpatient hospital services	473.1	7.0	✓
Physician services (primary and specialty care)	515.5	7.6	✓
Medicare premiums	402.1	5.9	
Intermediate care facility[b] public and private care	273.6	4.0	
Dental care	135.2	2.0	✓
Subtotal, top 10 service categories	**$6,108.7**	**90.2%**	
Other services	666.4	9.8%	
Total, all service categories	**$6,775.1**	**100.0%**	

[a] Personal care and habilitative services.
[b] Institutions for persons with intellectual disabilities.

Note: Excludes expenditures for administrative functions.

Source: JLARC staff analysis of data provided by DMAS and PricewaterhouseCoopers (the actuary that develops the capitation rates for the MCOs).

Medicaid Enrollees Are Generally Able to Access Six of the Nine Major Services Reviewed

Medicaid Services	Access Rating[a]
(1) Prescription Drugs (2) Acute Hospital Care (3) Nursing Home Care	 Higher ability to access care, statewide and regionally. Comparable to the general population.
(4) Primary Care (5) Outpatient Hospital Care (6) Hospital-Based Psychiatric Care	 Generally able to access care. Difficulty obtaining care in some regions.
(7) Specialty Care (8) Outpatient Mental Health Care (9) Dental Care for Children	 Lower ability to access care, statewide and regionally.

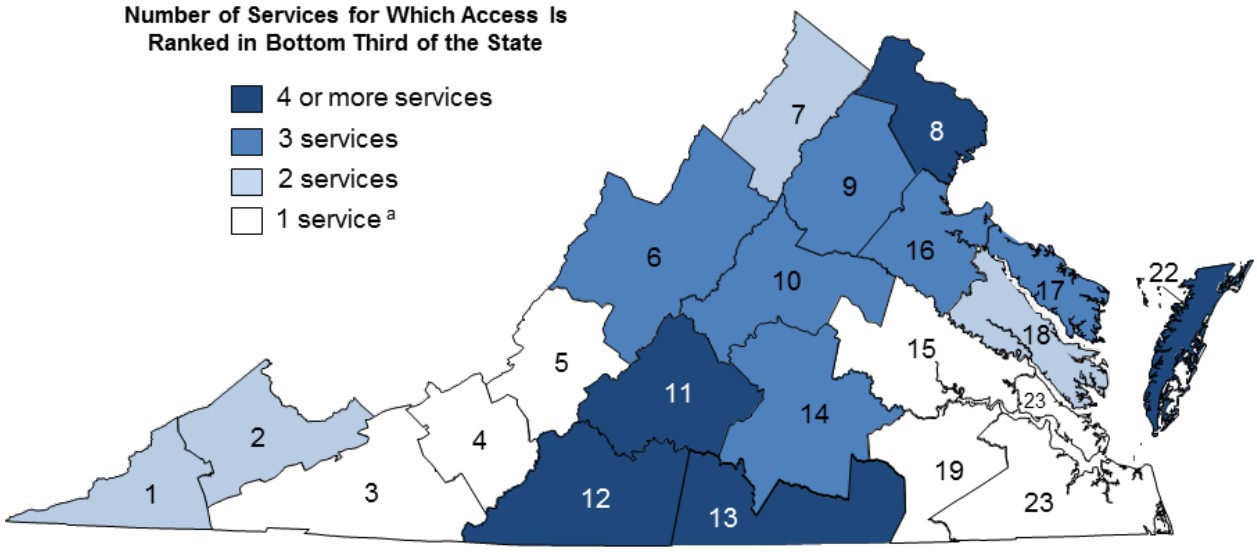
[a] Compared to other services.

Note: Virginia's Medicaid program covers dental care primarily for children. Surgical procedures are covered for adults. Source: JLARC staff analysis.

availability of providers and/or the use of these services varies—moderately to widely—across all regions of the State.

Enrollees appear to experience the most difficulty accessing specialty, mental health, and dental care, primarily because fewer than half of these types of providers participate in the Medicaid program. While the number of dentists available to treat children enrolled in Medicaid remains small, the availability of dentists and percentage of children receiving care has increased substantially since 2005.

Five Planning Districts Ranked in Bottom Third for Access to Multiple Health Care Services for Medicaid Enrollees



[a] Every planning district was in the bottom third of the State for at least one health care service.

Note: Appendix C includes a map that identifies localities within each planning district.

Source: JLARC staff analysis of DMAS, VDH, and VHI data.

Access to care varies among the regions of the State for all the services reviewed, but to varying degrees. Regions where Medicaid enrollees tend to have the most difficulty accessing health care services include the Accomack-Northampton, Region 2000, Southside, and West Piedmont planning districts. These regions are rural and tend to have fewer providers and a lower percentage of enrollees obtaining care relative to other regions. Enrollees living in these regions represent less than 10 percent of the State's total Medicaid population. Enrollees in Northern Virginia tend to

use fewer services, possibly because the population consists of proportionately more women and children and fewer elderly and disabled people than in other areas.

MEDICAID RATES TEND TO BE LOWER THAN RATES OF OTHER PAYERS AND THE COST OF PROVIDING CARE

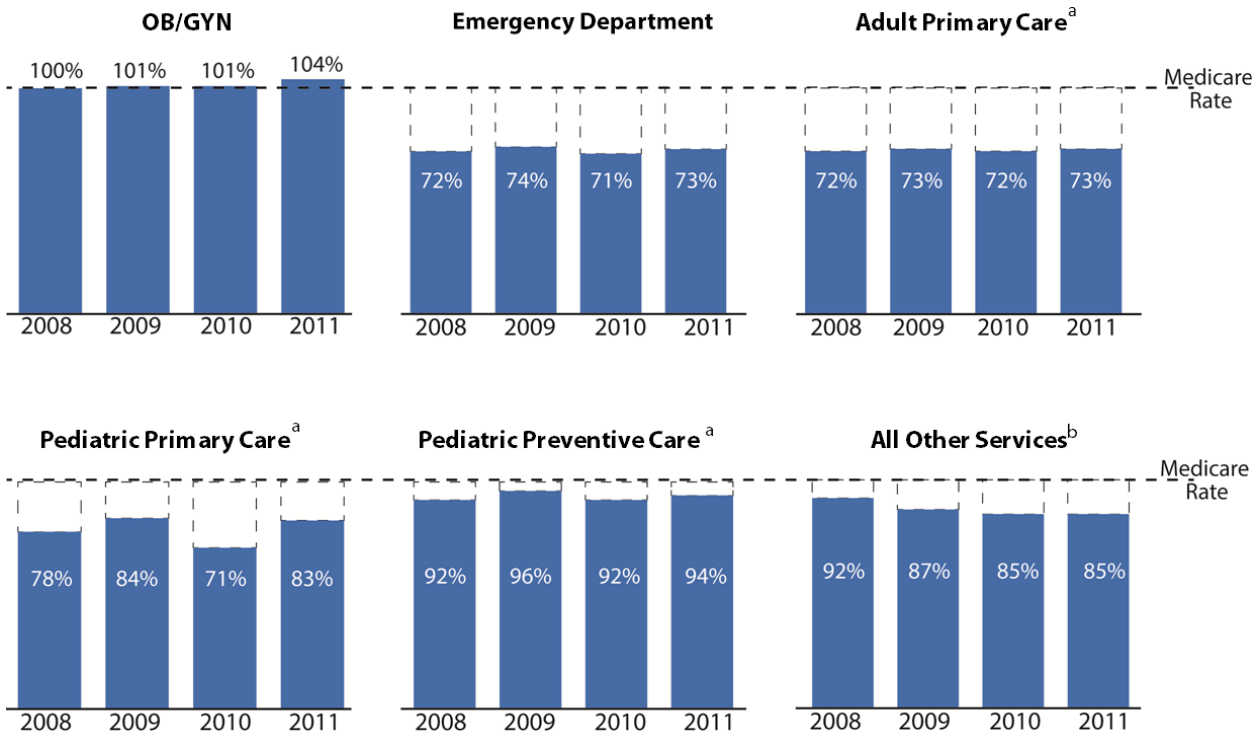
Virginia's Medicaid program pays most providers less than other payers, such as Medicare, and less than the cost of providing care. The Medicaid program has paid physicians approximately 70 to 80 percent of the Medicare rate for providing emergency and primary care services, but rates paid to some specialists are higher. In recent years, Medicaid rates for emergency department physicians and primary care physicians for adults have tended to be the lowest, and rates for obstetricians and gynecologists (OB/GYNs) have been the highest (Figure, page vi).

Only a few types of physicians have received sizable rate increases in the past decade. The providers that received the largest rate increases were OB/GYNs (34 percent) and dentists (30 percent). A few other providers, such as primary care physicians and pediatricians, received increases during the period studied, but on a smaller scale. Virginia's Medicaid program pays physicians 80 percent of Medicare rates, on average, which is higher than 30 other states.

In Virginia, most hospitals are not reimbursed for their full costs of treating Medicaid enrollees. However, their cost recovery percentages have been relatively consistent over the past 10 years, suggesting that the adequacy of Medicaid payments has not changed. On average, most general hospitals have been reimbursed for 78 percent of their Medicaid costs since FY 2003 (including supplemental payments). However, cost recovery rates for hospitals have ranged widely among facilities due to the variation in supplemental payments they receive for treating a high volume of Medicaid enrollees or because they are teaching hospitals. Virginia Commonwealth University Health System and the University of Virginia Medical Center have received 84 percent of these additional payments over the past decade to fully offset the cost of treating Medicaid enrollees and to offset the uncompensated care they provide to uninsured patients.

The average cost recovery rates for nursing homes are higher than for hospitals because the majority of their patients are Medicaid enrollees. Although nursing homes, on average, have been reimbursed consistently for almost all (94 percent) of their costs for treating Medicaid enrollees over the past decade, unreimbursed costs are still substantial (averaging $52 million per year), even after adjusting for inflation.

Virginia's Medicaid Rates for Physician Services Have Been Lower Than Medicare Rates, Except for OB/GYN Services (2008–2011)



[a] Physicians are being reimbursed for these primary care services (adult and pediatric) at 100 percent of the Medicare rate in 2013 and 2014, which is a temporary two-year increase under the federal Affordable Care Act.

[b] Includes care provided by psychiatrists.

Note: DMAS did not complete a Medicaid-to-Medicare comparison in 2012.

Source: JLARC staff analysis of information provided by DMAS.

INCREASING MEDICAID RATES APPEARS TO HAVE POSITIVE IMPACTS ON PROVIDER PARTICIPATION AND ACCESS TO CARE

A large number of empirical studies and surveys have found that increasing Medicaid payment rates appears to positively affect provider willingness to treat Medicaid patients. While the size of the impact varies, the effect is moderate. An increase in Medicaid rates of about 10 percentage points was found to increase provider participation by three to four percentage points. Rates have a larger impact on providers in office settings than in institutional settings, such as hospitals or clinics, because reimbursement for institution-based providers tends to be higher, particularly if they treat a large proportion of Medicaid enrollees. The results of these studies are consistent with findings from physician surveys and "secret shopper" studies that used trained interviewers to pose as patients and call providers' offices asking to make an appointment.

An analysis of Medicaid rate increases given to OB/GYNs and pediatricians in Virginia within the past 10 years does not show evidence of an increase in provider participation. Although the number of OB/GYNs and pediatricians participating in Medicaid rose in the two years following their rate increases, the number of other Medicaid physicians rose also, even though other types of physicians did not receive a rate increase. The general growth in the number of Medicaid providers makes it difficult to identify a specific effect due to rate changes. The very small number of Medicaid rate changes in Virginia over the past decade means little State-specific information is available to test the effects of rates on provider participation.

Given the limited information on the effects of Medicaid rate changes in Virginia, the best available evidence is the national research, which found that Medicaid rates have at least a modest effect on access to health care. These causal studies are consistent with the results of physician surveys and secret shopper studies, and in accord with the basic economic principle that an increase in price should lead to an increase in supply.

UPCOMING CHANGES TO MEDICAID PROGRAM COULD IMPACT FUTURE ACCESS

Virginia's Medicaid program may undergo several changes in the next few years that could impact enrollees and providers in the future. These changes may ultimately improve access to care and in some cases may hinder it. The most far-reaching of these changes is the expansion of Medicaid eligibility under federal health care reform, which Virginia may adopt if certain changes to the State's Medicaid program are made.

The expansion of Medicaid eligibility in Virginia is expected to result in enrollment growth of approximately 25 percent, or 248,000 individuals, above 2012 levels. The current network of providers for Medicaid enrollees may be overburdened in the short term, according to staff of managed care organizations, which may decrease access to services for Medicaid enrollees who are currently eligible. However, access to health care should improve for those currently-uninsured Virginians who would qualify for Medicaid under expansion.

DMAS is making other changes to the Medicaid program, which include reimbursing hospitals for treating eligible prison inmates through Medicaid rather than with State general funds. DMAS estimates that the State will reduce general fund spending by $1.4 million by using Medicaid to pay for acute hospital care for eligible inmates. The State had been paying the full cost of treating these inmates, but will pay only half the cost going forward, because the

federal government covers half of the State's payments for Medicaid services. If Virginia expands Medicaid eligibility, the State would receive more federal money for providing inpatient care to inmates, because almost all inmates would be eligible and the federal government would cover almost all of the cost. The savings to the State from expanding Medicaid to all inmates is estimated to be $12 million for FY 2014 with increased savings in subsequent years. All but one hospital is expected to receive lower total payments from the State.

ACCESS TO CARE SHOULD BE MEASURED ON AN ONGOING BASIS

Information about the adequacy of access to care for Medicaid enrollees in Virginia is limited. DMAS sets access standards for managed care organizations and requires them to collect data on several measures of access, but access is not regularly measured for fee-for-service enrollees. More systematic and ongoing evaluation of access to care would maximize the State's ability to comply with federal requirements related to ensuring access, provide a baseline for health care reform and other policy or rate changes, and help ensure Medicaid's effectiveness in providing care.

The General Assembly may wish to require DMAS to produce an annual report measuring access for a subset of Medicaid services, and every service should be reviewed at least every five years. This schedule is consistent with a rule proposed by CMS, expected to be finalized in 2014, which would require states to monitor access. If the final rule maintains this schedule, the report should be designed to meet the CMS requirements. The report could be submitted to the Health and Human Resources Subcommittees of the House Appropriations and Senate Finance Committees, the Medicaid Innovation and Reform Commission, the Joint Commission on Health Care, and the Secretary of Health and Human Resources.

The report should include specific measures of provider participation, enrollee utilization of services, and direct feedback from enrollees on their ability to access services. The measures suggested in this report are consistent with the access framework developed by the federal Medicaid and CHIP Payment and Access Commission, and the federal government's proposed rule on methods for assuring access to Medicaid.

Chapter 1

State's Medicaid Program Funds Health Care Services for More Than One Million Virginians

In Summary

The Medicaid program funds health care services for eligible individuals who do not have financial resources to obtain them on their own. In Virginia, eligible recipients tend to be children and their families, pregnant women, and individuals who are elderly or disabled and have financial resources below certain thresholds. Virginia's program is administered by the Department of Medical Assistance Services (DMAS) and covers a wide variety of health care services, such as physician visits, mental health services, and nursing home stays. Health care providers are either paid directly by DMAS or reimbursed by a managed care organization that contracts with DMAS to oversee and pay providers. In FY 2012, the State spent $7 billion to pay for health care services for more than one million enrollees, making it the largest State program in terms of expenditures. Half of this appropriation ($3.5 billion) was from the State general fund, which equated to approximately 20 percent of total general fund appropriations.

The federal government, which funds a portion of each state's Medicaid program, requires states to ensure that provider payments are sufficient to enlist enough health care professionals to care for Medicaid enrollees. Providers and representatives of professional health care associations have expressed the concern that low Medicaid rates negatively impact the willingness of providers to serve enrollees. Medicaid reimbursement rates in Virginia tend to be lower than rates paid by other payers, such as Medicare and private insurers, and some rates have been flat or have declined over the past decade. For Medicaid enrollees, access to care ultimately depends on there being enough providers who are willing to serve them.

Medicaid reimbursement rates are commonly understood to directly affect provider willingness to treat Medicaid enrollees. To gain further insight into how Medicaid payment policies impact provider availability and access to health care services for Virginians, the 2012 General Assembly adopted Senate Joint Resolution 92 (Appendix A). Specifically, the mandate directs JLARC staff to

- examine Medicaid enrollees' access to services, including primary, trauma, obstetric, psychiatric, and nursing care;
- review Medicaid payment policies for providers, including hospitals, physicians, and nursing homes;
- identify whether Medicaid payment policies impact access to services; and
- propose metric(s) for measuring Medicaid enrollees' access to care over time.

To conduct this study, JLARC staff interviewed staff from the Department of Medical Assistance Services (DMAS), Department of Health Professions (DHP), Virginia Department of Health (VDH), Department of Behavioral Health and Developmental Services (DBHDS), provider groups, managed care organizations, providers, and other stakeholders in Virginia. JLARC staff also analyzed administrative data obtained from DMAS, DHP, VDH, and Virginia Health Information. Staff performed an extensive review of the research literature and documents from DMAS, the Centers for Medicare and Medicaid Services, and other organizations. (See Appendix B for more detail on the research methods used for this study.)

Patient Protection and Affordable Care Act (ACA)

Congress passed the ACA in 2010, which would have required states to expand eligibility guidelines for their Medicaid programs by 2014.

In 2012, the Supreme Court ruled that expansion of eligibility guidelines under the ACA is optional for states.

Medicaid expansion in Virginia would result in an estimated additional 248,000 eligible Virginians, according to DMAS.

MEDICAID PROGRAM FUNDS HEALTH CARE SERVICES FOR ELIGIBLE VIRGINIANS

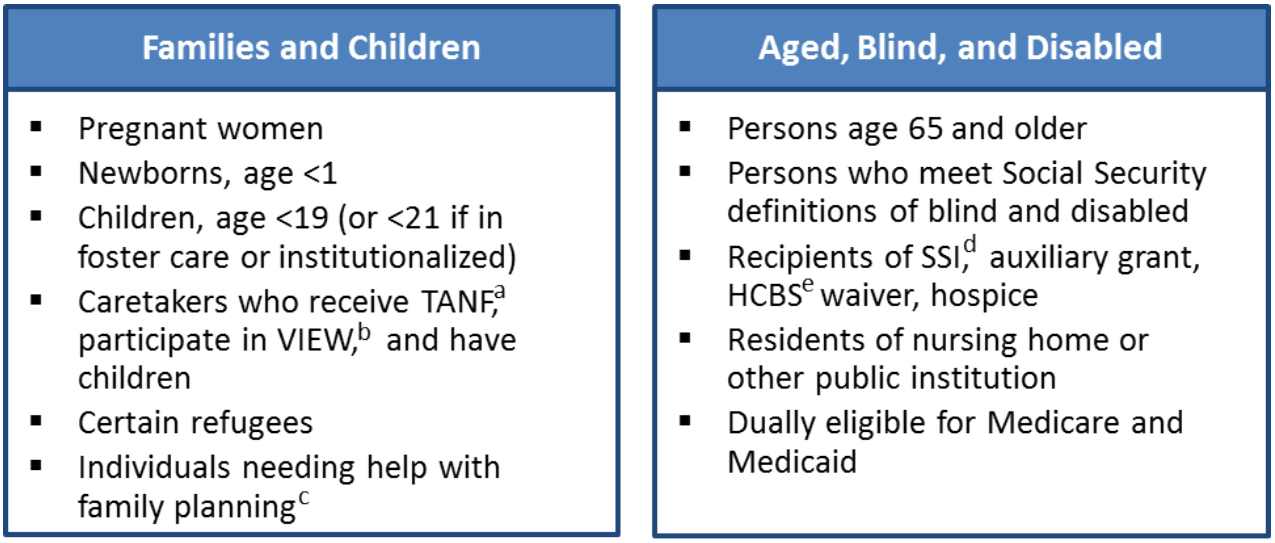
Medicaid is an entitlement program that was authorized in 1965 under Title XIX of the federal Social Security Act. The program is financed by state and federal governments and administered at the state level. The purpose of the program is to fund health care services for qualifying individuals who do not have the financial resources to obtain them on their own.

Virginians Must Meet Certain Eligibility Criteria to Receive Health Care Funded by the State's Medicaid Program

While the Medicaid program is designed to help low-income individuals obtain health care, eligibility is dependent on other criteria as well. Specifically, Virginia's eligibility guidelines are based on financial need and either the need for medical care, participation in certain benefit programs, or receipt of certain services. Individuals who meet these requirements are typically in one of two broad groups: families and children, or individuals who are age 65 and older (aged), blind, or disabled (Figure 1).

Minimum eligibility standards are established by the federal government, but states can expand their criteria to allow more individuals to be eligible. For example, federal law requires that states adopt criteria allowing children ages six to 19 to be eligible for Medicaid if family income is 100 percent of the federal poverty level or less. In 2002, Virginia expanded its criteria to 133 percent of the federal poverty level, which is currently $31,322 for a family of four (2013). Since then, only minor changes have been made to the eligibility criteria for Virginia's Medicaid program. Virginia may expand its eligibility guidelines according to the federal Patient Protection and Affordable Care Act (ACA) if certain changes are made, as directed by the General Assembly.

Figure 1: Two Categories of Individuals Are Eligible for Virginia's Medicaid Program if They Meet Financial Requirements



[a] Temporary Assistance for Needy Families.
[b] Virginia Initiative for Employment not Welfare.
[c] Plan First services only.
[d] Supplemental Security Income payments.
[e] Home and community-based services.

Note: Income limits vary according to eligibility classification. For example, children and pregnant women must have income equal to or less than 133 percent of the federal poverty level to be eligible, but individuals who are aged, blind, or disabled must have income equal to or less than 80 percent of the federal poverty level unless they meet other requirements.

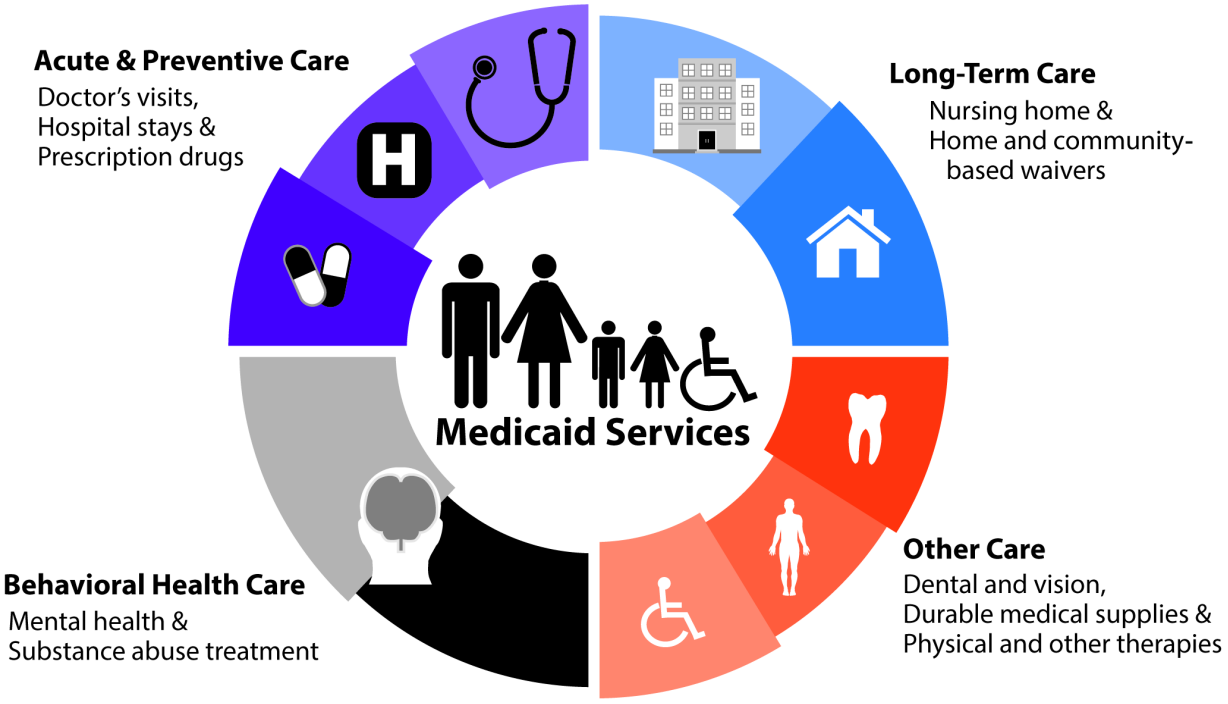
Source: Department of Medical Assistance Services, Virginia Medicaid Handbook (2012).

Virginia's Medicaid Program Covers a Variety of Services

Virginia's Medicaid program covers a wide range of health care services (Figure 2). Federal law requires states to cover certain services such as physician, laboratory and X-ray, and inpatient hospital services. Virginia also provides many optional services, such as prescription drugs, vision and dental care, and physical and other therapies.

Some services are not covered by Virginia's Medicaid program. Examples of excluded services are abortions, unless the pregnancy is life-threatening to the mother; acupuncture; certain experimental surgical or diagnostic procedures; chiropractic services; cosmetic treatment or surgery; and drugs prescribed to treat hair loss.

Figure 2: Virginia's Medicaid Program Covers a Wide Variety of Services



Note: Not inclusive of all services covered.

Source: JLARC staff review of DMAS provider manuals.

Virginia's Medicaid Program Is Administered by the Department of Medical Assistance Services

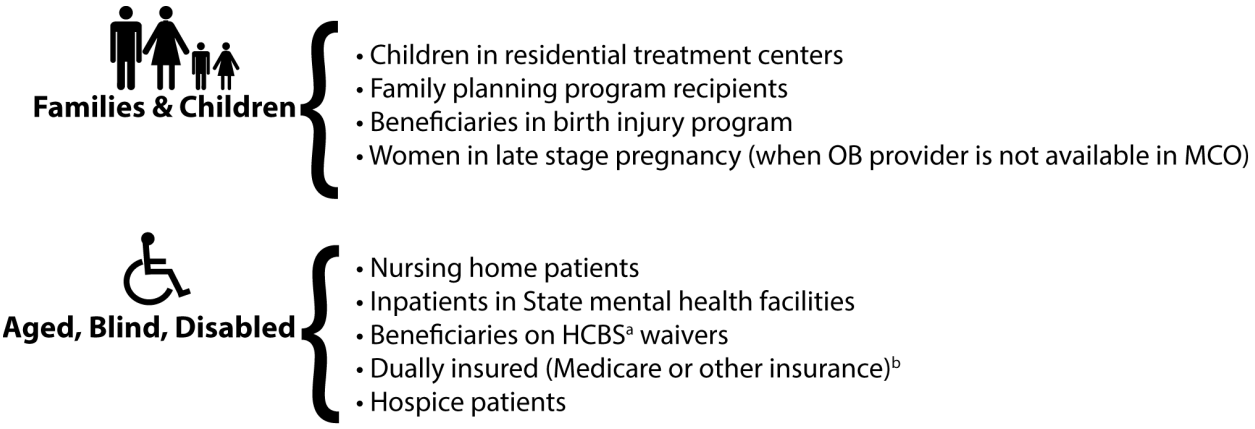
DMAS is the State agency that administers Virginia's Medicaid program. With the exception of eligibility determinations, which are handled by local departments of social services, DMAS is responsible for all functions of administering the Medicaid program, including:

- development of policies and regulations governing the Medicaid program and the services covered;
- development of reimbursement rates for paying providers, based on direction from the General Assembly;
- contracting with providers or managed care organizations to deliver health care services to Medicaid enrollees; and
- maintaining the Medicaid Management Information System, which contains information about all enrollees, the services they receive, and the providers that serve them.

HEALTH CARE SERVICES ARE PROVIDED THROUGH TWO DELIVERY MODELS

Virginia's Medicaid enrollees receive health care services that are delivered through one of two models: fee-for-service or managed care. When Virginia's Medicaid program was first created, enrollees received care only through the fee-for-service model, but managed care became available to enrollees living in the Tidewater region in 1996. The managed care model has since expanded statewide, with the far southwest region of Virginia being the last to gain managed care coverage in July 2012. Currently, Medicaid enrollees must receive health care services through managed care unless they meet certain exclusion criteria (Figure 3).

Figure 3: Services for Some Enrollees Are Excluded From Managed Care



[a] Home and community-based services.

[b] Will be transitioned to managed care beginning 2014 in some regions as part of a demonstration project. Includes dual eligible enrollees in nursing homes and home and community-based service waiver recipients.

Note: Additional exclusions apply to either eligibility group, which include: inpatients in hospitals that request exclusion until discharge and beneficiaries on spend-down or with retroactive or temporary coverage only.

Source: JLARC staff review of DMAS provider manuals and other documents.

DMAS Administers the Fee-For-Service Model

The fee-for-service model is a traditional health care model in which patients are responsible for coordinating their own care. Under this model, services are administered by DMAS through participating providers that contract directly with the agency. DMAS is responsible for enrolling providers in the fee-for-service network and ensuring that they are licensed and have other necessary credentials. DMAS is also responsible for processing claims from providers and paying them in a timely manner. Health care providers are reimbursed for each service or group of services delivered, according to the fee or rate that is developed by DMAS.

DMAS Contracts With Other Organizations to Administer Managed Care

Under the managed care model, health care services for Medicaid enrollees are administered by a managed care organization (MCO) that contracts with DMAS. The managed care model is different from the fee-for-service model because enrollee care is coordinated by a primary care provider. MCO staff help enrollees choose providers, find transportation to their appointments, and obtain information about various health topics. Six MCOs currently participate in the managed care program: Anthem HealthKeepers Plus, CoventryCares of Virginia, InTotalHealth (previously Amerigroup), MajestaCare, Optima Family Care, and Virginia Premier Health Plan. Kaiser Permanente became Virginia's seventh managed care organization effective November 1, 2013.

The MCOs are responsible for enrolling providers into their network and verifying licensure and credentials. MCOs are also responsible for processing provider claims and paying providers. Each MCO receives a flat or "capitated" monthly payment from DMAS for each Medicaid enrollee in its plan. The capitated payment covers a comprehensive set of services for each enrollee, regardless of how much care is actually provided. The capitated payments vary across enrollee categories to account for differences in costs based on the age, gender, Medicaid eligibility category, and health status of the MCOs enrollees and the region of the State. MCOs establish their own reimbursement rates for providers in their network, most of which are based on methods similar to those used by DMAS to calculate fee-for-service rates.

Managed care organizations establish their own reimbursement rates for providers in their network. Most rates are calculated based on methods similar to those used by DMAS to calculate fee-for-service rates.

Although DMAS does not play a role in setting the MCO reimbursement rates, MCOs are required under their current contract with DMAS to increase reimbursement rates by the same percentage as any increases to fee-for-service rates that are authorized by the General Assembly. This contractual obligation means that the General Assembly can directly influence the rates MCOs pay their providers.

Medicaid enrollees in managed care receive most of their services through the MCO model, but there are a few exceptions. Since 2005, DMAS has contracted with a single administrator (DentaQuest) for the provision of dental services to all enrollees in an effort to increase access to dental care. In addition, some services are provided only through the fee-for-service system. These "carved out" services include certain community-based mental health and substance abuse services; targeted case management; and early intervention services for infants and toddlers.

The Two Health Care Delivery Models Have Served Different Populations

Managed care enrollees have typically been newborns, children, or single parents (usually mothers) without significant disabilities or medical conditions. Medicaid beneficiaries are automatically enrolled in an MCO unless they meet one of the exclusion criteria (Figure 3) or were living in a region of the State with limited or no managed care coverage prior to 2012. Managed care enrollment has grown as coverage has expanded across the State; it now represents more than 70 percent of all Medicaid enrollees.

Managed care enrollment has grown as coverage has expanded across the State; it now represents more than 70 percent of all Medicaid enrollees.

In contrast, enrollees in the fee-for-service model tend to be older or have a physical or intellectual disability. Many fee-for-service enrollees receive long-term care services either in an institution such as a nursing home or outside an institution through home and community-based service waivers. Some populations that have historically been served through the fee-for-service model will be transitioned to managed care in the near future. For example, enrollees who are dually eligible for Medicaid and Medicare will be transitioned into managed care starting in January 2014 as part of a demonstration project with the federal government called the Commonwealth Coordinated Care program. The project will be phased in across different areas of the State starting in Central Virginia and the Tidewater region.

MEDICAID PAYMENTS TO MOST PROVIDERS ARE NOT DESIGNED TO REIMBURSE FOR THE COST OF CARE

In addition to minimum requirements for eligibility and services funded, the federal government has minimum requirements for how state Medicaid programs pay health care providers. These requirements do not obligate programs to reimburse providers for the cost of providing care to enrollees. Federal law only requires payments to be consistent with "efficiency, economy, and quality of care" and sufficient to enlist enough providers so that care and services are available at least to the extent that they are available for the general population. However, the federal government has only recently proposed regulations specifying how to determine compliance with this requirement.

While Medicaid programs in Virginia and other states base payment levels to some providers on costs, payments are often based on less than the cost of care to reduce the impact on the state budget and to meet the federal requirement to be consistent with efficiency and economy. DMAS sets the reimbursement rates based on guidance from the General Assembly. Reimbursement policies often include mechanisms to reduce provider payments below the cost of care, such as including an adjustment factor into the formula for calculating hospital payments. In addition, an inflation ad-

justment is included in the formula, but the General Assembly has periodically withheld or reduced the inflation adjustment during the budget process. The State has also made the policy decision to reimburse hospitals for only a portion of their capital costs, which is currently 76 percent. These practices are often used to contain growth in Medicaid spending, particularly during economic recessions, and to encourage the efficient provision of care.

Virginia and most other states base payments on the Medicare system for reimbursing physicians with some adjustments. Payment amounts to physicians based on the Medicare system are not designed to reflect the cost of care. While the Medicare formula accounts for physicians' labor and operating costs to some extent, Congress frequently increases payment rates above what the formula would have prescribed. DMAS uses the basic formula used by Medicare but reduces the payment by a calculated percentage called the "budget neutrality factor," which represents the percentage of Medicare that Virginia can pay based on available funding.

MCOs also do not reimburse providers in the managed care system the cost of providing care for most services. MCOs reported that they use similar methods as DMAS to set payment rates but often increase rates to ensure that an adequate network of providers is available.

VIRGINIA SPENT $7 BILLION ON MEDICAID SERVICES FOR 1.1 MILLION ENROLLEES IN FY 2012

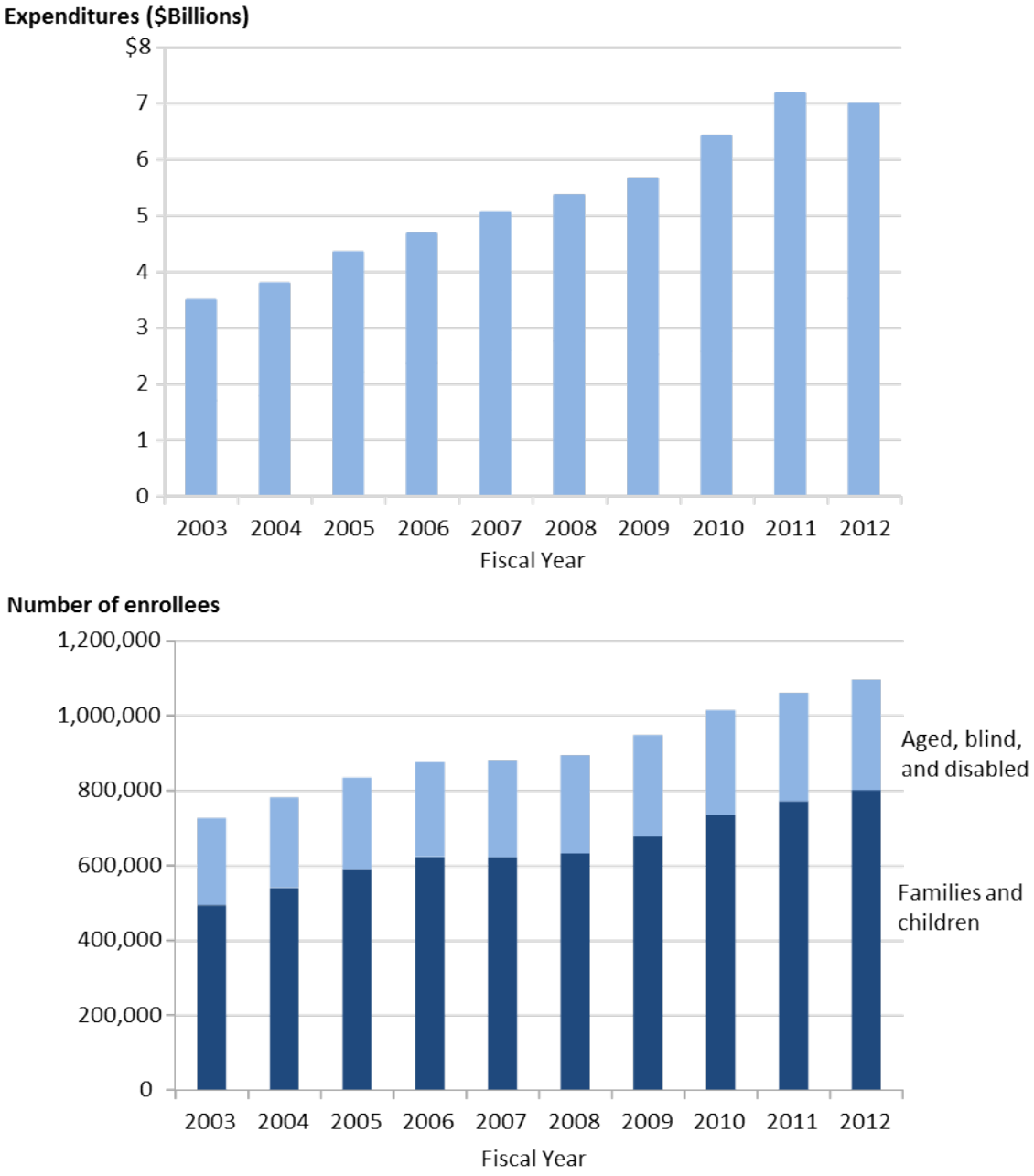
In FY 2012, the Medicaid program spent $7 billion (approximately 17 percent of the total State budget) to fund health care services for 1.1 million enrollees, making it the largest State program in terms of expenditures. Currently, half of the program's funding comes from the federal government and the other half is from State general funds. The State's $3.5 billion in Medicaid spending represents approximately 20 percent of general funds.

Spending and Enrollment for Virginia's Medicaid Program Have Increased Steadily Over the Past Decade

In FY 2012, Medicaid expenditures in Virginia reached $7 billion, which is twice the amount that was spent 10 years ago (Figure 4). In contrast, the State's general fund increased by 35 percent during this same time period. Enrollment in the program grew nearly 51 percent over the past decade. The majority of enrollees are part of the families and children group, and most are children.

About two-thirds of Medicaid expenditures are for providing health care services to aged, blind, or disabled individuals, but families and children represent the largest proportion of enrollees. This apparent

Figure 4: Spending and Enrollment of Virginia's Medicaid Program Have Increased Over the Past Decade (FY 2003–FY 2012)



Source: JLARC staff analysis of the Appropriation Acts and data provided by DMAS.

disconnect is due to the fact that aged, blind, and disabled individuals generally have more intensive and costly health care needs compared to children and non-disabled adults. Low income children, for example, represent a much larger group of enrollees but a lower proportion of expenditures.

Ten Service Categories Represent the Majority of Medicaid Spending

Spending in 10 major service categories represented 90 percent of total Medicaid spending in FY 2011, the last year for which spending data for managed care enrollees was available by service category (Table 1). Three services (inpatient hospital care, community-based long-term care services provided through waivers, and nursing home care) accounted for almost half of all Medicaid expenditures.

Table 1: Ten Service Categories Account for the Vast Majority of Health Care Expenditures by Virginia's Medicaid Program

Major service category	FY 2011 Expenditures ($M)	% of Total Expenditures	Included in JLARC Review
Inpatient hospital care (acute and psychiatric)	$1,336.6	19.7%	✓
Home and community-based waiver services[a]	1,053.6	15.6	
Nursing facility care	821.9	12.1	✓
Prescription drugs	583.5	8.6	✓
Physician services (primary and specialty care)	515.5	7.6	✓
Outpatient mental health services	513.5	7.6	✓
Outpatient hospital services	473.1	7.0	✓
Medicare premiums	402.1	5.9	
Intermediate care facility[b] public and private care	273.6	4.0	
Dental care	135.2	2.0	✓
Subtotal, top 10 service categories	**$6,108.7**	**90.2%**	
Other services	666.4	9.8%	
Total, all service categories	**$6,775.1**	**100.0%**	

[a] Personal care and habilitative services.
[b] Facilities for persons with intellectual disabilities.

Note: Excludes expenditures for administrative functions.

Source: JLARC staff analysis of data provided by DMAS and PricewaterhouseCoopers (actuary that develops capitation rates for the MCOs).

The mandate for this review directs JLARC to examine services that are covered by Virginia's Medicaid program, "including but not limited to" obstetric, trauma, and psychiatric services with a focus on certain providers (hospitals, nursing homes, and physicians). It is not known whether the services enumerated in the mandate are ones that Medicaid enrollees have difficulty accessing, given the limited information available about Medicaid recipients' access to care in Virginia. Additional services and providers were included in this study in an effort to develop a more comprehensive understanding of the services Medicaid enrollees have difficulty accessing.

The approach taken to address the study mandate was to

(1) examine access for Medicaid enrollees and identify problem areas;

(2) assess the adequacy of Medicaid rates paid to providers; and

(3) determine whether rates impact access to health care services for Medicaid enrollees.

Virginia's Medicaid program covers a wide variety of services. For this study, JLARC staff limited the services examined to those that represent the largest sources of expenditures (Table 1). One of these services (Medicaid payments for Medicare premiums) was excluded from the review, because it is not a true medical service for which access is a relevant concern. Home and community-based waiver services were excluded from this review for several reasons. Limited information is available about the providers of these services, making it difficult to measure whether the availability of providers is adequate. In addition, the Department of Behavioral Health and Developmental Services (DBHDS) is undergoing a review and redesign of waiver services to better serve individuals with intellectual and developmental disabilities. An assessment by JLARC staff would duplicate the efforts of DBHDS and be less relevant if the waiver system were changed. Intermediate care facility services were excluded from this study because they are reimbursed for the full amount of their costs for serving Medicaid enrollees. Reimbursement rates should therefore have limited impact on the ability of enrollees to obtain this type of care.

Chapter 2

Medicaid Enrollees Appear Generally Able to Access Six of the Nine Major Services Reviewed

In Summary

Medicaid enrollees in Virginia appear to have the highest level of access to prescription drugs, acute hospital care, and nursing home care, as compared to other services. Access to these services is comparable between Medicaid enrollees and the general population. Enrollees also appear generally able to access primary care and hospital-based outpatient and psychiatric care, but some enrollees may have more difficulty obtaining these services than others because access varies by region. Enrollees appear to have the lowest level of access to specialty, mental health, and dental care, primarily because fewer than half of these types of providers participate in the Medicaid program. While the number of dentists available to treat children enrolled in Medicaid remains small, access to dental care for this population has improved over the past five years. Access to care varies among the regions of the State for all the services reviewed, but to varying degrees. Regions where Medicaid enrollees tend to have the most difficulty accessing health care services include the Accomack-Northampton, Region 2000, Southside, and West Piedmont planning districts.

In Virginia and nationwide, limited information exists about the ability of Medicaid enrollees to access specific services. Therefore, it is not easy to identify which services are most difficult for enrollees to access. A federal requirement mandates that state Medicaid programs ensure that reimbursement rates be sufficient to offer Medicaid enrollees comparable access to care as the general population. The federal government has not provided guidance on how states should measure access and determine whether it meets the federal requirement. As a result, few states comprehensively measure access to care for Medicaid enrollees. In Virginia, the degree to which the Department of Medical Assistance Services (DMAS) monitors access is limited and mostly focuses on enrollees in managed care or specific services such as dental care for children.

This chapter identifies the extent to which Medicaid enrollees appear able to access the major services funded through Virginia's Medicaid program between FY 2010 and FY 2012. For many services, limited data are available to determine whether access is comparable between Medicaid enrollees and the general population, as required by federal law. No other standard exists that can be used to categorically determine whether access is adequate or inadequate.

For these reasons, access to each service was assessed on a relative basis and compared to access to other services. The resulting analy-

sis revealed which services enrollees appear to have the highest and lowest ability to access.

The extent to which Medicaid enrollees have access to a service is based on several measures that assess the availability of providers (percentages of providers participating in Medicaid and number of participating providers available per 1,000 enrollees) and use of services by Medicaid enrollees (percentage of enrollees receiving care and the number of visits to a health care provider per 1,000 enrollees). Multiple measures were used because no single measure adequately captures access. These specific measures were used for several reasons: they align with the framework for measuring access to care that has been adopted by the federal Medicaid and CHIP Payment Advisory Commission; they apply to most services reviewed; and the data necessary to examine them is already collected systematically for all or most enrollees.

To provide context for these measures, the experience of Medicaid enrollees was compared as follows:

(1) to the general population, where possible, to determine the extent to which access to care is comparable between Medicaid enrollees and the general population (reflecting the federal requirement);

(2) over a three-year period (FY 2010–FY 2012) to identify trends over time; and

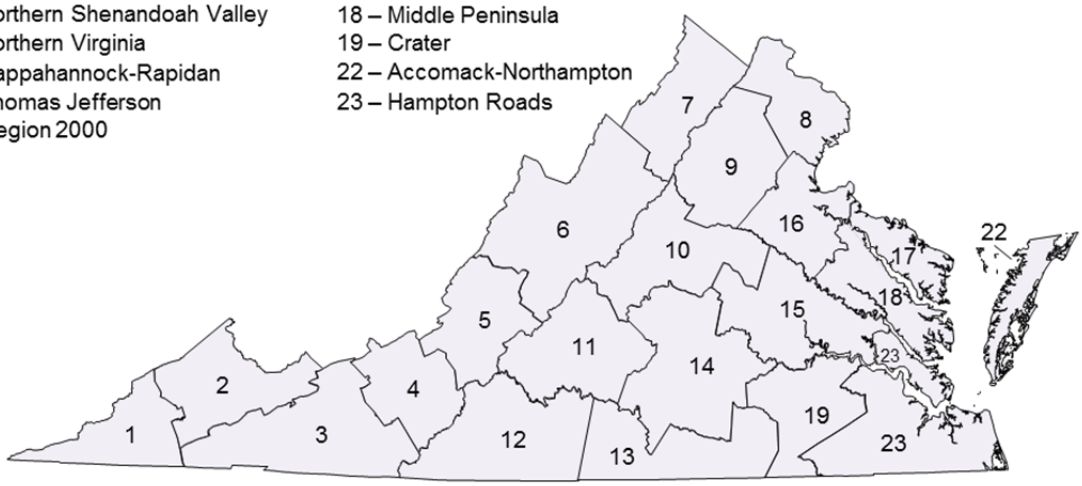
(3) across planning districts in Virginia in FY 2012 to identify regional variations in access (Figure 5).

These measures are not designed to gauge the quality of care provided to Medicaid enrollees but rather to determine the extent to which enrollees had access to providers, and were using services. (Appendix B includes more information about measures used, comparisons performed, and data collected.)

Access to each service was rated based on how the various measures of provider availability and service utilization compared to other services. For example, the number of primary care physicians per 1,000 Medicaid enrollees was given a "thumbs up" rating because it exceeded the ratio of providers to enrollees for other similar services that were reviewed for this study. However, some measures were not given a rating because it would not be appropriate to compare results. For example, it would not be appropriate to compare the percentage of enrollees receiving primary care with the percentage receiving specialty care because it is expected that a lower percentage of enrollees would need specialty care.

Figure 5: Access to Each Service Was Examined Across Virginia's Planning Districts

1 – Lenowisco
2 – Cumberland Plateau
3 – Mount Rogers
4 – New River Valley
5 – Roanoke Valley-Alleghany
6 – Central Shenandoah
7 – Northern Shenandoah Valley
8 – Northern Virginia
9 – Rappahannock-Rapidan
10 – Thomas Jefferson
11 – Region 2000
12 – West Piedmont
13 – Southside
14 – Commonwealth
15 – Richmond Regional
16 – George Washington
17 – Northern Neck
18 – Middle Peninsula
19 – Crater
22 – Accomack-Northampton
23 – Hampton Roads



Note: Former planning districts 20 and 21 were combined to create the Hampton Roads planning district (23). Appendix C contains a map identifying the localities within each planning district.

Source: JLARC staff analysis of planning districts.

ENROLLEES ARE GENERALLY ABLE TO ACCESS MAJOR SERVICES, WITH SOME EXCEPTIONS

Medicaid enrollees in Virginia appear generally able to access six of the nine major services reviewed for this study (Figure 6). This finding is consistent with responses by Virginia Medicaid enrollees to the Consumer Assessment of Healthcare Providers and Systems survey. According to recent surveys, more than 80 percent of adults and children (fee-for-service and managed care) reported being able to obtain needed care. Enrollees appeared to have the highest level of access to prescription drugs, acute hospital-based care, and nursing home care, relative to other services, because most pharmacies, hospitals, and nursing homes participate in the Medicaid program. As a result, access for Medicaid enrollees appears to be at levels comparable to the general population both statewide and regionally. Regional variation for these services tended to be minimal and affects the general population in the same way as Medicaid enrollees. Although enrollees appeared generally able to obtain primary care, outpatient hospital services, and psychiatric hospital care, enrollees in some regions of the State may have more difficulty obtaining these services because

Figure 6: Medicaid Enrollees Are Generally Able to Access Six of the Nine Major Services Reviewed

Medicaid Services	Access Rating[a]
(1) Prescription Drugs (2) Acute Hospital Care (3) Nursing Home Care	 Higher ability to access care, statewide and regionally. Comparable to the general population.
(4) Primary Care (5) Outpatient Hospital Care (6) Hospital-Based Psychiatric Care	 Generally able to access care. Difficulty obtaining care in some regions.
(7) Specialty Care (8) Outpatient Mental Health Care (9) Dental Care for Children	 Lower ability to access care, statewide and regionally.

[a] Compared to other services.

Note: Virginia's Medicaid program funds dental care primarily for children. For adults, only surgical services are covered.

Source: JLARC staff analysis.

the availability of providers or beds and their use of services varies moderately to widely across regions.

The finding that enrollees appear generally able to access six of the major services reviewed should not be interpreted to mean that all enrollees are able to obtain the services they need, even if they live in areas where access appears higher than in other regions. Some enrollees may still have difficulty obtaining care for several reasons. For example, access to nursing home care appears high relative to other services, but enrollees with very complex medical or behavioral needs may have difficulty finding a nursing home with staff trained to care for their specific needs, especially if they wish to remain near their home. Enrollees may have difficulty accessing some services if they have limited access to other types of care. For example, staff from the Department of Behavioral Health and Developmental Services reported that enrollees with psychiatric conditions often have difficulty obtaining prescription drugs to manage their conditions because it is frequently difficult to get an appointment with a psychiatrist who can prescribe the medications.

Medicaid enrollees appear to have the lowest level of access to specialty care, outpatient mental health care, and dental care, mostly because provider availability is much lower relative to other services. The availability of providers of specialty and outpatient mental health care and the use of these services also varies widely across regions.

ENROLLEES APPEAR ABLE TO ACCESS PRESCRIPTION DRUGS, ACUTE HOSPITAL CARE, AND NURSING HOME CARE, AT LEVELS COMPARABLE TO GENERAL POPULATION

Of the major services reviewed, Medicaid enrollees appear to have the highest level of access to prescription drugs, acute hospital-based care, and nursing home care because enrollees appear generally able to access these services both statewide and across regions. Access to these services is also expected to be comparable to access for the general population because all hospitals and most pharmacies and nursing homes provide services to Medicaid enrollees. There is minimal variation in access over time and across regions for these services with a few exceptions.

Medicaid Enrollees Appear Able to Access Prescription Drugs

Access to Prescription Drugs was measured for this study by the availability of pharmacies rather than by access to specific medications.

The Medicaid program's preferred drug list was not compared to private plans.

Medicaid enrollees do not appear to have difficulties accessing prescription drugs in Virginia (Figure 7). Access appears comparable to that of the general population in Virginia, because almost all pharmacies (98 percent) participate in Medicaid. Children enrolled in Medicaid use prescription drugs at rates similar to all children nationally. Enrollees have been using prescription drugs at increasing rates from FY 2010 to FY 2012, which could indicate increasing access to prescription drugs and/or changing health needs of enrollees.

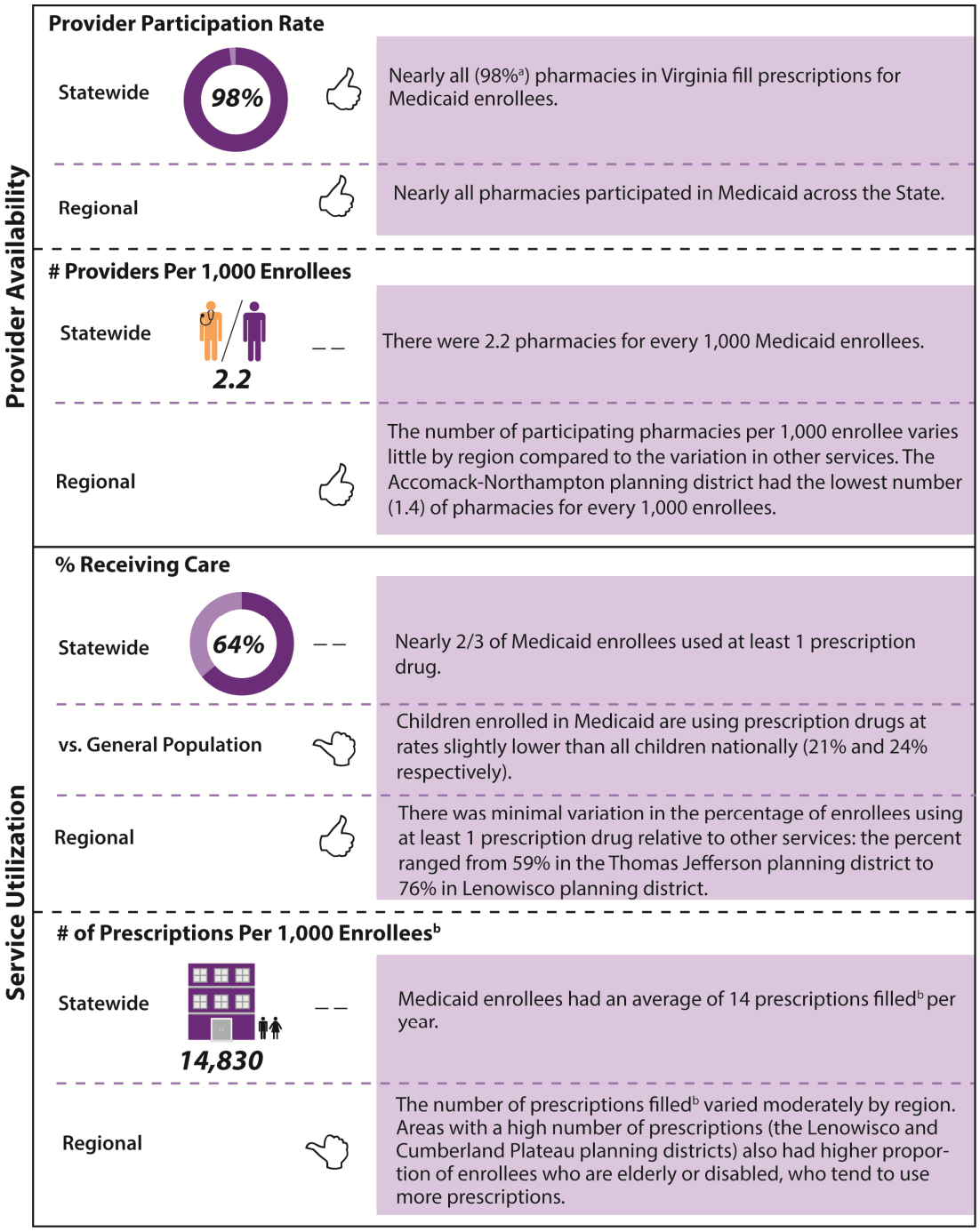
In contrast to many other services provided in community-based settings, access to prescription drugs does not vary widely across the State, even though some regions have few pharmacies. While the number of prescriptions filled varies moderately by region, areas with a high number of prescriptions (the Lenowisco and Cumberland Plateau planning districts) also have higher proportions of elderly or disabled enrollees, who tend to use more prescription drugs.

Acute Hospital Care includes treatment for which individuals are admitted for at least 24 hours and excludes emergency department care, which is categorized as outpatient hospital care.

Medicaid Enrollees Appear Able to Access Acute Hospital Care

Medicaid enrollees do not appear to have difficulty accessing acute hospital care (Figure 8). Because all general acute care hospitals in Virginia participate in the Medicaid program, enrollees appear to have access to acute hospital care that is comparable to that of the general population. Moreover, enrollees use actute care at higher

Figure 7: Most Pharmacies Fill Prescriptions for Medicaid Enrollees and the Use of Prescription Drugs Is Stable Across Time and by Region (FY 2012)

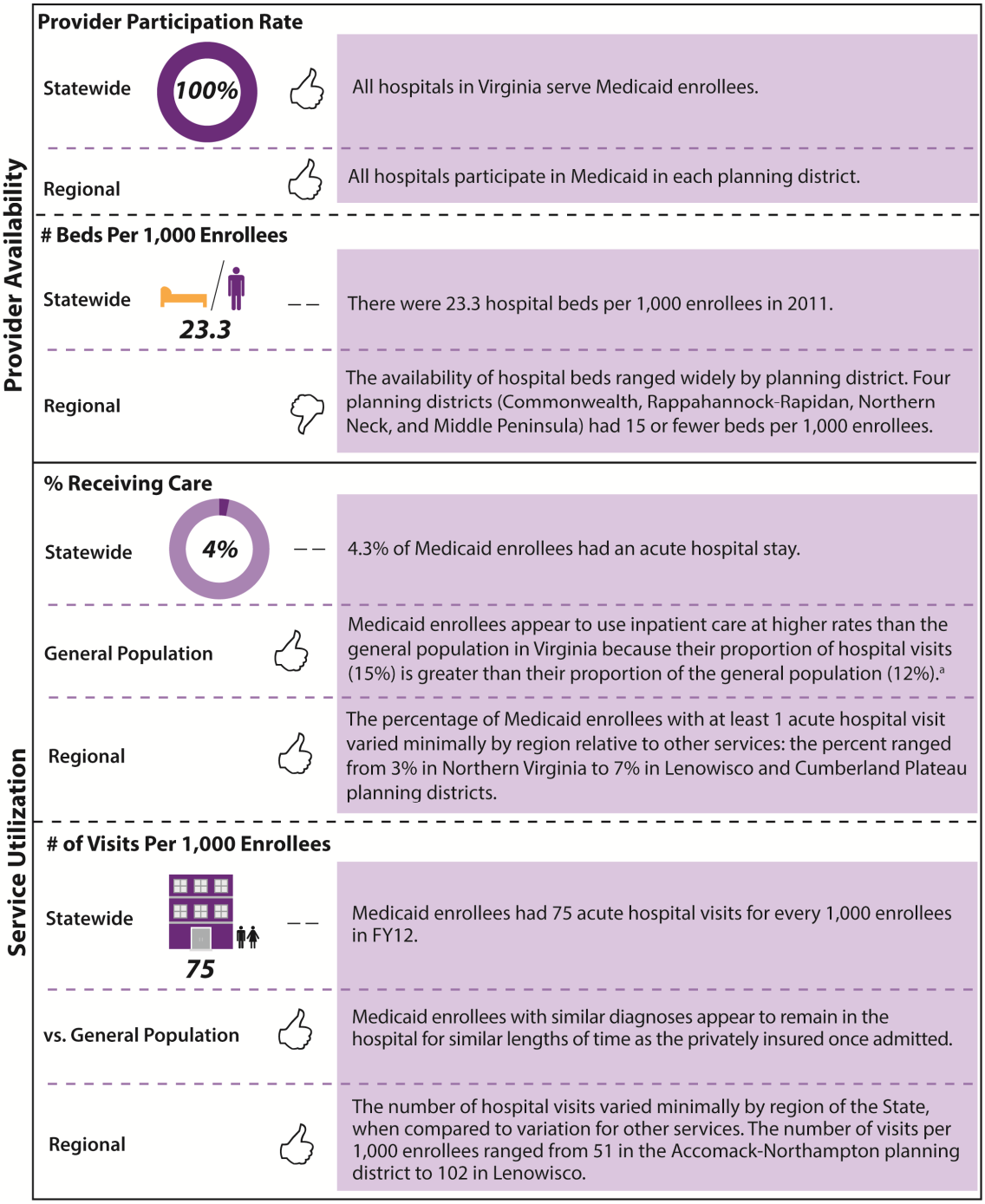


[a] Percentage may be overstated; pharmacies may be Medicaid participants but not currently filling prescriptions for enrollees.
[b] Includes refilled prescriptions.

Note: - -, comparison across services is not meaningful because utilization of services and/or need for providers is expected to differ across services.

Source: JLARC staff analysis of data provided by DHP, VDH, DMAS, and National Center for Health Statistics.

Figure 8: Medicaid Enrollees May Have Limited Access to Acute Hospital Care in Some Regions But It Does Not Appear to Have Impacted Use of Care and the General Population Is Similarly Affected (FY 2012)



[a] Based on analysis of discharges in FY 2012 from VHI patient-level data.

Note: - -, comparison across services is not meaningful because utilization of services and/or need for providers (beds) is expected to differ across services.

Source: Source: JLARC staff analysis of data provided by DHP, VDH, VHI, DMAS, and the US Census.

rates than the general population in Virginia because they are admitted to hospitals at greater rates than their proportion of the general population, which is consistent with the fact that Medicaid enrollees tend to be in poorer health than the general population. If enrollees used hospital care at rates lower than the general population, this could suggest that access is a problem.

The availability of hospital beds varies widely by region but did not result in wide variation in the use of hospital care across the State. Both the percentage of enrollees with a hospital stay and the average number of hospital stays varied minimally by planning district compared to other services. In addition, the general population is similarly affected by the variation in hospital beds.

Medicaid Enrollees Appear Able to Access Nursing Home Care

Nursing Home Care includes services provided by nursing facilities and hospitals with long-term care units.

Medicaid enrollees do not appear to have difficulties accessing nursing home care (Figure 9). Medicaid enrollees are the primary users of nursing home care, representing 61 percent of the nursing home patient days in the State in 2011. Almost all (91 percent) of the 297 nursing facilities in Virginia provided services to at least one Medicaid enrollee, such that their access to nursing care is generally comparable to that of the general population.

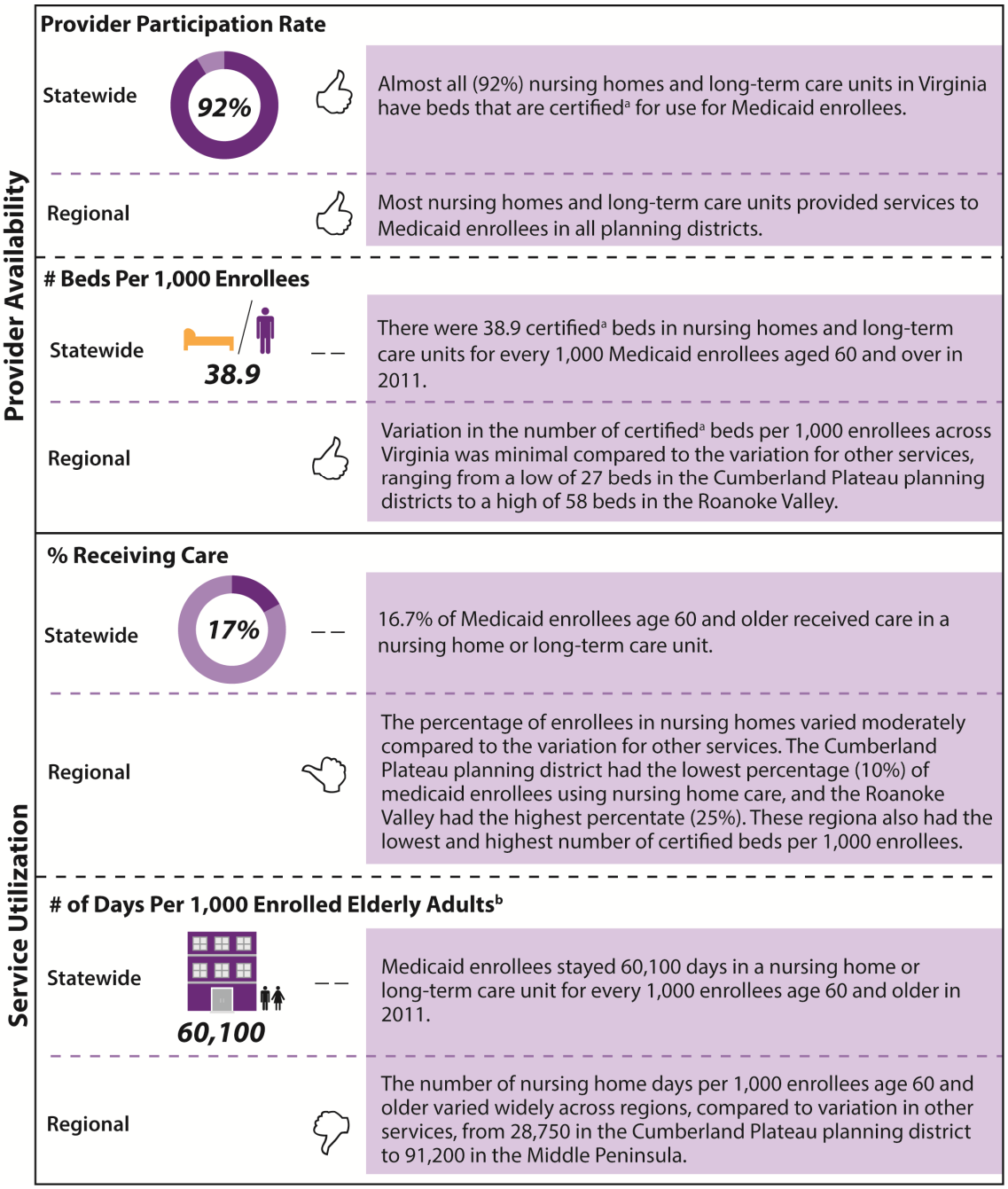
Nursing homes have additional capacity because occupancy rates have decreased over time, which suggests that the State has an adequate number of nursing home beds overall. Occupancy rates have declined, in part because private pay patients are increasingly receiving care from assisted living facilities, and Medicaid enrollees are increasingly using home and community-based waiver services instead of nursing home care. The number of nursing home beds has also remained stable during the period studied. However, low use of nursing home care by Medicaid enrollees in the southwestern planning districts of Cumberland Plateau and Lenowisco suggests that access may be more limited in these areas, particularly since these regions have high percentages of elderly and disabled enrollees relative to other areas.

Primary Care Physicians include physicians practicing internal medicine, general practice or family practice, and pediatricians. These physicians may practice as individuals, in a group practice, or in health clinics.

ENROLLEES ARE GENERALLY ABLE TO ACCESS PRIMARY CARE, OUTPATIENT HOSPITAL CARE, AND HOSPITAL-BASED PSYCHIATRIC CARE, BUT REGIONAL DIFFERENCES EXIST

Medicaid enrollees appear generally able to access primary care, outpatient hospital care, and hospital-based psychiatric care overall. While the availability of providers and/or the use of these services did not vary much over time, they tended to vary moderately to widely by region. Enrollees in the West Piedmont and Southside planning districts had consistently lower access to these services compared to access in the majority of other planning districts.

Figure 9: Almost All Nursing Homes Serve Medicaid Enrollees, But the Use of Nursing Home Care Varies by Region (FY 2012)



[a] Certified by the Virginia Department of Health for use by Medicaid enrollees, including some beds dually certified for Medicare patients.

[b] Estimate is slightly inflated because the analysis includes days for all enrollees regardless of age, and this number was compared to enrollees age 60 or older (90 percent of the nursing home population.)

Note: - -, comparison across services is not meaningful because utilization of services and/or need for providers (beds) is expected to differ across services.

Source: JLARC staff analysis of data provided by DHP, VDH, and DMAS.

Medicaid Enrollees Appear Generally Able to Access Primary Care, Except in Some Regions

There is little indication that Medicaid enrollees are systematically having difficulties accessing primary care, except potentially in a few areas of the State (Figure 10). Most primary care physicians in Virginia serve Medicaid enrollees. The number of providers available is far greater than the standard used by DMAS, which only requires managed care organizations to have one primary care physician per 1,500 enrollees. This suggests that Medicaid enrollees should be able to find primary care physicians. In addition, the majority of Medicaid enrollees visited a primary care physician at least once in FY 2012. These indicators have all remained relatively stable over the past three years, with one exception. The percentages of enrollees receiving primary care decreased since FY 2010, but the decrease may be due to an abnormally high number of primary care visits in FY 2010 caused by the H1N1 influenza outbreak. The percentage of all enrollees that obtained primary care was comparable in FY 2011 and FY 2012 but decreased by two percentage points for children. This measure should be further monitored to determine whether it constitutes a pattern.

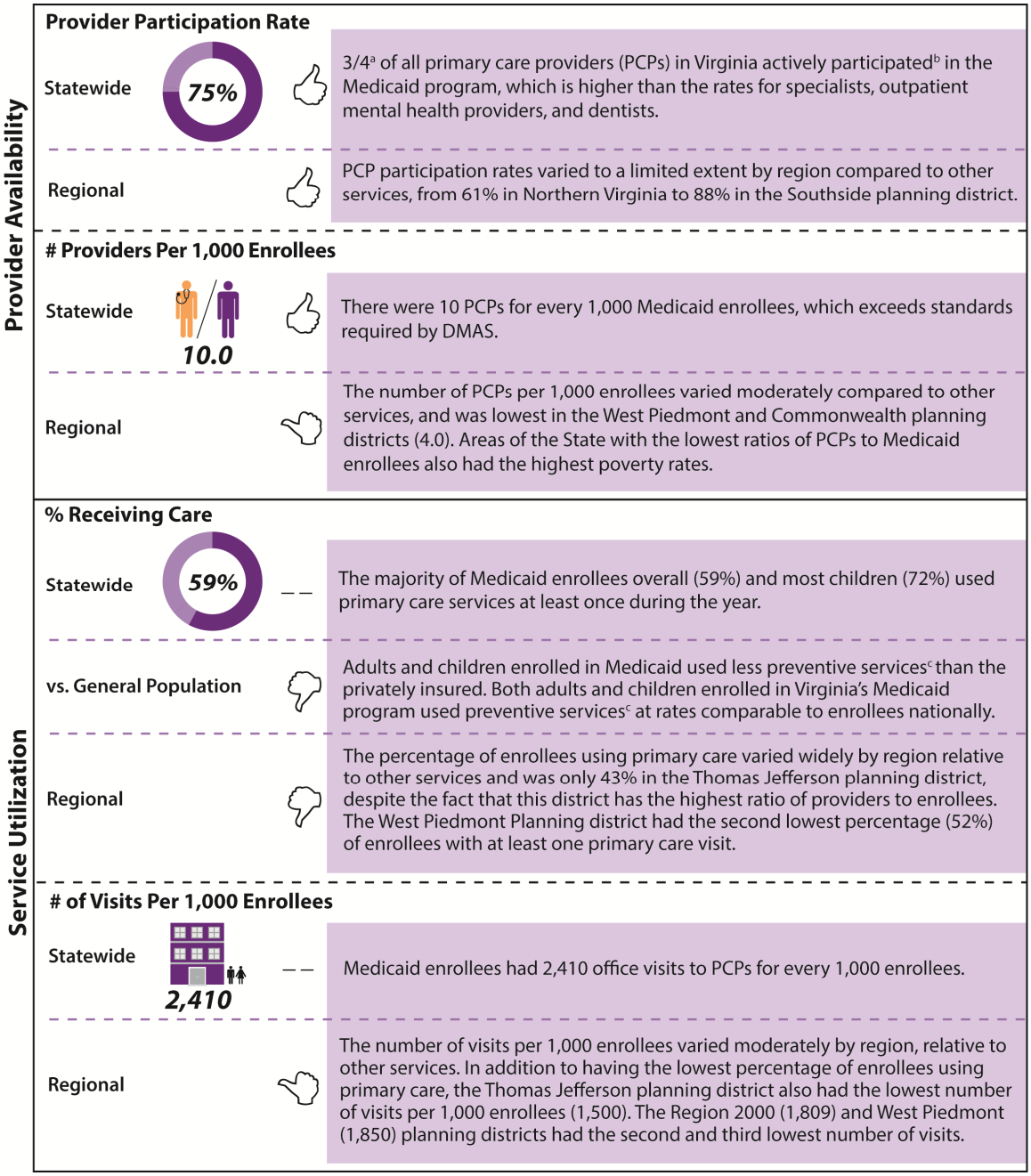
Some of these results vary widely by region, which may suggest that enrollees in some areas of the State may have greater difficulty obtaining primary care. Enrollees in the West Piedmont planning district appear to have access to fewer primary care physicians and are using fewer primary care services than enrollees in other parts of the State. Although a relatively large number of primary care physicians are available in the Thomas Jefferson planning district, Medicaid enrollees in that region use the least amount of services, which may suggest either that enrollees are not seeking care or that providers are limiting the number of Medicaid enrollees they serve.

HEDIS, the Healthcare Effectiveness Data and Information Set, is a tool used by more than 90 percent of health plans in the U.S. to measure performance.

HEDIS consists of 75 measures across eight domains of care.

The ability to manage chronic conditions is often viewed in the research literature as an indication that individuals have adequate access to primary and preventive care. Adults who are enrolled in Medicaid appear to have more difficulty managing chronic conditions than adults who are privately insured, which could suggest some difficulty with access to primary care. Alternatively, enrollees may choose not to seek the level of care to better manage their chronic conditions. Adult Medicaid enrollees used less preventive care than privately insured adults for 13 services designed to help manage chronic conditions such as asthma, diabetes, and hypertension, according to HEDIS measures on the use of specific types of preventive care. In addition, non-elderly adults with Medicaid who had a hospital visit were 62 percent more likely to be hospitalized for a preventable condition than non-elderly adults with private

Figure 10: Medicaid Enrollees Do Not Appear to Systematically Have Difficulty Accessing Primary Care, Except in Some Areas of the State (FY 2012)



[a] This rate may be understated because the number of PCPs working in rural health and federally qualified health centers, which treat a large number of Medicaid enrollees, is unknown.

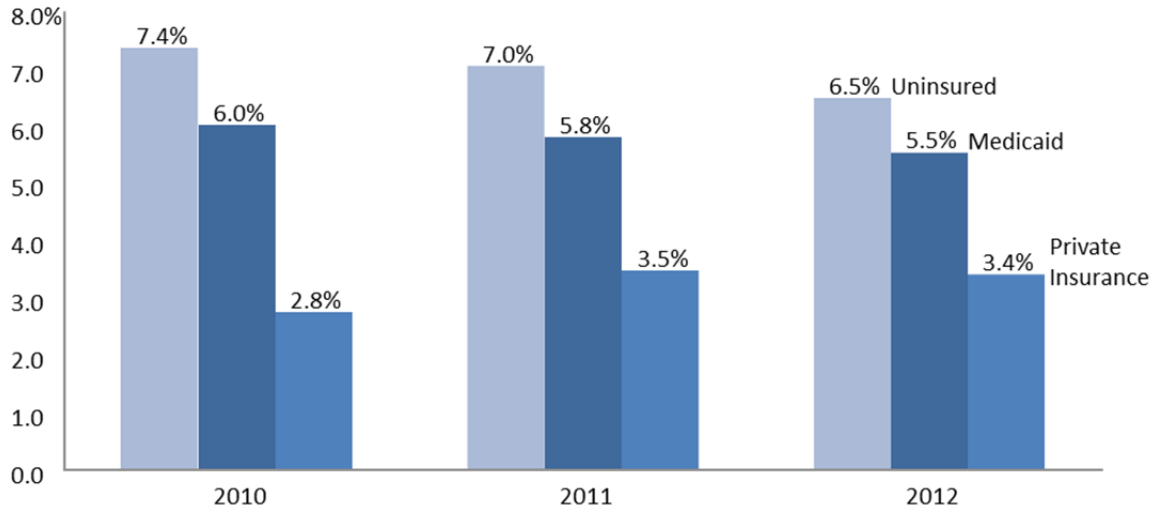
[b] Treated 10 or more Medicaid enrollees in FY 2012.

[c] Based on a comparison of Healthcare Effectiveness Data and Information Set measures, which are summarized in Appendix D. The average HEDIS score for private insurance plans only includes the 10 health plans with available data. Not all private health plans are accredited by NCQA and collect HEDIS data.

Note: - -, comparison across services is not meaningful because utilization of services and/or need for providers is expected to differ across services.

Source: JLARC staff analysis of data provided by DHP, VDH, VHI, and DMAS.

Figure 11: Adult Medicaid Enrollees in Virginia Have More Preventable Hospital Visits for Chronic Conditions Than Privately Insured Adults



Note: Calculations were made using the Agency for Healthcare Research and Quality (AHRQ) Prevention Quality Indicators (PQI) software. Ratios are calculated using the number of preventable visits divided by the total number of visits, by payer type. Appendix E provides results by type of chronic condition.

Source: JLARC staff analysis of Virginia Health Information Patient Level Data FY 2010–FY 2012.

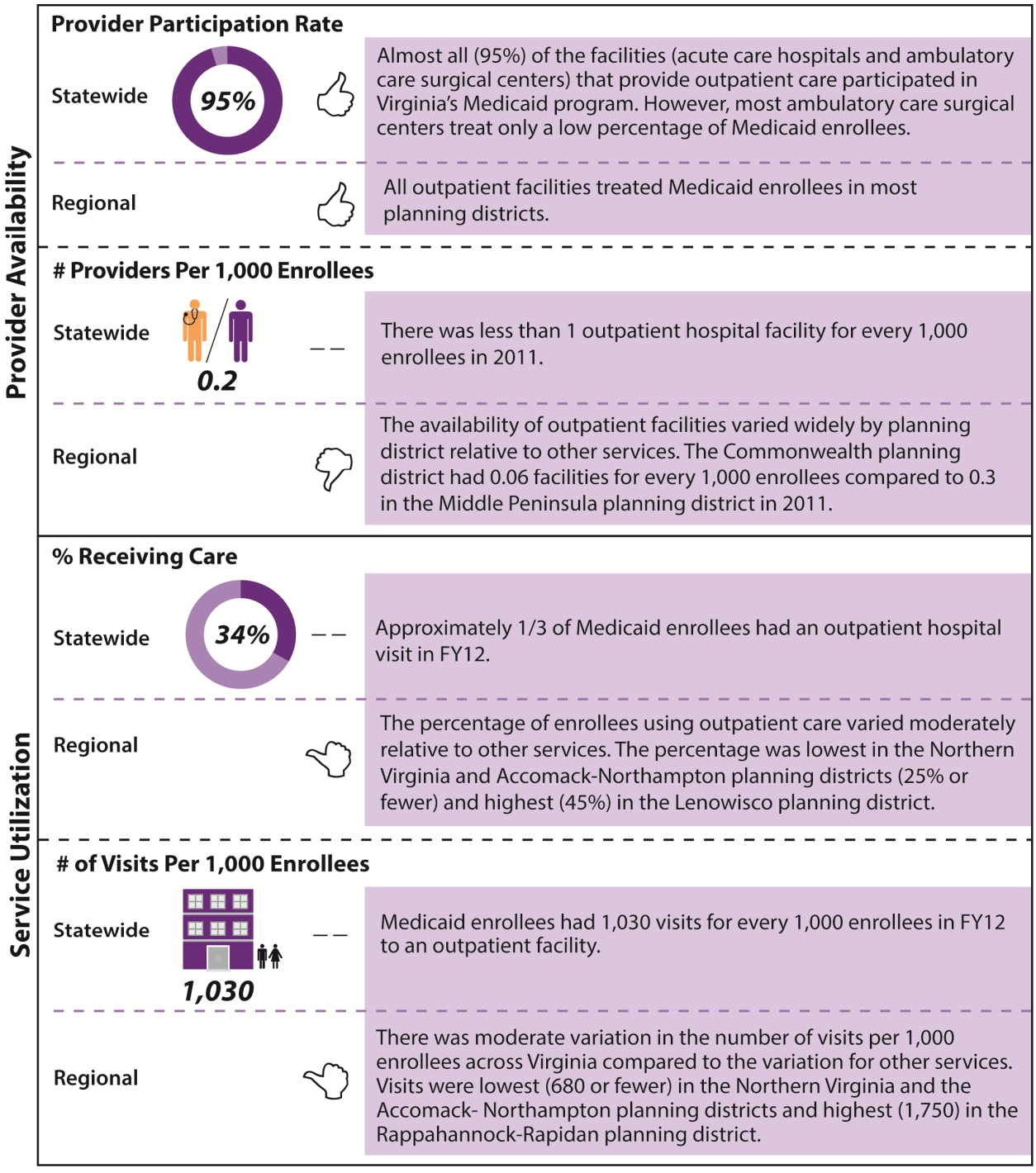
insurance in FY 2012 (Figure 11). This represents an improvement over FY 2010, when non-elderly adults with Medicaid visiting a hospital were 114 percent more likely to be hospitalized for a preventable condition. (See Appendixes D and E for more information on use of preventive care and preventable hospitalizations.)

Medicaid Enrollees Appear Generally Able to Access Outpatient Hospital Care but May Have Fewer Options and Be Affected by Regional Variation

There is little indication that Medicaid enrollees are systematically having difficulties accessing outpatient hospital care, except potentially in certain regions of the State (Figure 12). Medicaid enrollees mostly obtain outpatient hospital care from acute care hospitals and all acute care hospitals treat Medicaid enrollees. While Medicaid enrollees can access the outpatient departments of traditional hospitals, they may have less access to certain facilities that provide outpatient surgical procedures, such as ambulatory care surgical centers. This could result in fewer options for outpatient care. Almost all of these surgical centers provide outpatient care to Medicaid enrollees, but the vast majority of patients of these centers are privately insured.

The number of outpatient hospital visits decreased slightly since FY 2010, but the decline may have resulted from higher than typical outpatient visits in FY 2010 from the H1N1 influenza outbreak.

Figure 12: Medicaid Enrollees May Have Limited Access to Outpatient Hospital Care in Some Regions, but the General Population Is Similarly Affected (FY 2012)



Note: - -, comparison across services is not meaningful because utilization of services and/or need for providers is expected to differ across services.

Source: JLARC staff analysis of data provided by DHP, VDH, and DMAS.

Further analysis of outpatient hospital care should be performed by type of care, such as emergency care and elective procedures. A decline in emergency care could be a positive trend and suggest that enrollees have adequate access to primary care in the community, but a decline in elective procedures could suggest an access problem.

Outpatient Hospital Care includes emergency services (such as trauma care) provided in emergency departments and non-urgent or elective procedures provided in other outpatient departments for which the enrollee is not admitted overnight. Surgical procedures and other care provided by ambulatory care surgical centers are also included.

Analysis by type of outpatient care was not performed for this study, because information on the purpose of visits, such as emergency or elective care, was missing for many records.

Although hospitals are the primary providers of outpatient hospital care, enrollees were rated as having a lower level of access to outpatient care than acute hospital care because the use of outpatient hospital care varied more across regions. Geographic variation in the use of outpatient hospital services exists in part because of the limited number of hospitals in some regions, such as in the Accomack-Northampton planning district. This situation also affects the general population in those regions, not just Medicaid enrollees. In contrast, the use of acute hospital care varies minimally.

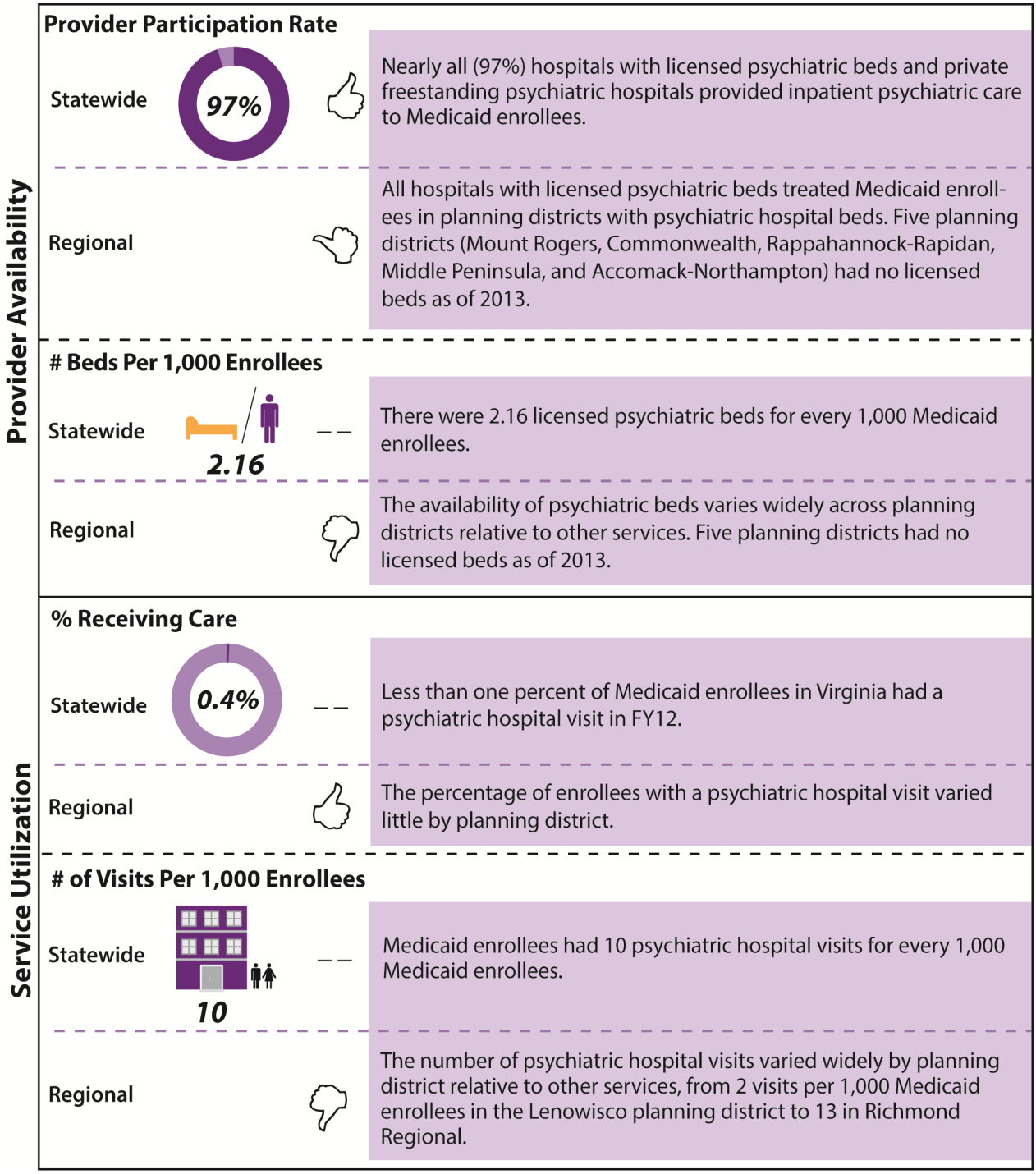
Availability of Psychiatric Hospital Care Has Decreased and Appears Worse in Certain Regions but Affects Medicaid Enrollees and the General Population

Medicaid enrollees may have difficulty obtaining hospital-based psychiatric care in the region in which they live, but the general population likely has similar access problems. All but two of the 35 hospitals with licensed psychiatric beds and four private freestanding psychiatric facilities in Virginia treated Medicaid patients in FY 2012 (Figure 13). The Virginia Department of Health identified four planning districts with shortages in 2006, but this shortage impacts the general population, not just Medicaid enrollees.

Psychiatric Hospital Care includes services provided to enrollees treated for psychiatric or other mental conditions by hospitals with licensed psychiatric beds and freestanding psychiatric hospitals. It excludes care provided to children in residential treatment facilities.

Large reductions in the number of licensed beds in Virginia have occurred over the last several decades, but the decrease may not reflect an access problem if there are enough community-based services in place and a minimum number of hospital beds for enrollees in need of intensive hospital-based treatment. According to the 2007 JLARC report on the availability of psychiatric services in Virginia, data suggested that the supply of psychiatric beds was adequate statewide, but more beds were needed in certain localities. The report also found that the use of psychiatric beds could be reduced by increased use of community-based services. Even though the number of beds has continued to decline in recent years, staff from the Department of Behavioral Health and Developmental Services report that the overall number of beds still appears adequate and that many communities are putting in place more intensive community-based treatment. Still, depending on the region, Medicaid enrollees may have difficulty finding a bed.

Figure 13: Availability of Psychiatric Beds Has Declined, But the General Population Is Similarly Affected (FY 2012)



Note: - -, comparison across services is not meaningful because utilization of services and/or need for providers (beds) is expected to differ across services.

Source: Source: JLARC staff analysis of data provided by DHP, VDH, DBHDS, and DMAS.

ENROLLEES HAVE MORE DIFFICULTY ACCESSING SPECIALTY, MENTAL HEALTH, AND DENTAL CARE THAN OTHER SERVICES

Medicaid enrollees may have more difficulty accessing care from certain specialists, outpatient mental health providers, and dentists because a low percentage of these providers treat Medicaid patients. However, the availability of dentists and percentage of children receiving care has increased substantially since 2005. The availability of providers and use of these services by Medicaid enrollees vary widely by region, and enrollees in the Southside planning district have consistently lower access to all three of these services compared to access in the majority of other regions.

Medicaid Enrollees Have More Difficulty Obtaining Specialty Care From Physicians Than Other Services, Especially in Certain Regions

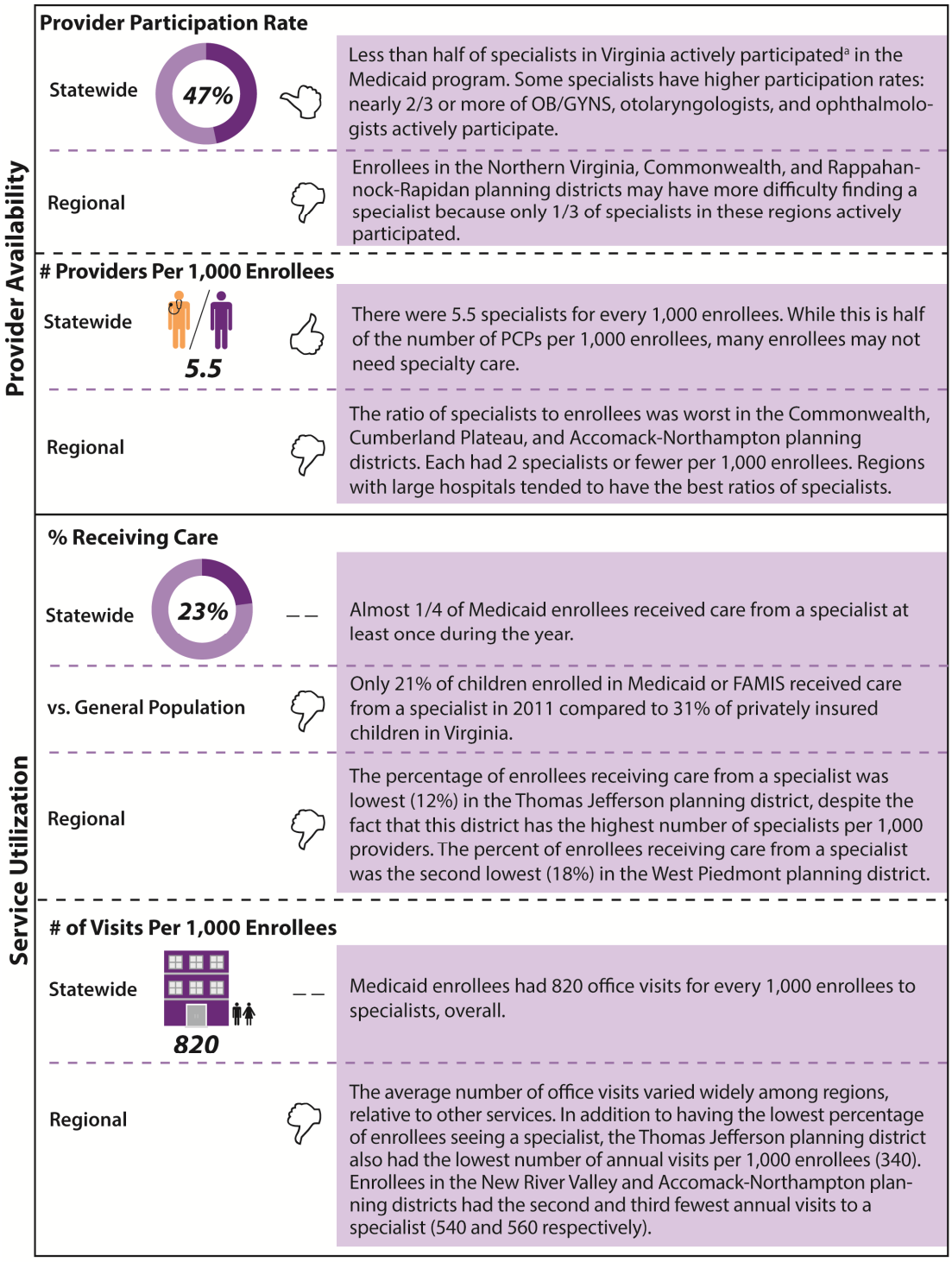
Medicaid enrollees appear to have more difficulty obtaining care from specialists compared to other types of services. Less than half of the specialists that provide care in Virginia actively participate in Virginia's Medicaid program, with exceptions in a few categories of specialization (Figure 14). For example, two-thirds or more of obstetricians and gynecologists (OB/GYNs), otolaryngologists (ear, nose, and throat specialists), and ophthalmologists participate in Medicaid at rates that are nearly as high as that of primary care physicians. These three types of specialists are also the ones that Medicaid enrollees see most commonly. Other analyses could not be performed for individual specialization categories because data were unavailable.

Specialists include non-primary care physicians with certifications recognized by the American Medical Association. Anesthesiologists, radiologists, and psychiatrists (included in outpatient mental health care) are excluded.

The number of specialists per 1,000 Medicaid enrollees has decreased over the last three years because the number of enrollees in Medicaid has grown at a faster rate than the number of participating specialists. However, service utilization of specialty care remained fairly stable during the last three years, suggesting that the reduced number of specialists has not prevented Medicaid enrollees from receiving the same amount of care.

The availability of specialists and utilization of specialty care vary widely by region, suggesting that enrollees in some areas of the State may have greater difficulty obtaining specialty care. For example, in the Accomack-Northampton planning district there were fewer specialists per 1,000 enrollees, a lower percentage of enrollees saw a specialist, and enrollees had fewer visits to specialists compared to most other regions.

Figure 14: Less Than Half of Specialists Treat Medicaid Enrollees and Use of Care From Specialists Varies by Region (FY 2012)



[a] Treated 10 or more Medicaid enrollees.

Note: - -, comparison across services is not meaningful because utilization of services and/or need for providers is expected to differ across services.

Source: JLARC staff analysis of data provided by DHP, VDH, DMAS, and the National Survey of Children's Health.

Medicaid Enrollees Appear to Have More Difficulty Accessing Outpatient Mental Health Care Than Other Services, But Community Services Boards Appear to Partially Improve Access

Outpatient Mental Health Care Providers include licensed clinical social workers, licensed professional counselors, marriage and family therapists, psychologists, and psychiatrists. These providers may work in private practice, Community Services Boards, or other organizations that provide non-traditional mental health care.

Services include traditional therapies and counseling as well as non-traditional services such as crisis stabilization, intensive community treatment, and mental health supports. These services may be provided to individuals in an office setting, clinic, their home, or other setting and excludes admission to a hospital or residential treatment center.

Medicaid enrollees appear to have more difficulty accessing outpatient mental health care than other types of services. The rate at which outpatient mental health providers in private practice participate in Medicaid is relatively low (23 percent), especially for licensed professional counselors, licensed clinical social workers, and psychologists (Figure 15). While the majority of psychiatrists participate in the Medicaid program, enrollees may still have difficulty securing psychiatric services due to a general shortage of these specialists in Virginia. The majority of Medicaid enrollees obtain care instead through safety net providers such as Community Services Boards, but these providers typically have waiting lists for services. More than 5,700 individuals were on the waiting list of one of the 40 Community Services Boards for mental health services between January and April of 2011, which occurred during the period studied. The waiting list has since decreased to just under 4,500 (January to April 2013).

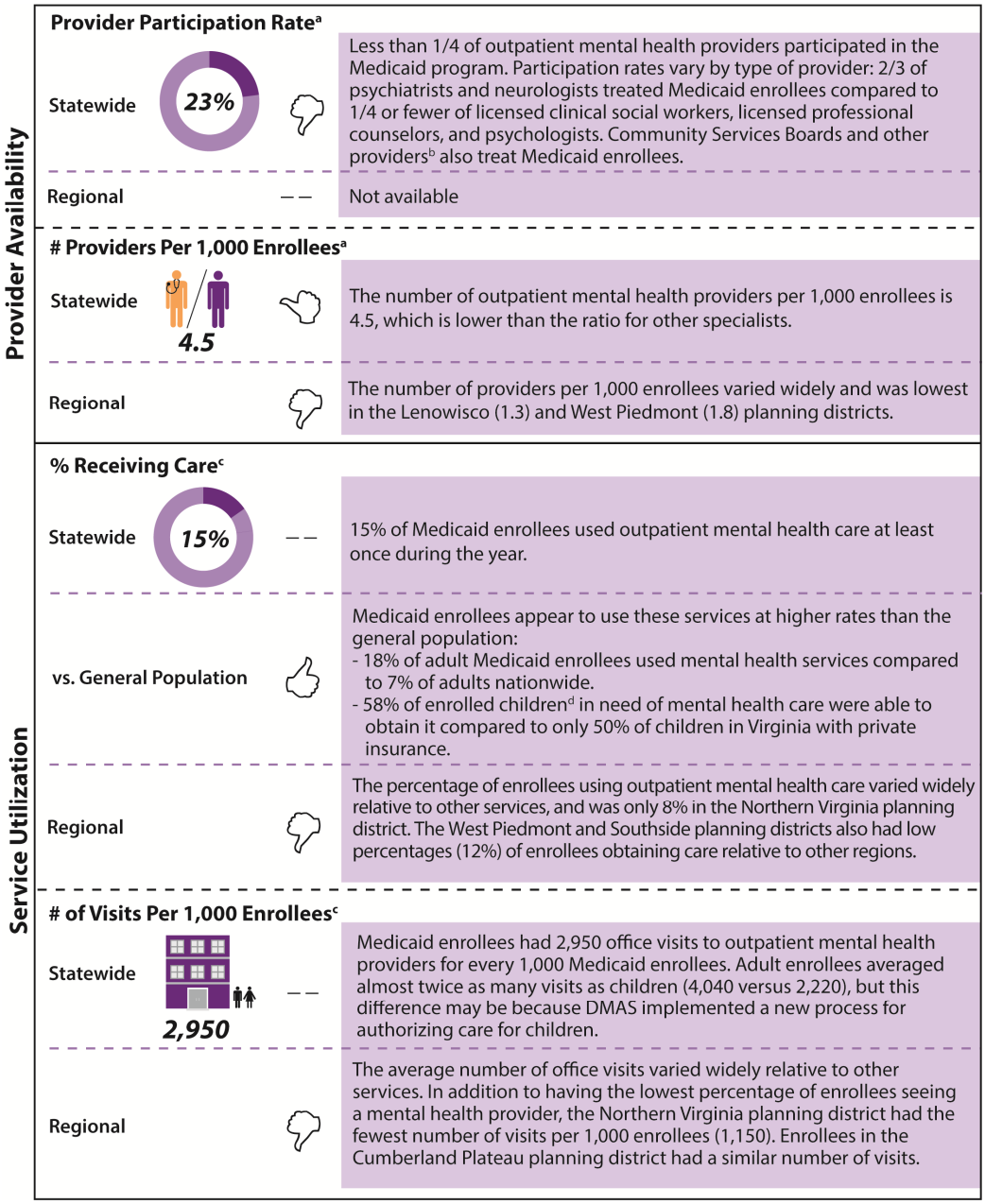
Between FY 2010 and FY 2012, the average number of visits to outpatient mental health providers increased for adults enrolled in Medicaid but decreased for children. These changes may not indicate that access to care is improving for adults or declining for children. Instead, visits for children may have declined because DMAS implemented a new process for authorizing care for children after identifying a sharp increase in their use of services. A similar increase has been identified for adults, which may suggest overutilization of care.

Results vary widely by region, suggesting that enrollees in some areas of the State may have greater difficulty obtaining outpatient mental health care. Enrollees living in the Southside and Southwest regions of Virginia have few providers and low rates of service utilization compared to enrollees in other regions. The Northern Virginia planning district tended to have the lowest utilization of services, but this may not be indicative of difficulty accessing care because the region has a low percentage of elderly, blind, or disabled enrollees who are more likely to need this type of care.

Children Enrolled in Medicaid May Have Difficulty Accessing Dental Care, But Access Is Improving

Children enrolled in Medicaid may have difficulty accessing dental care, but access appears to be improving (Figure 16). A relatively low proportion of dentists (34 percent) participate in Medicaid, and in FY 2012 almost half of children did not have a dental visit compared to only 19 percent of children in the general population. This disparity suggests that either dental care is less accessible for

Figure 15: Less Than One-Fourth of Outpatient Mental Health Providers Treat Medicaid Enrollees and Use of Services Varies Widely by Region (FY 2012)



[a] Rate may be understated; the number of mental health providers working in CSBs and other organizations that provide non-traditional mental health care paid for by Medicaid is unknown. These entities treat a large number of enrollees. Does not exclude those treating fewer than 10 enrollees (90 percent of providers).

[b] Providers of non-traditional mental health services such as partial hospitalization, crisis stabilization, intensive in-home treatment.

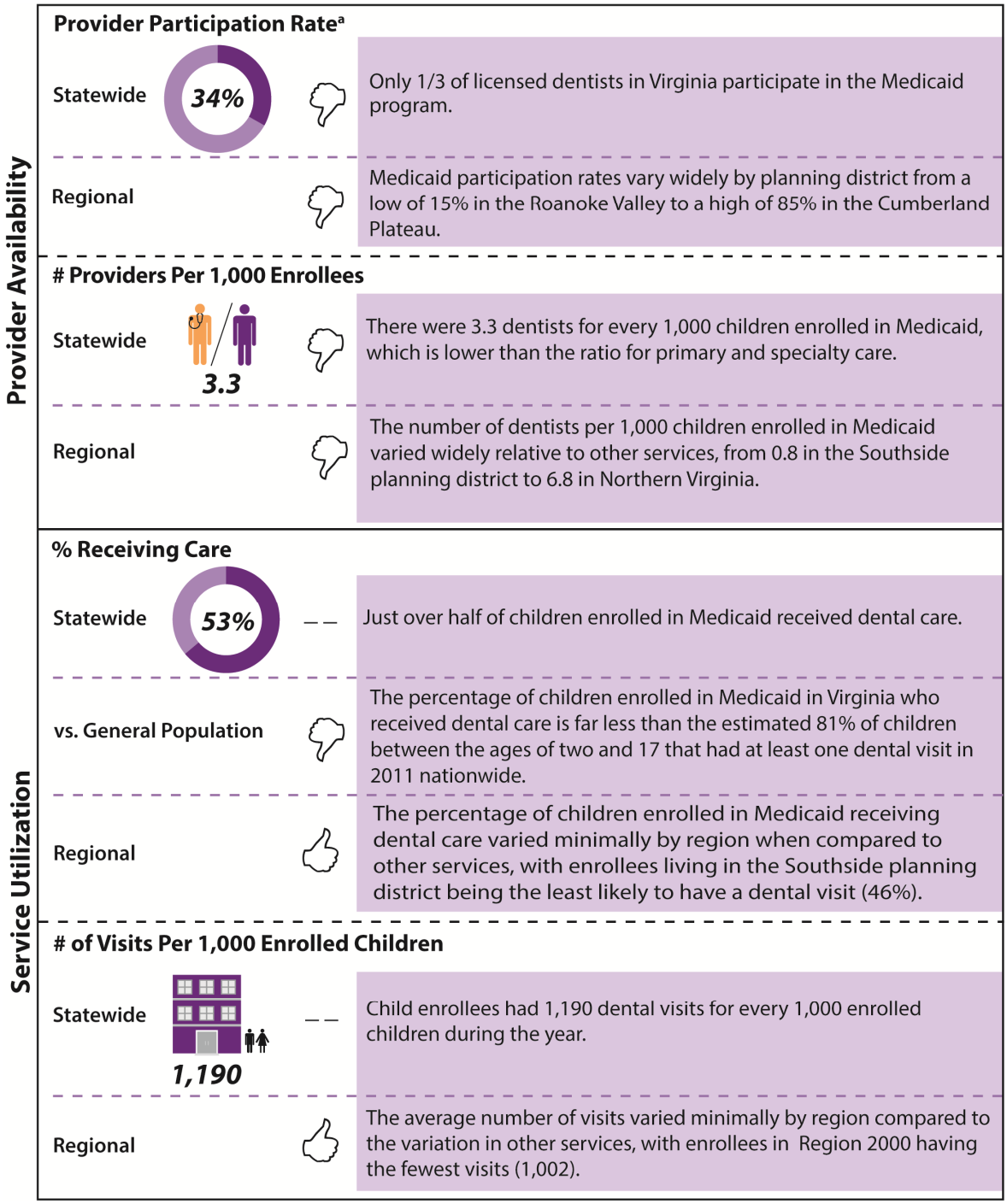
[c] Includes care provided by or visits to outpatient mental health providers in private practice, school systems, Community Services Boards, and other providers of non-traditional mental health services.

[d] Includes children enrolled in Medicaid or FAMIS.

Note: - -, comparison across services is not meaningful because utilization of services and/or need for providers is expected to differ across services.

Source: JLARC staff analysis of data provided by DHP, VDH, DMAS, and the National Survey of Children's Health.

Figure 16: Availability of Dentists and Use of Dental Care Is Low But Is Improving (FY 2012)



[a] Participation rate may be overstated because some dentists may be enrolled with DentaQuest but not treat Medicaid enrollees.

Note: - -, comparison across services is not meaningful because utilization of services and/or need for providers is expected to differ across services.

Source: JLARC staff analysis of data provided by DHP, VDH, DMAS, DentaQuest, and the National Center for Health Statistics.

Medicaid enrollees than the general population or enrollees are choosing not to use dental services as frequently as the general population. While low, both the number of dentists treating Medicaid enrollees and the percentage of children receiving dental care has doubled since FY 2005 when DentaQuest began managing dental care. The availability of dentists treating Medicaid enrollees varies widely by region, the use of dental care does not.

Access to Dental Care was assessed for this study by focusing on access for children under age 21. Virginia's Medicaid program covers dental care primarily for children but covers some surgical care for adults.

To increase access to dental care, DMAS contracted with the DentaQuest company in 2005 to enlist dentists for participation and manage the dental program, called Smiles for Children.

Access to dental care is a challenge for Medicaid programs nationwide, not just in Virginia. Nearly two-thirds (64 percent) of states that responded to a survey of directors of state Medicaid dental programs reported that less than half the dentists in their state served Medicaid patients. In 2011, the percentage of children under 21 and enrolled in Medicaid who received dental care in Virginia (45 percent) was comparable to the national average (43 percent), according to the Centers for Medicare and Medicaid Services. Low utilization of dental care is often attributed to an overall shortage of dental providers, the unwillingness of providers to treat Medicaid enrollees, and enrollees choosing not to use services.

ACCESS MAY BE MORE DIFFICULT FOR ENROLLEES IN CERTAIN REGIONS

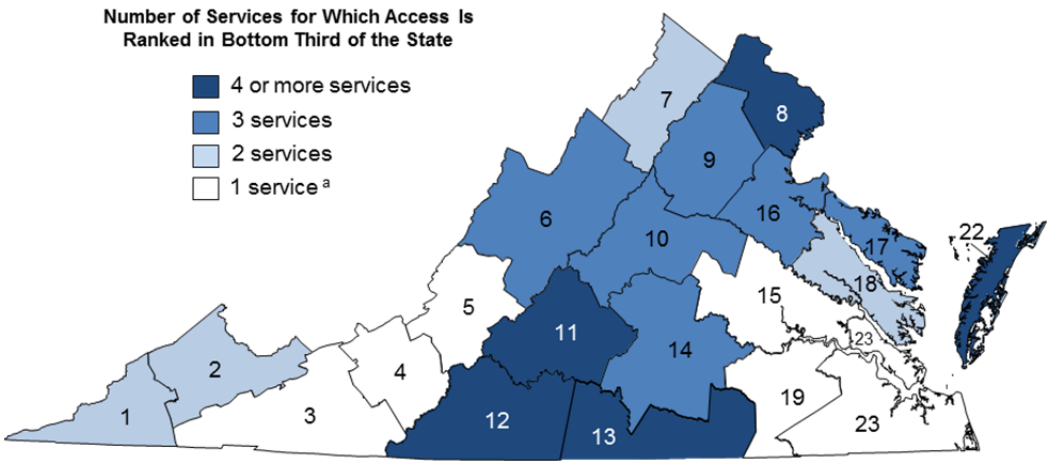
Medicaid enrollees living in four planning districts in Virginia may have more difficulty accessing health care, based on a comparison of provider availability and utilization of services by enrollees among planning districts. Enrollees in the Accomack-Northampton, West Piedmont, Southside, and Region 2000 planning districts may have lower access to most major health care services as compared to enrollees living in other areas of Virginia (Figure 17). These four planning districts consistently ranked in the bottom third for access for Medicaid enrollees for five or more services reviewed. These planning districts include rural localities, and enrollees living in these areas represent just over 10 percent of the State's total Medicaid population. The majority of localities in these planning districts have been identified by the Health Resources and Services Administration as having medically underserved areas for the general population, which means they have few primary care physicians relative to the population, high proportions of poor and elderly, and high infant mortality rates. The majority of localities in these planning districts have been identified by the Health Resources and Services Administration as Health Provider Shortage Areas for primary, dental, and mental health care.

The Northern Virginia planning district also ranked in the bottom third of Virginia regions for access for six of the nine services reviewed. This may be explained by several factors. Provider partici-

pation rates may appear artificially low relative to other regions, because the supply of total providers in the region is disproportionately large. In fact, the number of providers per 1,000 enrollees tend to be similar or above the statewide ratio depending on the service, suggesting that the availability of providers to enrollees in Northern Virginia is comparable to or better than the availability of providers statewide for most services. Enrollees living in this planning district also tend to use services at lower rates than enrollees living in the majority of other planning districts, possibly because Northern Virginia has the second highest proportion of enrollees in the families and children eligibility category, which tends to require fewer and less intensive services. For example, in Northern Virginia, over 80 percent of enrollees were in the families and children eligibility category compared to only 60 percent in the Southside planning district.

Enrollees living in the Crater, Hampton Roads, Mount Rogers, New River Valley, Richmond Regional, and Roanoke Valley planning districts appear to have the least difficulty accessing health care services compared to enrollees living in other regions. These regions rank in the bottom third for access for only one service. Enrollees in the Richmond Regional planning district appear to have the best access to care relative to enrollees living in other regions because the region had the most providers that treat Medicaid patients, particularly specialists, dentists, hospitals, and mental health providers. Enrollees living in this planning district use services at higher rates than enrollees living in other areas.

Figure 17: Five Planning Districts Rank in Bottom Third for Access to Multiple Health Care Services for Medicaid Enrollees



[a] Every planning district was in the bottom third of the State for at least one health care service.

Note: Appendix C includes a map that identifies localities within each planning district.

Source: JLARC staff analysis of DMAS, VDH, and VHI data.

Chapter 3

Medicaid Rates Tend to Be Lower Than Other Payers' Rates and the Cost of Providing Care

In Summary

Virginia's Medicaid program pays most providers less than other payers, such as Medicare, and less than the cost of providing care. The Medicaid program has paid physicians approximately 70 to 80 percent of the Medicare rate for providing emergency and primary care services. Hospitals and nursing homes have been reimbursed for an average of 78 and 94 percent of the cost of providing care, respectively, over the past 10 years. Medicaid to Medicare ratios and cost recovery rates tend to be higher for providers that serve a large percentage of Medicaid enrollees, such as obstetricians and gynecologists (OB/GYNs) and the State's academic health centers. Reimbursement rates paid to most providers have not changed much during the past 10 years and only a few types of providers have received sizable rate increases. The providers that received the largest rate increases over the past decade were OB/GYNs (34 percent) and dentists (30 percent).

Senate Joint Resolution 92 (2012) directs JLARC to review the extent to which Medicaid payment policies have permitted hospitals, nursing homes, and physicians to recover the cost of providing Medicaid services over time (Appendix A). The concern among providers and their representative associations was that the adequacy of payments would decline because of efforts taken by the State to restrain Medicaid expenditures during the economic downturn and that providers would be less willing to serve Medicaid enrollees. A decrease in the number of providers that are willing to serve Medicaid enrollees could limit enrollees' access to services.

This chapter focuses primarily on reimbursement rates paid to providers rather than other payment policies such as timing of payments and the paperwork required to file claims. Initial reviews of the literature and interviews with stakeholders found that payment amounts were of primary concern. The study mandate refers specifically to cost recovery, but no information is available on the cost of care for certain major providers, such as doctors and dentists. Although a less precise measure than cost recovery, benchmarking Medicaid rates against the rates paid by other insurers or by Medicaid programs in other states has been used by researchers to assess the adequacy of reimbursement rates. Because of these limitations, the adequacy of reimbursement rates is addressed differently depending on the type of provider (Table 2).

Table 2: Two Measures Were Used to Assess Adequacy of Medicaid Rates

Measure	Providers	Method
Cost recovery	Hospitals and nursing homes	• Comparison of Medicaid costs and reimbursements for providers receiving less than 100 percent of costs[a]
Benchmark against other rates	Physicians, dentists, and other practitioners	• Comparison of total Medicaid payments vs. payments by Medicare and private insurers • Calculation of Medicaid rate as a percentage of Medicare or private rate • Comparison of Medicaid-to-Medicare rates across states

[a] JLARC staff did not assess the adequacy of payments made to providers that are reimbursed for their allowable Medicaid costs (Federally Qualified Health Centers and rural health clinics).

Source: JLARC staff analysis of research literature and review of information available from DMAS.

VIRGINIA'S MEDICAID PROGRAM BASES PROVIDER REIMBURSEMENT RATES ON THREE DIFFERENT APPROACHES

Medicare Formula for Reimbursing Physicians

The Medicare formula uses a system known as the Resource-Based Relative Value Scale (RBRVS). The RBRVS has three major components that are designed to quantify the resources involved in providing health care services: (1) professional work, which measures the time and intensity of effort expended in providing the service; (2) practice expense, which measures the costs involved, such as salaries and overhead expenses; and (3) malpractice expense, which separately measures the cost of professional liability insurance.

The Medicare RBRVS system is adjusted annually by the Centers for Medicare and Medicaid Services.

Virginia's Medicaid program uses several different payment methods to determine how much to pay providers (Table 3). In general, reimbursement is based on a set price (which is typically calculated using a formula developed for Medicare), or the cost of providing care, or a combination of the two. The Department of Medical Assistance Services (DMAS) develops the payment methodology for reimbursing providers and makes adjustments at the direction of the General Assembly. All methodologies must be approved by the Centers for Medicare and Medicaid Services (CMS).

Reimbursement Is Based on a Set Price, Allowable Costs, or a Combination of the Two

Virginia's Medicaid program uses set prices to reimburse physicians, specialists such as psychiatrists, and most other practitioners. These set prices are mostly calculated using the same methodology, which is developed based on a Medicare formula. The rates derived from the Medicare formula are intended to reflect the resources consumed in performing each procedure, including the time spent performing the procedure and other work-related expenses. DMAS recalculates the rates annually to reflect changes in the amount of resources used for each procedure. The rate calculated for a given procedure may increase, remain the same, or decrease, depending on changes to the use of resources as compared to other medical procedures. Rates paid to physicians do not vary across Virginia, such that physicians are paid the same amount for a service whether they are in the northern or southern part of the State.

Several providers, such as dentists, certain mental health providers, and pharmacies, are reimbursed at a set price that is not based on a Medicare formula. For example, because Medicare does

not cover dental care, DMAS developed a fee schedule to pay dentists based on comparisons with commercial rates. DMAS also developed a fee schedule to pay mental health providers for nontraditional services that Medicare and private insurance do not cover.

Table 3: Reimbursement Methodologies and Rates Vary By Type of Care and Provider

Type of Care and Provider	Basis for Reimbursement Rate	Percentage of Basis Received by Providers	
		FY 2008	FY 2012
Primary and Specialty Care			
Physicians			
Pediatric Primary Care	Medicare formula	78.2%	82.6%[a]
Pediatric Preventive		91.6	94.4[a]
Adult Primary Care		72.4	73.1[a]
Obstetricians and Gynecologists		99.8	104.5[a]
Emergency Department		71.5	72.8[a]
All other physicians		92.0	85.3[a]
Federally Qualified Health Centers	Costs	100.0	100.0
Rural health clinics		100.0	100.0
Outpatient and Mental Health Care			
Psychiatrists	Medicare formula	92.0	85.3
Psychologists	Psychiatrist rate	90.0	90.0
Licensed professional counselors	Psychologist rate	75.0	75.0
Licensed clinical social workers		75.0	75.0
Community Services Boards (CSBs)	Fee schedule	n.a.	n.a.
Other Services			
Dentists	Fee schedule	n.a.	n.a.
Pharmacies	Average wholesale price	86.9[b]	86.9[b]
Facility-Based Care			
Hospitals (inpatient, academic health centers)	Prospective formula[c]	100.0[d]	100.0[d]
Hospitals (inpatient, all others)		81.6	75.4
Hospitals (outpatient, academic health centers)	Costs	94.2	90.2
Hospitals (outpatient, all others)		80.0	76.0
Freestanding psychiatric hospitals	Prospective costs[e]	84.0	84.0
Nursing homes	Prospective costs[e]	94.3	93.3[a]

[a] Percent of Medicare for FY 2011; DMAS did not perform a Medicaid-to-Medicare comparison in FY 2012. In addition, 2012 cost report data for nursing homes was not available from DMAS.

[b] Based on the average wholesale price of prescription drugs minus 13.1 percent plus a dispensing fee.

[c] Prospective payment system based on Diagnosis Related Group system (operating costs only). Capital costs are reimbursed based on allowable Medicaid costs.

[d] These hospitals are reimbursed a higher percentage of their costs because they treat a large percentage of Medicaid and indigent patients.

[e] Prospective daily rate based on operating costs.

Note: Percentage of the basis received by providers does not always correspond to the specific policy adopted by the General Assembly. For example, reimbursement policy does not require DMAS to pay physicians a certain percentage of the Medicare rate. The Medicare rate may vary annually, but Virginia's policy is to keep the reimbursement level budget neutral unless rates are increased in the budget. The percent of Medicare is used more for analytical purposes.

Source: JLARC staff analysis of information provided by the Department of Medical Assistance Services (DMAS).

Allowable costs are the portion of costs determined to be eligible for Medicaid reimbursement. These costs are calculated based on the percentage of Medicaid patients treated and the provider's total costs for treating all patients. Most costs are eligible for Medicaid reimbursement.

Other providers, such as rural health clinics and Federally Qualified Health Centers are reimbursed for the cost of providing care, which is determined based on their allowable Medicaid costs as reported by the provider. These providers are required to submit reports annually to DMAS that include detailed information on their allowable costs.

Hospitals are reimbursed based on a combination of set prices (reimbursement of operating costs) and Medicaid allowable costs (reimbursement of capital costs) for treating Medicaid patients. The prices are based on formulas that account for a patient's illness or diagnosis and staff resources needed to treat the patient. Hospitals are also reimbursed for the portion of their capital costs associated with serving each Medicaid patient, which is determined based on their Medicaid allowable costs. Some hospitals such as the State's two academic health centers—Virginia Commonwealth University (VCU) Health System and University of Virginia (UVA) Medical Center—receive higher payment rates to provide additional compensation for treating a higher percentage of Medicaid and uninsured patients.

State Academic Health Centers

Virginia has two State supported academic health centers: Virginia Commonwealth University Health System and University of Virginia Medical Center. These hospitals receive higher reimbursement rates from the State because they treat a large percentage of Medicaid and uninsured patients.

Medicaid Payments to Most Providers Are Often Adjusted in the State Budget Process

Regardless of the method used by DMAS to calculate how much to pay providers, payments to most providers are reduced so that they correspond with the target level of reimbursement established by the General Assembly (Table 3). The rates paid to providers that are considered to be "safety net" providers are not reduced, because they serve a larger proportion of Medicaid enrollees. For example, Federally Qualified Health Centers and the State's academic health centers are reimbursed for 100 percent of their costs because they serve a high volume of Medicaid patients.

Unless physicians work in a clinic reimbursed for its costs, they will have a downward adjustment applied to their calculated rate regardless of how many Medicaid patients they treat. Their rates are decreased through a "budget neutrality factor" that is included in Virginia's reimbursement formula. The budget neutrality factor is determined by the General Assembly based on what Virginia can afford to pay practitioners given the available funding that year.

The adjustments to Medicaid rates for hospitals vary by type of facility to reflect a portion of their Medicaid costs. The State's academic health centers are reimbursed for a higher percentage of their operating and capital costs than other hospitals. However, hospitals are reimbursed for the same percentage of capital costs for psychiatric services and general acute care (Table 3).

Provider Payments From Managed Care Organizations Are Slightly Higher But Comparable to Fee-for-Service Rates

DMAS pays only those providers that treat Medicaid enrollees in the fee-for-service system or for services that are not available through the managed care system, such as some community-based mental health services. For services provided through managed care, DMAS provides capitation payments to the managed care organizations (MCOs) with which it contracts, and MCOs are responsible for reimbursing providers at rates they have determined. The only payments that DMAS makes directly to providers for managed care services are supplemental payments, such as Disproportionate Share Hospital payments, made to hospitals.

MCOs reported that they base their payments to providers on the fee-for-service methods used by DMAS, but they tend to pay providers slightly more than the fee-for-service rate (up to five percent higher, on average). Staff from MCOs and DMAS indicate that fee-for-service rates could be used as a reasonable proxy for the rates paid through the managed care system, on average, with some isolated exceptions.

With regard to provider payments, there are several notable differences between the fee-for-service and managed care systems. Whereas DMAS pays similar providers the same rate for a particular service, MCOs often negotiate rates with providers. When necessary to obtain services for Medicaid enrollees in their network, MCOs may pay rates that are significantly higher than the fee-for-service rate. Moreover, four of the six MCOs pay primary care providers an administrative or management fee of $1 to $2 per patient in addition to the base reimbursement rate, and MCOs sometimes make incentive payments to providers that achieve certain performance goals.

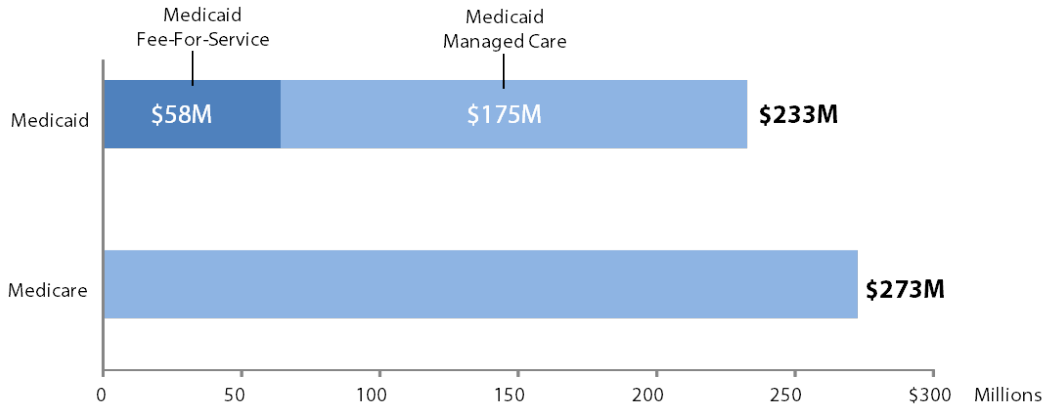
MEDICAID REIMBURSES MOST PHYSICIANS AND OTHER PRACTITIONERS LESS THAN OTHER PAYERS

Virginia's Medicaid program tends to pay physicians and most other practitioners less than rates paid by Medicare and private insurers. For example, physicians received approximately $40 million less from Medicaid than they would have received if they had been reimbursed at the Medicare rate in FY 2012 (Figure 18).

Virginia's Medicaid Program Pays Physicians and Other Practitioners Less Than Medicare and Private Insurers

Medicaid reimbursement rates paid to most Virginia physicians have averaged between 79 and 85 percent of Medicare rates since FY 2008, according to analysis performed by DMAS staff. Reimbursement rates have varied by specialization and over time (Figure 19).

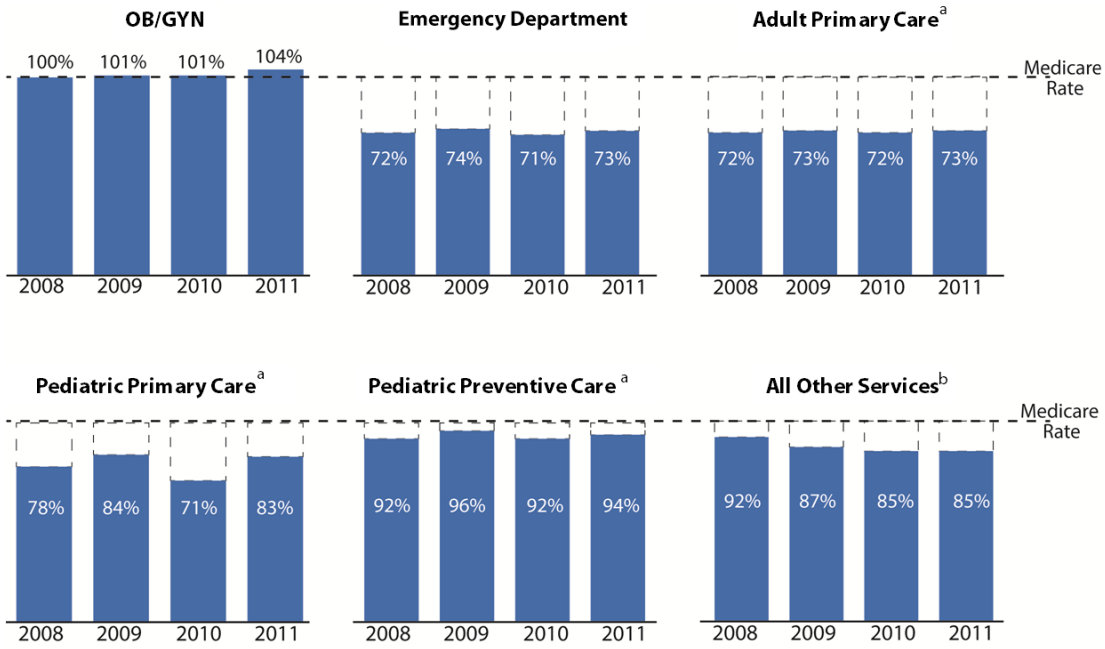
Figure 18: Physicians in Virginia's Fee-For-Service and Managed Care Medicaid Programs Would Have Received $40 Million More for Office Visits Under Medicare Rates (FY 2012)



Note: Medicaid rates used for these calculations are based on the procedure (CPT) code excluding any payment modifications. Medicaid rates that managed care organizations (MCOs) pay their providers were estimated as 105 percent above the fee-for-service rate, on average, based on information reported by MCOs. Excludes payments to Federally Qualified Health Centers and rural health clinics because these providers are reimbursed for their allowable Medicaid costs. Excludes payments for hospital-based visits and to out-of-state providers.

Source: JLARC staff analysis of data provided by DMAS.

Figure 19: Except for OB/GYN Services, Virginia's Medicaid Rates for Physician Services Have Been Lower Than Medicare Rates (FY 2008–FY 2011)



[a] Physicians are being reimbursed for these primary care services (adult and pediatric) at 100 percent of the Medicare rate in 2013 and 2014, which is a temporary two-year increase under the federal Affordable Care Act.

[b] Includes care provided by psychiatrists.

Note: DMAS did not perform a Medicaid-to-Medicare comparison for 2012.

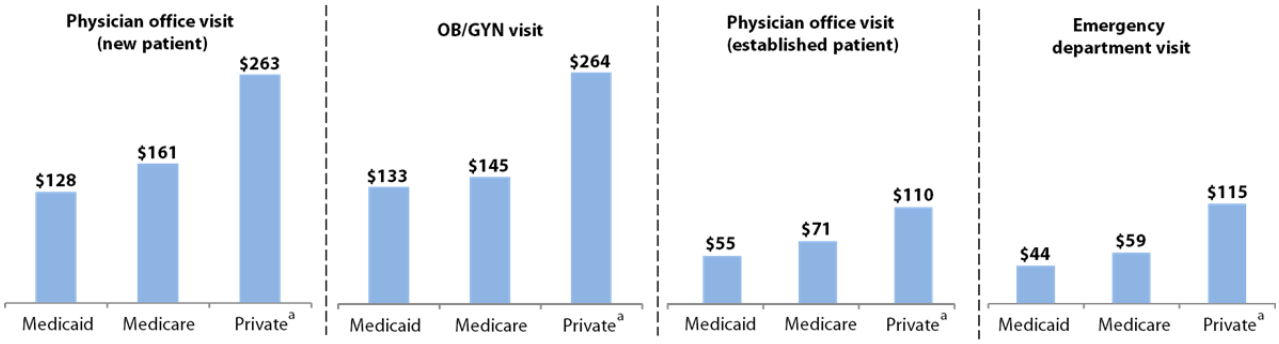
Source: JLARC staff analysis of information provided by DMAS.

Virginia's Medicaid program pays physicians less than private insurers. The Medicaid rate for a typical physician office visit is about half of the private insurance rate.

For example, Medicaid reimbursement rates to emergency department physicians tended to be the lowest (71 to 74 percent) relative to Medicare rates, while reimbursement rates for OB/GYNs were the highest (100 to 104 percent) compared to Medicare.

Virginia's Medicaid program also pays physicians and dentists less than private insurers. The Medicaid rate for a typical physician office visit is about half of the private insurance rate (Figure 20). The Medicaid rate is lowest for an emergency department visit, as compared to rates paid by private health insurers. Similarly, the Medicaid rate for a periodic oral exam is less than half of the rate paid by the dental plan for State employees.

Figure 20: Virginia's Medicaid Rates Were Lower Than Medicare and Private Rates for Commonly Used Physician Services (2013)



[a] Average private insurance rate paid to physicians working for VCU Health System.

Source: JLARC staff analysis of data provided by DMAS and VCU Health System's reimbursement department.

Most Practitioners Received Only Minimal Increases in Medicaid Rates During the Past 10 Years

Most practitioners received only minimal increases in their Medicaid reimbursement rates between FY 2003 and FY 2012, with the exception of OB/GYNs and dentists, which received notable increases. Prior to FY 2005, physicians and other practitioners had not received a Medicaid rate increase since FY 1992. OB/GYNs received the largest rate increase during the 10-year period studied—34 percent in FY 2005 and another 2.5 percent in FY 2006 (Table 4). In FY 2005, the General Assembly approved a 30 percent rate increase for dentists. According to DMAS staff, these rate increases were necessary to help retain OB/GYNs and encourage more dental providers to accept Medicaid patients.

A few other providers received increases during the study period, but on a smaller scale. Primary care physicians (adult and pediatric) received a five percent rate increase in FY 2006, and pediatricians

Table 4: OB/GYNs and Dentists Experienced Largest Rate Increases Over Past Decade

	Fiscal Year										
	2003	2004	2005[a]	2006	2007	2008[b]	2009	2010	2011[d]	2012	2013
OB/GYN			34%	2.5%							
Dental			30%			5%					
Pediatric				5%	5%	10%[c]					23%[e]
Primary Care				5%		5%					30%[e]
Emergency Department			2%	3%		5%					
All Other						5%					

[a] Prior to FY 2005, there were no rate increases since 1992.
[b] In FY 2008, all services except OB/GYN received a 5 percent inflation increase.
[c] In FY 2008, pediatric service providers received a 5 percent increase in addition to the 5 percent inflation increase applied to all services (except OB/GYN).
[d] In FY 2011, all service providers received a 3 percent rate reduction but it was only temporary (July–September 2010).
[e] Primary care providers (adult and pediatric) received a temporary two-year increase for FY 2013 and FY 2014 under the Affordable Care Act.

Source: JLARC staff analysis of information provided by DMAS.

Medicaid-to-Medicare Physician Fee Index

The Medicaid-to-Medicare fee index is a commonly used measure of each state's physician fees relative to Medicare fees. The index reflects differences in labor costs among states, because Medicare rates account for regional differences in labor costs.

Virginia's value of 80 percent across all physicians indicates that DMAS pays physicians an average of 80 percent of the Medicare rate for services provided to Medicaid patients. The Medicaid-to-Medicare fee index data only captures payments made under each state's Medicaid fee-for-service system.

received an additional five percent inflation increase in FY 2007 and FY 2008. All service providers received a five percent inflation increase in FY 2008, with the exception of OB/GYNs, which were already reimbursed as much as the Medicare rate.

Primary care providers (adult and pediatric) are temporarily being reimbursed at 100 percent of the Medicare rate in 2013 and 2014 under the federal Affordable Care Act. This equates to a rate increase of more than 20 percent for pediatric primary care physicians and 30 percent for physicians providing adult primary care services. The temporary increase applies only to primary care services as an effort to help states increase the number of primary care physicians willing to serve a larger number of Medicaid enrollees because of expansion under the Affordable Care Act. The Medicaid rates as a percentage of Medicare for primary care physicians would have decreased from previous years if not for the increase provided through federal law, according to information provided by DMAS.

Virginia Tends to Pay Physicians Higher Medicaid Rates Than Majority of Other States

Virginia's Medicaid program pays physicians approximately 80 percent of Medicare rates, which is more than the majority of other states. Medicaid rates are commonly compared to Medicare rates, which are often viewed as more attractive to providers since they

tend to be higher. According to data published by the Kaiser Family Foundation, Virginia's Medicaid-to-Medicare Physician Fee Index for all physician services (80 percent) was higher than 30 other states in 2012 (Figure 21). West Virginia and the District of Columbia have the same physician fee index as Virginia. North Carolina (82 percent) and South Carolina (81 percent) have a ratio higher than Virginia, and Maryland (73 percent) has a lower ratio. North Dakota, Alaska, and Wyoming are the only states that generally pay physicians more than the Medicare rate.

Following a national trend, Virginia's Medicaid-to-Medicare Physician Fee Index decreased between 2008 and 2012, and it decreased more for primary care than for other services (Table 5). Virginia's rank was lower in 2008 for all services except primary care.

Table 5: Virginia's Medicaid-to-Medicare Fee Index Decreased the Most For Primary Care From 2008 to 2012

	2008 Medicaid-to-Medicare Physician Fee Index			2012 Medicaid-to-Medicare Physician Fee Index		
Service Type	Virginia	U.S.	Virginia's Rank	Virginia	U.S.	Virginia's Rank
All services	90%	72%	23	80%	66%	17
Primary care	88	66	17	74	59	18
Obstetrics	102	93	24	91	78	20
All others	81	72	26	82	70	18

Note: Appendix F contains tables with the Medicaid-to-Medicare physician fee index for all states, by type of service.

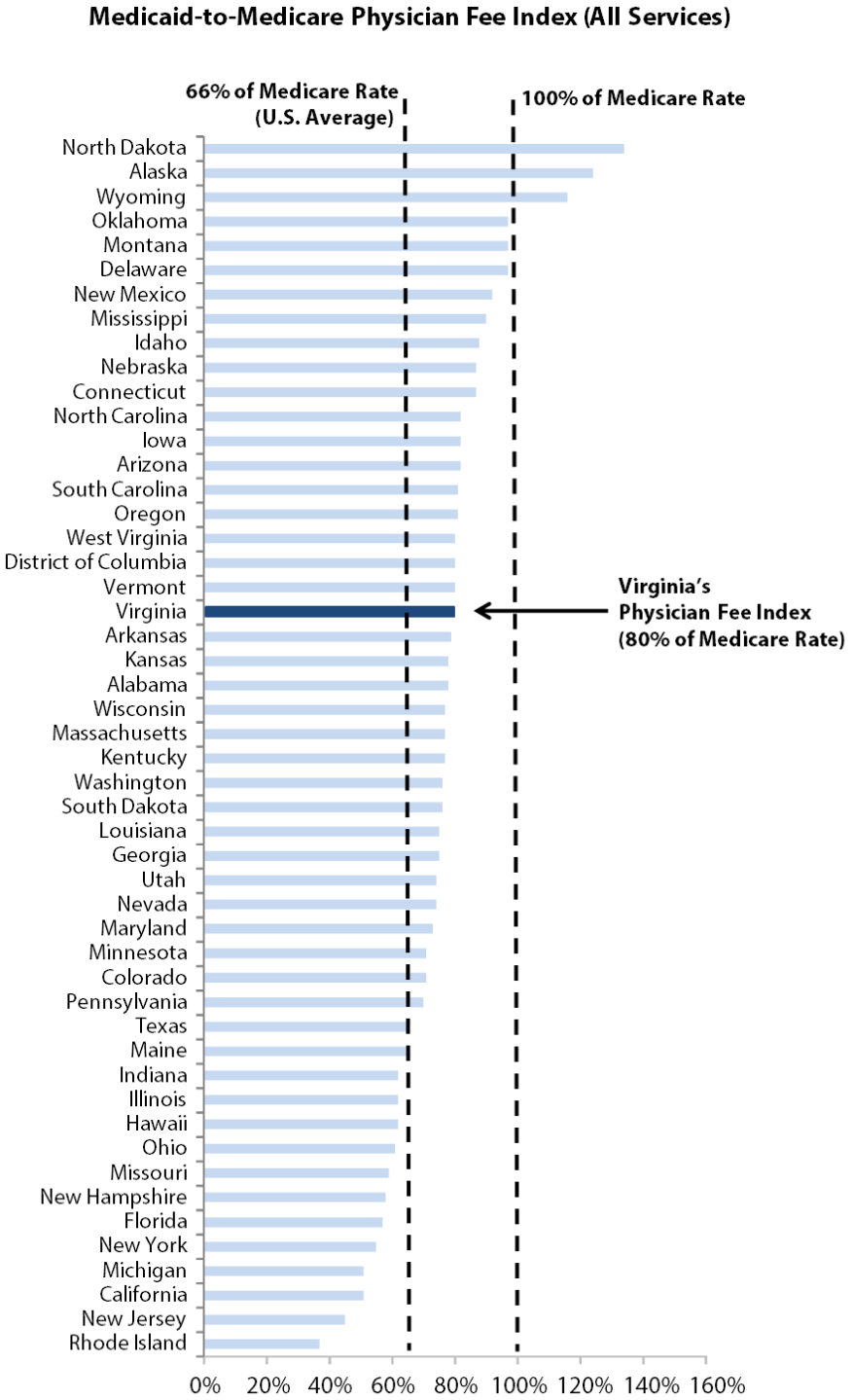
Source: Kaiser Family Foundation, 2008 and 2012.

COST RECOVERY RATES FOR HOSPITALS HAVE VARIED OVER TIME AND RATES HAVE DECLINED

In Virginia, most hospitals are not reimbursed for their full costs of treating Medicaid enrollees.

Overall, hospitals have been reimbursed a relatively consistent percentage of costs for providing care to Medicaid patients, but the percentage has ranged widely each year among facilities due to variation in the number of Medicaid patients treated. In Virginia, most hospitals are not reimbursed for their full costs of treating Medicaid enrollees. Hospitals that treat a large percentage of Medicaid patients receive additional payments that help offset the uncompensated care provided by these hospitals. Overall, hospitals' cost recovery rates have been relatively consistent over the past 10 years, suggesting that the adequacy of Medicaid payments has not changed much.

Figure 21: Virginia's Medicaid Program Pays Physicians 80 Percent of Medicare Rates, On Average, Which Is Higher Than 30 Other States (2012)



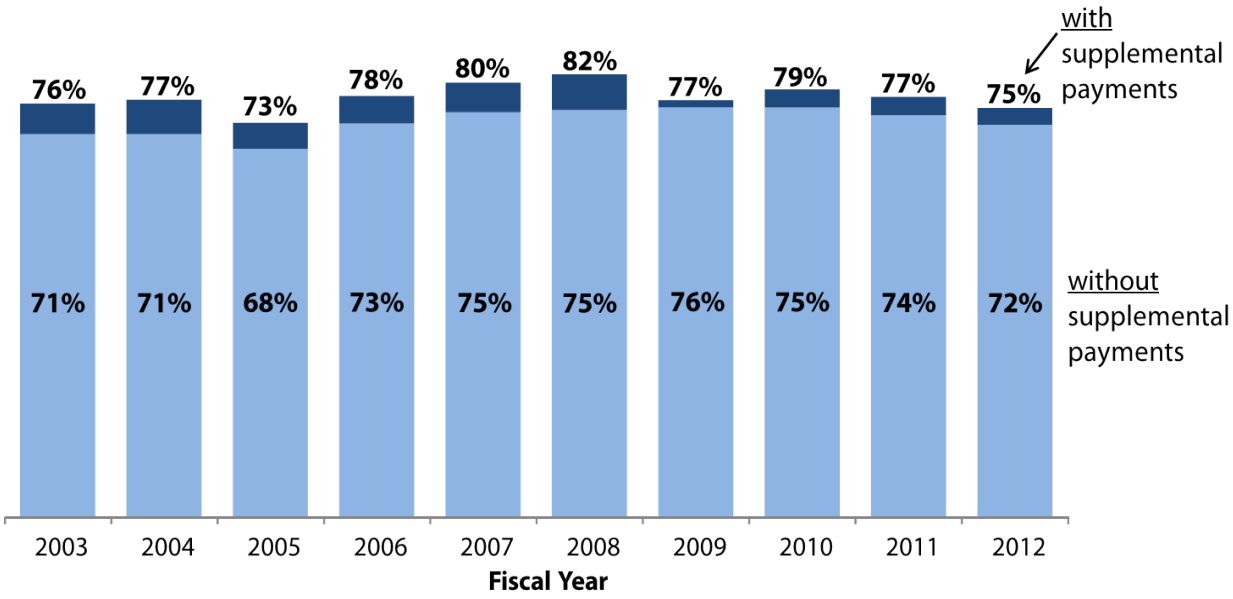
Note: A Medicaid-to-Medicare physician fee index was not calculated for Tennessee because it does not have a fee-for-service component in its Medicaid program.

Source: Kaiser Family Foundation, 2012.

Hospitals Have Been Reimbursed for Nearly Three-Fourths or More of Their Medicaid Costs, on Average, Over Past Decade

On average, most general hospitals have been reimbursed for approximately 75 percent of their Medicaid costs over the past decade (Figure 22). Cost recovery rates are slightly higher overall when factoring in the three supplemental payments that hospitals may receive through the Medicaid program: Disproportionate Share Hospital, Graduate Medical Education, and Indirect Medical Education payments. For the past 10 years, approximately 30 hospitals have received supplemental payments totaling more than $3 billion cumulatively to help offset some of the costs resulting from Medicaid losses (Table 6). All three types of supplemental payments are funded with both federal and State dollars. Beginning in FY 2014, federal funding for Disproportionate Share Hospital payments will be reduced, which will result in lower payments for hospitals.

Figure 22: Percentage of Medicaid Costs Reimbursed[a] Has Remained Relatively Stable For General Hospitals Over the Past 10 Years



[a] Percentage of Medicaid costs reimbursed was calculated based on Medicaid allowable fee-for-service costs and reimbursements (based on the fee-for-service enrollees that each hospital serves) as reported by hospitals annually to DMAS. Supplemental payments include DSH, GME, and IME payments. Appendix B includes more details about the analysis performed on this data.

Note: Excludes the State's two academic health centers (VCU and UVA), which are reimbursed for all of their Medicaid costs and receive supplemental payments to offset the uncompensated care provided to indigent patients. Freestanding psychiatric facilities are excluded because they are reimbursed a prospective per diem payment (with no cost settlement) for the Medicaid patients they treat. Because payments to freestanding psychiatric facilities are not retrospectively settled as payments to general hospitals are, DMAS does not require these facilities to file a Medicaid cost report.

Source: JLARC staff analysis of hospital cost report data provided by DMAS.

Supplemental Payments to Hospitals

Disproportionate Share Hospital (DSH) payments provide financial support to hospitals that treat a high percentage of Medicaid patients.

Graduate Medical Education (GME) payments compensate hospitals for a portion of their costs for training health professionals such as residents and interns.

Indirect Medical Education (IME) payments are provided to teaching hospitals in recognition of the higher operating costs of their teaching programs, which perform more diagnostic and treatment procedures to support the educational mission of those hospitals.

Table 6: Hospitals Received More Than $3.4 Billion in Supplemental Payments Over the Past 10 Years ($Millions)

Fiscal Year	DSH	GME	IME	TOTAL
2003	$271	$13	$78	$361
2004	301	24	90	415
2005	296	27	109	432
2006	263	28	117	408
2007	267	30	119	417
2008	224	33	121	377
2009	288	34	134	455
2010	101	34	105	241
2011	179	12	50	241
2012[a]	42	12	22	77
10-Year Total	**$2,233**	**$246**	**$945**	**$3,424**

[a] FY 2012 totals do not include supplemental payments made to the State's two academic health centers (VCU and UVA) because the data have not yet been settled by DMAS.

Source: JLARC staff analysis of data provided by DMAS.

The cost to hospitals of treating Medicaid patients has increased by 35 percent over the past decade, as more Virginians enrolled in Medicaid and the cost of health care continued to rise. Therefore, although the percentage of unreimbursed costs has remained relatively stable over the past decade, the *amount* of unreimbursed costs that hospitals have incurred has increased by approximately 40 percent, adjusted for inflation, from $119 million in FY 2003 to $166 million ($185 per patient day, on average) in FY 2012. Hospitals report that they are able to use payments received from other patients to cover the unreimbursed costs of treating Medicaid patients; however, this cost shifting becomes more difficult as the amount of unreimbursed costs grows.

The percentage of Medicaid costs reimbursed varies widely among hospitals, depending on the supplemental payments they receive because they serve a high volume of Medicaid patients or are teaching hospitals and have medical interns and residents. For example, the percent of costs reimbursed among hospitals in FY 2012 ranged from 49 percent (Riverside Hampton Roads Specialty) to 102 percent (Bedford County Memorial). The State's two academic health centers (VCU Health System and UVA Medical Center) were reimbursed for a higher percentage of costs.

Virginia's Medicaid program provides VCU Health System and UVA Medical Center with additional funding to recognize the important role that these facilities play in providing a health care safety net for Medicaid and uninsured patients in the State, as well as the public interest in ensuring the financial viability of these centers. The State's academic health centers have been re-

imbursed for well above their Medicaid costs almost every year over the past decade as a result of the additional funding received, which is designed not only to help offset their Medicaid losses but also to offset the uncompensated care they provide to uninsured patients.

VCU Health System and UVA Medical Center have received 84 percent of the $3 billion over the past 10 years for two primary reasons. As the State's two academic health centers, they treat a higher percentage of Medicaid patients (26 percent and 20 percent, respectively) compared to other hospitals (14 percent). They also treat a high volume of indigent patients. In FY 2012, the General Assembly appropriated approximately $237 million in supplemental payments to these two hospitals as compensation for the provision of indigent care.

Medicaid Payment Rates for Hospitals Have Declined Since 2008

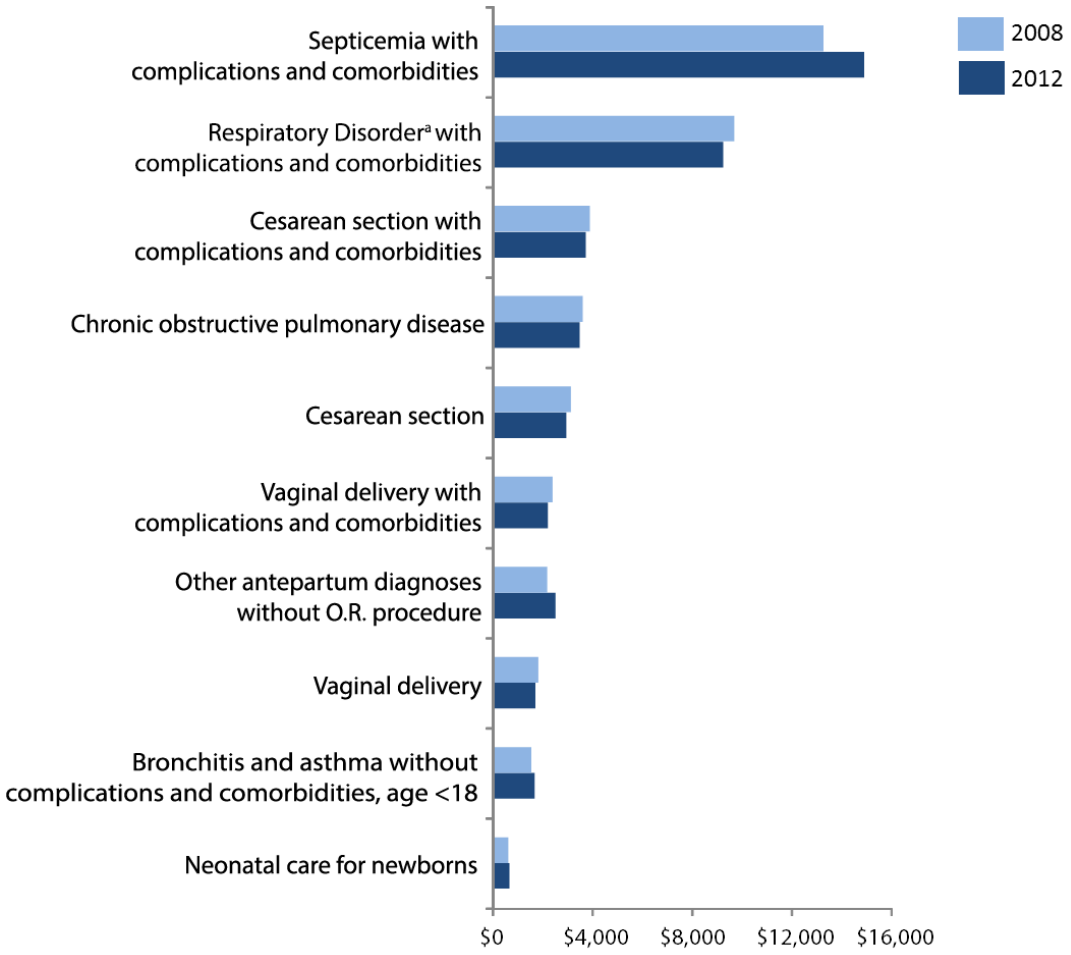
Freestanding psychiatric facilities have experienced a significant decrease in the Medicaid rates they have received in the past three years.

Although Medicaid rates paid to hospitals for their operating costs have increased since 2003, they have decreased since 2008. Freestanding psychiatric facilities in particular have experienced a significant decrease in the Medicaid rates they have received in the past three years. As rates decline over time, they may be viewed by providers as less adequate.

Medicaid payments for six of the 10 most commonly used hospital services declined since 2008 (Figure 23). Part of the reason that the Medicaid payments for these conditions have declined is because the base rates paid to hospitals have decreased since 2008 after adjusting for inflation. Hospital Medicaid rates are calculated based on (1) a base rate that accounts for wage differences between hospitals across the State; and (2) a relative weight that accounts for differences between patients' illnesses or diagnoses. While the inflation-adjusted average base rate increased 23 percent between 2003 and 2012, it reached its peak in 2008 ($5,694) and declined each year since ($5,279 in FY 2012).

Over the past decade, the inflation-adjusted Medicaid rate paid to hospitals for providing psychiatric care increased by 15 percent, on average. The rate reached a peak in 2008 and has declined 11 percent since then (Figure 24). Hospitals are paid a daily rate for psychiatric services rather than a flat rate depending on a patient's illness or diagnosis. In FY 2012, the daily rate was $764. These rates increased by 24 percent from 2007 to 2008 because the General Assembly provided additional funding for an increase in the adjustment factor for psychiatric services from 78 percent to 84 percent to help slow the decline in the availability of inpatient psychiatric beds in the State.

Figure 23: Inflation-Adjusted Medicaid Payments to Inpatient Hospitals Have Declined Since 2008 for Some of the Most Common Services



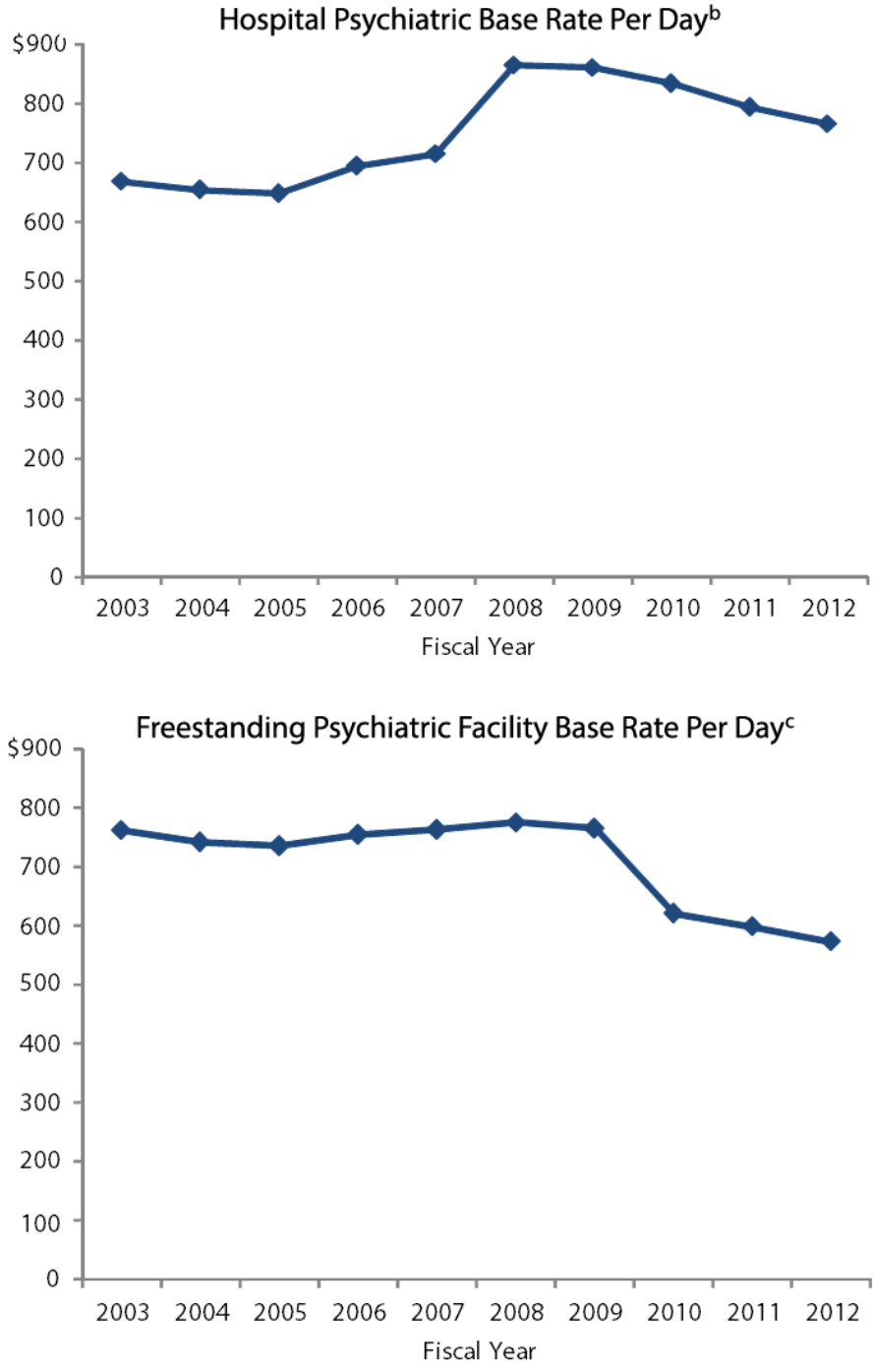
[a] Excluding infections, bronchitis, and asthma.

Note: Inflation-adjusted based on 2012 dollars using the Medical Price Index. Commonly used DRG codes were determined based on DMAS claims data (FY 2012).

Source: JLARC staff analysis of claims and rate data provided by DMAS.

In addition, inflation-adjusted Medicaid rates for freestanding psychiatric hospitals decreased by 25 percent over the past 10 years. As with the general hospitals that provide psychiatric care, freestanding psychiatric facilities are paid a daily rate. According to DMAS, three factors affected the reimbursement rates for freestanding psychiatric hospitals: (1) a partial inflation adjustment in FY 2009; (2) a rebasing of their costs to 2005 costs effective FY 2010, which resulted in a lower rate; and (3) an inflation freeze in FYs 2010, 2011, and 2012.

Figure 24: Inflation-Adjusted[a] Medicaid Rates for Psychiatric Services Have Declined Since 2008



[a] Inflation-adjusted based on 2012 dollars using the Medical Price Index.
[b] Capital costs are settled based on allowable costs for the entire hospital and are not included in the rate.
[c] Capital costs are included in the per diem rate for freestanding psychiatric facilities.

Source: JLARC staff analysis of rate data provided by DMAS.

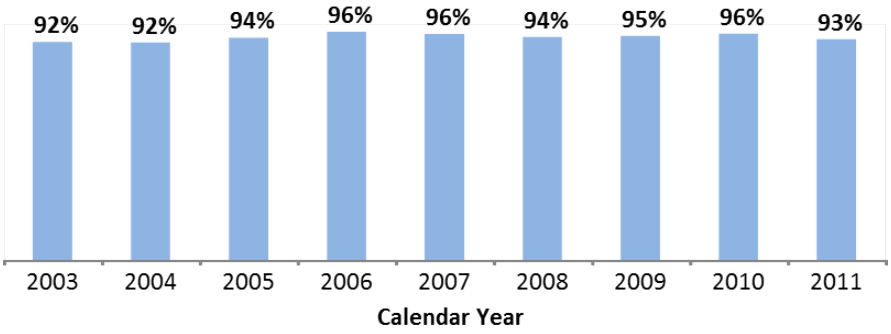
NURSING HOMES' COST RECOVERY RATES AND PAYMENTS HAVE REMAINED FLAT OVER TIME BUT VARY BY FACILITY

Overall, nursing homes have been reimbursed a consistent percentage of costs for providing care to Medicaid patients, but the percentage has ranged widely each year among facilities due to variation in the number of Medicaid patients treated. Medicaid rates paid to nursing homes have remained relatively flat after adjusting for inflation, suggesting that the adequacy of Medicaid payments has not changed much over time.

Nursing Homes With a Large Medicaid Population Have Been Reimbursed for Most of Their Medicaid Costs Over Time

Nursing homes have been reimbursed for 92 to 96 percent of their costs, on average, over time (Figure 25). Cost recovery rates for nursing homes are higher than hospitals because the majority of their patients are Medicaid recipients and the General Assembly has historically reimbursed these facilities a higher percentage of their Medicaid costs for this reason. Between 2003 and 2011, approximately 60 percent of nursing home patients were Medicaid recipients, on average.

Figure 25: Average Percentage of Medicaid Costs Reimbursed[a] for Nursing Homes Has Been Stable Over Time



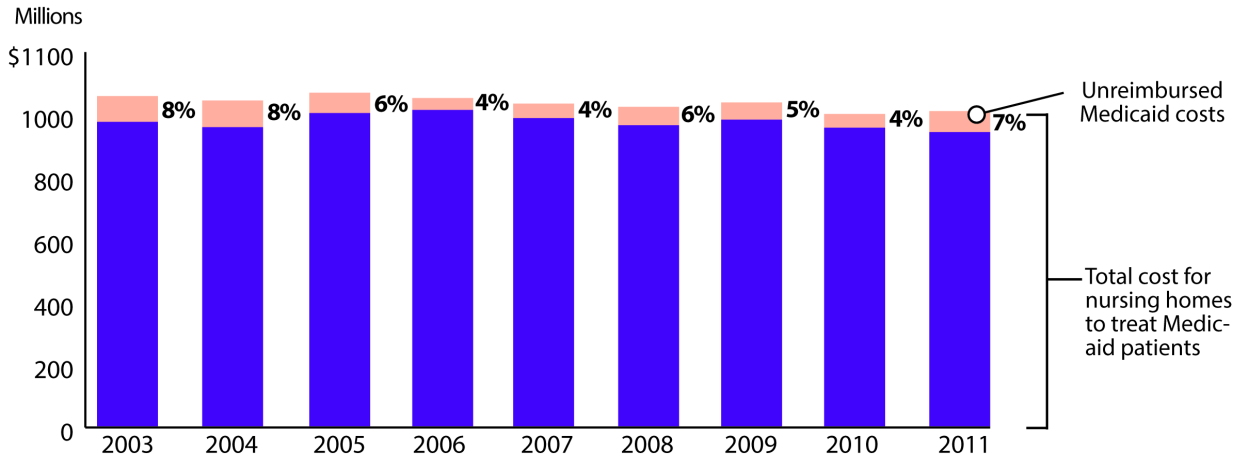
[a] Percentage of Medicaid costs reimbursed was calculated based on Medicaid allowable costs and reimbursements (based on the Medicaid enrollees that each nursing home serves) as reported by nursing homes annually to DMAS and CMS. Appendix B includes more details about the analysis performed on this data.

Note: Cost report data for nursing homes was not available from DMAS for 2002 or 2012.

Source: JLARC staff analysis of nursing home cost report data provided by DMAS.

Although nursing homes have been reimbursed for almost all of their costs for treating Medicaid patients, unreimbursed costs are still substantial. Between 2003 and 2011, nursing homes averaged about $52 million in unreimbursed Medicaid costs, after adjusting for inflation. The amount of unreimbursed Medicaid costs for nursing homes decreased 18 percent over the same period from

Figure 26: Total Medicaid Costs for Nursing Homes Decreased Five Percent From 2003 to 2011 and Unreimbursed Medicaid Costs Have Fluctuated Slightly Over Time



Note: Inflation-adjusted based on 2011 dollars using the Medical Price Index. Cost report data for nursing homes was not available from DMAS for 2002.

Source: JLARC staff analysis of nursing home cost report data provided by DMAS.

$82 million to $67 million (Figure 26). In 2011, the unreimbursed cost per patient day was approximately $11, on average.

Payment Ceiling for Nursing Homes

Virginia's Medicaid program reimburses nursing homes either a prospective payment rate or a prospective payment ceiling, whichever is lower. The payment ceiling is intended to encourage the efficient provision of care to Medicaid enrollees by capping Medicaid reimbursements for nursing homes whose costs exceed the median operating costs per day across other peer nursing home facilities.

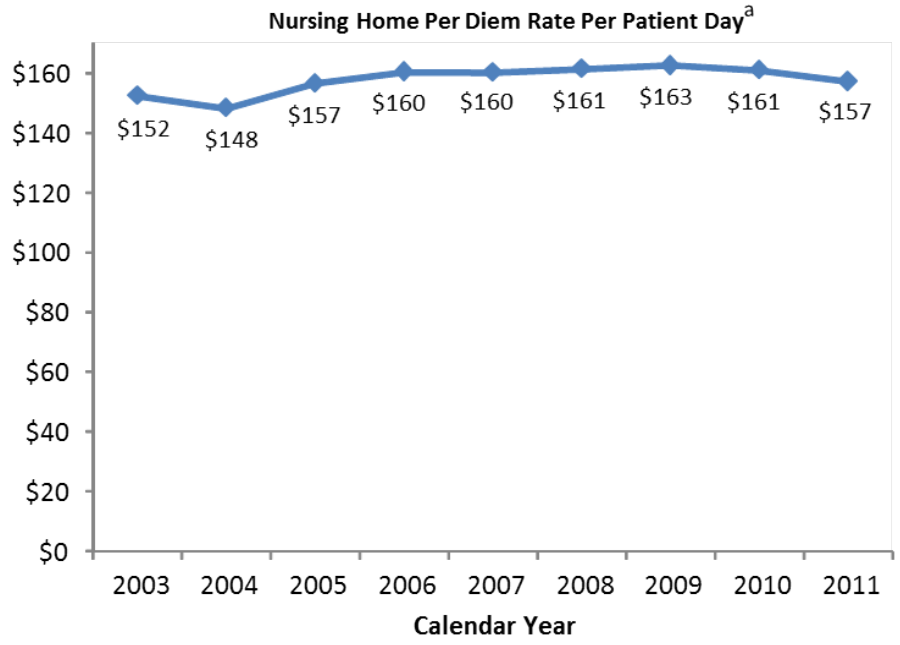
The percentage of Medicaid costs reimbursed has varied widely among nursing homes each year. Nursing homes with higher proportions of Medicaid enrollees tend to have a higher percentage of their Medicaid costs reimbursed because they have a greater incentive to provide care as efficiently as possible to keep their costs below the payment ceiling. Facilities with a low proportion of enrollees are much less reliant on Medicaid revenue for financial stability and have less of an incentive to keep Medicaid costs under the payment ceiling. These facilities also tend to be reimbursed for a lower percentage of their Medicaid costs. For example, only six percent of patients at the Colonnades Health Center were enrolled in Medicaid in 2011, and 55 percent of the facility's Medicaid costs were reimbursed. In comparison, all of Grace Lodge's patients were Medicaid recipients in 2011, and 112 percent of its Medicaid costs were reimbursed.

In 2011, 42 out of 266 nursing homes had costs above the payment ceiling and were reimbursed for less than 80 percent of their Medicaid costs. In the same year, 62 nursing homes had costs below the payment ceiling and were reimbursed for 100 percent or more of their Medicaid costs. From 2003 to 2011, 32 percent of nursing homes were reimbursed for all of or more than their reported Medicaid costs, on average.

Medicaid Rates Paid to Nursing Homes Have Remained Flat Since 2003

Rates paid to nursing homes have been relatively flat since 2003. After adjusting for inflation, the nursing home daily rate per patient increased by only three percent from 2003 to 2011. However, their rates have decreased by four percent from 2009 to 2011 (Figure 27). Part of the reason that Medicaid rates paid to nursing homes have decreased is because Medicaid occupancy rates for nursing homes have declined over the past 10 years. The average rate paid to nursing homes for treating Medicaid patients ranged from $148 per day in 2004 to $163 per day in 2009.

Figure 27: Inflation-Adjusted Rates Paid to Nursing Homes Have Remained Stable Over Time



[a] Inflation-adjusted based on 2011 dollars using the Medical Price Index.

Source: JLARC staff analysis of rate data provided by DMAS.

Chapter 4

Increasing Medicaid Rates Appears to Have Positive Impacts on Provider Participation and Access to Care

In Summary

Many empirical studies and surveys have found that increasing Medicaid payment rates appears to positively affect provider willingness to treat Medicaid patients. While the size of the impact varies, most empirical studies indicate a moderate effect: a rate increase of about 10 percentage points was found to increase provider participation by three to four percentage points. Rates have a larger impact on providers in office settings than in institutional settings, such as hospitals or clinics, because reimbursement for these providers tends to be higher, particularly if a large proportion of their patients are Medicaid enrollees. However, the effect of reimbursement rates on provider participation in the Virginia Medicaid program has not been established empirically. An analysis of two rate increases to Virginia Medicaid providers within the past 10 years does not show evidence that the rate increases affected provider participation, partly because the number of Medicaid providers has grown substantially for most services even in the absence of rate increases. The very small number of rate changes in Virginia over the past decade means little State-specific information is available to test the effects of rates on provider participation.

Setting Medicaid rates requires states to balance the need to restrain spending with ensuring access to care. While low rates restrict spending, they may not attract enough providers to offer a level of access to care that is comparable to that of the general population, as federal law requires. Conversely, high rates could increase the number of providers willing to serve Medicaid recipients but could increase spending.

Setting appropriate rates therefore requires understanding how rates affect access. If providers are very sensitive to Medicaid rates, then a small rate increase could induce a large increase in providers. If providers are insensitive to rates, then even a large rate increase may have only a small effect.

This chapter focuses on physicians primarily because the ability to obtain care from these providers is the object of most research on Medicaid rates. Few studies have examined the impact of rates on access to care delivered by other types of providers, and access to many other services appears to be less problematic.

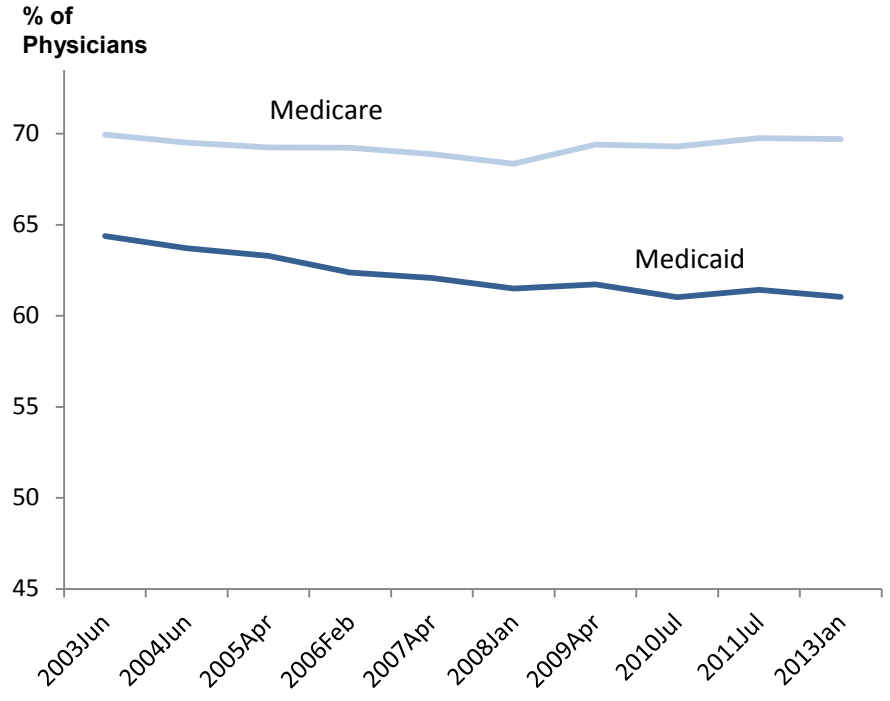
PHYSICIANS REPORT BEING LESS WILLING TO SEE PATIENTS WITH MEDICAID THAN WITH OTHER INSURANCE

Physicians consistently report that they are less willing to accept new patients with Medicaid than new patients with other types of insurance such as Medicare or commercial insurance, both in Virginia and nationwide. Most research focuses on new rather than existing patients, probably because an unwillingness to accept new Medicaid patients indicates a potential access problem even if a physician has current patients on Medicaid. The Virginia Department of Health Professions requires physicians with active Virginia licenses to provide information in a physician "profile" database that is available to the public on the agency's website. As part of the profile, physicians are asked to report whether they accept new Medicaid and Medicare patients. According to the profile, 61 percent of active physicians in Virginia were willing to accept new Medicaid patients in the spring of 2013, compared to 70 percent who were willing to accept new Medicare patients. Since 2003, physicians' willingness to accept new Medicaid patients has decreased slightly from 64 percent, while willingness to accept new Medicare patients has remained stable (Figure 28).

Physician Profile

Physicians with active Virginia licenses are required to supply basic information relating to their license, such as years in active practice, Board certifications, and location of their practice. Providers are required to update the information when changes occur, but not on a specific schedule. Responses to questions about provider participation are required for Medicaid and optional for Medicare, although no responses for active providers are missing. Other providers, such as dentists and psychologists, are not required to provide information for a profile.

Figure 28: Physician Willingness to Accept New Patients Has Declined Slightly for Medicaid in Virginia, but Not for Medicare



Source: JLARC analysis of extracts from the DHP Physician Profile for 2003-2013.

Seven other surveys of physicians' willingness to accept Medicaid were conducted in the past five years, including three in Virginia. Every survey that inquired about providers' willingness to accept patients depending upon type of insurance coverage showed a lower acceptance rate for Medicaid than for other insurance (Table 7).

Physicians most frequently cited low reimbursement rates as a reason for limiting their acceptance of Medicaid patients, according to the five surveys that addressed this question. For example, 78 percent of physicians responding to a survey performed by the U.S. Government Accountability Office said that low reimbursements negatively affected their willingness to serve children enrolled in Medicaid. The other limiting factors that were reported most frequently as barriers to acceptance were delayed reimbursements (68 percent) as well as billing requirements and paperwork burden (62 percent). Higher rates of missed appointments and less compliance with treatment by patients on Medicaid were also cited by more than half of responding physicians. A drawback of surveys is that, even if they accurately capture the intentions of providers, the actual behavior of providers might differ.

"Secret Shopper" Surveys

To test providers' willingness to treat Medicaid enrollees, multiple calls are made to each provider, where the only difference in the script for each call is the type of insurance that the "patient" has. The order of the calls by insurance type is varied randomly. Because every selected provider is asked about each payer type, and "patients" attempt to make a real appointment, these surveys are a better test of providers' acceptance of Medicaid than direct survey questions about providers' intentions.

Other studies have compared the ability to make appointments between patients enrolled in Medicaid and those covered by private insurance or Medicare, and consistently found that providers are less willing to accept new Medicaid patients than patients with other forms of insurance coverage. These "secret shopper" studies use trained interviewers who pose as patients and call provider offices asking to make an appointment. The studies, however, are not designed to identify the reasons for the lower acceptance. The following examples of secret shopper studies for various specialty services show lower acceptance rates for Medicaid:

- A 2010 study of 273 specialty clinics in Cook County, Illinois found that 66 percent of Medicaid/CHIP callers were unable to make an appointment, compared to 11 percent of privately insured callers.
- A 2011 study of 42 orthopedic surgery practices in the Cincinnati, Ohio area found that 14 percent accepted appointments for Medicaid patients, while 90 percent accepted appointments for privately insured patients.
- A 2005 study of 420 diagnostic mammography facilities in 11 states found that 91 percent accepted appointments for Medicaid patients, compared to 99 percent acceptance for Medicare patients.

JLARC staff interviews with physicians and other providers also suggested that rates influence participation in Medicaid. Several physicians and dentists reported not accepting Medicaid because

Table 7: Physicians Are Less Willing to Accept New Patients With Medicaid Than Other Insurance, According to Surveys

Geographic Area and Author	Data Source	Percent Willing to Accept New Patients, by Payer Type		
		Medicaid	Medicare	Private Insurance
Virginia				
Virginia Department of Health Professions	Physician Profile	61%	70%	--
American Academy of Pediatrics	Survey of member pediatricians	49	--	62%
Medical Society of Virginia	Survey of member physicians	65		--
College of William & Mary, Thomas Jefferson Public Policy Program	Survey of physicians and nurse practitioners	70	75	93
U.S.				
American Academy of Pediatrics	Member survey of pediatricians	47	--	64
National Center for Health Statistics	National Ambulatory Medical Care Survey[a]	69	83	82
U.S. Government Accountability Office (GAO)	National survey of physicians	47	--	79
Center for Studying Health System Change	Health Tracking Physician Survey	53	74	87

-- Not available

[a] Electronic Medical Records Supplement.

Source: JLARC staff analysis of results of surveys conducted since 2007.

the rates are low. However, two primary care physicians reported that Medicaid rates were not unfairly low, particularly since private rates had been reduced over time.

Staff in Medicaid managed care organizations (MCOs) also suggested that the supply of providers can influence the rates paid by MCOs. Every MCO said that providers had more bargaining power when they were relatively scarce for certain services or geographic areas. In those instances MCOs paid rate premiums to ensure an adequate supply of providers. At the same time, a few MCOs said they were able to pay rates slightly below the Medicaid fee-for-service rate for certain services that had a large number of competing providers. MCOs monitor provider availability closely, and MCO staff reported that, with few exceptions, they had an adequate network of primary and specialty providers.

PRIOR RESEARCH SUGGESTS THAT HIGHER MEDICAID RATES INCREASE PROVIDER PARTICIPATION AND ACCESS

Medicaid rates have a positive, mostly moderate effect on access to care, according to a review of the research literature.

Medicaid rates appear to have a positive, mostly moderate effect on access to care, according to a review of the research literature. JLARC staff identified 13 peer-reviewed studies published since 2007 of the effect of Medicaid rates on access to care. The studies used a variety of research designs, and the most common approach was to estimate the association between variation in rates and access to care across states. The hypothesis underlying these studies is that, if rates affect access, then states with higher Medicaid rates should have better access to care for their Medicaid enrollees. Many of the studies attempted to control statistically for other differences across states that might affect differences in access, but none used a research design with random assignment, and so all are subject to selection bias and other limitations. Nevertheless, the consistency of the studies in finding a positive relationship between rates and access provides more confidence that a relationship exists.

The studies examined different types of providers—most commonly primary care physicians, pediatricians, and dentists—and outcomes, such as provider participation and the percent of enrollees receiving care. Nine studies found that rates had a medium-sized effect on access. For example, one study found that if Medicaid rates were increased by 10 percentage points relative to Medicare rates, (such as increasing Medicaid rates from 80 to 90 percent of Medicare rates), the number of physicians who accept new Medicaid patients would increase by four percentage points. Four studies found that rates had a small effect on access. For example, a $10 increase in the rate for a dental visit would increase the probability of a dental visit by 1.3 percentage points. None of the peer-reviewed studies found large effects. (See Appendix G for key results of these studies.)

Literature Review of Empirical Studies

A literature search identified more than 50 studies over the past 30 years estimating the effect of Medicaid rates on access to care. JLARC staff performed a more detailed review of the most recent studies. Appendix H includes a complete list of the studies.

Prior research also found that rates have a larger impact on the participation of providers in office settings than in institutional settings such as hospitals or clinics. One study of the factors associated with physicians' participation in Medicaid concluded that "fee increases had less of an effect on increasing Medicaid acceptance among institutional-based physicians than physicians in private practice." Providers in some institutional settings do not make individual decisions about whether to accept Medicaid; instead, the decision is made at the institution level. Further, clinics such as Federally Qualified Health Centers receive Medicaid reimbursement based on their costs, so Medicaid rates are not relevant to them. A 2009 study found that a decrease in Medicaid rates shifted enrollees away from physicians' offices and into hospital outpatient and emergency departments. This may be partly due to

the fact that hospitals are required by federal law to stabilize individuals needing emergency services, regardless of insurance type or ability to pay.

INCREASING VIRGINIA'S MEDICAID RATES FOR OB/GYNS AND PEDIATRICIANS DID NOT PRODUCE DISTINCT IMPROVEMENT IN ACCESS

Over the past decade, the General Assembly has enacted three major Medicaid rate increases: a 34 percent increase for OB/GYN services in 2004, a 30 percent increase for dental services in 2005, and several increases totaling 20 percent for pediatric services from 2006 to 2008. JLARC staff examined the change in provider participation after the rate increases for OB/GYN and pediatric services, and found no clear evidence that the rate increases caused a meaningful increase in the number of providers serving Medicaid patients. For purposes of this analysis, providers were included if they submitted at least one claim for Medicaid payment. The increase for dental services was excluded from this analysis because data on the availability of providers before the rate increase were not available.

The analysis over time performed by JLARC staff found no evidence that the rate changes led to large increases in the number of Medicaid providers. The number of OB/GYNs participating in Medicaid increased five percent in the two years following the rate increase compared to the year before the rate increase. The number of other physicians participating in Medicaid increased three percent during the same time period, which means that the estimated net impact of the OB/GYN rate increase is a two percent increase in the availability of OB/GYNs (Table 8). The estimated impact of the rate change on pediatric services is negative. Because there is no reason to expect that a rate increase would have a negative impact on provider participation, the result can be interpreted as providing no evidence of an impact due to the rate increase. JLARC staff also examined changes in the number of enrollees served and the number of claims and found no evidence that the rate changes produced large increases for either of these outcomes.

JLARC staff compared the change in the availability of providers that delivered services subject to a rate increase with the change in the availability of providers for services without a rate increase to control for the fact that the entire population of providers serving Medicaid enrollees has grown, regardless of changes in rates. As in most states, Virginia's Medicaid program has grown rapidly over the past 10 years in the number of enrollees and providers. A simple comparison of the number of providers before and after any given year would therefore tend to show an increase in providers and likely overstate the extent to which results are attributable to changes in rates.

Table 8: Analysis of Rate Increases for OB/GYN and Pediatric Services in Virginia Shows No Evidence of a Large Increase in Physician Availability

	Average Number of Providers With Claims per Quarter			
Physician Type	**Before Rate Increase**	**After Rate Increase**	**Difference**	**% Difference**
OB/GYNs[a]	383	402	19	5%
Other Physicians[a,b]	1,538	1,589	52	3
			Net Change	**2%**
Pediatricians[c]	717	793	77	11
Other Physicians[b,c,d]	2,023	2,407	384	19
			Net Change	**–8%**

[a] Time period before the rate change = fourth quarter of calendar year 2003 through the second quarter of 2004. Time period after the rate change = third quarter of 2004 through the second quarter of 2006.
[b] Excludes primary care physicians because they began receiving rate increases (for a total of 10 percent) in FY 2006.
[c] Time period before the rate change = second quarter of 2005 through the first quarter of 2006. Time period after the rate change = third quarter of 2007 through the second quarter of 2009.
[d] Includes OB/GYN physicians.

Note: The analysis includes only physicians in office settings; prior research suggests they are most likely to respond to a rate increase.

Source: JLARC staff analysis of Medicaid claims data, FY 2004–FY 2012.

While the analysis did not find evidence that rates affected provider participation, it also did not demonstrate that rates have no effect on provider willingness to serve Medicaid enrollees. Virginia has had only two substantial rate changes for physicians in the past decade, not enough data points to clearly show the relationship between rates and the number of providers.

In contrast, studies based on differences in Medicaid rates across states essentially have 50 different rates, and sometimes 100 different rates when they use data for two different time periods in each state. Because these studies use much more information than what is available to analyze in Virginia, they provide clearer evidence on the relationship between rates and provider participation, and they consistently find a positive relationship.

Nevertheless, the fact that the 34 percent increase in rates for OB/GYNs did not lead to a large increase in providers in the two years after the rate increase is surprising. There are several possible explanations for this result:

- Medicaid rates may have still been below rates paid by private insurers, even with the increase, and the demand for OB/GYN physicians may have been sufficiently high that physicians had little capacity to expand the volume of services provided;
- the rate increase may have prevented a decrease in the number of providers that otherwise would have occurred;
- many providers may not have been aware of the rate change; and
- data imperfections may have contributed to error in measuring the number of providers.

Data constraints prevented investigation of these hypotheses.

Given the limited information to examine the effects of Medicaid rate changes in Virginia, the best available evidence is the national research summarized in this chapter that Medicaid rates have at least a modest effect on access to health care. The causal studies are also consistent with the results of physician surveys and secret shopper studies, and in accord with the basic economic principle that an increase in price should lead to an increase in supply.

Chapter 5

Upcoming Changes to Medicaid Program Could Impact Future Access

In Summary

Virginia's Medicaid program may undergo several changes in the next few years that could impact enrollees and providers in the future. These changes may ultimately improve access to care and in some cases hinder it. The most far-reaching of these changes is the expansion of Medicaid eligibility under federal health care reform, which Virginia may adopt if certain changes are made. DMAS expects the expansion of Medicaid eligibility in Virginia to result in enrollment growth of approximately 25 percent, or 248,000 individuals, above 2012 levels. The current network of providers for Medicaid enrollees may be overburdened in the short term, according to staff of managed care organizations, which may decrease access to services for Medicaid enrollees currently eligible. However, access to health care should improve for uninsured people who qualify for Medicaid under expansion. The Department of Medical Assistance Services is making other changes to the Medicaid program, which include transitioning enrollees who are dually eligible for Medicaid and Medicare into managed care networks and reimbursing hospitals for treating eligible State prison inmates with Medicaid rather than State general funds. These changes will have a financial impact on providers, but are not expected to significantly impact access to care for Medicaid enrollees.

The preceding chapters provide information about past experiences regarding access to health care for Virginia's Medicaid enrollees, reimbursement rates for Medicaid providers, and how rates have impacted access to care. In order to adopt Medicaid expansion under federal health care reform, Virginia's Medicaid program must undergo several changes in the next few years that could impact both access to care and reimbursement rates in the future. The General Assembly adopted budget language during the 2013 legislative session that outlines changes to be made to Virginia's Medicaid program in three phases, some of which are already underway. Although many of these changes are intended to improve access to health care, the changes may generate some unanticipated effects. Monitoring access to care on an ongoing basis, which is discussed in the next chapter, will be an important component of ensuring that changes that are adopted are working as intended.

MEDICAID EXPANSION AND OTHER CHANGES COULD IMPACT ACCESS TO CARE

Virginia's Medicaid program may undergo changes in the coming years that could impact access to care for Medicaid enrollees. Virginia is considering expanding Medicaid eligibility under federal health care reform, which could increase enrollment by nearly 25

percent. This expansion could significantly increase the demand for certain services and negatively affect access if the number of providers serving Medicaid enrollees does not keep pace. Still, expansion should improve access to health care for individuals newly eligible for Medicaid, who might otherwise be unable to obtain health insurance. Separately, DMAS is in the process of shifting new groups of enrollees from the fee-for-service model into managed care. The impact of this shift on access is uncertain and will depend on the ability of managed care organizations (MCOs) to enlist the appropriate providers in sufficient numbers.

Medicaid Expansion Could Increase Enrollment by Nearly One-Fourth

Optional Expansion of Medicaid

The Affordable Care Act originally mandated expansion by giving the federal government the authority to withhold the entirety of federal Medicaid funds from states that did not comply. The Supreme Court overturned this component of the ACA in 2012. In the *National Federation of Independent Business v. Sebelius*, the Supreme Court ruled that withholding federal funding was unconstitutionally coercive. The ruling makes expansion optional for states.

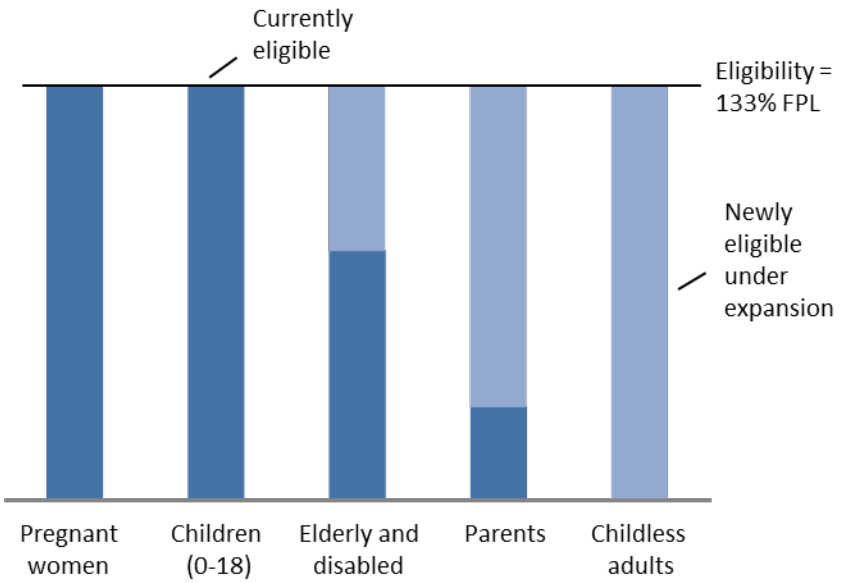
The Affordable Care Act (ACA) enacted in March 2010 gives states the option to expand Medicaid eligibility to all individuals under age 65 with incomes at or below 133 percent of the federal poverty level ($31,322 for a family of four). DMAS estimates that if Virginia proceeds with Medicaid expansion, enrollment could increase by an additional 248,000 Virginians (23 percent) by 2014 compared to FY 2012. The increase in enrollment would primarily impact some adult, disabled, and elderly individuals (Figure 29). This increase would be in addition to the 75,000 individuals who have been eligible for Medicaid and are now expected to enroll in the Medicaid program because of recent media attention to the ACA and a greater public understanding of eligibility.

New Enrollees Will Mostly Receive Services Through Managed Care and Use Primary Care Services. A large portion of Virginians who are expected to become eligible for Medicaid under expansion will be non-elderly adults without a serious health disability. These adults should be less likely to require specialized or institutional care and will most likely receive services through managed care unless they meet one of the exclusion criteria listed in Chapter 1.

Primary care services are expected to be heavily impacted by expansion. Most new enrollees will have to choose a primary care physician to help manage and coordinate their care, as required by all managed care organizations. In addition, it is expected that some new enrollees will have medical conditions that were untreated when they lacked insurance coverage, and for which they will begin receiving care from primary care providers or specialists upon referral by primary care providers.

The results from a study of Oregon's Medicaid program suggest that the demand for hospital services and prescription drugs may

Figure 29: Medicaid Expansion Will Increase Eligibility Among Adult and Disabled Individuals



Note: The ACA sets income eligibility at 133 percent of the federal poverty level, and the law requires states to calculate income using modified adjusted gross income. This calculation includes a five percent income disregard, which effectively raises the limit to 138 percent of the federal poverty level.

Source: DMAS presentation to the Medicaid Innovation and Reform Commission, June 2013.

Oregon Health Insurance Experiment

In 2008, the State of Oregon randomly selected 10,000 individuals to receive Medicaid benefits from a pool of 90,000 applicants. Individuals were randomly chosen to receive Medicaid benefits (treatment group) or remain uninsured (comparison group).

also increase after expansion. The study found that individuals selected to receive Medicaid coverage were 35 percent more likely to have a primary care visit, 30 percent more likely to be admitted to a hospital, and 15 percent more likely to use at least one prescription drug than individuals who remained uninsured. The study also suggests that demand for emergency department services may not increase following expansion. Enrollees selected for Medicaid did not use the emergency department at significantly higher rates than individuals who remained uninsured. Staff from one MCO indicated that emergency department care may decrease because the newly enrolled, who often relied on the emergency department for care, would now have access to primary care services.

MCO staff indicated that expansion could stress their provider network and possibly overload participating providers in the short term.

Access to Care for Medicaid Enrollees and the Uninsured Could Be Impacted. The increase in enrollment could impact access to health care for Medicaid enrollees, if the supply of providers does not adequately keep pace with demand. MCO staff indicated that expansion could stress their provider network and possibly overload participating providers in the short term, but suggested that they should be able to respond in the longer term. Staff from one MCO reported that they expect, on the basis of experiences in Massachusetts, that it might take two to three years for health plans to build an adequate network of providers. The Urban Insti-

tute reported that it might take 12 months for provider networks to build the appropriate capacity, based on interviews they conducted with State officials in Virginia.

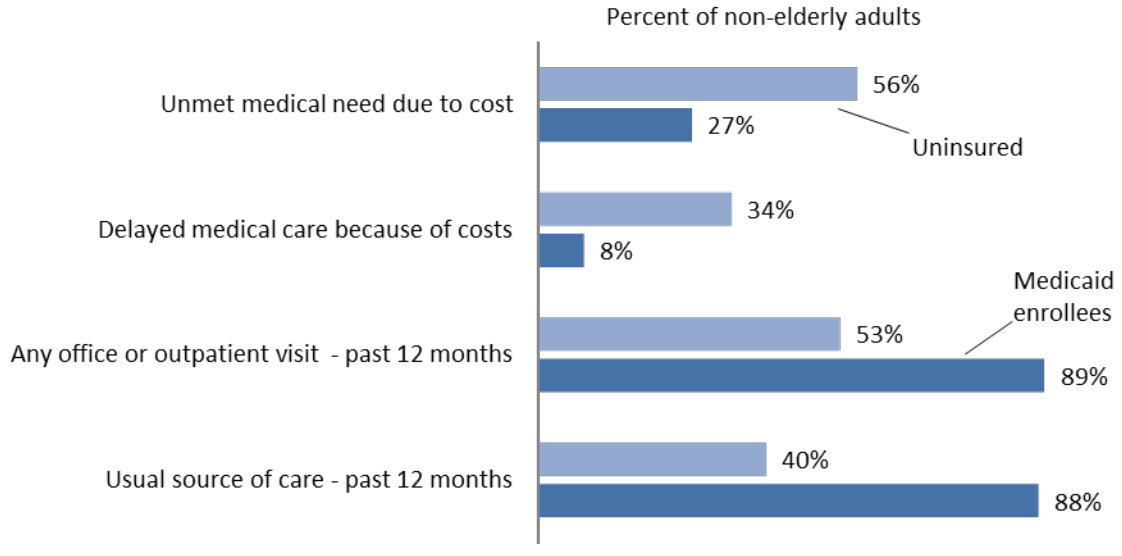
A 2012 Urban Institute report found that Medicaid enrollees are four times less likely to delay needed health care because of cost than the uninsured, and over twice as likely to have a usual source of care.

Access to care should increase for the uninsured Virginians who enroll in Medicaid as a result of expansion. Medicaid enrollees consistently report on national surveys that they use more health care services and have lower unmet medical needs than the uninsured. A 2012 Urban Institute report found that Medicaid enrollees are four times less likely than uninsured people to delay needed health care because of cost and over twice as likely to have a usual source of care (Figure 30). The Oregon Health Insurance Experiment found that the adults enrolled in Medicaid were 70 percent more likely to report having a regular place of care than the adults who did not gain coverage in the experiment.

Several Eligibility Groups Are Transitioning From Fee-for-Service to Managed Care

DMAS will transition several groups of individuals from the fee-for-service to the managed care system. Enrollees who are dually eligible for Medicaid and Medicare will be transitioned into managed care through a demonstration project with the federal government called Commonwealth Coordinated Care starting in January of 2014. The demonstration project will occur in five of the

Figure 30: Uninsured Adults Use Fewer Health Care Services Than Medicaid Enrollees and Report Higher Unmet Medical Needs (2009)



Source: JLARC staff analysis of Urban Institute findings from the 2009 National Health Interview Survey, 2012.

seven managed care regions in the State (Central Virginia, Tidewater, Northern Virginia, Charlottesville, and Roanoke) and involve approximately 78,600 enrollees. Starting in the fall of 2013, foster care children in Central and Northern Virginia and the Tidewater region will transfer from fee-for-service to managed care. This transition is expected to occur statewide by July of 2014.

DMAS expects that the transition of these eligibility groups into managed care will result in improved access to care. However, the transition could have negative impacts if MCOs have difficulty adjusting their care management practices and provider networks to accommodate the needs of these new populations. For example, the elderly population being added to managed care has different and more complex health needs than most enrollees currently in managed care. Some of these enrollees may be in nursing homes or receiving long-term care services in the community.

Additional Medicaid Changes May Improve Access in the Future

Several additional changes to Virginia's Medicaid program are being implemented or considered to improve the effectiveness and efficiency of the Medicaid program as required by the General Assembly. For example, DMAS has entered into a contract with Magellan Health Services to administer behavioral health services for enrollees with mental illnesses or substance abuse disorders. Improving access to these services and providing better coordination of enrollees' care were reasons cited for contracting with an administrator. Functions that Magellan will perform include provider recruitment, network management, member outreach and education, and claims processing. DMAS entered into a similar contract with DentaQuest to improve access to dental care in 2005, and the program appears to have been successful. (See discussion in Chapter 2.)

DMAS is in discussions with the Centers for Medicare and Medicaid Services to design a commercial-like Medicaid program, which could include incentivizing providers through additional reimbursement for providing high-quality care and modifying cost sharing responsibilities for certain enrollees. Using more commercial-like features, to the extent such action is determined to be beneficial to the Medicaid program, could improve access in a variety of ways. If these features are attractive to providers, the number of providers willing to treat Medicaid enrollees may increase. One of the purposes of implementing cost sharing is to achieve optimal use of services by deterring unnecessary care. Reducing unnecessary care could improve access if it frees up appointment times with providers. One option being considered is to provide enrollees with a prepaid debit card to be used for copayments; enrollees could keep any remaining balance at the end of the year.

PAYING FOR INMATE INPATIENT CARE THROUGH MEDICAID WILL DECREASE COSTS TO THE STATE

Starting in FY 2014, the State will pay the cost of inpatient hospital care for some State-responsible inmates through Medicaid rather than using general funds. Medicaid eligibility is terminated for enrollees when they are incarcerated, but otherwise eligible inmates can qualify for Medicaid if they receive care in a medical institution as an inpatient. States have been slow to use this policy to receive federal funds to cover a portion of the cost of care. Twelve states including North Carolina are using Medicaid funding to pay for inpatient care for eligible state inmates as of June 2013.

DMAS estimates that the State will experience reduced costs by using Medicaid to pay for inpatient care for eligible State-responsible inmates. The State had been paying the full cost of treating inmates, but will pay only half the cost going forward because the federal government covers half of the State's payments for Medicaid services. The Department of Planning and Budget has budgeted $2.8 million in 2014 to provide inpatient care to these inmates, indicating potential savings of $1.4 million to the State. This estimate reflects savings for inmates currently eligible, which includes pregnant, disabled, or elderly inmates.

If Virginia expands Medicaid eligibility, the State would receive more federal money for acute hospital care to inmates. Almost all inmates would be eligible and the federal government would cover almost all of the cost.

The State is projected to spend another $27 million for inpatient hospital care for inmates who are not currently eligible for Medicaid. If Virginia expands Medicaid eligibility, the State would receive more federal money for providing inpatient care to inmates, because almost all inmates would be eligible and the federal government would cover almost all of the cost. The federal government has committed to paying 100 percent of the cost for newly eligible Medicaid enrollees for three years (2014–2016), after which

Table 9: Paying for Inmate Care With Medicaid Funding Could Reduce State Expenditures, With or Without Expansion

Fiscal Year	Savings to State No Expansion ($M)	Savings to State With Expansion ($M)
2014	$1.4	$12.0
2015	2.2	26.7
2016	2.3	27.9
2017	2.4	27.8
2018	2.5	28.7
2019	2.6	29.6
2020	2.7	30.0

Note: Lower savings are estimated for FY 2014, because of a transition period in which the Department of Corrections (DOC) will be paying for services furnished in the previous fiscal year based on its existing contract.

Source: JLARC staff analysis of DMAS and DOC data.

the percentage would decrease each year until it reaches 90 percent in FY 2020. The savings to the State from expanding Medicaid to all inmates receiving inpatient care is estimated to be approximately $12 million for FY 2014 with increased savings in subsequent years (Table 9). Lower savings are projected in FY 2014, because there would be a transition period of several months in which the Department of Corrections will be paying for services furnished in the previous fiscal year based on its existing contract.

Currently, most hospitals, with the exception of VCU Health Systems, receive the commercial rate that the State has negotiated with Anthem, a private company, for State employees. VCU Health Systems has a special arrangement—a Memorandum of Agreement with the Department of Corrections—to receive $3,367 per inmate per day, which may be more or less than the Anthem rate depending on the inmate's needs. Based on projections, VCU Health Systems, which serves the greatest number of inmates, would be reimbursed more per inmate per day if care were paid through Medicaid. Other hospitals would probably be reimbursed less per inmate per day (Table 10).

Table 10: Most Hospitals Are Expected to Receive Lower Total Payments From the State for Medicaid Eligible Inmates (FY 2014)

	Number of Inmates	Total Current Payment ($M)	Total Payment Under Medicaid ($M)
VCU Health Systems	870	$2.45M	$2.78M
University of Virginia	85	0.19	0.17
All other hospitals	498 [a]	0.79	0.63

[a] Southern Virginia Regional Medical Center and Southampton Memorial Hospital had over half of the inmate discharges from "all other hospitals" with 154 and 137 respectively.

Note: The number of inmate discharges by hospital is based on FY 2011 data from the Department of Corrections (DOC). Data was not available for the entirety of FY 2012.

Source: JLARC staff analysis of DMAS estimates and DOC 2010–2012 expenditures.

Access to hospital care for inmates should not be impacted by this transition to Medicaid. Hospitals are required by federal law to treat anyone requiring emergency health care regardless of ability to pay. When inmates require non-emergency care, additional travel may be required if the closest hospital will not treat them. When inmates require inpatient care, the majority receive it from VCU Health Systems, which is expected to benefit financially from shifting to Medicaid reimbursements and therefore will probably continue to serve inmates.

Chapter 6

Access to Care Should Be Measured on an Ongoing Basis

In Summary

Limited information has been available about the adequacy of access to care for Medicaid enrollees in Virginia. The Department of Medical Assistance Services (DMAS) sets access standards for managed care organizations and requires them to collect data on several measures of access, but access is not regularly measured for fee-for-service enrollees. More systematic and ongoing measurement of access to care would maximize the State's ability to comply with federal requirements related to ensuring access, provide a baseline for health care reform and other policy or rate changes, and help ensure Medicaid's effectiveness in providing care. The General Assembly could require DMAS to produce an annual report measuring access for a subset of Medicaid services, based on measures constructed from data that are already collected. The report could be submitted to the Health and Human Resources Subcommittees of the House Appropriations and Senate Finance Committees, the Medicaid Innovation and Reform Commission, the Joint Commission on Health Care, and the Secretary of Health and Human Resources.

The mandate for this study directs JLARC to "develop a metric that would enable the state to measure changes in Medicaid recipients' access to care over time." Measuring access on an ongoing basis would be useful to State policymakers for several reasons. First, it would help Virginia's Medicaid program to maintain compliance with federal law, which requires states to set Medicaid payments that are "sufficient to enlist enough providers" to ensure that access to care is comparable to the general population. Federal approval of changes to a state's payment methodology, such as rates, is contingent in part on demonstrating that the access requirement would not be compromised. Proposed changes to federal regulations would require states to measure access for Medicaid enrollees in a more comprehensive way.

Proposed Federal Regulation Requiring States to Measure Access

The federal government is expected to issue regulations to establish a standard process states must use to demonstrate compliance with federal access requirements for Medicaid. The proposed rule does not prescribe specific measures of access, but requires states to analyze enrollee needs, the availability of providers, and utilization of services. The rule will be finalized in 2014.

Second, measuring access to care on an ongoing basis would enable DMAS and other policymakers to detect variation in access over time and to more accurately monitor the effects of rate and other policy changes, including the effects of federal health care reform and the reforms to Virginia's Medicaid program (Chapter 5). If Virginia expands Medicaid eligibility, it will be important to measure any changes to health care access for existing enrollees and newly eligible enrollees. If Virginia does not expand Medicaid eligibility, provisions of the Affordable Care Act could still affect provider participation in Medicaid because more people would be

To be most useful to policymakers, measures should identify the specific services and geographic areas for which access is less adequate.

required to purchase private insurance and providers may substitute newly insured patients for Medicaid patients. To be most useful to policymakers, measures should identify the specific services and geographic areas for which access is less adequate. This level of specificity would enable policymakers and DMAS administrators to consider targeted approaches rather than broad changes that may be less effective and efficient. For example, if particular regions have much less access than others to primary care physicians, provider recruitment initiatives or incentives could be used to increase the number of providers.

ACCESS TO CARE FOR MEDICAID ENROLLEES IS NOT COMPREHENSIVELY MEASURED

While DMAS attempts to ensure the adequacy of access to care for Medicaid enrollees and requires managed care organizations (MCOs) to produce information on access, DMAS does not systematically measure access for either managed care or fee-for-service enrollees. MCOs are required to meet certain access standards, including a target number of enrollees per primary care physician, but the standard is based on federal shortage designations and is not stringent. MCOs must also meet standards for average travel time and distance of enrollees to the closest primary care provider, but compliance is not regularly monitored by DMAS.

MCOs conduct an annual survey of enrollees, the Consumer Assessment of Healthcare Providers and Systems (CAHPS), which includes questions about access to primary care and care in general, but not about specific services. DMAS requires MCOs to ensure access to specialty care, but does not systematically measure the adequacy of the number of specialists. MCOs also calculate Healthcare Effectiveness Data and Information Set (HEDIS) scores for 15 performance measures, including childhood immunizations, well-child visits, diabetes and cholesterol screenings, and management of antidepressant medications. While these measures reflect the effectiveness of the MCOs in providing basic care, they are dependent on enrollees' willingness to comply.

For other major services and for fee-for-service enrollees, DMAS performs limited monitoring and measurement of access. DMAS monitors Medicaid utilization for nursing homes and acute hospitals through reviews of the cost reports submitted by these providers, but these reviews are primarily to monitor reimbursements, not access. DMAS tracks the number of dentists enrolled in the Medicaid dental program and the percentage of children seeing a dentist. DMAS conducted a CAHPS survey for fee-for-service enrollees in 2010, but it has not surveyed these enrollees since

then. In interviews, DMAS staff reported that information about access is acquired primarily through enrollee complaints and requests for assistance.

VIRGINIA SHOULD PERFORM ONGOING ASSESSMENTS OF ACCESS TO CARE FOR MEDICAID ENROLLEES

Access to health care includes the availability of providers to deliver services and the experiences of enrollees in seeking and obtaining care. A comprehensive understanding of access therefore requires measuring provider participation, enrollee utilization, and enrollee feedback. No single measure adequately captures all three aspects of access.

Assessment Should Focus on at Least Six Measures of Access

To gain a more complete understanding of access for Medicaid enrollees in Virginia, six measures should be examined on an ongoing basis (Table 11). These measures are consistent with the access framework developed by the federal Medicaid and CHIP Payment and Access Commission, and with the federal government's proposed regulation for measuring access for Medicaid enrollees**.** Of the six suggested measures of access, four cover provider participation and enrollee utilization. These measures are used in this study to evaluate access to nine major Medicaid services in Virginia (Chapter 2).

Two proposed measures would capture feedback from enrollees. These measures are not included in this study's evaluation of access because data are not currently available for most services. Enrollee feedback is important because it directly captures individual enrollee perceptions of access, not just whether a particular service was available or received. Enrollee feedback can be obtained through two channels: requests for assistance finding providers and enrollee reports of their ability to get needed care.

Enrollee Requests for Assistance Could Be Obtained From Calls to Enrollee Helplines. Medicaid enrollees sometimes call helplines provided by DMAS and the MCOs if they are in need of assistance. Gathering data from these calls, particularly those in which enrollees request assistance in finding a provider, may help identify problems of access. For example, a large number of enrollee requests for help finding OB/GYNs in Southwest Virginia could indicate a shortage of these providers in the region. An increase in requests for assistance over time could reflect increasing difficulty of access to care. This information would be more current than information acquired from claims data, which may not be complete until nine months after services are provided.

New Hampshire Analysis of Hotline Calls

New Hampshire's Medicaid program systematically collects data on the number of calls per 1,000 enrollees made to a toll-free hotline for assistance finding a provider. The state produces a quarterly report on access to care for Medicaid that includes five-year trends in the number of calls for assistance finding providers.

Table 11: Access to Care for Medicaid Enrollees Should Be Assessed Using at Least Six Measures Because No Single Measure Will Provide a Complete Picture of Access

Measure	Value	Limitations
Provider participation rate	Shows the proportion of total providers that accept Medicaid patients. Can be constructed mainly from DMAS claims and encounter data, and data from Department of Health Professions (DHP).	Does not distinguish between providers that serve many Medicaid patients and those that serve few. Requires significant data validation to ensure that provider location and other information are correct and consistent in DHP and DMAS data.
Providers per 1,000 enrollees	Shows whether enough providers are available. Can be compared to existing standards. May identify geographic differences better than provider participation. Can be constructed from DMAS claims, encounter, and enrollment data.	Shows adequacy of the number of providers in theory, but not whether some providers limit the number of Medicaid patients they see.
Percentage of enrollees receiving care	Identifies percentage of enrollees not receiving basic care. Can be constructed from DMAS claims, encounter, and enrollment data.	Depends not just on provider availability, but also on whether enrollees seek services.
Volume of services used per enrollee	Identifies level of utilization, which can be useful for identifying cost drivers as well as measuring access. Can be constructed from DMAS claims, encounter, and enrollment data.	Depends not just on provider availability, but also on enrollees' demand for services.
Enrollee requests for assistance accessing providers	Directly indicates whether enrollees have difficulty accessing care. More timely than claims data.	Requires DMAS to systematically collect and analyze data on requests, which is not currently done. Some requests may be expected for new enrollees and may not be due to insufficient providers.
Enrollee ability to access care, based on CAHPS survey	Directly measures whether enrollees believe they can access the care they need. Can be compared across MCOs in Virginia, to other states, and to national averages.	Ability to make comparisons depends on the number of survey responses and response rates. Can be expensive to administer. Not administered to fee-for-service enrollees

CAHPS: Consumer Assessment of Healthcare Providers and Systems.

Source: JLARC staff analysis of the research literature and DMAS data.

Enrollees Report Ability to Obtain Care in Surveys, But Improvements to Survey Collection and Reporting Could Be Made. A second method for gathering enrollee feedback is through the CAHPS survey, which asks enrollees about their ability to get needed care. The Medicare Payment Advisory Commission (MedPAC) uses enrollee feedback from national surveys as a key measure of Medicare access and payment adequacy, suggesting the usefulness of an

analogous measure for Medicaid. The 2013 MedPAC report to Congress found that access to care for Medicare enrollees is stable and similar to access for privately insured individuals ages 50 to 64. Seventy-seven percent of beneficiaries reported that they never had to wait longer than they wanted for a routine visit, and 84 percent reported that they never had to wait longer than they wanted for an illness or injury visit.

DMAS requires that MCOs conduct the child and adult CAHPS survey annually and report results to DMAS and the federal Agency for Healthcare Research and Quality. DMAS could improve the value of the survey in several ways. Currently, only enrollees in managed care receive the survey. DMAS could expand the populations surveyed by administering the survey periodically to fee-for-service enrollees or their caretakers, as the agency did in 2010. Satisfaction and access would then be measured for all enrollees in the State. DMAS could improve the reporting of the CAHPS survey responses, which are currently summarized in an Annual Technical Report that only compares the statewide average to national standards. More information could be gained by comparing the responses of enrollees within each managed care organization to national benchmarks to identify high and low performing networks. Although DMAS takes some steps to encourage MCOs to improve CAHPS scores, the agency could develop protocols for responding to provider networks with consistently low scores.

Access Should Be Measured for Medicaid Services and Compared to the General Population

Access should be evaluated annually for at least a subset of Medicaid services, and every service should be evaluated at least once every five years. This schedule is similar to the one specified in the Centers for Medicare & Medicaid Services' proposed rule for measuring access. To be most useful, the report should include a summary assessment of the services and areas where access appears to be most problematic.

Where possible, comparisons should be made to the general population, because this is the benchmark used in federal law to define adequate access. DMAS should further explore ways in which comparisons to the general population could be made. HEDIS measures and some national surveys enable comparisons between Medicaid enrollees and the general population, although survey data may need to be combined across several years to produce a sufficient sample size at the State level. MCOs that serve both Medicaid enrollees and the privately insured could be required to compare access for the two groups and report results to DMAS. Virginia Health Information is developing an all-payer claims da-

tabase that could enable more comprehensive comparisons of access between Medicaid enrollees and the general population.

Access should also be evaluated over time and by geographic area. Deterioration of access over time or large differences across geographic areas could indicate access issues deserving further scrutiny and allow the State to make targeted responses. For example, if access is identified as problematic for dental services based on a decline in provider participation over several years, then the State could consider increasing rates for those services. If access is identified as a problem in a particular area of the State, then provider recruitment strategies or campaigns could be conducted in that area.

DMAS Should Perform the Assessments of Access to Care

DMAS is the most appropriate organization to assess access to care for Medicaid enrollees for two primary reasons. The agency is responsible for administering Medicaid and complying with federal requirements, including the access provision. Further, DMAS already collects nearly all the data needed to produce the suggested measures of access and uses these data to manage and monitor the program, especially for fiscal management.

Constructing measures of access on an ongoing basis would require DMAS to perform additional analysis, because none of the suggested measures are currently produced or reported, with the exception of the CAHPS survey results. DMAS would need to combine fee-for-service claims and managed care encounter data to provide a comprehensive view of access for all services and enrollees. Constructing provider participation rates would involve some collaboration with staff from the Department of Health Professions' Healthcare Workforce Data Center to obtain data on all licensed providers by type. DMAS would also need to compile a database for analysis of requests for assistance finding providers. When using the results of the CAHPS survey from MCOs, DMAS would need to go beyond the summary report and obtain detailed data in order to perform analyses by region.

The proposed measures are a starting point that should be improved and refined based on what is learned from initial results, feedback from users, approaches in other states, and regulations or guidance from the federal government.

The measures proposed in Table 11 are a starting point that should be improved and refined based on what is learned from initial results, feedback from users, approaches in other states, and regulations or guidance from the federal government. Potential refinements include conducting separate analyses for certain subpopulations of enrollees, and examining how much access varies within smaller geographic areas (Table 12).

Table 12: Proposed Measures of Access Could Be Refined

Potential Refinement	Purpose
Examine alternative geographic classifications such as medical market areas, localities, and census tracts	Provide a better understanding of which geographic areas have the most limited access
Examine alternative enrollee subcategories such as TANF[a] recipients, SSI[b] recipients, other aid categories	Provide more insight into service utilization because different groups of Medicaid enrollees may have dissimilar patterns of utilization that result in different access issues
Consider seasonal adjustments to utilization measures, if there is a clear seasonal pattern	Remove variation that is not due to access problems to produce a clearer picture of long-term access trends
Consider excluding dual-eligible enrollees from some measures	Exclude enrollees from analysis if Medicare pays for most of their care

[a] Temporary Assistance for Needy Families; [b] Supplemental Security Income.

Source: JLARC staff review of studies of measuring access for Medicaid enrollees.

Because measuring access is complex, DMAS should consider additional measures that might provide useful information and that have been included in other studies of access (Table 13). Some would require data from other sources, such as preventable hospitalizations, which Virginia Health Information tracks for all patients but not by payer type. DMAS could consider partnering with the Virginia Community Healthcare Association to periodically assess the capacity of Community Health Centers to serve Medicaid enrollees, because these centers are important safety net providers in many Virginia localities.

DMAS Should Provide an Annual Report on Access to Care to the House Appropriations and Senate Finance Committees

DMAS should produce a report on access to care for Medicaid enrollees. The report should be submitted to the Health and Human Resources Subcommittees of the House Appropriations and Senate Finance Committees because they handle all changes to the Medicaid program that impact the State budget. It would be useful for these committees to understand the effect of policy and rate changes on access. The report should also be sent to three other entities:

- the Medicaid Innovation and Reform Commission, which is overseeing the changes to Medicaid (Chapter 5), some of which could impact access to care;

Table 13: Additional Measures of Access Could Be Useful

Additional Measure	Purpose
Emergency department visits	Could indicate decreased access to primary and specialty care if non-emergency visits to emergency departments increase. Could produce substantial cost savings through targeting of non-emergency visits.
Preventable hospitalizations	May indicate decreased access to primary and specialty care if hospitalizations increase. Could produce substantial cost savings through targeting areas with the highest preventable hospitalizations.
Community Health Center capacity (capacity for additional patients; wait times for routine and urgent appointments)	Could identify potential access problems in areas where centers are close to capacity.
Concentration of Medicaid patients served by the largest providers	May indicate a change in access to smaller providers, such as office-based physicians.
Number of providers entering and exiting Medicaid over time	Could indicate a decline in access if the number of providers exiting increases or the number of providers entering decreases.

Source: JLARC staff review of studies of measuring access for Medicaid enrollees.

- the Joint Commission on Health Care, whose mandate includes making recommendations to improve the delivery of health care services "so that the greatest number of Virginians receive quality health care"; and
- the Secretary of Health and Human Resources, who oversees DMAS and other agencies from which data may be needed.

The report should be produced annually for a subset of Medicaid services, and every service should be reviewed at least every five years. This schedule is consistent with the proposed CMS rule for state monitoring of access. If the final rule maintains this schedule, the report should be designed to meet the CMS requirements.

DMAS should have adequate resources to produce the report. The agency's budget for the 2013-14 biennium includes funding for five new positions to establish a data analytics unit and improve the capacity of DMAS to monitor and improve the effectiveness of program services. These staff could help produce the proposed report on access. DMAS staff reported that they are finalizing the descriptions of these positions for hiring purposes.

Recommendation (1). The General Assembly may wish to consider requiring the Department of Medical Assistance Services to issue an annual report on access to care for Medicaid enrollees to the Health and Human Resources Subcommittees of the House Appropriations and Senate Finance Committees, the Medicaid Innovation and Reform Commission, the Joint Commission on Health Care, and the Secretary of Health and Human Resources. The assessment should include measures of provider participation, enrollee utilization, and enrollee feedback. The report should cover a subset of Medicaid services, and every service should be reviewed at least every five years. The assessment should show trends over time and differences across geographic regions, and include a summary assessment of any services and areas where access may be relatively limited.

JLARC Recommendations:

Review of the Impact of Medicaid Rates on Access to Health Care in Virginia

1. The General Assembly may wish to consider requiring the Department of Medical Assistance Services to issue an annual report on access to care for Medicaid enrollees to the Health and Human Resources Subcommittees of the House Appropriations and Senate Finance Committees, the Medicaid Innovation and Reform Commission, the Joint Commission on Health Care, and the Secretary of Health and Human Resources. The assessment should include measures of provider participation, enrollee utilization, and enrollee feedback. The report should cover a subset of Medicaid services, and every service should be reviewed at least every five years. The assessment should show trends over time and differences across geographic regions, and include a summary assessment of any services and areas where access may be relatively limited.

Appendix A Study Mandate

SENATE JOINT RESOLUTION NO. 92

Directing the Joint Legislative Audit and Review Commission to study the effect of Medicaid payment policies for hospitals, nursing homes, and physicians on access to health care services for Virginians.
Report.

Agreed to by the Senate, February 14, 2012
Agreed to by the House of Delegates, February 24, 2012

WHEREAS, the federal government requires that the state plan for medical assistance services include such provisions for methods and procedures related to the utilization of, and the payment for, care and services available under the plan, including but not limited to utilization review plans required by § 1903(i)(4) of the Social Security Act, as may be necessary to safeguard against unnecessary utilization of care and services and to assure that payments are consistent with efficiency, economy, and quality of care and sufficient to enlist enough providers so that care and services are available under the plan at least to the extent that such care and services are available to the general population in the geographic area; and

WHEREAS, Virginia Medicaid recipients' access to care has, in the past, been adversely affected by state payment policies; and

WHEREAS, efforts to restrain state Medicaid expenditures during the economic downturn that began in 2008 have substantially reduced the adequacy of provider payment rates, resulting in hospital inpatient rates that will cover only 59 percent of costs by 2014; nursing home losses of approximately $15 per day per patient; and physician payments for Medicaid patients that are 15 to 30 percent less than commercially insured patients; and

WHEREAS, research has shown that health outcomes, particularly for individuals with chronic health conditions, are better when individuals have access to primary care and other health services needed to manage their chronic conditions; and

WHEREAS, timely access to health care services is an effective way to reduce expenditures for acute services and reduce the future rate of growth in health care; now, therefore, be it

RESOLVED by the Senate, the House of Delegates concurring, That the Joint Legislative Audit and Review Commission be directed to study the effect of Medicaid payment policies for hospitals, nursing homes, and physicians on access to health care services for Virginians.

In conducting its study, the Joint Legislative Audit and Review Commission (JLARC) shall (i)

review the history of Medicaid payment policies and the extent to which they have permitted hospitals, nursing homes, and physicians to recover the cost of providing Medicaid services; (ii) identify the effect of Medicaid payment policies to date on access to health care services including, but not limited to, obstetrics, psychiatric, and trauma services; (iii) analyze the effect on access to care if providers are required to accept Medicaid payments for the treatment of inmates in state correctional facilities in fiscal year 2014; (iv) examine changes over time in active Medicaid provider participation rates for physicians and nursing homes in both fee-for-service and managed care programs; (v) compare Medicaid recipients' experiences regarding access to primary care and their ability to manage chronic health conditions compared with other patient populations; (vi) develop a measure of Medicaid recipients' current access to care as a baseline by which to measure Virginia's readiness for the additional 300,000 or more Medicaid recipients that may be enrolled as a result of expanded Medicaid eligibility under federal health care reform; (vii) develop a metric that would enable the state to measure changes in Medicaid recipients' access to care over time; and (viii) examine other issues as may seem appropriate. All agencies of the Commonwealth shall provide assistance to the Joint Legislative Audit and Review Commission for this study, upon request.

The Joint Legislative Audit and Review Commission shall complete its meetings for the first year by November 30, 2012, and for the second year by November 30, 2013, and the Chairman shall submit to the Division of Legislative Automated Systems an executive summary of its findings and recommendations no later than the first day of the next Regular Session of the General Assembly for each year. Each executive summary shall state whether JLARC intends to submit to the General Assembly and the Governor a report of its findings and recommendations for publication as a House or Senate document. The executive summaries and reports shall be submitted as provided in the procedures of the Division of Legislative Automated Systems for the processing of legislative documents and reports and shall be posted on the General Assembly's website.

Appendix B

Research Activities and Methods

Key research activities for this study included

- quantitative analysis of administrative data collected from several State and national agencies to examine access to health care services for Medicaid enrollees;
- analysis of Medicaid reimbursement rates paid to hospitals, nursing homes, and physicians to assess the adequacy of rates and the variation of unreimbursed costs over time by provider type;
- time series analysis of an increase in rates on provider participation in Medicaid;
- structured interviews with State agency staff, managed care organizations, provider groups, health care associations, and other stakeholders in Virginia;
- reviews of access studies performed in other states; and
- reviews of State documents and research literature.

QUANTITATIVE ANALYSIS TO EXAMINE ACCESS TO HEALTH CARE SERVICES FOR MEDICAID ENROLLEES

Data from several State agencies and national entities were collected and analyzed to examine the availability of health care professionals to provide care to Medicaid enrollees and the extent to which enrollees are using services. These data were used to

- gain an understanding of the level of access to care Medicaid enrollees have had over a three-year period (FY 2010–FY 2012);
- determine whether access for Medicaid enrollees appears adequate, based on comparisons against several benchmarks such as access to services for the general population and changes in access over time; and
- identify services for which access is most problematic.

Additional analyses were performed to assess the ability of Medicaid enrollees to access primary care services compared to other patient populations. JLARC staff collected information on the use of preventive services by Medicaid enrollees in Virginia and compared the findings to the privately insured in Virginia and the na-

tional average for Medicaid enrollees. The ability of Medicaid enrollees to manage chronic conditions was also assessed, as directed by SJR 92 (2012).

JLARC was directed to examine access to specific services such as obstetrics, psychiatric care, and trauma care. Outpatient mental health and hospital-based psychiatric care were examined separately. Access to obstetrics was examined as part of the analyses for specialty care. Access to trauma care was not examined specifically because data limitations precluded JLARC staff from identifying emergency department visits by trauma patients. However, trauma care provided by emergency departments is included within the outpatient care analysis. Staff of hospitals designated as trauma centers reported that Medicaid enrollees have similar access to trauma care as the general population.

Access Measured Based on Provider Availability and Enrollee Utilization of Services

JLARC staff examined access along two dimensions: provider availability and enrollees' utilization of services. These two dimensions make up two of the components of the framework proposed in 2011 by the Medicaid and CHIP Payment Access Commission (MACPAC). The MACPAC framework is based on the research literature on measuring access to care spanning the past several decades. The Centers for Medicare & Medicaid Services (CMS) used the MACPAC framework in a 2011 proposed rule on how states can ensure adequate access to Medicaid services. The rule is expected to be finalized in 2014.

Examining both provider availability and the use of services is important for understanding access, because neither provides a complete picture by itself. Provider availability is necessary for examining access because enrollees cannot access health care unless providers are available to serve them. While provider availability captures the "supply" of health care services, service utilization measures access from the enrollee perspective, or the "demand." Even if sufficient providers are available to enrollees, it is still possible that enrollees are not receiving services. Enrollees may not have full information on which providers are available or may have personal barriers that limit their use of health care services. Provider availability may appear inadequate, but enrollees may still be able to access the services they need in a timely manner. (Table B-1 describes the measures used to examine provider availability and service utilization.)

Three Comparisons Used to Determine Adequacy of Access

A review of the research literature found no absolute standard of adequacy of access to care. For each type of service, JLARC staff examined the adequacy of access for Medicaid enrollees using three

Table B-1: Four Measures of Access to Health Care Services

Measure	Description	Data Source
Provider Availability		
Rate of provider participation in Medicaid	Number of providers[a] serving Medicaid enrollees divided by number of providers licensed in Virginia	DMAS claims & encounter data DHP licensing data VDH licensing data DBHDS licensing data
Providers for every 1,000 enrollees	Number of providers[a] serving Medicaid enrollees divided by number of Medicaid enrollees, multiplied by 1,000	DMAS claims, encounter & enrollment data DBHDS licensing data VHI discharge data & industry report
Service Utilization		
Percentage of enrollees receiving care	Number of Medicaid enrollees with at least one Medicaid claim[b] for each service divided by total number of Medicaid enrollees	DMAS claims, encounter & enrollment data
Number of visits per 1,000 enrollees	Number of visits[c] to health care provider divided by total number of Medicaid enrollees, multiplied by 1,000	DMAS claims, encounter & enrollment data

[a] Calculated using providers actively serving Medicaid enrollees (providers serving at least 10 Medicaid enrollees), providers serving one Medicaid enrollee, or providers enrolled in the Medicaid program in a State fiscal year, depending on the type of service. (See Chapter 2.)

[b] Only claims that were approved were included in the analysis.

[c] A visit was determined by unduplicating the number of claims submitted by a provider for each recipient for a specified date range. For some services, multiple claims can be filed for the same "visit."

Note: DMAS, Department of Medical Assistance Services; DHP, Department of Health Professions; VDH, Virginia Department of Health, DBHDS, Department of Behavioral Health and Developmental Services; VHI, Virginia Health Information.

Source: JLARC staff analysis of DMAS, DHP, VDH, DBHDS, and VHI data.

types of comparisons. Specifically, the availability of providers for and service utilization by Medicaid enrollees were compared (1) to the general population, (2) over time, and (3) across geographic areas.

Access for General Population Compared to Access for Medicaid Enrollees. Federal law requires states to pay providers at levels sufficient to enlist enough providers so that care and services are available to Medicaid enrollees at least to the extent that care and services are available to the general population in the same geographic area. For this reason, this benchmark was used as the primary measure for determining adequacy, where possible. Federal law and regulations do not define "general population," but most studies of access have compared Medicaid enrollees to the privately insured and uninsured. For some analyses, Medicaid enrollees were compared to the combined group of privately insured and uninsured, while other analyses compared enrollees to the privately insured only or both groups separately.

Comparisons to the general population could not be made for each measure and for each service because information was limited for the general population's use of certain services. National surveys, such as the National Health Interview Survey (NHIS), estimate the extent to which the general population uses certain services, and these estimates were incorporated into the analysis where possible. For example, the percentage of children nationwide with any insurance type that used a dental service in 2011 was compared to the percentage of children enrolled in Medicaid with at least one dental visit.

In many cases, an overall statewide assessment was used for provider availability in Medicaid rather than a comparison to the general population. For example, if the percentage of providers actively participating in Medicaid was high, then the availability of providers was deemed high. Low participation rates indicate services where access may be worse for Medicaid enrollees because of a lower availability of providers.

Comparisons for Determining Adequacy of Access for Medicaid Enrollees. Two other comparisons were used to determine whether Medicaid enrollees have adequate access to care. JLARC staff examined whether and to what extent access for Medicaid enrollees has changed over time. This benchmark helped to identify services for which access has decreased over time (suggesting access is getting worse) or increased over time (suggesting access is getting better).

JLARC staff also identified disparities in access for Medicaid enrollees by planning district to identify whether gaps in access vary around the State. Planning districts were used to describe the geographic variation in the State for several reasons. The Virginia Department of Health (VDH) determines general provider shortages using health planning regions, which consist of planning districts. Planning districts offer a more precise indicator of access for enrollees than the larger health planning regions, which may homogenize results due to the diverse communities within each region. Further, planning districts do not separate cities from surrounding counties. Many residents of suburbs use health providers, such as hospitals, located within the neighboring city.

Results Compared Across Services to Identify Services That Present Some Difficulty of Access for Enrollees

Comparing access across services is useful for several reasons. First, stakeholder interviews suggested that access in Virginia is less problematic for certain health care services, whether due to reimbursement policies or other reasons, but JLARC staff found no comprehensive analysis to indicate for which services access is a greater or lesser problem. Second, targeting the problem areas is the most effective way to improve access, and identifying varia-

tions in access across services is useful for determining the degree to which payment policies limit access.

JLARC staff identified the services that appeared to be the most difficult to access by assessing each of the four measures against each of the comparisons (general population/overall statewide, over time, geography) for each service. A score from zero to two for each comparison was assigned to each of the four measures used in the analysis, with a higher number indicating poorer access. For example, if the percentage of Medicaid enrollees using primary care varies widely across the State compared to the variation in the percentage using other services, the score for that measure was "2." Alternatively, if almost all providers participate in Medicaid, then a score of "0" was assigned to provider participation. The scores were then summed across all measures, the total potential score was calculated, and then the final score for each service was calculated (Figure B-1). Because primary care received a score of 0.45 and specialty care received a score of 0.73, it was determined that enrollees likely had more difficulty accessing specialty care.

Figure B-1: Measures and Scoring of Access to Care

Comparison	Rating for Measure and Score (Primary Care)			
	Provider Participation Rate	# Providers / 1,000 Enrollees	% Receiving Care	Average # of Visits
Overall Statewide/ General Population	= 0	= 0	= 2	--
Over Time	= 1	= 1	= 1	= 1
By Region	= 0	= 1	= 2	= 1
Total Score	**1**	**2**	**5**	**2**
Total Possible Score[a]	6	6	6	4

Sum of total score (all measures) = 10

Sum of total possible score (all measures) = 22

Final score = (10/22) = 0.45

[a] Calculated according to the number of measures for which data were available multiplied by two.

Source: JLARC staff analysis of DMAS, VDH, and VHI data.

Medicaid Enrollees' Ability to Manage Chronic Conditions Was Assessed Against Other Patient Populations

As directed by SJR 92, JLARC staff compared Medicaid enrollees' ability to manage chronic health conditions with other patient populations. To perform this analysis, information on utilization of certain types of chronic and preventive care, such as appropriate use of asthma medication, childhood immunizations, and breast cancer screenings, were collected for Medicaid enrollees in Virginia, Medicaid enrollees nationally, and the privately insured in Virginia. Use of preventive and chronic care was examined using the Healthcare Effectiveness Data and Information Set (HEDIS) measures developed by the National Committee for Quality Assurance. DMAS provided JLARC staff with HEDIS data for Medicaid managed care enrollees in Virginia and nationwide and VHI provided HEDIS data for the privately insured in Virginia. (Appendix D includes a comparison of HEDIS scores for Medicaid enrollees and the privately insured.)

JLARC staff examined preventable hospitalizations for Medicaid enrollees and different patient populations in Virginia to further assess Medicaid enrollees' ability to manage chronic health conditions. To conduct this analysis, data on each patient discharged from a hospital in Virginia from FY 2010 to FY 2012 were obtained from Virginia Health Information (VHI). The patient-level data included information on the type of payer (Medicaid, Medicare, private, etc.) and diagnoses of admitted patients. These data were analyzed to determine rates of preventable hospitalizations for Medicaid enrollees, patients with private insurance, and patients without insurance in Virginia. These rates were calculated to measure the ability of Medicaid enrollees to manage chronic health conditions compared to other patient populations. Two statistical programs—Prevention Quality Indicators (PQI) and Pediatric Quality Indicators (PDI)—were used to measure preventable hospitalizations in adults and in children. These programs were developed by the Agency for Healthcare Research and Quality (AHRQ).

The PQI and PDI programs identify patient visits that could have been prevented through more appropriate chronic care management. For short-term complications of diabetes, for example, AHRQ has identified 12 different diagnosis codes that indicate preventable hospitalization. The AHRQ program identified preventable hospitalizations for nine different conditions in adults using the PQI program and two different conditions in children using the PDI program (Table B-2).

Once preventable hospital visits were identified, JLARC staff calculated rates of preventable hospitalizations for each payer group based on two different comparisons: (1) per hospital visit and (2)

Table B-2: Preventable Hospitalizations Based on Hospital Stays for 13 Conditions in Adults and Four Conditions in Children

Conditions	Adults	Children
Angina without procedure	✓	
Asthma in younger adults	✓	✓
Asthma in older adults	✓	
Diabetes, short-term complications	✓	✓
Diabetes, long-term complications	✓	
Heart failure	✓	
Hypertension	✓	
Lower-extremity amputation among patients with diabetes	✓	
Uncontrolled diabetes	✓	

Note: Indicators have different age ranges, but none of the PQI indicators include populations under 18 and none of the PDI indicators include populations over 17.

Source: JLARC staff analysis of AHRQ Quality Indicators publications.

per 100,000 individuals for each payer group. The PQI and PDI programs were designed to calculate rates per 100,000 individuals, which is how preventable hospitalizations are commonly reported. The rate per hospital visit was calculated by dividing the number of discharges identified as preventable hospitalizations by the total number of hospital discharges for each payer. To calculate the rate per 100,000 individuals, JLARC staff used estimates of the population covered by each type of insurance (Medicaid, Medicare, private, etc.) from the Public Use Microdata Sample (PUMS) files maintained by the US Census Bureau. The PUMS data is based on responses to the American Community Survey.

JLARC staff determined that rates calculated per hospital visit offered the most appropriate comparison for Medicaid enrollees to the privately insured and uninsured based on a comparison of the results and discussion with AHRQ staff. AHRQ staff indicated that higher disease prevalence in the Medicaid population could make for misleading comparisons between payer groups, if rates were calculated using the total population of each payer. Results of the analysis by 100,000 individuals for each payer group showed that Medicaid enrollees had considerably higher rates of preventable hospital stays than individuals with other types of insurance. A 2008 study performed by AHRQ also suggests that comparing rates of preventable hospitalizations by hospital stay is more appropriate when comparing Medicaid enrollees to the privately insured. The study found that 5.4 percent of hospital stays for Medicaid enrollees and the privately insured were preventable based on a national sample.

ANALYSIS OF MEDICAID REIMBURSEMENT RATES AND COST RECOVERY OVER TIME

In addition to quantitative analysis of access to health care services for Medicaid enrollees, JLARC staff performed an analysis of Medicaid reimbursement rates and the cost recovery of providing care to Medicaid enrollees over time. Two primary measures were used to assess the adequacy of Medicaid rates over time: a comparison of Medicaid rates to other rates (such as Medicare and average private insurance rates) for physicians, dentists, and other practitioners; and a comparison of Medicaid costs and reimbursements for hospitals and nursing homes over the past decade.

Comparison of Medicaid and Other Rates Paid to Physicians

Identifying the cost of providing services for physicians and most other practitioners, such as dentists and psychiatrists, is not feasible, because no entity systematically collects such cost information. For this study, Medicaid rates were compared to other rates that providers receive. Based on a review of the research literature, JLARC staff found that Medicaid rates for physicians are often benchmarked against Medicare rates and Medicaid rates paid in other states. For this analysis, Medicaid-to-Medicare ratios by type of physician service over the past six years were obtained from DMAS. Medicare and average private rates were obtained from VCU's reimbursement department for some of the services most commonly used by Medicaid enrollees in recent years. The services were selected through an analysis of DMAS claims and encounter data to identify the most common diagnosis groups (used by hospitals) and procedure codes (used by practitioners) (Table B-3).

Finally, JLARC staff obtained Medicaid-to-Medicare ratios for certain services across all states, which are compiled by the Kaiser Family Foundation from surveys sent by the Urban Institute to the 49 states and the District of Columbia that have a fee-for-service component in their Medicaid programs (Appendix F).

Table B-3: Different Analysis for Hospitals and Other Providers

Hospitals (diagnosis groups)	Physicians and Other Practitioners (procedure codes)
1. Identified common diagnosis group (DRG) codes among Medicaid enrollees	1. Identified common procedure (CPT) codes among Medicaid enrollees
2. Identified relative weight for DRG code	2. Identified corresponding Medicaid rate
3. Calculated the average Medicaid payment using statewide Medicaid operating rate	3. Obtained Medicare and average private rates from VCU's reimbursement department

Analysis of Medicaid Cost Recovery Over Time for Hospitals and Nursing Homes

To assess the adequacy of Medicaid reimbursement rates and analyze the variation in unreimbursed costs over time, JLARC staff obtained the cost report databases from DMAS for hospitals and nursing homes for FY 2003 to FY 2012. These databases include operating and capital costs for major service areas and the corresponding Medicaid reimbursement amounts for each provider. JLARC staff also obtained from DMAS an example cost report submitted by a hospital and a nursing home to gain a better understanding of the information included in the databases. The cost report data allowed JLARC staff to analyze the extent to which Medicaid reimbursements have covered the cost of providing care to Medicaid patients over the past 10 years (Figure B-2).

JLARC staff did not audit the cost and reimbursement data provided by DMAS for accuracy. This data is reported by hospitals to DMAS each year. A DMAS contractor performs a "desk review" within 180 days to determine whether the cost report should be approved or rejected. The DMAS contractor may also perform in-depth field and in-house audits by checking facility records against the cost reports.

JLARC staff analyzed other supplemental payments to hospitals to compare reimbursements paid to hospitals to the cost of providing

Figure B-2: Calculation of Cost Recovery Rates for Hospitals and Nursing Homes

$$\text{Cost Recovery Rate for Hospitals and Nursing Homes} = \frac{\text{Total Medicaid Reimbursements}}{\text{Total Medicaid Costs}}$$

Hospitals

Total Medicaid Reimbursements =

Total Medicaid operating cost reimbursement +
Total Medicaid outpatient reimbursement amount +
Allowable Medicaid capital cost[a] +
Supplemental payments (DSH, GME, IME)

Total Medicaid Costs =

Total Medicaid inpatient costs +
Total Medicaid outpatient costs +
Total Medicaid capital costs

Nursing Homes

Total Medicaid Reimbursements =

Total Medicaid cost reimbursed +
Total Medicaid reimbursement for criminal records checks

Total Medicaid Costs =

Total Medicaid direct nursing service costs +
Total Medicaid direct ancillary costs +
Total Medicaid indirect nursing service costs +
Total Medicaid plant costs +
Total Medicaid cost of criminal records checks for staff

[a] Allowable Medicaid capital cost was used as a proxy for the amount of capital reimbursed.

Note: Cost recovery rate for hospitals was calculated based on Medicaid allowable fee-for-service costs and reimbursements (based on the fee-for-service enrollees that each hospital serves) as reported by hospitals annually to DMAS. In addition, DSH, GME, and IME payments were allocated based on the percentage of fee-for-service enrollees that each hospital treated.

Source: JLARC staff analysis of information provided by DMAS.

services. Hospitals may receive three supplemental payments if they treat a high volume of Medicaid patients and/or are teaching hospitals: Disproportionate Share Hospital (DSH), Graduate Medical Education (GME), and Indirect Medical Education (IME). JLARC staff obtained supplemental payment amounts from DMAS that hospitals received from FY 2003 to FY 2012.

Analysis of Medicaid Reimbursement Rates Paid to Hospitals and Nursing Homes Over Time

To address the study mandate, JLARC staff collected fee-for-service rate information from DMAS over the past 10 years (FY 2003–FY 2012) for hospitals and nursing homes. This information allowed JLARC staff to understand whether and to what extent rate amounts have changed over time. JLARC staff also compared rates paid to hospitals and nursing homes with versus without inflation (using the Medical Price Index) over time.

ANALYSIS OF THE EFFECT OF INCREASES IN MEDICAID RATES ON PROVIDER PARTICIPATION IN MEDICAID

JLARC staff developed counts of the number of physicians over time to determine whether the increases in Medicaid rates for obstetric/gynecological (OB/GYN) and pediatric services led to increases in the number of providers serving Medicaid patients. The analyses counted the number of OB/GYN physicians before and after the OB/GYN rate increase, and calculated the percentage change. JLARC staff performed similar calculations for pediatric care before and after rate increases. To attempt to control for other factors that may have affected the number of providers serving Medicaid patients, similar before-and-after comparisons were performed for all providers in specialties not affected by the rate changes. For example, the number of OB/GYN physicians serving Medicaid patients increased five percent in the two years following the OB/GYN rate increase, compared to the number of OB/GYN physicians in the year preceding the rate increase. During the same time period, the number of physicians not subject to the rate increase and serving Medicaid patients increased three percent. The estimated net impact of the OB/GYN rate increase is therefore two percent. This approach is sometimes referred to as a "difference-in-difference" estimate, because it is based on the difference between two calculations which are themselves differences.

The analysis was based on average statewide quarterly counts of physicians serving Medicaid enrollees in the year prior to and the two years after each rate increase. Physicians were identified as OB/GYNs, pediatricians, or other physicians based on the provider specialty code in the claims data. Only in-state physicians were counted based on the locality code where a service was provided. The counts represent unique physicians, so each physician was counted only once, even if they provided services in multiple loca-

tions. Providers were counted in a quarter if they had at least one Medicaid claim in that quarter. Only providers in office-based settings were counted, based on a "place of service" code in the claims and encounter data, because previous research suggests that providers in office settings are likely to be more sensitive to rate increases than providers in hospitals or clinics. As a test of robustness, JLARC staff performed the analysis for providers in all settings, with similar results.

No tests of statistical significance were performed, because the final impact estimate for each rate increase was derived from population data:

1. average quarterly number of pediatricians in the year before the pediatrics rate increase;
2. average quarterly number of pediatricians in the two years after the pediatrics rate increase;
3. average quarterly number of all physicians not subject to a rate increase in the year before the pediatrics rate increase; and
4. average quarterly number of all physicians not subject to a rate increase in the two years after the rate increase.

This approach would produce the clearest evidence of an impact if the change in providers was large and immediately followed the rate increase, and the change in providers not subject to the rate increase was much smaller. But other factors that could not be quantified may also affect changes in the number of providers, such as rates paid by private insurers, age distribution of providers, demand for health care services, opportunities in other states or in positions other than direct patient care, and malpractice premiums.

STRUCTURED INTERVIEWS

JLARC staff conducted structured interviews with various State agencies and other stakeholders in Virginia to gain their perspective on Medicaid reimbursement rates and enrollees' access to health care. These interviews covered a range of topics related to SJR 92 (Table B-4). In addition to topics specific to each interview, JLARC staff had a broader discussion on Medicaid reimbursement rates and enrollees' access to services with each agency or stakeholder group.

Table B-4: Structured Interviews of Stakeholders Conducted by JLARC Staff

State agency/stakeholder	Topics discussed
Agency for Healthcare Research & Quality	➢ Analysis of preventable hospitalizations
Department of Corrections	➢ Inpatient care received by inmates
Department of Medical Assistance Services	➢ Processes currently used to measure access to health care services ➢ Oversight of MCOs ➢ Rationale for provider reimbursements ➢ Processes for developing reimbursement rates ➢ Future changes to the Medicaid program
Hospitals that provide care to State inmates	➢ Inpatient care received by inmates
Providers (dentists, hospitals, nursing homes, and physicians)	➢ Factors influencing participation in Medicaid ➢ Adequacy of Medicaid reimbursement rates
Provider associations (dentists, health centers, hospitals, nursing homes, and physicians)	➢ Factors influencing participation in Medicaid ➢ Adequacy of Medicaid reimbursement rates
Managed care organizations (MCOs)	➢ Methods used to measure access to care for enrollees in their network ➢ Amounts paid to providers by MCOs compared to fee-for-service rates ➢ Impact of Medicaid expansion on provider network and access to care
Virginia Department of Health	➢ Access to care for Medicaid enrollees ➢ Licensed facilities in Virginia
Virginia Department of Health Professions	➢ Licensed physicians in Virginia
Virginia Department of Behavioral Health and Developmental Services	➢ Access to mental health services ➢ Licensed psychiatric hospitals in Virginia
Virginia Health Information	➢ Analysis of preventable hospitalizations
Virginia Health Care Foundation	➢ Access to care for Medicaid enrollees
Virginia Health Reform Initiative	➢ Measures of access to health care services ➢ Future changes to the Medicaid program
Virginia Poverty Law Center	➢ Access to care for Medicaid enrollees

Source: JLARC staff analysis.

REVIEW OF OTHER STATES' APPROACHES TO MEASURING ACCESS TO CARE

In an attempt to identify best practices, JLARC staff did an online search of other states' approaches to measuring access to care for Medicaid enrollees. The search focused on the websites for state Medicaid agencies and attempted to identify and review reports addressing any aspect of access to care for Medicaid enrollees.

Most states have no analyses of access posted online. However, California and New Hampshire prepare extensive regular reports of access. California was required by the Centers for Medicare & Medicaid Services to monitor health care access for fee-for-service Medicaid enrollees as a condition of approval for reducing certain reimbursement rates. Since 2011 the State has produced quarterly reports covering physician supply, service utilization, and enrollee feedback. The New Hampshire Department of Health and Human Services has produced reports approximately quarterly since March 2012 covering provider availability, utilization of services, and enrollee satisfaction for physicians, hospitals, and clinical care. A few other states have conducted narrower analyses, such as measuring avoidable hospitalizations.

REVIEW OF DOCUMENTS AND RESEARCH LITERATURE

JLARC staff reviewed the Virginia Administrative Code, as well as multiple DMAS documents to gain a better understanding of Virginia's Medicaid program. The Administrative Code was reviewed to determine Medicaid payment methods to health care providers, such as hospitals, nursing homes, and physicians. The Medallion II managed care contract between the State and the MCOs was reviewed to understand the State's requirements for MCOs to reimburse providers and monitor access for enrollees in their network. The Medallion II Data Book and Capitation Rates prepared by PricewaterhouseCoopers and the Medicaid/FAMIS Handbook prepared by DMAS were also reviewed.

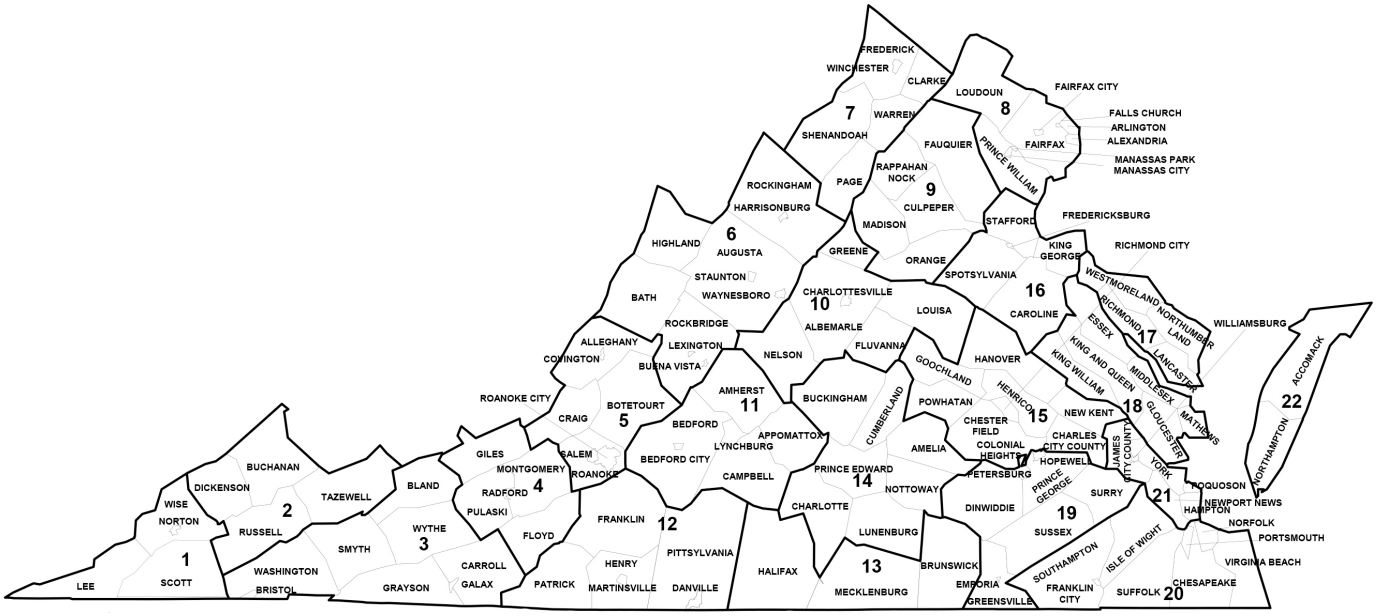
JLARC staff studied materials prepared by federal commissions charged with providing policy and data analysis for Medicaid and Medicare. Reports prepared by the Medicaid and CHIP Payment and Access Commission (MACPAC) were used to identify measures of access to care that are generally accepted by academic institutions and the federal government. The MACPAC framework for measuring access to care was used for the analyses performed for Chapter 2 of this report because of its comprehensive approach and because elements of this framework could become federal requirements. The Centers for Medicare and Medicaid Services proposed a rule in May of 2011 to create a standardized process for monitoring access to care using the MACPAC framework.

JLARC staff also performed an extensive search for empirical studies on how Medicaid rates affect access to care (Chapter 4). Approximately 60 empirical studies that have attempted to estimate the causal effect of Medicaid rates on access to care for Medicaid enrollees were identified from a search of the PubMed online database of medical literature as well as archives of specific journals, including the *Journal of the American Medical Association*, the *New England Journal of Medicine*, *Health Affairs*, *Inquiry*, and *Health Services Research* (Appendix H). Studies were excluded if they did not have a causal design, did not focus on rates, or were not published in peer-reviewed journals. For example, studies were excluded if they were based only on surveys of physicians about Medicaid rates and did not estimate a statistical association between rates and access. Studies were also excluded if they measured the causal effect of Medicaid on access but did not estimate the impact of rates. (Chapter 4 summarizes the results of secret shopper studies and physician surveys, which provide useful information about access and provider perceptions of the adequacy of rates).

Appendix C

Localities Within Virginia's Planning Districts

Figure C-1: Multiple Localities Make Up Each of Virginia's 21 Planning Districts



Note: Former planning districts 20 and 21 were combined to create 23, the Hampton Roads planning district.

Source: Virginia Department of Health.

Appendix D

Virginia Medicaid Enrollees Had Lower HEDIS Scores Than Virginians with Private Insurance

All six managed care organizations (MCOs) in Virginia are required to collect Healthcare Effectiveness Data and Information Set (HEDIS) performance measures. HEDIS data identifies usage of certain services, typically preventive services such as childhood immunizations and well-child visits by members in health plans. The current contract signed by all participating MCOs requires MCOs to calculate HEDIS scores for 15 performance measures and to submit results to the National Committee for Quality Assurance (NCQA) and DMAS. The calculations rely on insurance claims and are audited annually by an NCQA-approved auditor. DMAS compares HEDIS measures among Virginia's MCOs and to the national Medicaid managed care average. For the purposes of this report, HEDIS scores for Medicaid enrollees were also compared to the privately insured. Virginia Health Information reports the HEDIS results for ten of the private managed care plans in Virginia.

Table D-1: Virginia Medicaid Enrollees Had Lower HEDIS Scores Than Virginians With Private Insurance And Similar Scores to Medicaid Enrollees Nationwide (2011)

Category and Measure	Virginia Medicaid Average	Virginia Private Insurance Average[a]	National Medicaid Average
Use of Appropriate Asthma Medication (children and adults)	**86%**	**93%**	**86%**
Total (Combined)	86	93	86
Preventive Care for Children[b]	**66**	**72**	**66**
Immunization: Combination 2[c]	71	81	74
Immunization: Combination 3[c]	67	76	71
Lead Screening	66	n.a.	68
Well-Child Visits – first 15 Months	71	83	62
Well-Child Visits – 3 to 6 years	73	76	72
Well-Child Visits – 12 to 21 years	46	43	50
Preventive Care for Women	**49**	**70**	**51**
Breast Cancer Screening	49	70	51
Obstetric Care (women)	**76**	**90**	**74**
Postpartum Care	66	84	64
Timeliness of Prenatal Care	85	95	83
Cholesterol Management (adults)	**66**	**74**	**62**
Cholesterol Control <100 mg/DL	49	60	42
Cholesterol Screening	83	88	82
Comprehensive Diabetes Care (adults)[b]	**61**	**65**	**60**
Blood Pressure Control (<140/80mm Hg)	37	n.a.	39
Blood Pressure Control (<140/90mm Hg)	56	n.a.	61
Blood Glucose Control <8%	50	n.a.	48
Blood Glucose Control >9%[d]	40	28	42

Category and Measure	Virginia Medicaid Average	Virginia Private Insurance Average[a]	National Medicaid Average
Blood Glucose Testing	84	90	83
Controlling High Blood Pressure	59	66	57
Cholesterol Control (<100 mg /dL)	40	48	35
Lipid Profile Cholesterol Screening	75	86	75
Medical Attention for Kidney Disease	78	85	78
Retinal Exam	51	55	53
Mental Health Care (adults)	**53**	**66**	**49**
Antidepressant Management – Acute	51	65	51
Antidepressant Management – Continuation	38	47	34
Follow-Up After Mental Illness – 7 Days	49	67	47
Follow-Up After Mental Illness – 30 Days	74	85	65

[a] The average HEDIS score for private insurance plans only includes the 10 health plans with available data. Not all private health plans are accredited by NCQA and collect HEDIS data.

[b] Percentages for HEDIS categories, such as "comprehensive diabetes care," only include HEDIS measures available for all three patient groups.

[c] Combination 2 includes age appropriate vaccinations for diphtheria/tetanus/pertussis, polio, measles/ mumps/rubella, H. influenza type B, Hepatitis B, and chicken pox. Combination 3 includes all age appropriate vaccinations in Combination 2 and pneumococcal conjugate vaccinations.

[d] A lower score for this HEDIS measure is positive.

Source: JLARC staff analysis of DMAS and VHI data.

Appendix E

Preventable Hospitalizations

Preventable hospitalizations are hospital admissions for acute conditions that could have been prevented with appropriate primary and preventive care. Reducing rates of preventable hospitalizations can improve patient health outcomes and decrease health care costs. However, the literature often suggests that low-income individuals struggle to keep ahead of their illnesses and appropriately manage diseases, resulting in higher rates of preventable hospitalizations among Medicaid enrollees. The following tables summarize the percentage of hospital stays that were identified as preventable for non-elderly adults and children enrolled in Medicaid and other patient populations in Virginia.

Table E-1: Non-Elderly Adults Enrolled in Medicaid Have More Preventable Hospitalizations Than Virginians With Private Insurance But Fewer Than the Uninsured

Condition/Year	Medicaid	Privately Insured	Uninsured
Angina			
2010	0.1%	0.1%	0.2%
2011	0.1	0.1	0.1
2012	0.1	0.1	0.1
Asthma			
2010	2.2	1.0	2.3
2011	2.3	1.2	2.1
2012	2.1	1.1	1.9
Diabetes			
2010	2.2	0.9	2.8
2011	2.0	1.2	2.8
2012	2.0	1.3	2.5
Heart Failure			
2010	1.2	0.6	1.3
2011	1.2	0.7	1.2
2012	1.1	0.7	1.0
Hypertension			
2010	0.3	0.2	0.8
2011	0.3	0.3	0.8
2012	0.3	0.3	0.9
Total, all conditions			
2010	6.0	2.8	7.4
2011	5.8	3.5	7.0
2012	5.5	3.4	6.5

Source: JLARC staff analysis of preventable hospitalizations using VHI patient discharges and AHRQ QI statistical programs.

Table E-2: Children Enrolled in Medicaid Have More Preventable Hospitalizations Than Children in Virginia With Private Insurance Overall But Fewer Preventable Hospitalizations for Diabetes

Condition/Year	Medicaid	Privately Insured
Asthma		
2010	6.5%	6.9%
2011	5.3	5.2
2012	7.1	4.9
Diabetes		
2010	0.8	1.3
2011	0.7	1.0
2012	0.8	1.1
Total		
2010	7.3	8.2
2011	6.0	6.2
2012	7.9	6.0

Note: Children without insurance have similar rates of preventable hospitalizations as children enrolled in Medicaid. Only three percent of children were uninsured.

Source: JLARC staff analysis of preventable hospitalizations using VHI patient discharges and AHRQ QI statistical programs.

Appendix F

Medicaid-to-Medicare Physician Fee Index, By State and Type of Service

Table F-1: Medicaid-to-Medicare Physician Fee Index, By Type of Service (2012)

State	Medicaid-to-Medicare Physician Fee Index, 2012				Rank (2012)			
	All Services	Primary Care	Obstetric Care	Other Services	All Services	Primary Care	Obstetric Care	Other Services
North Dakota	1.34	1.35	1.24	1.39	1	1	3	1
Alaska	1.24	1.27	1.14	1.28	2	2	6	2
Wyoming	1.16	0.96	1.74	0.89	3	5	1	13
Delaware	0.97	0.98	0.94	0.96	4	3	17	6
Montana	0.97	0.94	1.05	0.96	4	6	9	6
Oklahoma	0.97	0.97	0.97	0.96	4	4	14	6
New Mexico	0.92	0.85	1.00	1.00	7	9	13	5
Mississippi	0.90	0.90	0.90	0.90	8	7	21	11
Idaho	0.88	0.89	0.82	0.92	9	8	27	10
Connecticut	0.87	0.71	1.23	0.79	10	26	4	21
Nebraska	0.87	0.76	1.01	0.96	10	15	11	6
Arizona	0.82	0.75	0.92	0.84	12	16	19	15
Iowa	0.82	0.77	0.86	0.90	12	14	24	11
North Carolina	0.82	0.85	0.72	0.87	12	9	38	14
Oregon	0.81	0.72	1.04	0.71	15	24	10	32
South Carolina	0.81	0.74	1.39	0.79	15	18	2	21
District of Columbia	0.80	0.80	0.80	0.80	17	13	30	20
Vermont	0.80	0.81	0.82	0.77	17	12	27	24
Virginia	**0.80**	**0.74**	**0.91**	**0.82**	**17**	**18**	**20**	**18**
West Virginia	0.80	0.74	1.08	0.75	17	18	7	27
Arkansas	0.79	0.70	0.74	1.11	21	27	34	3
Alabama	0.78	0.70	1.01	0.71	22	27	11	32
Kansas	0.78	0.82	0.73	0.78	22	11	36	23
Kentucky	0.77	0.72	0.97	0.76	24	24	14	25
Massachusetts	0.77	0.68	0.97	0.72	24	32	14	30
Wisconsin	0.77	0.60	0.93	1.01	24	37	18	4
South Dakota	0.76	0.69	0.84	0.82	27	31	26	18
Washington	0.76	0.66	1.07	0.59	27	34	8	43
Georgia	0.75	0.70	0.81	0.83	29	27	29	16
Louisiana	0.75	0.75	0.73	0.76	29	16	36	25
Nevada	0.74	0.68	0.80	0.83	31	32	30	16
Utah	0.74	0.74	0.74	0.74	31	18	34	29
Maryland	0.73	0.70	0.89	0.70	33	27	23	34
Colorado	0.71	0.74	0.68	0.69	34	18	39	35
Minnesota	0.71	0.73	0.66	0.72	34	23	42	30
Pennsylvania	0.70	0.56	1.15	0.49	36	42	5	48
Maine	0.65	0.63	0.68	0.65	37	35	39	40
Texas	0.65	0.61	0.68	0.75	37	36	39	27

State	Medicaid-to-Medicare Physician Fee Index, 2012				Rank (2012)			
	All Services	Primary Care	Obstetric Care	Other Services	All Services	Primary Care	Obstetric Care	Other Services
Hawaii	0.62	0.57	0.66	0.68	39	40	42	37
Illinois	0.62	0.54	0.86	0.64	39	44	24	41
Indiana	0.62	0.55	0.78	0.69	39	43	33	35
Ohio	0.61	0.59	0.65	0.63	42	39	44	42
Missouri	0.59	0.57	0.57	0.68	43	40	47	37
New Hampshire	0.58	0.60	0.61	0.51	44	37	45	46
Florida	0.57	0.49	0.90	0.55	45	46	21	45
New York	0.55	0.42	0.80	0.58	46	49	30	44
California	0.51	0.43	0.54	0.67	47	48	48	39
Michigan	0.51	0.46	0.61	0.50	47	47	45	47
New Jersey	0.45	0.50	0.37	0.46	49	45	50	49
Rhode Island	0.37	0.33	0.39	0.46	50	50	49	49
Tennessee	NA	NA	NA	NA				

Source: Kaiser Family Foundation, 2012.

Table F-2: Medicaid-to-Medicare Physician Fee Index, By Type of Service (2008)

State	Medicaid-to-Medicare Physician Fee Index, 2008				Rank (2008)			
	All Services	Primary Care	Obstetric Care	Other Services	All Services	Primary Care	Obstetric Care	Other Services
Wyoming	1.43	1.17	2.13	1.23	1	2	1	3
Alaska	1.40	1.40	1.41	1.38	2	1	5	1
New Mexico	1.07	0.98	1.26	1.07	3	7	8	6
Arizona	1.06	0.97	1.28	1.03	4	8	6	9
Nevada	1.04	0.93	1.28	1.03	5	12	7	10
Idaho	1.03	1.03	1.03	1.02	6	3	21	11
Montana	1.03	0.96	1.19	1.01	7	9	13	13
North Dakota	1.02	1.01	1.03	1.02	8	4	22	12
Nebraska	1.01	0.82	1.19	1.24	9	23	14	2
Delaware	1.00	1.00	1.00	0.99	10	5	25	16
Oklahoma	1.00	1.00	1.00	1.00	11	6	26	14
Connecticut	0.99	0.78	1.74	0.59	12	26	3	42
Iowa	0.96	0.89	1.08	0.99	13	16	19	15
North Carolina	0.95	0.95	0.95	0.95	14	10	32	17
South Dakota	0.95	0.85	1.09	1.05	15	21	17	7
Vermont	0.95	0.91	1.03	0.93	16	14	23	19
Kansas	0.93	0.94	0.93	0.92	17	11	34	20
South Carolina	0.93	0.86	1.75	0.86	18	19	2	22
Washington	0.93	0.92	1.21	0.62	19	13	11	41
Louisiana	0.92	0.90	0.95	0.94	20	15	33	18
Georgia	0.90	0.86	1.00	0.86	21	20	27	23
Oregon	0.90	0.78	1.26	0.78	22	27	9	31
Virginia	**0.90**	**0.88**	**1.02**	**0.81**	**23**	**17**	**24**	**26**
Alabama	0.89	0.78	1.21	0.75	24	28	12	35

State	Medicaid-to-Medicare Physician Fee Index, 2008				Rank (2008)			
	All Services	Primary Care	Obstetric Care	Other Services	All Services	Primary Care	Obstetric Care	Other Services
Arkansas	0.89	0.78	0.89	1.17	25	29	38	4
Massachusetts	0.88	0.78	1.16	0.79	26	30	15	29
Maryland	0.87	0.82	1.09	0.82	27	24	18	25
Mississippi	0.87	0.84	0.98	0.89	28	22	29	21
Colorado	0.86	0.87	0.89	0.80	29	18	37	27
Kentucky	0.86	0.80	1.14	0.79	30	25	16	30
West Virginia	0.85	0.77	1.24	0.77	31	31	10	32
Wisconsin	0.85	0.67	1.04	1.05	32	34	20	8
Utah	0.82	0.76	0.97	0.77	33	32	30	33
Minnesota	0.76	0.58	0.84	1.11	34	42	42	5
Texas	0.74	0.68	0.87	0.83	35	33	39	24
Hawaii	0.73	0.64	0.86	0.76	36	38	40	34
New Hampshire	0.73	0.67	0.97	0.57	37	35	31	44
Pennsylvania	0.73	0.62	1.73	0.51	38	39	4	46
Missouri	0.72	0.65	0.77	0.80	39	37	45	28
Indiana	0.69	0.61	0.93	0.74	40	40	35	36
Ohio	0.69	0.66	0.84	0.65	41	36	41	39
Florida	0.63	0.55	0.99	0.59	42	44	28	43
Illinois	0.63	0.57	0.82	0.64	43	43	44	40
Maine	0.63	0.53	0.84	0.66	44	45	43	38
Michigan	0.63	0.59	0.76	0.55	45	41	46	45
District of Columbia	0.58	0.47	0.91	0.45	46	46	36	48
California	0.56	0.47	0.64	0.69	47	47	48	37
New York	0.43	0.36	0.67	0.31	48	49	47	50
Rhode Island	0.42	0.36	0.49	0.47	49	50	49	47
New Jersey	0.37	0.41	0.30	0.37	50	48	50	49

Source: Kaiser Family Foundation, 2008.

Appendix G

Key Results From Studies of the Effect of Medicaid Rates on Access

Table G-1: Recent Studies All Find Evidence That Medicaid Rates Are Positively Related to Access

Lead Author (Year)	Service	Effect	Effect Size	Type of Comparison	Key Result
Buchmueller, Thomas C. (2013)	Dental care for children	Positive	Small	Across states and time	"Our estimates imply that a $10 increase in the payment rate for an office visit leads to a 1.3-percentage point increase in the probability of an annual dental visit."
Parish, Susan L. (2012)	Pediatrics	Positive	Small	Across states	"For children with special health care needs, a $10 increase in the Medicaid reimbursement rate for office visits increased the likelihood of receiving care."
Cunningham, Peter J. (2011)	Primary care	Positive	Small	Across states	"For primary care providers, a 10 percentage point increase in the Medicaid / Medicare fee ratio for primary care is associated with only a 2.1-percentage-point increase in PCP Medicaid patient acceptance."
Decker, Sandra L. (2007)	All physicians	Positive	Small	Across states	"A 10% increase in the [Medicaid-to-Medicare] fee ratio would increase [provider] participation by a little less than 5%."
Decker, Sandra L. (2012)	All physicians	Positive	Moderate	Across states	"On average, a 10 percentage-point increase in the fee ratio raised the acceptance of new Medicaid patients by 4 percentage points."
Thomas, Kathleen C. (2012)	Health care services for children with autism	Positive	Moderate	Across states	Families raising children with autism are more likely to report no problems accessing care in states with higher reimbursement rates.
Decker, Sandra L. (2011)	Dental care for children	Positive	Moderate	Across states and time	"A $10 increase in the Medicaid prophylaxis payment level (from $20 to $30) was associated with a 3.92 percentage point increase in the chance that a child or adolescent covered by Medicaid had seen a dentist."

Lead Author (Year)	Service	Effect	Effect Size	Type of Comparison	Key Result
Chien, Alyna T. (2010)	Immunizations	Positive	Moderate	Within state, across MCOs	Immunization rates for 2-year-olds were 11 percent higher for the Medicaid health plan that paid a bonus per immunization compared to Medicaid health plans that paid no bonus.
Griffin, Susan O. (2010)	Dental sealants	Positive	Moderate	Within two states, before and after	"Increasing the sealant reimbursement rate was associated with a 102% increase and a 39% increase in sealant prevalence in Mississippi and Alabama, respectively."
Decker, Sandra L. (2009)	All physicians	Positive	Moderate	Across states and time	Increasing the Medicaid-to-Medicare fee ratio would increase the proportion of Medicaid enrollees with at least one visit.
Cunningham, Peter J. (2009)	All physicians	Positive	Moderate	Across states	"Consistent with previous studies, Medicaid participation levels were much higher among physicians in states with relatively high fee levels than in those with low fee levels."
Adams, E. Kathleen (2008)	All physicians	Positive	Moderate	Across states and time	"There are positive and significant effects on participation from increased relative Medicaid fees, mainly for office-based physicians already participating to some extent in the Medicaid market and for non-office-based physicians."
Cunningham, Peter J. (2008)	All physicians	Positive	Moderate	Across states and time	"Higher fees increase the likelihood that physicians will accept new Medicaid patients."

Source: JLARC staff literature review.

Appendix H

Bibliography

Adams, E. Kathleen, and Bradley Herring. 2008. "Medicaid HMO Penetration and Its Mix: Did Increased Penetration Affect Physician Participation in Urban Markets?" *Health Services Research* 43 (1): 363–83.

Adams, E. Kathleen. 2001. "Factors Affecting Physician Provision of Preventive Care to Medicaid Children." *Health Care Financing Review* 22 (4): 9–26.

Adams, E. Kathleen. 1994. "Effect of Increased Medicaid Fees on Physician Participation and Enrollee Service Utilization in Tennessee, 1985–88." *Inquiry* 31 (2): 173–87.

Asplin, Brent R., K.V. Rhodes, H. Levy, N. Lurie, A.L. Crain, B.P. Carlin, and A.L. Kellermann. 2005. "Insurance Status and Access to Urgent Ambulatory Care Follow-Up Appointments." *Journal of the American Medical Association* 294 (10): 1248–54.

Baker, Laurence C., and Anne B. Royalty. 2000. "Medicaid Policy, Physician Behavior, and Health Care for the Low-Income Population." *Journal of Human Resources* 35 (3): 480–502.

Berman, Steve, Judith Dolins, Suk-fong Tang, and Beth Yudkowsky. 2002. "Factors that Influence the Willingness of Private Primary Care Pediatricians to Accept More Medicaid Patients." *Pediatrics* 110 (2): 239–48.

Buchmueller, Thomas C., Sean Orzol, and Lara Shore-Sheppard. 2013. "The Effect of Medicaid Payment Rates on Access to Dental Care Among Children." Working Paper 19218, National Bureau of Economic Research.

Chein, Alyna T., Zhonghe Li, and Meredith B. Rosenthal. 2010. "Improving Timely Childhood Immunizations through Pay for Performance in Medicaid-Managed Care." *Health Services Research* 45 (6): 1934–47.

Coburn, A., S.H. Long, and M.S. Marquis. 1999. "Effects of Changing Medicaid Fees on Physician Participation and Enrollee Access." *Inquiry* 36 (3): 265–79.

Cohen, J.W., and P.J. Cunningham. 1995. "Medicaid Fee Levels and Children's Access to Care." *Health Affairs* 14 (1): 255–62.

Cohen, J.W. 1993. "Medicaid Physician Fees and Use of Physician and Hospital Services." *Inquiry* 30 (3): 281–92.

Cossman, Jeralynn S., Jarryl B. Ritchie, and Arthur G. Cosby. 2006. "Medicaid Reimbursement and Access to Physicians: Does Lower Reimbursement Mean Less Access to Care?" *Journal of the Mississippi State Medical Association* 47 (11): 323–36.

Cunningham, Peter J. 2011. "State Variation in Primary Care Physician Supply: Implications for Health Reform Medicaid Expansions." HSC Research Brief 19, Center for Studying Health System Change.

Cunningham, Peter J., and Ann S. O'Malley. 2009. "Do Reimbursement Delays Discourage Medicaid Participation By Physicians?" *Health Affairs* 28 (1): w17–w28.

Cunningham, Peter J., and Jack Hadley. 2008. "Effects of Changes in Incomes and Practice Circumstances on Physicians' Decisions to Treat Charity and Medicaid Patients." *The Milbank Quarterly* 86 (1): 91–123.

Cunningham, Peter J., and Len M. Nichols. 2005. "The Effects of Medicaid Reimbursement on the Access to Care of Medicaid Enrollees: A Community Perspective." *Medical Care Research and Review* 62 (6): 676–96.

Currie, Janet, Jonathan Gruber, and Michael Fischer. 1995. "Physician Payments and Infant Mortality: Evidence from Medicaid Fee Policy." *American Economic Review* 85 (2): 106–11.

Davidson, Stephen M., Janet D. Perloff, Phillip R. Kletke, Donald W. Schiff, and John P. Connelly. 1983. "Full and Limited Medicaid Participation Among Pediatricians." *Pediatrics* 72 (4): 552–59.

Decker, Sandra L. 2012. "In 2011 Nearly One-Third Of Physicians Said They Would Not Accept New Medicaid Patients, But Rising Fees May Help." *Health Affairs* 31 (8): 1673–79.

Decker, Sandra L. 2011. "Medicaid Payment Levels to Dentists and Access to Dental Care Among Children and Adolescents." *Journal of the American Medical Association* 306 (2): 187–93.

Decker, Sandra L. 2009. "Changes in Medicaid Physician Fees and Patterns of Ambulatory Care." *Inquiry* 46 (3): 291–304.

Decker, Sandra L. 2007. "Medicaid Physician Fees and the Quality of Medical Care of Medicaid Patients in the USA." *Review of Economics of the Household* 5 (1): 95–112.

Fakhraei, S. Hamid. 2006. "Payments for Physician Services: an Analysis of Maryland Medicaid Reimbursement Rates." *International Journal of Healthcare Technology and Management* 7 (1/2): 129–42.

Fox, M.H., J.P. Weiner, and K. Phua. 1992. "Effect of Medicaid Payment Levels on Access to Obstetrical Care." *Health Affairs* 11 (4): 150–61.

Galbraith, A.A., D.C. Grossman, T.D. Koepsell, P.J. Heagerty, and D.A. Christakis. 2005. "Medicaid Acceptance and Availability of Timely Follow-up for Newborns with Medicaid." *Pediatrics* 116 (5): 1148–54.

Garner, D.D., W.C. Liao, and T.R. Sharpe. 1979. "Factors Affecting Physician Participation in a State Medicaid Program." *Medical Care* 17 (1): 43–58.

Gertler, Paul J. 1992. "Medicaid and the Cost of Improving Access to Nursing Home Care." *Review of Economics and Statistics* 74 (2): 338–45.

Gray, Bradley. 2001. "Do Medicaid Physician Fees for Prenatal Services Affect Birth Outcomes?" *Journal of Health Economics* 20 (4): 571–90.

Griffin, S.O., K.A. Jones, S. Lockwood, N.G. Mosca, and P.A. Honoré. 2007. "Impact of Increasing Medicaid Dental Reimbursement and Implementing School Sealant Programs on Sealant Prevalence." *Journal of Public Health Management and Practice* 13 (2): 202–06.

Gruber, J., J. Kim, and D. Mayzlin. 1999. "Physician Fees and Procedure Intensity: The Case of Cesarean Delivery." *Journal of Health Economics* 18 (4): 473–90.

Gruber, J., E.K. Adams, and J. Newhouse. 1997. "Physician Fee Policy and Medicaid Program Costs." Working Paper 6087, National Bureau of Economic Research.

Hadley, Jack. 1979. "Physician Participation in Medicaid: Evidence from California." *Health Services Research* 14 (4): 266–80.

Hassan, M., J.M. Bronstein, and V. Johnson. 1997. "Office Practice Volume Differential Among Medicaid Participants." *Journal of Economics and Finance* 20 (4): 67–75.

Headen, A.E., N.A. Masia, and K.J. Axelsen. 2006. "Effects of Medicaid Access Restrictions on Statin Utilisation for Patients Treated by Physicians Practising in Poor and Minority Neighbourhoods." *PharmacoEconomics* 24 (3): 41–53.

Held, Philip J., and John Holahan. 1985. "Containing Medicaid Costs in an Era of Growing Physician Supply." *Health Care Financing Review* 7 (1): 49–60.

Hwang, A.H., M.M. Hwang, H.W. Xie, B.E. Hardy, and D.L. Skaggs. 2005. "Access to Urologic Care for Children in California: Medicaid Versus Private Insurance." *Urology* 66 (1): 170–73.

Ketcham, Jonathan, and Andrew Epstein. 2006. "Which Physicians Are Affected Most by Medicaid Preferred Drug Lists for Statins and Antihypertensives?" *Pharmaco-Economics* 24 (3): 27–40.

Kushman, J.E. 1978. "Participation of Private Practice Dentists in Medicaid." *Inquiry* 15 (3): 225–33.

Long, S.H., R.F. Settle, and B.C. Stuart. 1986. "Reimbursement and Access to Physicians' Services under Medicaid." *Journal of Health Economics* 5 (3): 235–51.

Margolis, P.A., R.L. Cook, J.A. Earp, C.M. Lannon, L.L. Keyes, and J.D. Klein. 1992. "Factors Associated With Pediatricians' Participation in Medicaid in North Carolina." *Journal of the American Medical Association* 267 (14): 1942–46.

Mayer, M.L., S.C. Stearns, E.C. Norton, and R.G. Rozier. 2000. "The Effects of Medicaid Expansions and Reimbursement Increases on Dentists' Participation." *Inquiry* 37 (1): 33–44.

McGuire, Thomas G., and Mark V. Pauly. 1991. "Physician Response to Fee Changes with Multiple Payers." *Journal of Health Economics* 10 (4): 385–410.

Meyer, M.H. 2001. "Medicaid Reimbursement Rates and Access to Nursing Homes: Implications for Gender, Race, and Marital Status." *Research on Aging* 23 (5): 532–51.

Mitchell, Janet. 1991. "Physician Participation in Medicaid Revisited." *Medical Care* 29 (7): 645–53.

Mitchell, Janet B., and Rachel Schurman. 1984. "Access to Private Obstetrics/Gynecology Services Under Medicaid." *Medical Care* 22 (11): 1026–37.

Nietert, Paul J., W. David Bradford, and Linda M. Kaste. 2005. "The Impact of an Innovative Reform to the South Carolina Dental Medicaid System." *Health Services Research* 40 (4): 1078–91.

Parish, S.L., R.A. Rose, J. Yoo, J.G. Swaine. 2012. "State Medicaid Policies and the Health Care Access of Low-Income Children with Special Health Care Needs Living in the American South." *North Carolina Medical Journal* 73 (1): 15–23.

Perloff, J.D., P.R. Kletke, J.W. Fossett, and S. Banks. 1997. "Medicaid Participation Among Urban Primary Care Physicians." *Medical Care* 35 (2): 142–57.

Perloff, J.D., P.R. Kletke, and J.W. Fossett. 1995. "Which Physicians Limit Their Medicaid Participation, and Why." *Health Services Research* 30 (1): 7–26.

Resneck, J., M.J. Pletcher, and N. Lozano. 2004. "Medicare, Medicaid, and Access to Dermatologists: the Effect of Patient Insurance on Appointment Access and Wait Times." *Journal of the American Academy of Dermatology* 50 (1): 85–92.

Shen, Y.C., and S. Zuckerman. 2005. "The Effect of Medicaid Payment Generosity on Access and Use Among Beneficiaries." *Health Services Research* 40 (3): 723–44.

Showalter, M.H. 1997. "Physicians' Cost Shifting Behavior: Medicaid Versus Other Patients." *Contemporary Economic Policy* 15 (2): 74–84.

Skaggs, D.L., C.L. Lehmann, C. Rice, B.K. Killelea, R.M. Bauer, R.M. Kay, and M.G. Vitale. 2006. "Access to Orthopaedic Care for Children with Medicaid versus Private Insurance: Results of a National Survey." *Journal of Pediatric Orthopaedics* 26 (3): 400–04.

Skaggs, D.L., S.M. Clemens, M.G. Vitale, J.D. Femino, and R.M. Kay. 2001. "Access to Orthopedic Care for Children with Medicaid versus Private Insurance in California." *Pediatrics* 107: 1405–08.

Sloan, Frank, Janet Mitchell, and Jerry Cromwell. 1978. "Physician Participation in State Medicaid Programs." *Journal of Human Resources* 13: 211–45.

Thomas, K.C., S.L. Parish, R.A. Rose, and M. Kilany. 2012. "Access to Care for Children with Autism in the Context of State Medicaid Reimbursement." *Maternal and Child Health Journal* 16 (8): 1636–44.

Tucker, Jessie L. 2002. "Factors Influencing Physician Participation in Medicaid in the USA." *International Journal of Social Economics* 29 (9): 753–62.

Wang, E.C., M.C. Choe, J.G. Meara, and J.A. Koempel. 2004. "Inequality of Access to Surgical Specialty Health Care: Why Children With Government-Funded Insurance Have Less Access Than Those With Private Insurance in Southern California." *Pediatrics* 114 (5): e584–90.

Yudkowsky, B.K., J.D. Cartland, and S.S. Flint. 1990. "Pediatrician Participation in Medicaid: 1978 to 1989." *Pediatrics* 85 (4): 567–77.

Zuckerman, Stephen, Joshua McFeeters, Peter Cunningham, and Len Nichols. 2004. "Changes in Medicaid Physician Fees, 1998–2003: Implications for Physician Participation." *Health Affairs* (2004 web supp.): w374–84.

Appendix

Agency Responses

As part of an extensive validation process, State agencies and other entities involved in a JLARC assessment are given the opportunity to comment on an exposure draft of the report. JLARC staff provided an exposure draft of this report to the Virginia Hospital and Healthcare Association and the following State agencies:

- Secretary of Health and Human Resources,
- Department of Medical Assistance Services,
- Virginia Department of Health,
- Department of Behavioral Health and Developmental Services, and
- Department of Health Professions.

Appropriate technical corrections resulting from their comments have been made in this version of the report. This appendix includes letters received from the Department of Medical Assistance Services, Virginia Department of Health, and the Department of Behavioral Health and Developmental Services.

COMMONWEALTH of VIRGINIA

Department of Medical Assistance Services

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November 4, 2013

Hal E. Greer
Joint Legislative Audit and Review Commission
Suite 1100, General Assembly Building
Capitol Square
Richmond, Virginia 23219

Dear Hal:

I would like to thank the Joint Legislative Audit and Review Commission (JLARC) for the opportunity to comment on the draft "Review of the Impact of Medicaid Rates on Access to Health Care in Virginia". This is a challenging study topic, and I believe the work product shows both thoroughness and a thoughtful approach to some difficult research questions. This is especially commendable given the short time period in which the study needed to be completed.

We have provided written comments on the draft. We identified some technical and relatively simple factual issues on which we wished to offer clarification. We do not have a need to comment on the major conclusions of the study.

Thank you again for the opportunity to review and comment on the study. If there are any questions concerning the comments we have provided separately, please do not hesitate to contact me.

Sincerely,

Cynthia B. Jones

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NOV 04 2013

COMMONWEALTH of VIRGINIA

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Cynthia C. Romero, MD, FAAFP
State Health Commissioner

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October 31, 2013

Hal E. Greer, Director
Joint Legislative Audit and Review Commission
201 N. 9th Street
General Assembly Building, Ste. 1100
Richmond, VA 23219

Dear Mr. Greer:

Thank you for providing the Virginia Department of Health (VDH) with the opportunity to review Chapter 2 of the report, *Review of the Impact of Medicaid Rates on Access to Health Care in Virginia*. Based on our review of Chapter 2, VDH does not have any substantive comments or concerns with respect to the report.

Sincerely,

Cynthia C. Romero, MD, FAAFP
State Health Commissioner

COMMONWEALTH of VIRGINIA

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November 1, 2013

Mr. Hal E. Greer, Director
Joint Legislative Audit and Review Commission
201 North 9th Street
General Assembly Building, Suite 1100
Richmond, Virginia 23219

Dear Mr. Greer:

Thank you for your letter dated October 22, 2013, and the opportunity to provide comment to the commission on Chapter 2 of the report, *Review of the Impact of Medicaid Rates on Access to Health Care in Virginia*.

The Division of Behavioral Health Services reviewed it and provided five points of informal feedback to your staff via email on October 30, 2013. If the commission has any additional questions before publication, do not hesitate to contact John Pezzoli, Assistant Commissioner, (804) 786-3921, john.pezzoli@dbhds.virginia.gov.

We look forward to reading the final report once published.

Sincerely,

James W. Stewart, III

Cc: The Hon. William A. Hazel, MD
Matt Cobb
Olivia J. Garland, Ph.D.
John Pezzoli
Ruth Anne Walker

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