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Report to the Governor and the General Assembly of Virginia

Spending on Inmate Health Care

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JLARC
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AND REVIEW COMMISSION

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VADOC spends about the same on inmate health care as other states and Medicaid, though spending is growing more quickly

Virginia spends about the same on inmate health care as other states and on its own Medicaid program; however, spending growth has been higher. The Virginia Department of Corrections (VADOC) spending on health care per inmate has grown 7.6 percent annually over the past decade, nearly twice the rate of Virginia's Medicaid program and of health care spending nationwide.

VADOC is increasingly relying on contracts to help manage spending growth. Though using contracts has made spending more predictable in the short term, it may not be saving the state money in the long term. JLARC analysis found no evidence that contract facilities spend less than non-contract facilities on prescription drugs and offsite services.

WHY WE DID THIS STUDY

JLARC directed staff to study the rising cost of inmate health care. From FY07 to FY17, the Virginia Department of Corrections (VADOC) medical budget increased by $56.8 million (40 percent).

ABOUT INMATE HEALTH CARE

Correctional systems are required to provide "reasonably adequate" health care to inmates. Inmates are typically less healthy than the general population. VADOC spent $201 million on medical and clinical services in FY17, or about $6,500 per inmate. This accounted for 17 percent of VADOC's $1.2 billion operating budget, nearly all of which comes from the general fund. VADOC uses a mix of state employees and contracts to care for approximately 30,000 state-responsible inmates at its 41 facilities.

VADOC pays more than other public payers for certain services and medications

Despite being a public purchaser of health care, VADOC pays rates higher than Medicare and Medicaid. Using a lower rate structure based on Medicare could save $9 million annually. There would be, though, the need to balance the pursuit of these cost savings with ensuring access to care. This will be especially challenging as Virginia expands Medicaid, which will pose a substantial test of access in some areas of the state.

VADOC also pays more for certain prescription drugs. Furthering its partnership with VCU Health, the UVA health system, or others could reduce spending on biologic medications, inhalers, and insulin by $1.5 million to $6.6 million annually.

Virginia's restrictive compassionate release policies contribute to higher health care spending

Virginia has one of the nation's most restrictive compassionate release policies for inmates with terminal diagnoses. Only one state (Kansas) has a more stringent time requirement than Virginia's. VADOC spends much more on inmates near the end of their lives than on inmates generally. VADOC spent more than $61,000, on average, to provide end-of-life care for 65 inmates who died in FY17. These 65 inmates comprised only 0.2 percent of all inmates, yet their end-of-life care accounted for 4.7 percent of VADOC health care spending on services and medications.

Virginia also has one of the nation's most restrictive release policies for inmates with complex long-term medical conditions. Virginia is the only state that does not have a policy under which inmates who have complex health conditions or are permanently incapacitated may be considered for release. VADOC spends more on inmates with complex long-term medical conditions, which often require high-cost services or medications, than on inmates generally. VADOC spent more than $20,000, on average, for 810 inmates with complex long-term medical conditions in FY17. These 810 inmates comprised only two percent of all inmates, yet their care accounted for nearly 20 percent of VADOC health care spending on services and medications.

Spending for inmates with terminal illness or complex conditions is far higher than spending for all other inmates (FY17)

SOURCE: JLARC analysis of VADOC claims data.

Aligning Virginia's compassionate release policies with other states' could reduce VADOC inmate health care spending—which is almost entirely state general funds—by anywhere from $1.5 million to $16.9 million. Some of these costs, though, would eventually be incurred through other parts of the state budget. Many inmates who would be released would be covered through other public programs, especially Medicaid, which lower general fund requirements.

Problems with staffing, record keeping, and monitoring pose legal and financial risk

Staffing problems, especially at facilities currently managed through contracts, pose the risk of a court finding that the state is not providing adequate health care to inmates. Stable, effective health administrative leadership is essential to managing a facility's health care operations. However, facilities operated by contractors struggle to retain health administrators; nine of the 12 contract facilities lost their health administrators during FY17 alone. Similarly, key front-line staff, especially registered nurses and licensed practical nurses, left contract facilities twice as often as they left VADOC facilities.

Challenges with VADOC's medical records system and monitoring also potentially leave the state legally and financially vulnerable. VADOC's use of paper-based medical records hinders its ability to efficiently and reliably demonstrate that it is providing adequate care, which is essential when inmates allege they have been denied adequate care. VADOC does have a monitoring program that helps manage risk. The monitoring program, though, does not comprehensively address the full range of risks to adequate care at facilities (especially at the facilities the department manages itself). Issues identified through monitoring are also not fully tracked to resolution; this lack of follow-through also makes the state vulnerable.

WHAT WE RECOMMEND

Legislative action

- Direct VADOC to design a pilot project to pay Medicare rates to providers who treat inmates.
- Direct VADOC to work with the VCU Health Authority and the UVA health system to (i) treat inmates with chronic conditions that require on-going or high-cost prescription drugs and (ii) implement a clinical pharmacy services pilot project.
- Direct VADOC to work with the UVA and VCU health systems to develop and propose a pilot project to provide inmate health care for at least one VADOC facility.
- Option: Amend the Code of Virginia to allow inmates with serious illness to petition the Virginia Parole Board to be considered for release.

Executive action

- Extend the time requirement for a terminal diagnosis from 3 months to 12 months for an inmate to be considered for release.
- Modify contracts to incentivize retaining health administrators and key front-line staff at contract facilities.
- Develop and implement a risk-based monitoring program.

The complete list of recommendations and options is available on page v.

Recommendations and Options: Spending on Inmate Health Care

RECOMMENDATION 1

The General Assembly may wish to consider including language in the Appropriation Act directing the Virginia Department of Corrections (VADOC) to design a pilot project that would test the feasibility and assess the impact of using lower rates, potentially based on Medicare rates, for physician and outpatient services. VADOC should submit the pilot project design to the House Appropriations and Senate Finance Committees, and implement the pilot project no later than 2021. (Chapter 3)

RECOMMENDATION 2

The General Assembly may wish to consider including language in the Appropriation Act directing the Virginia Department of Corrections, VCU Health Authority, and the University of Virginia Health System to develop and implement a plan to treat inmates with chronic conditions that require long-term or high-cost prescription drugs through a 340B-eligible provider. (Chapter 3)

RECOMMENDATION 3

The General Assembly may wish to consider including language in the Appropriation Act directing the Virginia Department of Corrections and the VCU Health Authority to undertake a pilot project to provide clinical pharmacy services to a specific population of inmates. (Chapter 3)

RECOMMENDATION 4

The governor should extend the life expectancy requirement for terminally ill inmates to be considered for medical clemency to 12 months. (Chapter 3)

RECOMMENDATION 5

The Virginia Department of Corrections (VADOC) should develop and implement a health administrator peer review program in which experienced leadership or front-line staff review the operations at VADOC facilities—other than the one at which they work—to identify inefficiencies and share potential solutions. (Chapter 4)

RECOMMENDATION 6

The Virginia Department of Corrections should seek to ensure stable health administrator and front-line staffing at contract facilities by modifying contracts to incentivize and ensure stability. (Chapter 4)

RECOMMENDATION 7

The Virginia Department of Corrections should evaluate whether the contract modifications have resulted in more stable staffing and efficient care delivery by measuring turnover rates, compliance findings, and inmate grievances. The results of the evaluation, including a determination of whether staffing stability at contract facilities has improved from prior years and is similar to non-contract facilities, should be submitted to the Senate Finance and House Appropriations Committees by the end of 2020. (Chapter 4)

RECOMMENDATION 8

The Virginia Department of Corrections should modify its comprehensive health services contracts to increase the fines, and reduce the 90-day grace period, for not meeting critical standard of care requirements. (Chapter 4)

RECOMMENDATION 9

The Virginia Information Technologies Agency should collaborate as necessary with the Virginia Department of Corrections (VADOC) and the Office of the Attorney General to ensure the selection of a vendor capable of successfully implementing an electronic medical records system that can meet the specific functional requirements of the correctional system and be cost-effectively used by all VADOC facilities. (Chapter 4)

RECOMMENDATION 10

The Virginia Department of Corrections should develop and implement a formal risk-based monitoring program as part of its existing continuous quality improvement program. The program should (i) identify risk factors related to access and follow-up; (ii) monitor risk on a regular basis across all facilities; (iii) use the results of monitoring to address the problems identified; and (iv) track the resolution of the problems identified through monitoring activities. (Chapter 4)

RECOMMENDATION 11

The General Assembly may wish to consider including language in the Appropriation Act directing the initiation of a pilot partnership program for a university health system to provide comprehensive medical care for at least one Virginia Department of Corrections (VADOC) facility. The program should be jointly developed by (i) the director of VADOC; (ii) the chief executive officer of the VCU Health System; and (iii) the executive vice president for health affairs at the University of Virginia. The plan should be submitted to the House Appropriations and Senate Finance Committees no later than November 1, 2020. (Chapter 4)

OPTION 1

The General Assembly could amend Title 53.1 of the Code of Virginia to allow inmates to petition the Virginia Parole Board for conditional release based on serious illness. (Chapter 3)

OPTION 2

The Virginia Department of Corrections could make health administrator positions state employee positions, if the stability of staffing at contract facilities does not sufficiently improve. (Chapter 4)

1 Inmate Health Care in Virginia

SUMMARY The Virginia Department of Corrections (VADOC) is constitutionally obligated to provide inmates "reasonably adequate" health care. In FY17, VADOC spent at least $201 million to provide medical, dental, and behavioral health care to approximately 30,000 inmates at 41 facilities. VADOC contracts with several private companies to provide care and manage health care claims, both in facilities and at community providers' offices and hospitals. Virginia and other states have struggled to maintain successful, long-term contractual relationships with private health care companies. Some states are moving toward partnering with university health systems to provide cost-effective care to inmates.

Correctional systems are required to provide "reasonably adequate" health care to inmates under a 1976 U.S. Supreme Court decision, *Estelle v. Gamble*. The case established that constitutional protections under the Eighth Amendment, which guarantees freedom from cruel and unusual punishment, include that all inmates have a right to a standard of health care that is available in the community. In Virginia, the cost of providing this health care has been increasing faster than the total corrections budget. From FY07 to FY17, the Virginia Department of Corrections (VADOC) medical budget increased by $57.5 million (40 percent), adjusted for inflation. Over the same time period, the total VADOC budget increased by $66.7 million (six percent).

This trend of increased spending prompted JLARC in 2017 to direct staff to study the rising cost of inmate health care. The study resolution specifically called for staff to identify factors contributing to cost increases and assess whether VADOC provides health care efficiently and cost-effectively. The resolution also directed JLARC staff to assess VADOC's partnerships with contractors and other government entities to provide care. (See Appendix A for study resolution.)

To address the study resolution, JLARC staff interviewed VADOC health services staff, contractor staff, clinicians working in VADOC facilities, and correctional department staff in other states. JLARC staff also surveyed clinicians and health services administrators in VADOC facilities, and analyzed data provided by VADOC and its various health services contractors. (See Appendix B for more detail on the research methods used in this study.)

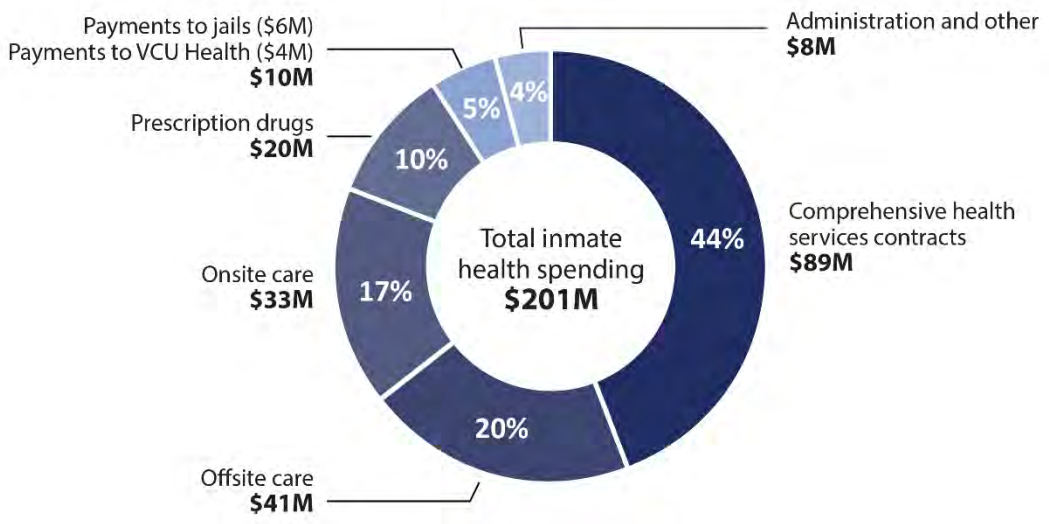
VADOC spent over $200 million on inmate health care in FY17

VADOC spent $201 million on medical and clinical services in FY17, or about $6,500 per inmate. This accounted for 17 percent of VADOC's $1.2 billion operating budget, nearly all of which comes from the general fund. (See Appendix C for more information on inmate health care spending in FY17.) Health care is the second-largest portion of VADOC's budget, behind only security and management of inmates. It is more than twice as large as the budget for probation and parole and four times larger than the budget for food.

Three categories of spending—onsite care, offsite care, and prescription drugs—account for most of inmate health care costs. Some of these costs are paid for through comprehensive health services contractors, to whom VADOC pays a per-inmate capitated rate to provide care at several facilities. The contractor then is responsible for paying the direct costs of health care, including onsite care, offsite care, and prescription drugs for the inmates at those facilities. Payments to comprehensive service contractors accounted for 44 percent of VADOC's health care costs. Spending on onsite care accounts for 17 percent of VADOC health care spending. The charges for offsite services account for 20 percent of spending. Prescription drugs account for another 10 percent of spending (Figure 1-1).

VADOC is responsible for providing health care to all **state-responsible inmates**, or those with a sentence longer than one year. Some state responsible inmates are housed in local jails rather than VADOC prisons due to space limitations. The Compensation Board pays local jails a per-day fee for housing state-responsible inmates. When an inmate's health care costs are high, local jails may request VADOC to pay for certain services.

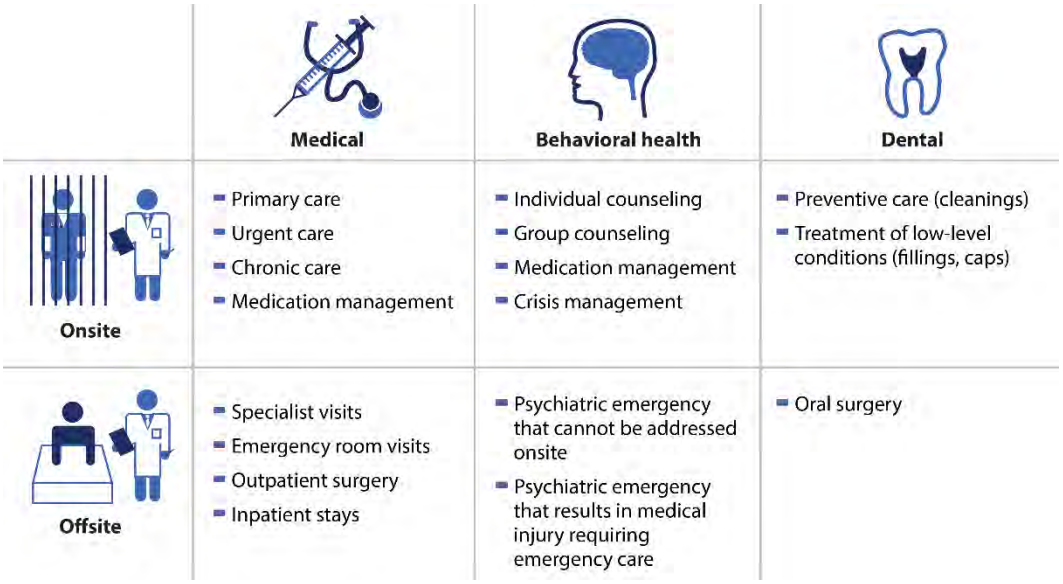
FIGURE 1-1
Four largest spending categories account for 91 percent of inmate health care costs (FY17)



SOURCE: JLARC analysis of VADOC expenditure data, FY17.
NOTE: Payments to jails are for offsite care services and prescription drugs not covered in the daily rate paid by the Compensation Board (sidebar). Payment to VCU Health was an annual payment to make up for lower reimbursement rates, but this payment ended in FY17. Prescription drugs, onsite care, and offsite care categories include spending on services at non-contract facilities as well as payment for inpatient care and some prescription drugs at contract facilities.

Onsite and offsite services include medical, behavioral health, and dental care. VADOC provides several services in facilities, including health screenings, primary medical care, preventative dental care, and psychological and psychiatric services. Most spending on onsite care is for the staff who deliver these services, as well as supplies and equipment. If onsite clinicians cannot provide the services an inmate needs, VADOC will schedule, transport, and pay for the inmate to visit a local hospital or provider's office for offsite care. VADOC also provides medication to inmates as prescribed by a physician (Figure 1-2).

FIGURE 1-2
VADOC provides a range of medical, behavioral, and dental services to inmates



SOURCE: VADOC health care providers and department operating procedures.
NOTE: Chronic care refers to regular treatment for chronic diseases such as hypertension and diabetes. Chronic care services include blood work, testing, and medication management. Some facilities are able to provide specialized services like dialysis onsite as well.

Many other costs of providing inmate health care are not as easily tracked and accounted for as part of VADOC's health care spending. Taken together, these costs totaled more than $10 million in FY17. Virginia's Medicaid program may pay for inpatient care when an eligible inmate is admitted to a hospital for more than 24 hours. Virginia's Medicaid program paid $5.5 million for eligible inpatient claims in FY17, half of which came from the general fund. VADOC also transported inmates for offsite care and back more than 25,000 times at an estimated cost of between $1.3 and $1.6 million for fuel and vehicle maintenance. Transportation sometimes requires overtime costs for security personnel, but these are difficult to estimate because some transportation is done by security staff during regular working hours. VADOC also provides some substance abuse and behavioral health treatment in intensive therapeutic communities, at an additional cost of $3.2 million in FY17.

VADOC inmates have higher health care needs than people in the community

VADOC calculates **average daily population (ADP)** by totaling the inmate population counted in periodic head-counts and dividing by the number of head-counts taken.

VADOC provides health care to approximately 30,000 inmates. The number of inmates in VADOC custody has decreased slightly over the past decade, from 31,756 in FY07 to 30,455 in FY17 (four percent decrease). There were approximately 11,000 inmates who entered VADOC custody and another 11,000 who were released in FY17, which is typical for a given year. Because most inmates eventually return to the community, effective health care—particularly for mental health disorders and infectious diseases—has positive impacts on public health and recidivism.

Inmates generally have more health problems than individuals in the community

Inmates typically have worse health than the community population. Nationally, inmates are more likely to have chronic health conditions, which drive up health care costs. Inmates are also much more likely to have a history of mental illness or drug or alcohol dependency. In 2010, approximately 65 percent of adults in prison nationwide met the medical criteria for an alcohol or drug use disorder, and 33 percent suffered from mental illness. In comparison, 18.3 percent of adults in the U.S. had a mental health condition (2016).

The higher health needs of Virginia's inmates mirror the nationwide trends. In FY17, 27 percent of VADOC inmates were identified as having a mental health condition. Approximately 65 percent of inmates reported a history of alcohol use or abuse and 43 percent reported a history of drug use or abuse (2015).

VADOC's high-cost populations are growing

Like most health systems, VADOC spends a substantial amount of money on a small number of inmates with high health care needs. Two populations with high health care needs and costs—female inmates and those over age 55—are growing in VADOC. Overall health care costs are much higher for older and female inmates than for younger and male inmates.

VADOC's inmate population is predominately male, but the proportion of female inmates is increasing. In FY17, 8.0 percent of VADOC's inmates were female, compared to 6.0 percent in FY1997 (a 33 percent increase). Many other states are experiencing growth in their female inmate populations as well. Research suggests that this increase in the female inmate population is a result of changes in drug enforcement policies and the rise of the opioid epidemic.

While female inmates are still a relatively small proportion of the inmate population, per-inmate spending is much higher for female inmates. In FY17, VADOC spent $6,204 per male inmate and $10,543 per female inmate. According to VADOC health services staff, care for female inmates is more expensive for several reasons: (1) female

inmates generally have greater health care needs when they enter VADOC custody; (2) female inmates are more likely to request care; and (3) more female inmates have a diagnosed mental health disorder (Table 1-1).

Table 1-1
VADOC spends more on health care for female inmates than for male inmates (FY17)

Percent of inmates with	Male	Female
Serious mental health diagnosis	17.7%	53.4%
Hepatitis diagnosis (A, B, or C)	12.1%	21.9%
Offsite utilization	21.2%	30.8%
Pharmacy utilization	64.9%	75.8%
Average spending	$6,204	$10,543

SOURCE: VADOC health and spending data, FY17.
NOTE: VADOC assigns each inmate a mental health code from 0-4 that indicates the presence and severity of mental illness. A code of two or higher indicates a serious mental health diagnosis.

Virginia's inmate population is also getting older. The percentage of inmates over age 55 has more than doubled in the past 10 years, from 5.6 percent in FY07 to 12.4 percent in FY17. Two factors have led to this increase. First, Virginia's 1995 truth-in-sentencing reform has led to inmates serving longer portions of their sentences, so that more inmates are aging within the prison system (sidebar). Second, the average age of an inmate entering VADOC custody for the first time is increasing. This mirrors the population of Virginia overall.

In 1995, **Virginia abolished parole**. Under the reforms, an inmate must serve at least 85 percent of his sentence. This "Truth-in-Sentencing" policy resulted in inmates serving longer portions of the full sentence.

Older inmates, like older individuals in society, have higher health care costs than younger inmates. The annual cost of providing prescription drugs and offsite care to older inmates with chronic health conditions is more than four times that of younger, healthier inmates. In FY17, inmates over age 55 accounted for about 12 percent of the VADOC population but 33 percent of the offsite and prescription drug spending (Table 1-2).

Table 1-2
VADOC spends more on health care for inmates over age 55 than for younger inmates (FY17)

Percentage of inmates with	Age 55 and under	Over age 55
Cardiovascular diagnosis	29.9%	60.7%
Hepatitis diagnosis (A, B, or C)	11.5%	19.6%
Diabetes diagnosis	3.0%	10.2%
Offsite utilization	20.8%	40.4%
Pharmacy utilization	66.3%	80.9%
Average spending on offsite services & prescription drugs	$1,878	$9,140

SOURCE: VADOC health and spending data, FY17.
NOTE: Onsite spending could not be separated by age group, so only offsite and pharmacy spending is reported.

Virginia and other states use a combination of state employees and contracts to provide care

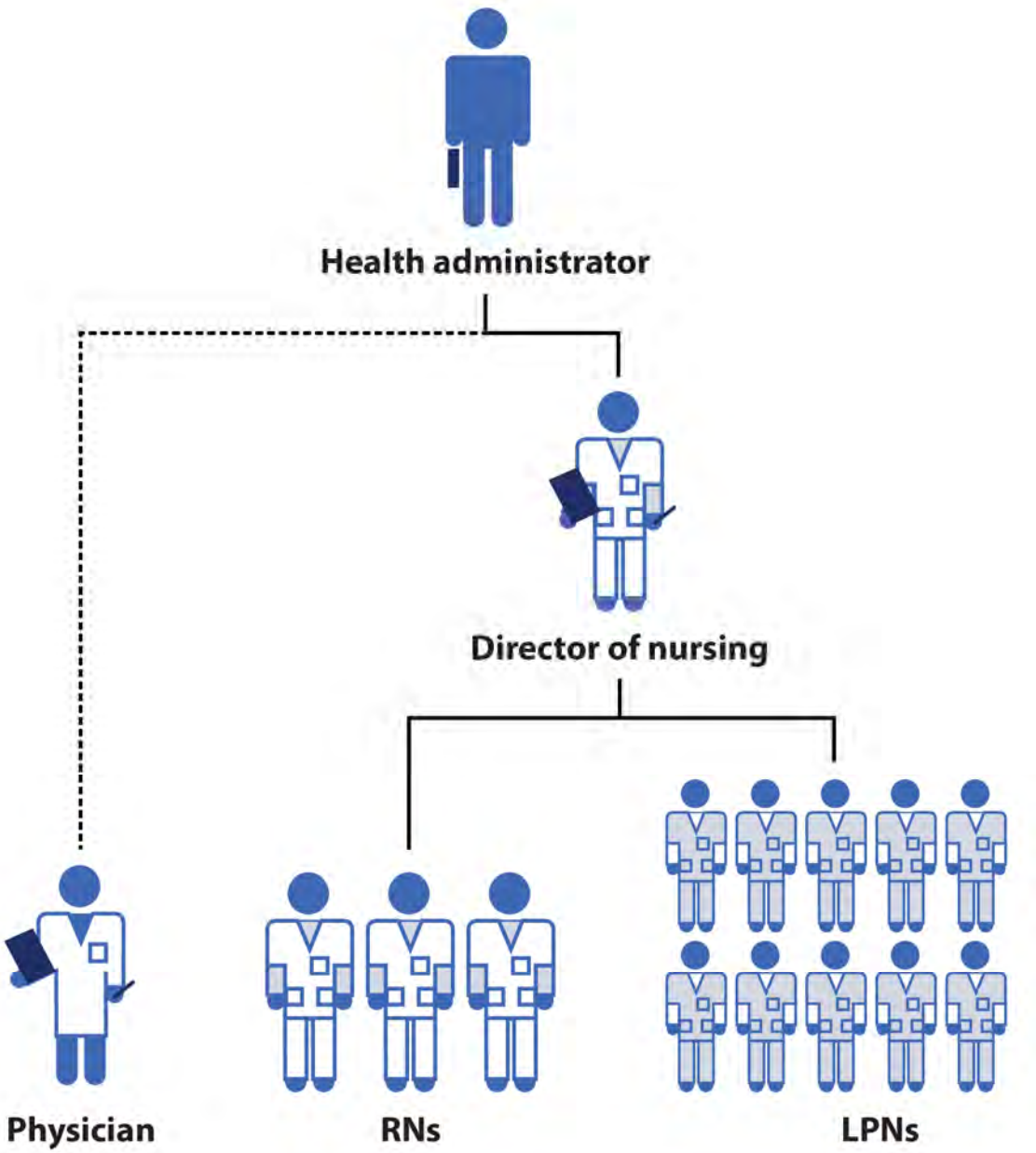
Nearly every state's department of corrections uses contracts to some extent to provide inmate health care. Virginia employs medical and other staff to provide care to about half of its inmate population while contracting with comprehensive health services vendors to provide care to the other half. Other states use contractors to varying degrees to provide care. In some states, like Maryland, all inmate health care is provided by contractors, who are overseen by state employees. Maryland contracts with separate private companies to provide distinct types of care: medical, dental, behavioral health, and pharmaceutical. In other states, like North Carolina, the state provides care directly but supplements state-employed clinicians with individually contracted staff when needed.

VADOC uses mix of state employees and contracts to provide care

VADOC provides medical, dental, and behavioral health services at 41 facilities across the state. The vast majority of inmates (90 percent) are housed in 27 major facilities, and the remaining 10 percent are housed in smaller work centers and field units. Multiple types of clinicians—physicians, nurses, dentists, psychiatrists, and mental health professionals—provide care in the facilities. Physicians, dentists, and psychiatrists prescribe medication and refer inmates offsite for specialist care as needed. Onsite medical services are often provided in a dedicated medical unit that is overseen by a health administrator, who provides clinical supervision to a team of nurses, and administrative supervision to an onsite physician (Figure 1-3).

When inmates require offsite care, most are treated by the Virginia Commonwealth University Health System (VCU Health), at either the secure care unit at its primary hospital or by its affiliated physicians. This strategy of fully contracting out some facilities while directly operating others is unique among state correctional systems. Most states contract out for certain providers or services, rather than some full facilities.

FIGURE 1-3
A health administrator typically oversees staff of nurses and onsite physician to provide care



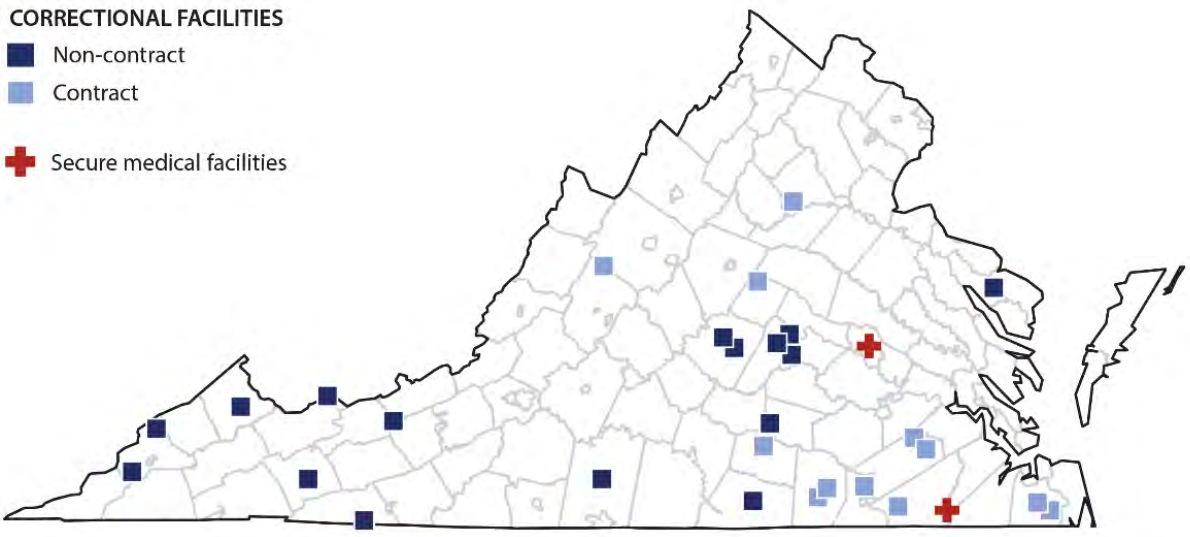
SOURCE: VADOC staffing reports and HR data.
NOTE: The number of clinicians varies between facilities, due to differences in facility size and onsite health care capabilities. This is an example of the medical unit staffing at one facility, where staffing levels are reasonably representative of facilities across the state.

VADOC provides care at majority of facilities but contracts out care at high-need, hard-to-staff facilities

340B drug pricing is a federal program that requires drug manufacturers to provide outpatient drugs to eligible health care organizations at significantly reduced prices. Eligible organizations include those that serve vulnerable, low-income, and uninsured patient populations. VCU Health is eligible for 340B pricing.

At 25 facilities with half of all inmates, VADOC directly administers health care. VADOC hires state-employed clinicians and pays for all offsite care and prescription drugs. At 15 facilities, VADOC pays two correctional health care vendors a capitated, per-inmate rate to provide comprehensive health services. The contractors hire clinicians, provide care in facilities, pay for outpatient offsite care, and purchase most prescription drugs. Contractors are not financially responsible for inpatient hospital care and certain high-cost medications. This arrangement allows VADOC to seek reimbursement through the Medicaid program for eligible inpatient stays and obtain substantially reduced prices on high-cost drugs through the federal 340B prescription drug program (sidebar). Virginia also has one fully privatized prison; one private company provides all services, including medical care, at the correctional facility in Lawrenceville (Figure 1-4). (See Appendix D for a detailed map of facilities.)

FIGURE 1-4
VADOC provides services directly at most major facilities



SOURCE: JLARC analysis of VADOC website and contract documents, FY17.
NOTE: Figure only shows major correctional facilities.

According to VADOC, contracts were introduced to facilities that were particularly hard for VADOC to staff, either because of the facility's location or because the facility provided intensive, specialized services that required a larger number of highly qualified clinicians. Seven correctional facilities have specialized health care capabilities in addition to the primary care provided in all facilities; five of these acquire services under contract. Five facilities have infirmaries for acute and chronic conditions, three facilities provide dialysis services, four facilities provide specialized behavioral health services, and one facility has an assisted living unit (Table 1-3).

TABLE 1-3
At most facilities that provide specialized health care, services are contracted out (FY17)

Facility	ADP	Health care specialty	Contract status
Greensville	2,961	Infirmary, behavioral health services, dialysis	Yes
Sussex II	1,247	Dialysis	Yes
Fluvanna	1,198	Infirmary, behavioral health services, dialysis	Yes
Deerfield	1,064	Infirmary, assisted living unit	Yes
Deep Meadow	718	Infirmary	Partial
Powhatan	331	Infirmary, behavioral health services	Yes
Marion	290	Behavioral health services	No

SOURCE: Reports by VADOC management and the Joint Commission on Health Care.
NOTE: ADP and contract status is provided for FY17. Dental care is not outsourced at any facility. Deep Meadow is a non-contract facility but has an infirmary that is run by a contractor.

VADOC has recently insourced health care provision at Fluvanna, but has a staffing contract through which the former comprehensive services contractor provides clinicians to deliver onsite care.

Additional contracts facilitate purchase of prescription drugs and payment of offsite claims

VADOC and its two comprehensive contract vendors use third-party contractors to manage offsite care claims and prescription drug purchasing. All offsite care claims, regardless of facility, are managed by a claims administrator, who negotiates rates with providers and bills either VADOC or the comprehensive contractor for the services. Most prescription drugs are purchased through a "prescription fill" vendor that buys drugs from manufacturers and wholesalers and delivers them to VADOC facilities. VADOC and both comprehensive health services contractors use the same prescription fill vendor, but through separate contracts. VADOC and its contractors also use smaller subcontracts as needed, including individual staffing contracts with providers and a contract with a company that provides dialysis services at two facilities.

Many states, including Virginia, have struggled to maintain stable, long-term contracts with private health care companies

Many states, including Virginia, have struggled to maintain long-term contractual relationships with private comprehensive health care contractors. This is largely due to two types of conflict: (1) the inherent tension between the state's need to reduce spending and the contractor's need to make a profit, and (2) a disconnect between the party that provides care (contractor) and the party that is legally accountable if care is not adequate (the state).

JLARC did not assess whether VADOC is providing adequate care. The Joint Commission on Health Care has produced research on the quality of care provided in state prisons and local jails. This reports aims to evaluate spending growth and identify ways to reduce spending without reducing quality of care.

Both of these conflicts have played out in Virginia in recent years. In 2013, a private company secured a comprehensive health care services contract for 17 facilities by significantly underbidding other vendors. The contract price ultimately was an estimated $15 million lower than the actual cost to provide care, and the company terminated the contract less than a year later due to financial losses. In 2012, a class-action lawsuit was brought against VADOC claiming inadequate health care at a contract facility, Fluvanna Correctional Center for Women. The parties settled two years later, but litigation over the settlement is ongoing, and health care at the Fluvanna facility has

been under continual, intense scrutiny. VADOC recently moved to take back administrative control of health care at Fluvanna.

Challenges with contracting are not unique to Virginia; several other states have struggled to maintain successful relationships with private contractors. Florida contracted with two separate companies in 2012 to provide health services across the state, but both contracts were terminated early. One contract was terminated by the contractor, citing cost concerns, and the other was terminated by the state, citing concerns about adequacy of care.

Idaho contracted with a private company from 2014 to 2017 to provide health care services, but the state did not renew the contract because of lawsuits alleging inadequate care. The state signed a contract with a new vendor in 2017, but a court monitor cited "grossly insufficient and extremely poor quality of psychiatric services" less than a year later.

Many states, including Virginia, benefit from contracts with state academic hospitals

VADOC partners with VCU Health to provide some health care to inmates. VCU Health has a secure care unit within its medical center that allows inmates to be seen by physicians for outpatient services as well as be admitted for inpatient stays in a secure setting. VCU staffs the secure care unit with medical personnel, and VADOC provides the security. As a result, two-thirds of inpatient and outpatient hospital care is provided by VCU Health. VCU Health physicians in over a dozen specialties diagnose and treat inmates via telemedicine as well, so inmates do not need to leave the facility to receive care. Additionally, VADOC and VCU Health have a memorandum of understanding that allows VADOC to purchase certain high-cost drugs—those for HIV, hepatitis C, and hemophilia—from VCU Health at 340B prices. University of Virginia physicians in several specialties also use telemedicine to treat inmates.

Other states have partnered with state academic hospitals to an even greater extent. In Texas and New Jersey, the state correctional departments have contracts with state university hospital systems to provide staffing, offsite care, and prescription drugs. Both states transitioned to partnering with university health systems after settling significant lawsuits pertaining to inmate health care. The medical expertise and associated credibility of a university can improve confidence in a state's ability to provide adequate care.

Other states indicate that partnering with an academic health system can also improve staffing and reduce costs. Many states have difficulties staffing health care positions because prisons typically have more challenging patients, both in behavior and health status, and because prisons are often located outside of major metropolitan areas. Working with an academic system can give the state access to a wider pool of clinicians for inmate health care, while providing additional clinical settings for students to observe and learn. Formal partnerships with university hospital systems have allowed states to access 340B pricing for all outpatient prescription drugs and to pay actual costs of care, rather than commercial rates, for offsite services.

2 Spending on Inmate Health Care

SUMMARY Virginia spends a similar amount per person on inmate health care as others do on comparable populations; however, the growth in spending over time has been higher. There are several likely reasons for this persistently higher spending growth, including the changing demographics of the inmate population, the reliance on more expensive prescription drugs, and general advancements in correctional health care standards. Within the last five years, the major drivers of VADOC's spending growth have been higher spending on prescription drugs and offsite care services. VADOC has also increased its reliance on comprehensive health services contracts, and although this has made spending more predictable in the short term, it is likely not saving the state money in the long term.

VADOC spent a total of $201 million to provide health care to nearly 30,000 inmates in FY17. While the amount VADOC spends per inmate on health care is similar to what others spend on comparable populations, the rate at which this spending has grown over time is significantly higher than those other populations. VADOC's per person spending on inmate health care has grown by 76 percent over the past 10 years. Over that same time period, the percentage of VADOC's total budget dedicated to medical services increased from 13 percent to 17 percent.

Health care spending on VADOC inmates is similar to spending on comparable populations, per person

The amount VADOC spends per inmate on health care is similar to what the state spends on a comparable subset of Medicaid recipients and what other states spend on their inmate population. Per-person spending was used for this comparison because the sizes of these populations differ significantly.

Virginia DOC spent $201 million in primarily general funds to provide care to about 30,000 inmates (not including state-responsible inmates in local/regional jails). Virginia's Medicaid program spent $9.2B in federal and general funds to provide health care to about 1.13 million individuals in FY17.

VADOC health care spending is about the same per person as state Medicaid spending

Virginia spent nearly the same per inmate as it did per comparable Medicaid recipient in FY17. VADOC spent $6,507, on average, to provide health care to inmates in VADOC custody. The state's Medicaid program spent $6,582 to provide care for a subset of recipients, which is $75 (1.2 percent) more than VADOC spends per inmate (Figure 2-1). In order to calculate a useful comparison, JLARC staff used per-person spending for a subset of Medicaid recipients with similar characteristics to the state's inmate population, adjusted for differences in age, gender, and health status. (See Appendix B for more detail on this analysis.)

FIGURE 2-1
Virginia spent 1.2 percent less per inmate than per Medicaid recipient (FY17)

SOURCE: JLARC analysis of expenditure data from VADOC and DMAS, FY17.
NOTE: Figures are weighted to account for differences in gender, age, and health status between the two populations.

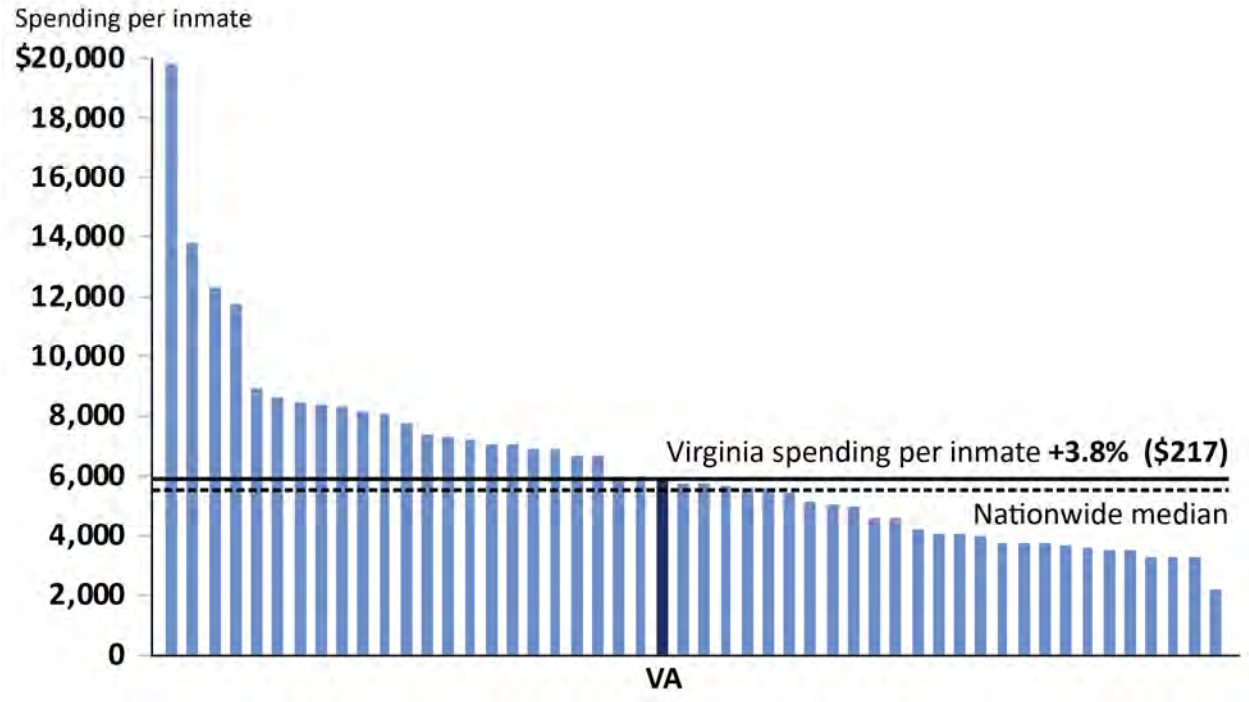
The **National Health Expenditure (NHE)** measure is an annual estimate of total health care spending in the US, published annually by the Center for Medicare and Medicaid Services (CMS).

More broadly, the amount VADOC spends per person is considerably less than the nationwide average per person. In FY17, the U.S. collectively spent $7,565, on average, per person to provide health care, according to the National Health Expenditure measure, which is $1,058 (16.3 percent) more than VADOC spends per person (sidebar).

Virginia spends about the same per inmate on health care as other states

Virginia's spending per inmate was very close to the nationwide median in FY15 (latest available data). Virginia's spending was $217 (3.8 percent) more per inmate than the nationwide median (Figure 2-2). Virginia ranked 24th out of 49 states that reported data on inmate health care spending, according to the Pew Charitable Trusts. Several states spent considerably more, especially California, which spends by far the most of any state (nearly $20,000), in part because its entire prison system is under a court mandate to provide a certain level of care. Other states that spend considerably more than Virginia (Vermont, New Mexico, and Wyoming) tend to have relatively few inmates; consequently, these states have difficulty gaining economies of scale in providing care that can reduce the cost per inmate.

FIGURE 2-2
Virginia's health care spending per inmate was very close to median of other states (FY15)



SOURCE: *Prison Health Care: Costs and Quality*, Pew Charitable Trusts, 2017.
NOTE: Does not include data for New Hampshire, because the state did not provide Pew with spending data.

Virginia's neighboring states spent between 23 percent more, and 33 percent less, than Virginia. Because of the differences in how states operate their correctional systems, it is difficult to know precisely what accounts for these differences in spending across states. Virginia spends 33 percent more than West Virginia, which mandates the use of Medicaid rates for inmate health care; this policy likely allows West Virginia to contain spending. (See Chapter 3 on the possibility of using this approach in Virginia.) Virginia spends about the same per inmate as Tennessee, 17 percent less than North Carolina, and 23 percent less than Maryland. The latter difference is part of a larger pattern: Virginia spends less than Maryland, per person, on many governmental functions including Medicaid.

Virginia's spending has consistently been in the middle range across all states. The Pew Charitable Trusts have collected inmate health care spending from 49 other states between FY10 and FY15. Virginia's per-inmate spending has ranked between 22nd and 27th during that time period.

Health care spending on VADOC inmates has grown faster than spending on similar populations

Comparing the level of spending provides insight into a single year, but a comprehensive assessment necessitates also comparing the rate of growth in spending over time. If historical rates of growth are trending higher, policymakers can take action to moderate growth. (See Chapter 3 for potential cost-saving strategies.) The need to moderate future growth is especially important for services, such as inmate health care, that rely heavily on state general funds.

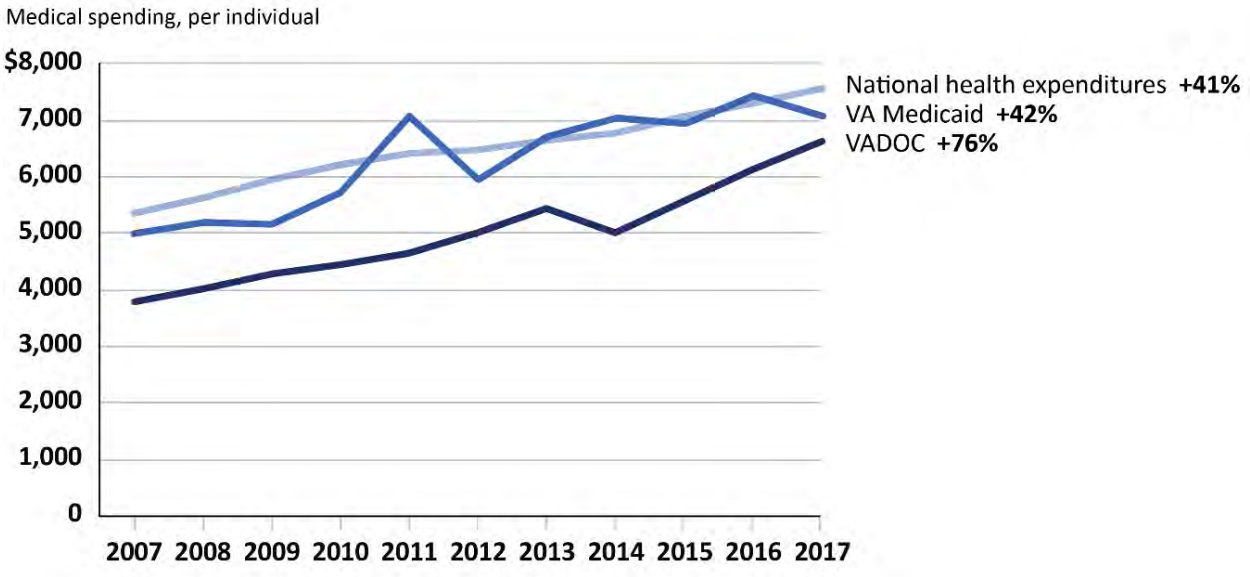
VADOC health care spending is rising faster than state Medicaid spending and nationwide health care spending, per person

VADOC spending on health care per inmate has grown 76 percent from FY07 to FY17. This represents an annualized growth rate of 7.6 percent. This increase in health care spending is outpacing VADOC's operating budget. As a result, health care spending accounts for 17 percent of the total VADOC budget, up from 13 percent in 2007.

VADOC's spending per inmate has risen faster than several reasonable comparator groups (Figure 2-3). VADOC's spending increased at nearly twice the rate of growth of Virginia's Medicaid program. VADOC spending also increased at nearly twice the rate of growth in health care spending nationwide. Per-inmate spending in Virginia has also grown slightly faster than per-inmate spending in other states, ranking 17th in growth in per-inmate spending from FY10 to FY15 (latest available data).

VADOC spending has also been growing faster than medical services nationwide as calculated in the Consumer Price Index. Medical services costs grew 35 percent between 2007 and 2017. This was less than half the rate of growth in VADOC inmate health care spending during the same time period.

FIGURE 2-3
Virginia's per-inmate spending has been increasing more than its spending on Medicaid and health care spending across the U.S. (2007-2017)



SOURCE: JLARC analysis of expenditure data from VADOC and DMAS, and CMS National Health Expenditures.
NOTE: Figures not adjusted for inflation.

There is no quantifiably reliable way to isolate exactly why VADOC spending is growing more quickly than comparison groups. There are, however, several factors that are at least partially contributing to this faster growth. VADOC's population is, on average, less healthy than the general population, and specifically has a higher rate of infectious diseases. Many of these infectious diseases, including hepatitis C and HIV, require expensive medications and treatment.

The cost to treat these infectious diseases may continue to grow even faster, as treatment protocols change in response to emerging legal challenges. Two pending lawsuits against VADOC allege that VADOC has failed to provide adequate treatment to inmates with hepatitis C. Judges in similar lawsuits in several other states have ruled in favor of inmates and required states to provide newer, high-cost treatments for hepatitis C to all inmates with a diagnosis on a schedule dictated by the court.

Changing demographics have also contributed to increased spending, as the proportion of female inmates and inmates over the age of 55, both of which are associated with higher health care costs, continues to grow. From FY12 to FY17, the percentage of female inmates increased from 7.1 percent to 8.0 percent and the percentage of inmates over 55 increased from 8.5 percent to 12.4 percent. If VADOC had the same proportion of elderly inmates in FY17 as it did five years ago, total spending would have been about $11 million less.

According to VADOC's projections of the future inmate population, the trends that contribute to faster growth are likely to continue in the near future. For example, offender forecasting reports predict the number of females to increase by 11.3 percent between FY17 and FY23, compared to a 2.9 percent increase among males. Although forecasting is not conducted for older inmates, the number of inmates age 50 or older increased by almost 40 percent from 2010 to 2016, and there is no indication that this growth rate is slowing.

This trend of significantly higher spending growth continued in FY18 but may be moderating, based on projected spending. Spending increased by more than 10 percent in FY18, but the amount appropriated to VADOC for FY19 increases by only 1.4 percent from FY18 and actually decreases in FY20 by 4.2 percent. This moderation in the growth rate is largely the result of Virginia's decision to expand its Medicaid program, which will shift most of the cost of inpatient hospital stays to non-general fund sources in FY19 and FY20. It is unclear, though, how much a potential judicial requirement to test and treat all inmates for hepatitis C would offset this moderation in growth.

"Advancements in the professionalization and sophistication of care provided … brought care for prisoners into closer alignment … with health care provided in the community."

– Prison Health Care: Costs and Quality Pew 2017

The continuing growth in spending on inmate health care should be viewed in the context of an ongoing effort to bring correctional health care in line with community standards. This effort is the result of *Estelle v. Gamble*, the 1976 Supreme Court decision that granted inmates a constitutional right to health care. In the decades since this decision, as the expected community standard for care has changed, so too have correctional systems had to adapt, while still trying to control costs. The dilemma facing correctional systems was highlighted in a 2008 article published in the *Journal of Correctional Health Care*:

> *Estelle* results in one essential difference from the community: A constitutional guarantee of fulfillment of all required health care needs will outweigh management of the bottom line.

Failing to meet such standards has, in many states, resulted in litigation, which in turn has led to the imposition of court-mandated standards, further increasing correctional health care budgets. Consider California, where per-inmate spending increased by 25 percent (from $15,827 in FY10 to $19,796 in FY15) after the state's correctional system was placed under a court order to improve general conditions in their prisons, which has required them to invest substantially in health care facilities and staff.

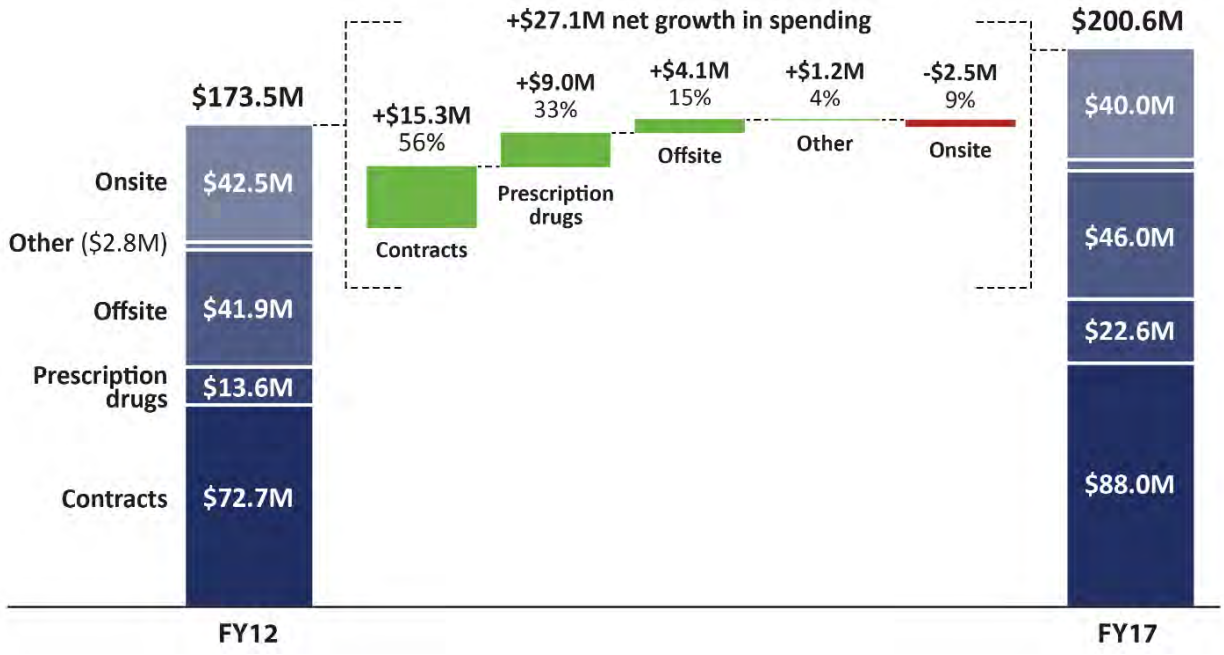
Prescription drugs and offsite care, and more inmates at contract facilities, are drivers of recent spending increases

In 2014, **new high-cost drugs were approved to treat hepatitis C**. The use of these drugs was a significant driver of VADOC's increase in prescription drug spending over the past five years.

Growth in health care spending at VADOC has primarily been driven by the increasing cost of prescription drugs and offsite care, which make up nearly half of the increase in total health care spending (Figure 2-4). These categories of spending have gone up primarily due to more expensive medications and high-cost inpatient stays; utilization rates have been fairly stable during this time period. Spending on comprehensive con-

tracts makes up over half of the remaining increase in total health care spending. However, this is primarily because VADOC added more facilities and inmates to the scope of the contracts, not because of an increase in the capitated rate.

FIGURE 2-4
More inmates at contract facilities, and increase in prescription drugs and offsite care, account for nearly all spending growth (FY12-FY17)



SOURCE: JLARC analysis of VADOC expenditure data, FY12 and FY17.
NOTE: FY12 figures have been adjusted for inflation. The increase in spending on contracts is largely the result of additional facilities being added to the contracts, not an increase in per-person spending under the contracts. Excludes other categories of spending that combined accounted for four percent of growth.

These spending increases may have been even larger without VADOC's recent efforts to manage spending. VADOC has reduced the price it pays for some high-cost prescription drugs by accessing federal 340B drug pricing through the VCU Health system. VADOC also changed its reimbursement method for inpatient hospital stays at the primary hospital it uses, VCU Health, reducing the average cost per stay. Further, as VADOC's health care costs at its non-contract facilities have continued to rise, the per-inmate capitated rate included in the comprehensive contracts has remained fixed. This has helped control spending growth over the short term.

One of the typical drivers of increased health care spending is an increase in the number of people who need and receive care. However, providing care to more inmates is not one of the drivers of recent VADOC spending increases. The number of state-responsible inmates in VADOC custody has remained fairly stable over the past 10 years, ranging between 33,691 and 29,767, with an annual average population of 30,970.

From 2006 to 2012, VADOC used a **risk-sharing contract model**. VADOC and the contractor split small-to-moderate profits and losses equally. Extensive profits and losses (greater than 17 percent for offsite care, 10 percent for staffing) were incurred by VADOC.

Use of contracts stabilizes spending in short term but likely does not reduce spending in long term

As noted above, the largest driver of recent VADOC spending increases is the expanded scope of contracting. VADOC pays comprehensive health services contractors a capitated rate to incentivize contractors to find efficiencies and reduce costs. Using a capitated rate shifts the financial risk or potential for financial reward to the contractor. If the contractor can provide services for less than the capitated rate, the contractor profits. If the contractor spends more than the capitated rate, the contractor incurs the financial loss.

VADOC's current contract structure is designed to incentivize contractors to find efficiencies specifically in offsite and pharmacy services. Offsite care, prescription drugs, and onsite staffing are the largest spending categories in VADOC health care, but onsite staffing costs are largely fixed due to staffing level requirements built into the contract.

The **capitated rate** paid by VADOC under its comprehensive contracts includes the cost for all onsite care, outpatient visits, and most prescription drugs.

VADOC uses capitated rate structure for contracts to stabilize spending

VADOC's use of capitated rates has helped manage annual costs increases and made spending more predictable in the short term. VADOC negotiated a fixed capitation rate with its contractors for the first three years of the current contract. Contractors have therefore had to absorb some of the increasing costs of prescription drugs and offsite care, limiting the contractors' ability to cover administrative costs and corporate overhead. The largest contractor reported financial losses in 2016 and 2017, citing offsite care and prescription drugs as the largest drivers of spending growth.

Over the long term, though, it is unlikely that rates in the current contracts will remain the same. The capitated rates for VADOC's comprehensive health services contracts were renegotiated in November 2018, and can be renegotiated in each of the following two, one-year renewal periods. Because of the cost increases that the contractors have had to absorb, it is highly likely they will seek higher capitated rates during the renegotiation.

This short-term versus long-term dynamic is inherent in the use of capitated rates. In the short term, entities like VADOC can stabilize spending increases through the use of capitated rates. However, VADOC will only save money in the long term on its health services contracts if contractors are able to find efficiencies and deliver care at a lower cost than VADOC could. The contractor must cover its direct costs, administrative expenses, and make a profit to sustain a long-term contractual relationship. The payment of administrative costs and profits is only financially beneficial for the state if the contractor saves money on direct costs.

No evidence that contract facilities spend less than non-contract facilities on pharmacy and offsite services

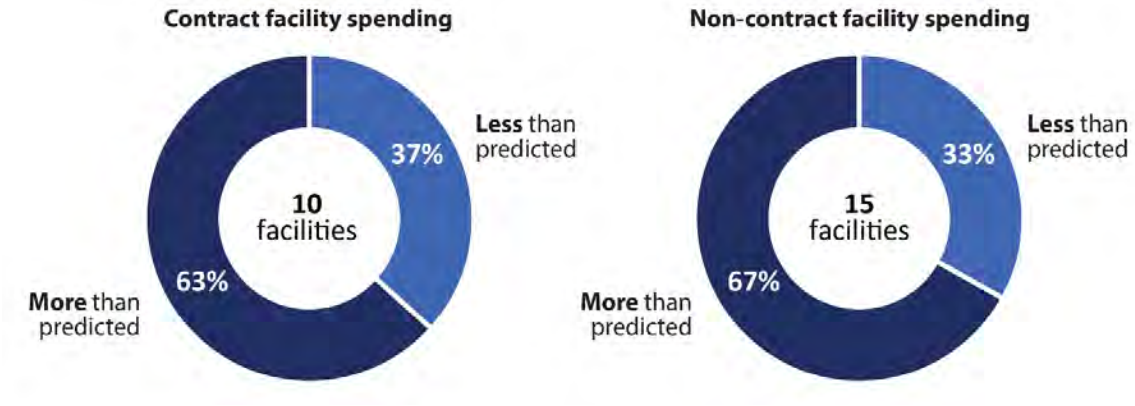
One of the goals of contracting with private companies is to incentivize cost savings; however, per-inmate spending is higher at contract facilities. Contract facilities spend slightly more, on average, than non-contract facilities on prescription drugs ($92 vs. $83 per person per month) and substantially more on offsite services ($202 vs. $130 per person per month). This spending data, though, does not account for the fact that facilities with specialized health care capabilities and services are more likely to be contracted-out. Consequently, contract facilities house inmates with higher health care needs, compared to non-contract facilities. To account for this key difference between facilities, JLARC conducted statistical analysis to control for patient demographic and health factors (sidebar).

JLARC analysis found no evidence that contract facilities spend less than non-contract facilities. Contract and non-contract facilities' pharmacy and offsite spending was very similar after controlling for patient differences (Figure 2-5). About one-third of both non-contract and contract facilities spent less than expected after controlling for demographics and health. Based on the very similar results for non-contract and contract facilities, the use of contracts may not be reducing spending.

Spending reductions are not the only potential benefits of using contracts, though. Correctional systems also use contracts for other purposes, including to more effectively recruit and retain medical staff. (See Chapter 4 for additional information on how contractors are used to staff facilities.)

JLARC developed four regression models to predict pharmacy utilization and spending, and offsite utilization and spending for each facility. The models controlled for inmate demographic information including age, race, and gender, as well as health characteristics such as mental health status and chronic disease diagnoses. (See Appendix E for more detail on this analysis.)

FIGURE 2-5
Spending is similar at contract and non-contract facilities, adjusted for inmate characteristics (FY15-FY17)



SOURCE: JLARC analysis of prescription drug and offsite care claims data, FY15-FY17. Spending is adjusted for each facility based on inmates' demographic characteristics and health status.
NOTE: This analysis excludes one contract facility, Powhatan, which is an infirmary.

3 Strategies to Reduce Spending

SUMMARY Providing health care to inmates, who typically are less healthy than the general population, will always necessitate substantial public investment. Virginia can, however, make several changes that will reduce its spending over time. Despite being a public purchaser of health care, VADOC pays higher rates than other larger public health programs: Medicare and Medicaid. Using lower, Medicare rates as the basis for reimbursement could reduce what VADOC pays for these services by $9 million annually. VADOC also pays more for certain prescription drugs. Furthering its partnership with the VCU or UVA health systems could reduce total spending on biologic medications, various types of inhalers, and insulin by $1.5 million to $6.6 million annually. The most substantial potential savings could come from implementing a less restrictive compassionate release policy. Virginia has one of the nation's most restrictive compassionate release policies. Revising its policy to mirror other states could reduce VADOC spending by $1.5 million to $16.9 million.

All health care providers, including correctional health care systems, have three primary ways to manage or reduce spending:

- paying providers less for services and prescription medications,
- reducing utilization of services or medications, and
- providing services or medications to fewer individuals.

JLARC staff were directed to assess how efficiently VADOC is providing care, in particular the use of practices known to manage or reduce spending.

VADOC pays more than other public payers for certain services and prescription drugs

VADOC could reduce the prices it pays for many drugs and services, but this must be balanced against increased administrative costs and potential impacts on access to services and provider revenue. Obtaining the best possible price for necessary services and prescriptions is the most direct way for VADOC to reduce spending on inmate health care. The cost of health care services, particularly prescription drugs and hospital services, can vary widely depending on the provider of the service and who is paying for it.

VADOC pays more than other public purchasers pay for physician and hospital services

VADOC spent $63 million in FY17 on offsite care for inmates, including inpatient hospital stays, outpatient procedures, and consultations with specialists such as oral surgeons and cardiologists. VADOC currently pays providers the rate that is negotiated by the vendor that administers its claims for offsite care. These rates are often higher than the rates Medicare and Medicaid pay. For example, VADOC pays about $130 on average for a radiologist to conduct a type of CT scan, while Medicare pays $92 (29 percent lower) and Medicaid pays about $80 (38 percent lower).

Medicaid expansion will shift the vast majority of costs for inpatient hospital services out of VADOC's budget. Medicaid pays for the cost of inpatient hospital services for any inmate who would otherwise be eligible for Medicaid but is incarcerated. In prior years this was a small number of elderly and disabled inmates, but after Medicaid expansion, any low income adult will be potentially eligible, and VADOC will be able to enroll nearly all inmates in Medicaid (sidebar).

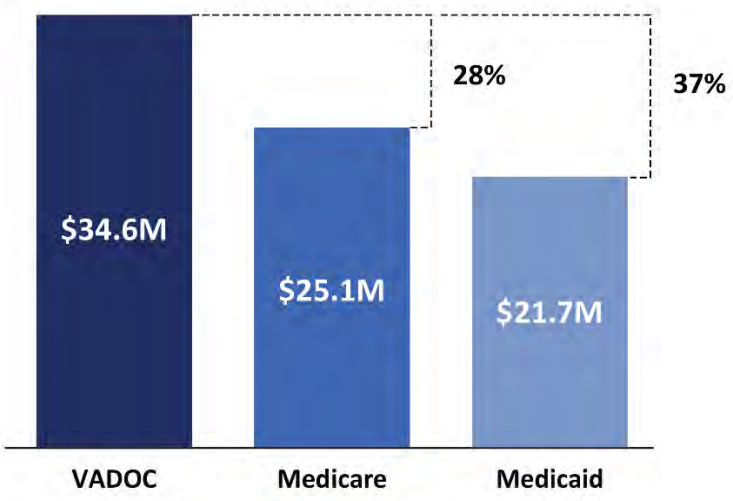
Consistent with federal guidelines, inmates must agree to be covered by Medicaid. VADOC staff indicate that it is likely some inmates will not agree to be enrolled in Medicaid, or will be ineligible due to their immigration status or financial circumstances. For these inmates, the current funding stream of primarily state general funds will be used for inpatient hospital stays.

This shift will result in substantial savings to the state general fund. In FY17, VADOC spent $30 million on inpatient hospital stays, and the total cost for these services will be lower under Medicaid rates. Savings to the general fund will occur primarily because VADOC's budget is appropriated almost entirely from the general fund, and the costs for Medicaid expansion will be paid for by federal funds and revenue generated through a new tax on private hospitals.

While Medicaid expansion will allow VADOC to pay lower rates and shift much of the spending to non-general funds for inpatient hospital stays, expansion does not address physician services or outpatient hospital stays. The state could, though, take the further step of reducing VADOC rates to the level of either Medicaid or Medicare for these other aspects of care not addressed through Medicaid expansion.

The state could save the most by using Medicaid rates for physician services and outpatient hospital stays. Medicaid rates would be the lowest in most instances, and therefore result in the largest potential savings. JLARC estimates that VADOC would have saved approximately $13 million on outpatient and physician services in FY17 (37 percent) had it reimbursed providers using Medicaid rates (Figure 3-1). The state could also use Medicare rates, which are typically higher than Medicaid but lower than the rates VADOC currently pays. Using Medicare rates in FY17 would have resulted in an estimated $10 million in savings on outpatient and physician services (28 percent).

FIGURE 3-1
VADOC spending on outpatient and physician services would have been lower using Medicare or Medicaid rates (FY17)



SOURCE: JLARC analysis of VADOC claims data, DMAS data on Medicaid provider rates, DMAS comparison of Medicaid and Medicare rates, and Medicaid hospital cost reports, FY17.
NOTE: Actual savings would vary depending on the mix of services used because the difference in rates vary for each service.

Some other states use Medicare or Medicaid rates for inmate services

At least 10 states use either Medicare or Medicaid rates as the basis for reimbursement for inmate health care. Five of these states (Arizona, Georgia, Maine, New Jersey, and West Virginia) use Medicaid, while two (Oregon and North Carolina) set a higher rate that is tied to Medicaid. Three states use either Medicare rates or a rate that is slightly higher than Medicare (Florida, Indiana, and Texas).

It is unclear whether these states' use of lower rates has reduced the number of providers willing to see inmates as patients. Reimbursing at lower rates always raises the risk that at least some providers will stop accepting patients. States that used Medicare or Medicaid rates for inmate health care have either not attempted to measure the impact on access when making this change, or anecdotally indicated they did not notice any major reductions in access to care.

Oregon pays a rate higher than Medicaid for inmate health care services, but indicated this creates a perverse incentive for hospitals. Hospitals receive Medicaid rates for inpatient services under Medicaid expansion, but higher rates for outpatient services.

Role of VCU Health and UVA health system, as well as broader Medicaid expansion, complicate decision to lower VADOC rates

Reducing reimbursement rates could reduce the number of providers willing to treat inmates, particularly in more remote areas of the state that have fewer providers. There were eight VADOC facilities located in regions of the state with low Medicaid participation by specialist providers (based on analysis from a 2013 JLARC study), but seven of these facilities already send a majority of inmates to VCU Health for offsite care.

JLARC's 2013 study, **Review of the Impact of Medicaid Rates on Health Care Access in Virginia,** analyzed Medicaid provider participation rates across the state.

The remaining facility, Coffeewood, is the most likely to experience challenges scheduling offsite appointments if fewer providers are willing to treat inmates.

Although using lower rates may not substantially reduce access, it is clear that lowering rates would reduce VADOC payments to VCU Health and the UVA health system. Reducing spending on inmate health care through lower rates is to some extent a "zero sum" game. More than 75 percent of hospital fees are paid to VCU and UVA medical centers, with the vast majority being handled through the secure care unit at VCU. Physicians from both of these health systems also provide a large amount of specialist services to inmates. Reducing reimbursement rates would reduce the revenues of almost all providers, with a disproportionate reduction for these two state teaching hospitals. Based on FY17 spending, these hospitals may see reductions of up to $4 million in total for outpatient services.

The impact that shifting to lower rates would have on providers is complicated by Virginia's impending Medicaid expansion. One question that the General Assembly and the Department of Medical Assistance Services are currently analyzing is whether Virginia's health care market will be able to accommodate and provide care for the estimated 400,000 individuals newly covered under Medicaid expansion. This major market shift will generate a substantial amount of potential new patients for providers, increasing revenues but also straining the ability of providers to treat all patients, particularly in already underserved areas.

Shifting to Medicare rates would carry less risk of hindering access, and providers would not experience as significant of a reduction in revenues. Medicare rates are more widely accepted than Medicaid rates among both primary care physicians and specialists, providing a broader pool of physicians for VADOC to contract with to treat inmates. The percentage of physicians who accept Medicare rates is typically about the same as the percentage that accept commercial insurance, indicating there may not be a significant change in the number of providers willing to treat inmates under Medicare rates. The adverse impact on revenues for VCU Health and UVA health system would also be partly mitigated, with an estimated reduction of about $2 million in FY17 (compared to $4 million using Medicaid rates).

Feasibility and impact of lower rates could be tested through a pilot project

VADOC's reduced spending on inpatient hospital services from Medicaid expansion will likely generate some savings in the near term. However, the impacts of also using lower rates for physician and outpatient services are uncertain, so 2019 may not be the appropriate time to attempt to reduce rates. It would seem advisable to wait for the broader Medicaid expansion to take hold and then reassess the feasibility and impact of using lower rates similar to Medicare rates (lower than current VADOC rates but higher than Medicaid rates).

To prepare to determine the feasibility and impact of using Medicare rates (or Medicaid rates or any rate lower than the current VADOC rates), the General Assembly

should direct VADOC to design a small-scale pilot project. The pilot project's goal would be to select certain regions of the state where the private market may be able to accommodate lower rates for physician and outpatient services, and begin the process of lowering rates to assess how providers respond. When necessary, VADOC may need the ability to negotiate higher rates with specific providers if VADOC is unable to schedule necessary appointments for inmates with certain medical needs. VADOC could submit the design for the pilot project to the General Assembly, and the project could be initiated after Medicaid expansion is underway.

RECOMMENDATION 1

The General Assembly may wish to consider including language in the Appropriation Act directing the Virginia Department of Corrections (VADOC) to design a pilot project that would test the feasibility and assess the impact of using lower rates, potentially based on Medicare rates, for physician and outpatient services. VADOC should submit the pilot project design to the House Appropriations and Senate Finance Committees, and implement the pilot project no later than 2021.

VADOC pays more for certain medications than it would pay through VCU Health

VADOC spent more than $31 million on prescription drugs in FY17, and prescription drug spending is growing much faster than overall health care spending at VADOC and nationwide. VADOC currently buys 60 percent of its prescriptions through a private vendor, while the remaining 40 percent are purchased through VCU Health.

The prices that the vendor negotiates tend to be higher than the prices that VCU Health gets through the federal 340B drug purchasing program (sidebar). For example, VADOC pays about $39 for the most common type of inhaler prescribed for inmates with asthma and other respiratory conditions, while VCU Health purchases the exact same inhaler for about $8. However, the administrative expenses that the vendor charges for dispensing the prescriptions are relatively low.

Federal 340B program requires drug manufacturers to sell drugs at discounted prices to providers that treat a high number of indigent or Medicaid covered patients. Providers that meet these criteria are able to obtain these advantageous prices for any patient that they treat in an outpatient setting.

VADOC could substantially reduce the price it pays for certain drugs by expanding its partnership with VCU Health

VADOC spent more than $8.3 million on medications for auto-immune diseases (biologics), inhalers, and insulin in FY17, and these drugs could be purchased at substantially lower prices if inmates were treated by VCU Health physicians, one of the key requirements to be eligible for 340B drug prices. The cost of these drugs through the 340B program would have been an estimated $1.7 million (Table 3-1). The estimated savings include more than a 90 percent reduction in the acquisition price of the drugs, which would be offset to some extent by higher dispensing fees.

TABLE 3-1
Costs for three high-cost types of drugs would be 80 percent lower if inmates were treated by VCU Health (FY17)

	VADOC spending	Estimated cost through VCU Health	Estimated savings	Inmates treated
Biologics	$3.49M	$0.16M	$3.33M	150
Inhalers	$2.65	$0.70	$1.47	3,762
Insulin	$2.17	$0.80	$1.85	2,400
Total	**$8.32**	**$1.66**	**$6.65**	**5,831**

SOURCE: JLARC analysis of data from VADOC and VCU Health, FY17.
NOTE: Estimates are based on comparing actual costs for a selected sample of drugs at a specific point in time. Actual savings vary by drug over time. "Inmates treated" column does not sum to the total because some inmates are on more than one medication.

VADOC recently entered into an agreement with VCU Health to start treating inmates who need biologic medications. However, VADOC is having difficulty scheduling appointments for some inmates with certain diseases, such as skin conditions, limiting VADOC's ability to obtain lower-cost medications. This is due to a limited number of dermatologists within VCU Health.

The relatively higher number of inmates prescribed inhalers and insulin would necessitate a more extensive partnership and a significant increase in capacity. Inmates in need of these drugs typically have diabetes, asthma, and chronic obstructive pulmonary disorder (COPD), requiring patients to be seen regularly by a physician in VADOC's chronic care clinics at each facility.

VADOC should consider other 340B-eligible providers, including the University of Virginia (UVA) health system, in establishing partnerships that could further reduce prescription drug spending. In addition to the UVA health system, most other major hospital systems, local departments of health, and many clinics that serve low-income populations participate in the 340B program. It is not known which providers may currently have, or could develop, the capacity to treat inmates in need of high cost prescription drugs. However, given the capacity limitations at VCU Health and the challenge of transporting some inmates to Richmond to be treated, seeking providers closer to VADOC facilities could be advantageous.

Federal legislation to limit use of the 340B program has been introduced for the last several years. One proposal has been to make all inmates ineligible for 340B prices on prescription drugs, regardless of whether they are being treated by a 340B-eligible provider. This raises uncertainty over the long-term sustainability of cost savings.

VADOC's **current prescription drug vendor** partners with correctional systems and 340B providers in other states to fill prescriptions. This reduces the burden on the pharmacy services of the 340B provider and the need to fill prescriptions through different mechanisms.

RECOMMENDATION 2
The General Assembly may wish to consider including language in the Appropriation Act directing the Virginia Department of Corrections, VCU Health Authority, and the University of Virginia Health System to develop and implement a plan to treat inmates with chronic conditions that require long-term or high-cost prescription drugs through a 340B-eligible provider.

VADOC pays similar prices for prescription drugs as other public purchasers that use a multi-state buying group

Other state agencies in Virginia, and many other public health care providers in other states, purchase prescription drugs through the Minnesota Multistate Contracting Alliance for Pharmacy (MMCAP). MMCAP is able to leverage the volume of drugs purchased across all of its members in negotiating prices with drug manufacturers and wholesalers. The prices VADOC pays through its current vendor, though, are very similar to MMCAP's negotiated prices. Because prescription drug prices fluctuate, VADOC will need to periodically monitor the prices it pays relative to what is available through other purchasing arrangements. However, any decision to change how it purchases prescription drugs needs to consider the level of service provided by the current vendor, which includes

MMCAP is a buying group that represents government purchasers of prescription drugs from all 50 states and is able to leverage that volume into lower prices with drug manufacturers.

- shipping prescriptions drugs to each VADOC facility in a timely manner;
- accepting the return of unused medications;
- providing an electronic prescription drug record for all inmates;
- managing VADOC's prescription drug formulary; and
- on demand, customized reporting capabilities.

VADOC effectively employs utilization management to control spending

Utilization management is a practice that can be used to minimize unnecessary use of services and thereby control spending. Utilization management typically consists of (1) a review of service requests to ensure services are medically necessary; (2) approving only those requests for services that are deemed necessary; and (3) providing only those treatments that have been shown to be cost-effective. Ideally, utilization management principles are applied to both service requests and decisions to prescribe medication. It is important that VADOC implement utilization management practices to ensure it pays only for necessary services. Utilization management practices also protect the state against the risk of litigation when inmates allege they have been denied necessary services.

Decisions about medical necessity in historical claims data were analyzed by VADOC's third-party administrator using externally developed criteria. Analysis found few high-cost services that would have been subject to further review and potentially recommended for alternative treatment options. Most high-cost services would have been approved.

VADOC review and approval process minimizes unnecessary procedures

VADOC has procedures in place to minimize the use of unnecessary services. It requires prior approval for nearly all offsite services, which is consistent with industry practices. When inmates have non-emergency medical issues, they must first be treated by a physician in the facility. When the physician recommends a specialist, or any other offsite service, the physician submits a request to the chief physician at the VADOC central office. The chief physician reviews the request and accompanying notes for

medical necessity and either approves the request or recommends alternative treatment. Physicians at contract facilities follow a similar protocol, but the reviewer is a physician employed by the contractor. This process for reviewing medical necessity is consistent with other state correctional systems, as well as insurance companies paying for care in the community.

For decisions about medical necessity, the VADOC chief physician uses internal criteria, supplemented by in-house research on current medical practice. Some other organizations use a more rigorous approach that involves externally developed criteria, which are comprehensive and continually updated. However, VADOC would probably not achieve significant cost savings by using external criteria. The external criteria could help speed up the decisions about medical necessity, but according to analysis by VADOC's third-party claims administrator (sidebar), the use of external criteria would probably not identify many unnecessary services that are not already identified under VADOC's current process.

VADOC prescribes drugs approved to be cost-effective but could use more rigorous approach

Clinical pharmacy services are a broad group of activities performed by a clinical pharmacist. Services can include directly working with patients and physicians to review drug effectiveness, interactions, and costs, systematic reviews of prescriptions for lower cost options, and population-wide analyses to update formularies and treatment protocols.

VADOC uses a prescription drug formulary as its primary method of managing prescription drug utilization. This approach is consistent with other health care payers. The formulary provides a list of approved drugs to treat specific conditions and is developed and regularly updated by a committee of physicians and pharmacists to identify the most cost-effective medications available. When a physician believes an inmate needs a medication that is not on the formulary, the physician seeks approval by the VADOC chief pharmacist, or a similar clinician who works for the comprehensive health services contractor.

It may be possible for VADOC to use a more rigorous approach to prescribing medications. Some organizations use clinical pharmacy services or medication therapy management to maximize the cost-effectiveness of prescribed drugs (sidebar). Research literature on this practice finds that, in most cases, total medical spending is reduced while health outcomes are improved. For example, medical research has shown that

- use of clinical pharmacy services for patients with **heart disease** reduced the risk of cardiac-related emergency room and hospital visits by 50 percent and reduced the average cost of these cardiac episodes by 30 percent; and
- use of clinical pharmacy services for patients with **asthma** reduced the average cost per patient by $725 per year, by reducing emergency room visits and long-term hospitalizations.

Clinical pharmacy services tend to be most effective when they are targeted to a patient population with multiple, complex medical conditions that are treated and managed with many different prescription drugs. Inmate populations often include individuals with these types of conditions. Faculty at the VCU School of Pharmacy expressed interest in working with VADOC to determine if a partnership for clinical pharmacy

services would be possible. VCU faculty indicated that focusing on patients with complex medical needs and high pharmacy utilization would likely be beneficial, and that the use of telemedicine for pharmacist consultation would significantly reduce the logistical challenges of providing services. VCU faculty also indicated that it would provide a valuable teaching environment where pharmacy students could learn from trained clinical pharmacists who are providing services to inmates.

VADOC and the VCU School of Pharmacy should be tasked with implementing a pilot project to establish the feasibility of clinical pharmacy services for inmates. Establishing a clinical pharmacy program at VADOC would entail identifying an inmate population for which the services could be most beneficial. It would also entail identifying and hiring clinical pharmacists who are willing to work with VADOC and establishing a protocol to integrate clinical pharmacy services into the current process for providing care. The purpose of the pilot project would be to evaluate the feasibility, costs, and benefits of developing and implementing a full-scale, long-term clinical pharmacy services program.

RECOMMENDATION 3

The General Assembly may wish to consider including language in the Appropriation Act directing the Virginia Department of Corrections and the VCU Health Authority to undertake a pilot project to provide clinical pharmacy services to a specific population of inmates.

Virginia has restrictive compassionate release policies, which contribute to higher spending

One of the most direct ways to reduce spending on health care is to have fewer inmates in VADOC custody, and compassionate release is one way that an inmate may be released early. Compassionate release can be granted because of a serious and debilitating medical condition, advanced age, or terminal illness. Virginia currently has policies addressing two types of compassionate release, and judicial discretion allows judges to reduce sentences based on medical status at sentencing.

In Virginia, judges can reduce an offender's sentence at sentencing because of a serious medical condition. In FY17, 162 offenders eligible for a state-responsible sentence received lesser sentences for medical or mental health reasons, with 68 of these offenders receiving no time to serve after sentencing.

Compassionate release policies enable inmates to be *considered* for conditional release, but inmates still must meet the same criteria as all other healthy inmates who are eligible for release. Expanding compassionate release would not authorize the release of any inmate, but would give additional flexibility to the Virginia Parole Board in considering inmates for release in part based on their medical conditions. Those who have committed particularly serious or violent offenses are unlikely to be released, even with a serious medical condition, as are those who have behaved poorly while incarcerated. Seriously ill inmates would not be released unless there is a place in the community for them to receive appropriate care. If inmates are granted a conditional release, whether based on illness or time served, they are monitored by probation and parole offices to ensure they meet the conditions of their release, which for seriously ill inmates would

be the same as or similar to those for any other offender. Inmates who violate the conditions of their release would be re-incarcerated with VADOC.

A small number of very sick inmates account for a large portion of health care spending at VADOC. Even if these inmates were released, many of their medical needs would still be paid for primarily through Medicaid and Medicare, which would reduce the financial burden on the general fund.

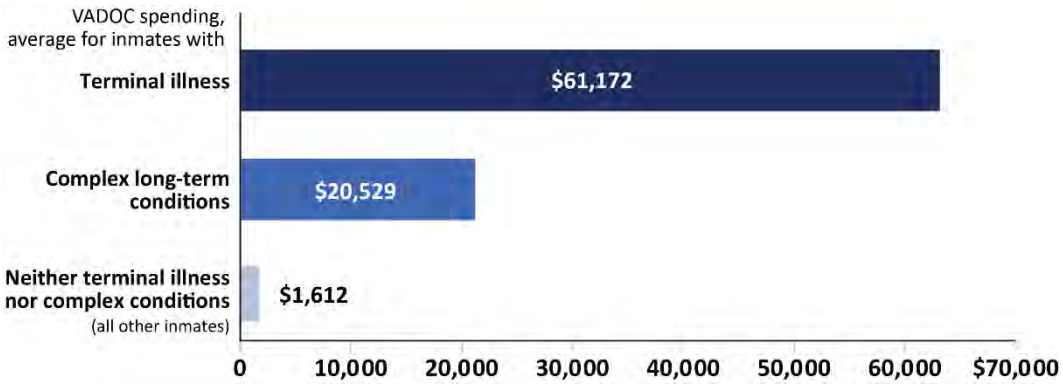
Spending for inmates with serious medical conditions or near the end of their lives is substantially higher than for other inmates

Virginia's geriatric conditional release policy was intended to be a safety valve for an aging inmate population following the implementation of truth-in-sentencing in Virginia. In 1995, Virginia abolished discretionary parole and codified "truth-in-sentencing" for felonies. This framework includes a rule that inmates must serve at least 85% of their sentence before being released.

In Virginia, some inmates who have serious medical conditions or received a terminal diagnosis cannot be considered for early release under any of Virginia's current compassionate release policies. Such inmates do not meet age requirements for geriatric conditional release (age 60 or 65, depending on years served), and those given a terminal diagnosis have more than three months left to live. Virginia should consider changes that would reduce costs and bring the policy in line with other states.

VADOC spends much more on inmates near the end of their lives than on inmates generally (Figure 3-2). VADOC spent $61,000 per inmate in the last twelve months of life, on average, to provide end-of-life care to 65 inmates who died in FY17. These 65 inmates comprised only 0.2 percent of all inmates, yet their end-of life care (outpatient and prescription drugs) accounted for 4.7 percent of all VADOC health care spending on these categories.

FIGURE 3-2
Spending for inmates with terminal illness or complex conditions is far higher than spending for all other inmates (FY17)



SOURCE: JLARC analysis of VADOC claims data, FY17.
NOTE: Inmates included in analyses received health care services for at least 3 months while in VADOC custody. Calculations include all health care spending for in-patient hospital stays, outpatient services, and prescription drugs. Some inmates with high cost diseases are either not severely impaired, or died suddenly without a terminal diagnosis, and therefore would not be eligible for less restrictive compassionate release policies.

VADOC also spends more on inmates with serious, long-term medical conditions, which often require high-cost services or medications (Figure 3-2). VADOC spent more than $20,000, on average, on 810 inmates with serious, long-term medical conditions in FY17. These 810 inmates comprised two percent of all inmates, yet the offsite services and prescription drugs they required accounted for 19.8 percent of all VADOC offsite and prescription drug spending in FY17.

CASE STUDY

Inmate has high-cost and serious long-term medical condition, but is not eligible for release under current VADOC policies

VADOC spent more than $200,000 caring for an inmate with cystic fibrosis in FY17. This inmate was also among those on whom VADOC spent the most in FY15 and FY16. Despite his health status and high cost to VADOC, he does not qualify to be considered for release under any existing compassionate release policy. He is not terminally ill, so he cannot be considered for release under the existing medical clemency policy. He is also far too young (47) to be considered under the only other applicable policy, geriatric conditional release, which is for inmates older than age 60 or 65.

Collectively, inmates with serious medical conditions or at the end of their lives comprise about three percent of all inmates but about 25 percent of VADOC's total health care spending. This is not uncommon; all health systems have similar challenges. It does, however, present a potential opportunity to reduce VADOC total health care spending by providing care through other funding streams in the community.

Virginia has more restrictive compassionate release policies than other states

There are three primary criteria for compassionate release used by other states: terminal illness, serious medical conditions, and advanced age. Many other states have programs similar to Virginia's for geriatric release, and Virginia's criteria for this type of release are in line with those of other states. Virginia's policy allows inmates who are at least 65 years old and have served at least 5 years of their sentence, or at least 60 having served 10 years, to be considered for geriatric conditional release. Most other states have an age requirement of between 55 and 70, some in conjunction with a requirement for time served that is similar to Virginia's. The states that do not have a similar program have other types of medical release programs that may apply to these offenders. (See Appendix F for additional information on other states' compassionate release policies.)

Virginia's current compassionate release policies allow terminally ill inmates to be considered for release, but the state's requirement that they have only three months to live

Some inmates would not be able to be released even if they met the medical criteria for compassionate release. Some offenders' criminal history or behavior while incarcerated would render them ineligible, and for others, particularly those convicted of sex offenses, VADOC would not be able to find a nursing or assisted living facility willing to accept them. JLARC factored in these challenges in estimating the number of inmates potentially able to be released.

is more restrictive than most other states. Moreover, none of Virginia's current compassionate release policies apply to inmates who are not terminally ill but have serious medical conditions.

Virginia has the nation's second-most restrictive compassionate release policy for inmates with terminal illnesses

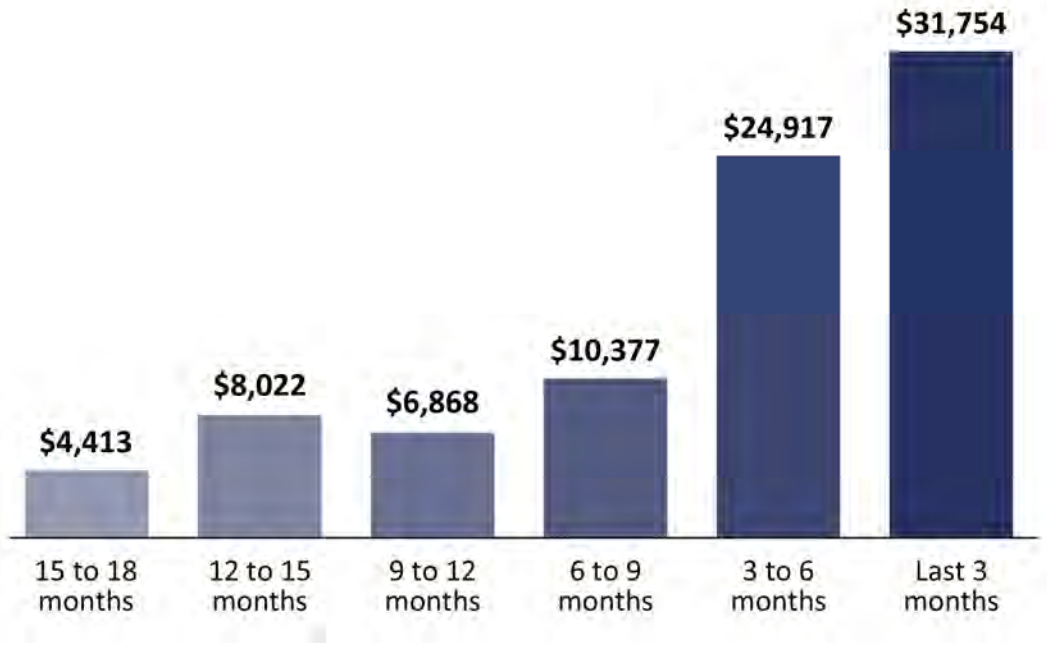
Virginia's medical clemency policy allows an inmate to be considered for release when he or she has been given a prognosis of three months or less to live. Only Kansas has a more stringent time requirement than Virginia, at 30 days to live. Twenty-three states and Washington, D.C., have statutory requirements that a physician provide an estimate of the time an inmate has left to live, typically between 6 and 18 months, in order for the inmate to be considered for medical release. The remaining states do not specify a time frame, and instead allow flexibility in implementing the policy (Figure 3-4). As a result of Virginia's policy, only 15 inmates were released under medical clemency in the past five years.

Average spending on health care increases as inmates near the end of life. VADOC spends considerably more during the last six months of an inmate's life. In FY17, VADOC spent nearly $32,000 per inmate during his or her last three months of life, after spending nearly $25,0000 in the preceding three months (Figure 3-3). VADOC spent nearly $57,000 per inmate in the final six months of an inmate's life, on average.

The process for inmates to be granted medical clemency takes time to complete, and some inmates may not live long enough to be granted release even if they are eligible. Once they receive a prognosis of three months or less to live, there is an investigation to determine if an inmate may safely be released to the community. This is time-intensive and can take anywhere from four weeks to 10 months. Part of the time involved includes notifying victims, as required by statute, that an inmate may be released. Cases that involve terminal illness are expedited so that they are completed more quickly than discretionary parole cases, but some inmates die before the review is finished.

A policy that allows terminally ill inmates with a prognosis of 12 months or less to live to be considered for release would help VADOC control inmate health care costs. This change would also bring Virginia's policy in line with other states' policies and would account for the sometimes lengthy process of reviewing an inmate for release and finding an appropriate community placement. This policy would be most effectively implemented if VADOC proactively identified inmates who may be eligible for this type of release.

FIGURE 3-3
Spending on health care increases at the end of an inmate's life

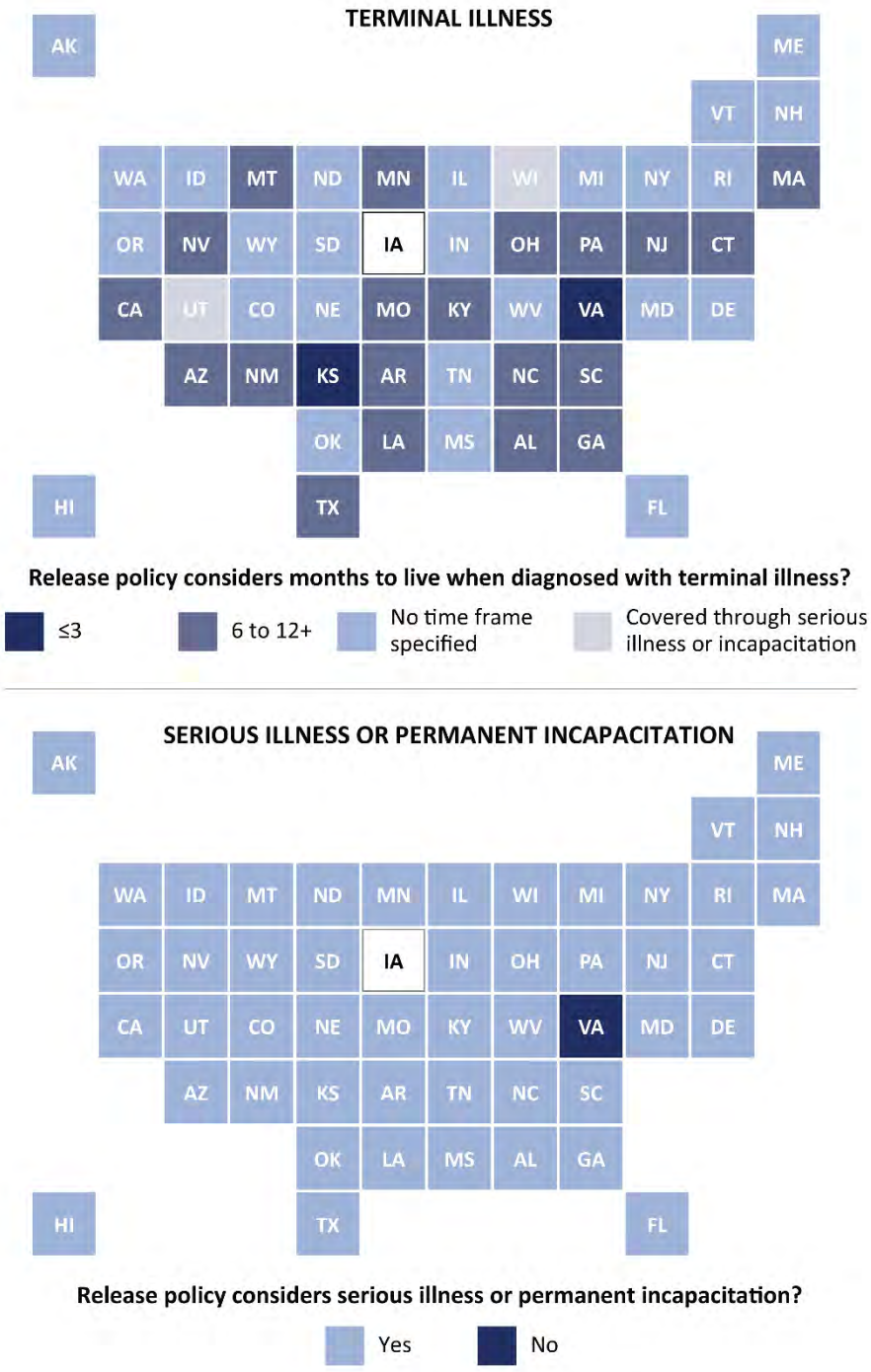


SOURCE: JLARC analysis of data from VADOC inmate and health care spending data, FY17.
NOTE: Inmates included in analyses received health care services in at least 3 months while in VADOC custody. Calculations include all health care spending for in-patient hospital stays, outpatient services, and prescription drugs.

Unlike other states, Virginia does not allow for compassionate release of inmates with serious, but not terminal, illnesses

Virginia is the only state (other than Iowa, which does not specify in its policy) that does not have a policy under which inmates who have a serious medical condition or are permanently incapacitated may be considered for release (Figure 3-4). Some states require clemency from the governor for these types of releases, while others have processes similar to Virginia's parole consideration. In addition, a few states use the cost and complexity of an inmate's health care needs as criteria for medical release, in order to save money on inmate health care and reduce the complexity of health care needs among the inmate population.

FIGURE 3-4
Virginia has more restrictive release policies than nearly all other states



SOURCE: JLARC analysis of compassionate release statutes and policies in other states, and of *Everywhere and Nowhere: Compassionate Release in the States, Families Against Mandatory Minimums*, June 2018.
NOTE: Terminal illness: The District of Columbia also has a policy to allow the release of inmates diagnosed with a terminal illness. Serious illness or incapacitation: The District of Columbia also has a policy to allow the release of inmates with serious illness or permanent incapacitation. No information is available about Iowa's release policies.

Virginia could reduce spending by aligning its compassionate release policies with other states, but extent of savings would vary

To reduce spending, Virginia could change its compassionate release policies to be more consistent with policies in other states. Spending reductions would be attributable to lower health care spending and the other costs of housing an inmate (security and food). The amount of savings likely to accrue would depend on the number of inmates released, but each release would represent a savings of about $42,000 annually.

Expanding Virginia's compassionate release policies would only serve to increase the number of inmates that could be *considered* for release. Compassionate release does not authorize the release of any particular inmate, instead making more inmates eligible to be considered for conditional release based on their medical status. Under these policies, seriously or terminally ill inmates would still have to meet requirements related to public safety. They would also not be released unless there was appropriate care and a placement for them in the community. An inmate could be re-incarcerated if he or she violates the terms of release, just as any inmate released under the current probation and parole system. In addition, an inmate released under these policies could be sent back to prison if his or her medical condition resolves.

Expanding compassionate release policies could reduce VADOC spending

States vary widely in how they define serious illness, and the definition Virginia chooses would have a significant effect on any cost savings. For example,

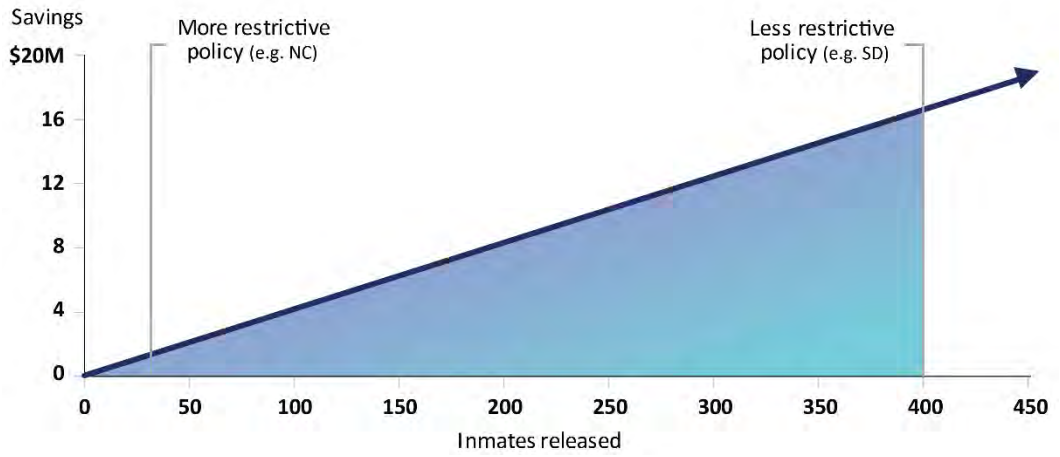
- South Dakota has a fairly broadly defined compassionate release policy, which includes inmates who are "seriously ill and not likely to recover" or require "extensive medical care or significant chronic medical care." About 800 Virginia inmates could meet this broad definition. About 400 of these inmates might meet VADOC's existing public safety and placement criteria. Releasing these 400 inmates could save about $16.9 million.
- North Carolina has a narrowly defined compassionate release policy, including only inmates who are "permanently and totally disabled." About 70 Virginia inmates could meet this definition, and 35 of those might meet existing public safety and placement criteria. Releasing these 35 inmates could save about $1.5 million. (See Appendix B for more information on how these savings were estimated.)

South Dakota excludes inmates convicted of capital offenses from compassionate release.

North Carolina excludes inmates convicted of capital offenses, murder, offenses related to terrorism, and sex offenses that require registration in the sex offender registry from compassionate release.

The number of inmates eligible for this type of release each year would vary. Once currently eligible inmates are released after being deemed not a public safety threat by the Virginia Parole Board, savings each year thereafter would likely be less. With an inmate population of about 30,000, additional inmates will continue to become seriously ill and qualify to be considered for release under a serious illness policy. This number is not possible to predict, but would result in some savings to VADOC's budget each subsequent year.

FIGURE 3-5
Estimated savings to VADOC from compassionate release would depend on the criteria used



SOURCE: JLARC analysis of prescription drug and off-site outpatient care claims data, FY17.
NOTE: Cost estimates account for the cost of outpatient hospital care, physician services, prescription drugs, housing, and security. Inpatient hospital costs were not included because most of them will be paid for through the Medicaid program following Medicaid expansion. To estimate the number of inmates with serious, long-term illnesses, JLARC identified inmates for which the cost of their offsite and prescription drug services were in the top 10 percent of all inmates for three consecutive years.

Louisiana recently instituted a medical furlough program for seriously ill inmates with permanent disabilities. Since instituting the policy in early 2018, five inmates have been released after being deemed not a public safety threat. If any of these inmates were to recover or violate any other terms of release, they would likely be re-incarcerated. Three inmates' requests for medical furlough have been denied this year.

Savings could also result from amending the state's terminal illness policy. Most other states define terminal illness as having a prognosis of either six or 12 months, compared to three months in Virginia. Extending Virginia's terminal diagnosis time frame to 12 months could result in as many as 30 inmates per year being released, with an overall savings to VADOC of around $700,000.

There are other financial benefits to expanding Virginia's compassionate release policies. VADOC has submitted an $80 million capital budget request for approximately 270 infirmary beds to meet the current demand for beds for seriously ill inmates and those returning from inpatient hospital stays. While expanding Virginia's compassionate release policies would not totally negate the need for some capital investment, doing so could considerably reduce the number of beds needed and perhaps address the problem in the near-term. More open infirmary beds could also allow inmates to be released from inpatient hospitalization sooner, reducing inpatient hospitalization costs.

A less restrictive compassionate release policy would also have non-financial benefits. Inmates with serious medical conditions usually require more staff attention and time than other inmates. Releasing some of these inmates would free up VADOC staff resources to provide care to other inmates, which could improve the efficiency of care generally or reduce wait times, and reduce employee burnout.

Health care costs would be shifted to other public programs, paid for largely with non-general funds

The costs of care for inmates released under these policies would likely shift to other public payers like Medicaid and Medicare, and some of these costs would require the use of general funds. Inmates who are permanently disabled or need nursing home or assisted living facility services would likely be eligible under existing Medicaid categories, meaning the state would pay for 50 percent of their Medicaid services from general funds. Each Medicaid-eligible inmate with a 50/50 split would result in savings of about 20 percent (see sidebar). Inmates who are eligible under Medicaid expansion would have no general fund impact for their Medicaid services.

Virginia pays half the cost of Medicaid services for most recipients. The estimated savings from releasing an inmate under compassionate release policies comes from health care spending (40%) and other operational costs (60%). If the general fund pays for half of the 40% attributable to health care services, savings would be about 20% less.

The savings would also be somewhat offset by the need for a small increase in VADOC administrative capacity, which could include one or more additional administrative staff at VADOC central office to supplement existing staff who focus on conditional release and community re-entry. There could also be additional, but still moderate, costs if VADOC chose to have a nurse and other staff travel to facilities to conduct assessments, which may include assessments of whether an inmate is able to perform activities of daily living. This additional administrative capacity would cost between $70,000 and $200,000.

Virginia's compassionate release policies could be broadened through both executive and legislative action. The governor can extend the prognosis requirement for terminal illness for medical clemency. The Virginia Constitution gives the governor the power to grant pardons, including those for medical clemency. The governor establishes the criteria that inmates must meet to be considered for medical clemency and makes the final decision if an inmate is granted medical clemency for terminal illness. The Code of Virginia, though, would need to be amended to establish a new type of conditional release for seriously ill inmates to be considered for release. Because the General Assembly abolished discretionary parole in 1995 through statutory changes, it was necessary to establish geriatric conditional release by statute. The same would be true of conditional release for serious illness. In developing such legislation, the General Assembly could consider approaches used by other states to define serious illness and to evaluate inmates for release.

Some states put into code that an inmate cannot be a threat to public safety to be released under compassionate release policies.

Many states, like Texas, Wisconsin, and Mississippi, exclude inmates from compassionate release based on their offenses, especially violent and/or sex offenses.

RECOMMENDATION 4

The governor should extend the life expectancy requirement for terminally ill inmates to be considered for medical clemency to 12 months.

OPTION 1

The General Assembly could amend Title 53.1 of the Code of Virginia to allow inmates to petition the Virginia Parole Board for conditional release based on serious illness.

4 Staffing and Risk Management

SUMMARY All state correctional systems face the financial risk of being found by a court to be providing inadequate care. Such court findings often result in substantial increases in spending. Staffing challenges, especially at facilities currently managed through contracts, make the state vulnerable to these legal and financial risks. Stable, effective health administrative leadership is essential to managing a facility's health care operations. However, VADOC facilities operated by contractors struggle to maintain a stable group of health administrators; nine of the 12 contract facilities lost their health administrative leadership staff during FY17 alone. Similarly, key front-line staff, especially registered nurses and licensed practical nurses, left contract facilities at twice the rate they left non-contract facilities. VADOC's use of paper-based medical records also hinders its ability to readily assess the overall quality of care provided by the system, and would impede Virginia's ability to defend a lawsuit brought against VADOC's health system. VADOC does have a monitoring program which helps manage risk, and has made some recent improvements. The monitoring program, though, does not comprehensively identify, monitor, and address the full range of risks to adequate care at facilities (especially at the facilities VADOC manages itself). Issues identified through monitoring are also not fully tracked to resolution, which makes the state legally vulnerable. Many of these challenges could be addressed through a more comprehensive partnership with one of the state's university hospital systems.

Even with implementing the cost control approaches recommended in Chapter 3, VADOC—and all prison systems—face the ongoing risk of lawsuits that could substantially increase spending on inmate health care. VADOC, like all correctional systems, is constitutionally required to provide reasonably adequate health care to all inmates. VADOC faces significant financial and legal risks if it fails to effectively deliver this level of care. Most lawsuits within the last decade against state correctional systems have alleged either lack of access to care for an inmate with a serious medical need, or lack of sufficient follow-up after treatment or referral. Class-action suits have arisen when lack of access or follow-up appears to represent systemic problems rather than isolated incidents.

Inmate health care is important for reasons other than controlling spending. Most inmates eventually return to the community, placing additional burdens on public health resources if they are not provided adequate medical care while incarcerated. Research also indicates that improved health care can reduce the likelihood of recidivism.

If a court finds a system to not be providing adequate care, the system (or a just single facility within a system) can be subject to judicial direction regarding the level and type of health care provided. When this happens, state spending almost always rises substantially. California provides the most compelling example of these financial consequences. Its entire correctional system has been under a court order to provide improved care, contributing to per-inmate health care costs that are more than three times what Virginia spends per inmate.

Recently in Virginia, class action litigation at Fluvanna Correctional Center for Women has resulted in a substantial amount of state resources required to defend VADOC, and increasing costs to provide court-mandated care at Fluvanna. The state was also ordered to pay $1.5 million to date in fees to the plaintiff's attorneys.

VADOC can best mitigate the risk of losing a lawsuit by working to ensure the health care it provides meets the legal standard of care. Having a stable workforce of qualified health care professionals who adhere to health care standards and procedures is among the most effective ways to ensure adequate care.

VADOC and its contractors struggle to maintain a stable health care workforce

Recruiting and retaining qualified medical staff is critical to VADOC's ability to efficiently deliver health care. Each VADOC facility is led by a person who is the health authority, or lead nurse administrator, and some larger facilities also have a director of nursing. The individuals in these health administrator positions are supported by front-line staff who are primarily registered nurses (RN) and licensed practical nurses (LPN). These staff have a wide range of responsibilities, including treating inmates who get sick and those with chronic conditions that require ongoing monitoring and treatment. Medical staff also distribute prescription medications and schedule appointments for offsite care.

Stability among staff is key, as the correctional setting is different from other clinical settings. Staff must have a thorough understanding of policies and procedures meant to ensure the safety of both staff and inmates, and coordinate with security staff on a daily basis to ensure inmates make their appointments on time, receive their medication, and are transported for offsite care.

Turnover or instability in either health administrators or front-line medical staff makes an already difficult job even more difficult. Staffing VADOC facilities is inherently difficult due to a combination of several factors, including a general shortage of nurses and primary care physicians, the remote locations of many facilities, and a more difficult patient population. There is a national shortage of licensed nurses to meet the demand from hospitals, private practices, and public providers, and Virginia is experiencing this same challenge. Some of VADOC's most difficult-to-staff facilities are those in somewhat rural locations that are still close enough to metropolitan areas that staff are willing and able to drive to for a job in a hospital system or private practice. Facilities in the most rural locations are actually better able to recruit and retain staff, because there are very few other competitor employers. Additionally, the secure nature of correctional facilities can be less attractive to staff, who must undergo a rigorous security check each time they enter or exit the facility.

State employees tend to earn lower salaries, but more generous benefits, than they could earn with other employers. The lower salaries can exacerbate the challenge of recruiting and retaining a stable workforce in a competitive labor market, and VADOC

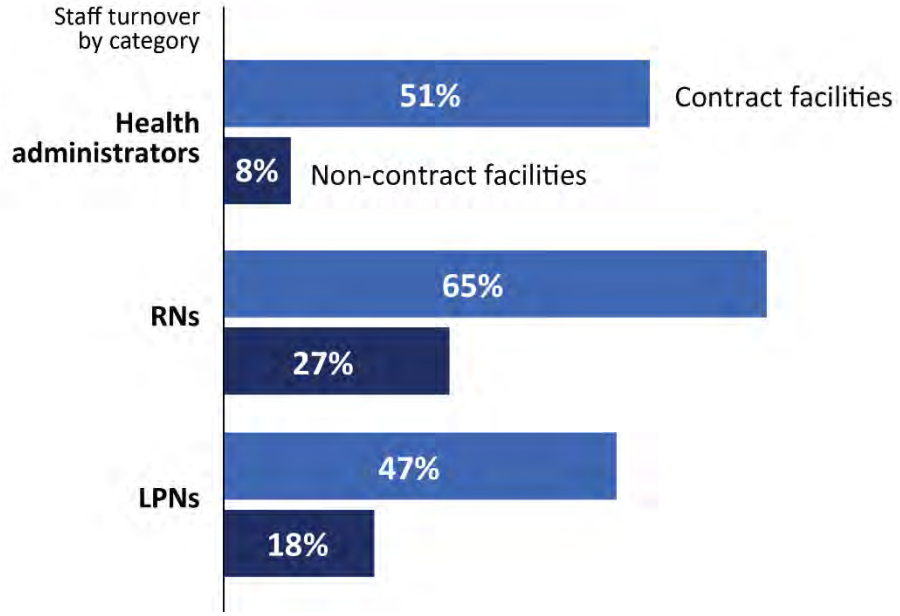
experiences this challenge with some of its most critical positions. Average state salaries for health administrators and qualified mental health professionals were among the least competitive in the state in 2017 (*Total Compensation for State Employees*, JLARC 2017).

VADOC's primary strategy to recruit and retain health administrators and front-line staff at its most challenging facilities is to contract with a private vendor. This decision is based on the assumption that contractors can more effectively recruit and retain staff because they have more flexibility to compensate staff without the restrictions of the state's compensation policies.

Contractors have been unable to provide stability in health administrator positions or front-line staff

Contract facilities have experienced substantial instability in health administrator and front-line staff positions. All 12 contract facilities experienced turnover in either their health authority or director of nursing at least once over the last three years. This rate of turnover is much higher than at non-contract facilities; only three of 15 non-contract facilities (20 percent) experienced turnover in these critical leadership roles between FY15 and FY17. Contract facilities have been similarly unable to provide long-term staffing stability in front-line staff, especially RNs and LPNs. Turnover rates of staff RNs and LPNs at contract facilities were more than double those of non-contract facilities (Figure 4-1).

FIGURE 4-1
Staff turnover is substantially higher at contract facilities than at VADOC-managed facilities (FY15-FY17)



SOURCE: JLARC analysis of DHRM personnel data and contractor personnel data, FY15-FY17.
NOTE: Turnover of full-time, salaried staff; excludes temporary staff.

It should be expected that contract facilities would have somewhat higher turnover, given that VADOC specifically chooses to contract out difficult-to-staff facilities. However, the substantially higher levels of turnover demonstrate that contractors are not particularly effective at maintaining stability, especially in the critically important health administrator role. Contractors themselves identified staffing as the single greatest challenge they face in providing health care. The general labor shortage of nurses and primary care physicians, coupled with the challenging correctional work environment, is currently too difficult for the contractors to overcome even with greater flexibility in their compensation structure.

Instability in medical staffing hinders operational effectiveness and increases risk

Staffing instability in key health administrator positions and front-line staff hinders effective and efficient health care operations. With frequent turnover, health administrators do not develop expertise in correctional health care, limiting their ability to provide guidance to front-line staff and continuously improve health care operations. Frequent turnover also makes it very difficult to develop effective working relationships with security staff.

VADOC headquarters staff indicate that continuity in key health administrator (health authority and director of nursing) positions is critical to running an efficient medical unit that minimizes VADOC's legal risk. Health administrators at each facility "set the tone" for the entire health care operation. Strong health administrators understand the nuances of delivering care in a correctional setting and can work with new or temporary front-line staff to train them on how to efficiently deliver care. Health administrators also need to develop good working relationships with security staff and the warden, because all aspects of a facility's operations need to be well coordinated for health care to be provided in a timely manner.

Front-line staffing instability can also lead to many problems, particularly if it occurs at a facility without an experienced health administrator. Some of these problems result in inmate grievances that can escalate to lawsuits. Inmates at contract facilities with exceptionally high staff turnover filed grievances at nearly twice the rate of inmates at other contract facilities. Four contract facilities with exceptionally high staff turnover struggled to meet contract requirements related to delivery of care, resulting in more than $160,000 in fines (73 percent of all care delivery fines) in FY17.

During interviews and site visits, VADOC staff emphasized the importance of the role of health administrators for operational effectiveness. Some facilities have long-tenured leadership who are effective at working within the correctional environment. Others, however, are either new to correctional health care, or have ample clinical experience but not enough administrative experience. During JLARC site visits, several instances of inefficiency or ineffectiveness were observed that likely would have been identified and remedied by experienced correctional health administrators. For example,

- Front-line medical staff at one facility indicated they were extremely short on exam room space to treat inmates, hampering their ability to keep up with sick call and chronic care clinics. However, in the same space, there was a largely unused dental suite with enough space for four exam chairs, even though the facility only employed one part-time dentist.
- At one facility, staff restrict access to the medical unit when treating inmates from restricted housing, deferring non-emergency medical care for most other inmates. In contrast, other facilities send providers to the restricted housing unit, avoiding deferral of non-emergency care for other inmates.

To facilitate operational effectiveness at all facilities, especially those led by new or less experienced health administrators, VADOC should implement a health administrator peer review program. Health administrators or other senior front-line staff who have demonstrated the ability to creatively address operational issues and consistently deliver health care efficiently could visit sites that are having persistent challenges to help them identify inefficiencies and share potential solutions. This could help improve the development of less experienced health administrators. VADOC has a similar program for its security staff. Teams of security staff periodically visit other facilities to review their security operations, identify challenges, and share ideas for improvement.

RECOMMENDATION 5

The Virginia Department of Corrections (VADOC) should develop and implement a health administrator peer review program in which experienced leadership or front-line staff review the operations at VADOC facilities—other than the one at which they work—to identify inefficiencies and share potential solutions.

Inability to provide stable staffing is due in part to misalignment of contractual incentives

VADOC's contract requirements place a heavy emphasis on fines for missing shifts, which incentivizes employing staff to cover open positions rather than on hiring full-time staff with the knowledge and experience needed to provide efficient and adequate care. For example, contractors are fined $98 for each hour of missed front-line staff nursing time (three times the average hourly rate for a nurse in Virginia). This places an extremely strong emphasis on getting a nurse into the facility to fill a shift, rather than on hiring and developing stable staffing, which is shown to improve the delivery of care. Fines were levied for missed hours in every month of 2017, and 10 of the 14 contract facilities paid at least some level of fine.

To provide care and meet the terms of the contract, the contractors often rely on temporary nursing staff, or "agency nurses," to fill vacant positions when they experience turnover, just as VADOC does. Interviews indicate that these temporary staff may lack the necessary knowledge of relevant policies and procedures, such as the

process for logging and scheduling sick call requests, which can lead to a backlog. Temporary staff also may not receive appropriate onboarding to learn and implement agency-specific policies. This results in inefficiencies and challenges providing quality care. Filling vacancies also requires full-time staff to work substantial amounts of overtime, leading to burnout and eventually more turnover.

Contract incentives and structure could be modified to improve staffing stability

VADOC should take steps to improve the stability of full-time staff at contract facilities. Making incremental changes to contract incentives, which can be evaluated over time before making more sweeping contract changes, is a prudent approach given the need to maintain continuity of care at each facility. VADOC recently started the first of three one-year renewal periods under the current contracts. This provides a unique opportunity to make these changes because the contract terms can be modified in each of the next two years. Then VADOC can use the information gained from that experience to develop an RFP for its re-procurement of health care services that will better incentivize staffing stability.

VADOC should first modify its contract requirements to better ensure and incentivize stable, full-time, health administration and front-line staffing. These changes could include

- retention incentives based on staff tenure, such as bonuses based on the number of staff with at least one year of service;
- granting VADOC an advisory role in the recruiting and selection process for health administrators, through which VADOC could help ensure those chosen have some background or characteristics that makes it more likely they will stay for a considerable period of time (such as previous employment in a correctional setting); and
- guidelines to formalize and foster relationships between contract health administrators and VADOC wardens and assistant wardens, such as requirements for attending inter-departmental meetings.

It is possible these incremental changes to the contract structure will not materially improve the stability in staffing at contract facilities. The general health care staffing shortage and difficulties of working in correctional facilities may be too great to be overcome through making contractual changes alone. After changing the contracts, VADOC should assess whether the changes have led to more stable staffing at contract facilities. This assessment should be based on objective measures such as turnover rates, the number of compliance findings, and the number of inmate grievances. VADOC should look for measurable improvement from prior years, ideally to the point where they are operating similarly to non-contract facilities with more stable staffing and efficient health care delivery. If stability has improved, the changes made to the contracts to incentive staffing stability should be continued.

This incremental approach to improve stability should be implemented during the renewal periods that are part of the current VADOC contracts. These contracts can be renegotiated at the end of each contract year, for the next two years.

RECOMMENDATION 6

The Virginia Department of Corrections should seek to ensure stable health administrator and front-line staffing at contract facilities by modifying contracts to incentivize and ensure stability.

RECOMMENDATION 7

The Virginia Department of Corrections should evaluate whether the contract modifications have resulted in more stable staffing and efficient care delivery by measuring turnover rates, compliance findings, and inmate grievances. The results of the evaluation, including a determination of whether staffing stability at contract facilities has improved from prior years and is similar to non-contract facilities, should be submitted to the Senate Finance and House Appropriations Committees by the end of 2020.

If stability remains a problem, VADOC should consider a more significant change in how it contracts for health care. VADOC could make the health administrator position at some, or even all, contract facilities a classified, state position. This could have several advantages, including giving VADOC direct control over hiring decisions, the ability for VADOC to move health administrators between facilities to meet its needs, and a more direct reporting relationship between the health administrators and the wardens at each facility. Converting health administrator positions to VADOC employee positions may necessitate changing the capitated rate model currently used. A contractor may be less willing to still bear the majority of the financial risk for the cost of care, without having direct control over decisions that affect care. With this change, the contracts would likely become only staffing contracts for front-line staff, rather than a comprehensive contract for most health care services.

OPTION 2

The Virginia Department of Corrections could make health administrator positions state employee positions, if the stability of staffing at contract facilities does not sufficiently improve.

Contracts could better incentivize key aspects of health care delivery

Meeting the standard of care is the ultimate objective of having sufficient, stable staffing over the long term. However, current contracts penalize staffing violations more than meeting the standard of care. No fines are issued during the initial 90 days of standard of care violations. After that 90-day period, the fine is $2,500 the first month, and $5,000 each following month. This means that if a problem is corrected within 90 days, but re-emerges as a problem a month later, the 90-day period resets.

In addition, the fine structure for delivery of care applies to a broad range of violations that vary substantially in their level of seriousness. For example, failure to distribute medications or treat sick inmates in a timely manner is treated the same as a failure to properly document care that was delivered.

VADOC should also modify its contracts to more directly emphasize the most critical aspects of care delivery. VADOC should place a greater priority on certain critical violations related to standard of care, such as late treatments of sick inmates and missed medications, by making such violations subject to fines more quickly and at higher amounts.

RECOMMENDATION 8

The Virginia Department of Corrections should modify its comprehensive health services contracts to increase the fines, and reduce the 90-day grace period, for not meeting critical standard of care requirements.

VADOC lacks sufficient record-keeping and monitoring processes needed to manage risk

VADOC bases its health care policies on accepted correctional health care standards from the American Correctional Association. Though they do not guarantee adequate care, these standards are looked upon favorably by courts. These standards are one of two used by state correctional systems. The other set of standards that VADOC does not use is more specific, but not necessarily more comprehensive, widely accepted, or generally preferred.

Despite the use of the American Correctional Association standards, VADOC still faces the risk that the care it provides will be subject to a successful legal action asserting that the care provided is inadequate. An adverse court finding could lead to court-mandated higher levels of spending (as is already occurring at the Fluvanna Correctional Center for Women). To further manage this risk, VADOC needs the ability to demonstrate that it is providing adequate care and the ability to identify potential adequacy concerns at all facilities. Implementing an electronic medical record and a risk-based monitoring approach would address these needs.

Lack of electronic medical records complicates efforts to demonstrate adequacy of care, increasing legal and financial risk

VADOC lacks a readily-available and accessible system of recordkeeping that can be used when needed to answer questions from families, attorneys, or judges about the level of care being provided to each inmate. Without such a recordkeeping system, VADOC has difficulty demonstrating, accurately and efficiently, that care is being provided system-wide, at a given facility, or to a single inmate. VADOC's current paper-based medical record system makes monitoring and risk assessment resource-intensive and does not allow the agency to make full use of available information. This limits

VADOC's ability to identify and address problems through monitoring. Inmate health files contain extensive information, but because of time and resource limitations, only a small portion of these files can be examined during monitoring.

Reliable and readily-available records are also essential in responding to litigation. Because files are currently on paper at each facility, it is extremely time intensive to review and provide them to attorneys. Responding to allegations of system-wide problems in class action lawsuits can require compiling and reviewing thousands of paper medical records. The Office of the Attorney General indicated that the discovery process as part of the ongoing litigation at Fluvanna exceeded 100,000 paper documents.

Electronic medical records would facilitate data collection and synthesis across all inmate records. This could help the state demonstrate that allegations of inadequate care by a single inmate are not a systemic issue with that facility or the entire system.

VADOC has been working for several years to establish a system of electronic medical records for inmates. In recent years, the General Assembly dedicated nearly $3 million in funding that VADOC could use for electronic medical records. VADOC worked with a vendor, in conjunction with VITA, to develop an electronic medical records system to be integrated with VADOC's current IT systems. However, the vendor backed out of negotiations because it was unwilling to meet VITA's information security requirements. The vendor had proposed using a cloud-based medical records system, but this requires compliance with VITA's new Enterprise Cloud Oversight Services requirements, which are designed to ensure cloud-based applications comply with Virginia's security standards.

The 2018 General Assembly directed a workgroup to evaluate the feasibility of implementing a shared, or at least interoperable, electronic medical records system for VADOC and other relevant state agencies. Any steps undertaken by VADOC would need to be done in consultation with this ongoing effort. VADOC recently issued a request for proposals for an electronic medical records system and is in the process of reviewing proposals.

Electronic medical records would improve the accessibility and portability of inmate health records. The state would more easily be able to respond to allegations of inadequate care with readily available information. Staff would be able to quickly access inmate records at any facility where an inmate might be transferred or transported. Off-site providers would also be able to receive inmate health information electronically for off-site appointments and hospitalizations, and send information back to VADOC once the inmate is returned to a correctional facility.

There would be up-front administrative challenges to implementing electronic medical records. Staff would need to be trained on the new system and integrate it into patient care. Information from paper records for inmates still in VADOC custody may also need to be entered into the new system, which would involve significant staff time.

VITA should work to help VADOC select a vendor and develop a contract that will result in a successful, cost-effective system of electronic medical records. VADOC should work as needed with the Office of Attorney General staff with expertise in procurement and contract administration. VITA should prioritize its assistance to VADOC to ensure the vendor can accomplish the work and deliver a system consistent with VITA's security standards.

RECOMMENDATION 9

The Virginia Information Technologies Agency should collaborate as necessary with the Virginia Department of Corrections (VADOC) and the Office of the Attorney General to ensure the selection of a vendor capable of successfully implementing an electronic medical records system that can meet the specific functional requirements of the correctional system and be cost-effectively used by all VADOC facilities.

VADOC monitors adequacy of care but does not sufficiently monitor access and follow-up

VADOC does monitor the care provided to inmates but focuses more on contract facilities than on the facilities managed by VADOC. Contract facilities are more closely monitored in part because VADOC needs to enforce the terms of the contracts. Contract facilities are monitored each month and a standard set of critical metrics is checked each time, in addition to other metrics that rotate throughout the year. There are designated VADOC staff who monitor contract facilities; as a result, monitoring is more frequent and addresses a more comprehensive set of topics. VADOC has recently made improvements to its monitoring, such as standardizing the monitoring form used across facilities as part of its continuous quality improvement program.

Perhaps because VADOC focuses its monitoring more heavily on contract facilities, it is finding more problems at contract facilities. VADOC staff say the agency has a clearer idea of the problems that exist at contract facilities than at non-contract facilities. While there may simply be fewer problems at non-contract facilities because they tend to have more stable medical staffing, the less rigorous monitoring process does not provide sufficient assurance that all issues are being identified.

Because VADOC's medical records system is paper-based, monitoring is time-intensive. Monitoring currently requires extensive review of medical facilities and paper records. However, implementing electronic medical records would allow VADOC to better monitor health care delivery and assess risk factors at each facility. Data for all inmates (rather than a selection of paper files) could be checked electronically (1) for compliance with policies, and (2) for risk factors such as long waits for inmates who request care. Some of these tasks could be accomplished by data analysts on a statewide basis, freeing up monitoring resources for targeted, onsite monitoring. Inmate health outcomes could also be monitored through an electronic records system.

Without risk-based monitoring, VADOC lacks a key mechanism to identify potential problems that could lead to lawsuits

Correctional health care lawsuits and inmate complaints often involve an inmate alleging he or she did not receive access to care or did not receive prescribed follow-up treatment. VADOC currently allocates most of its monitoring resources to contract facilities. Outsourcing health care delivery is an important risk factor that should be considered, but other facility characteristics and compliance indicators may be better measures of risk.

VADOC should routinely identify key indicators of potential problems at all facilities using its existing quality monitoring process and use these indicators as the basis to govern its monitoring activities. This information could be collected regularly and used to assess the risk at each facility. Staff could then do in-depth monitoring at those facilities with the highest risk, similar to what is currently done each month at only contract facilities. Monitoring would be less frequent but more targeted than what is currently done for contract facilities.

The key indicators should address issues that can lead to adverse inmate health outcomes, health care complaints, and lawsuits. These indicators would likely include those related to access to care and follow-up. VADOC should assess critical risk factors related to these issues on an ongoing basis, such as

- Access – status of nurse and doctor sick call;
- Access – status of chronic care clinic;
- Follow-up – status of recommended specialist care; and
- Follow-up – medication administration.

For the most effective risk-based monitoring approach, this information should be collected on a regular basis using a standardized format from all facilities. Analysis of risks at each facility would then be used to determine which facilities need in-depth monitoring, allowing VADOC to more strategically deploy its limited monitoring resources.

Much of this information to assess risk is not currently available centrally but could be self-reported by each facility. The status of sick call, chronic care clinics, and specialist care visits are not tracked centrally and would require the medical unit at each facility to report this information. VADOC does have an electronic record for medication administration, and this could be used to develop indicators of problems with distributing prescription drugs at each facility.

Sick call is similar to a primary care appointment or a visit to an urgent care center for a minor injury or illness.

Chronic care clinics are where inmates with chronic illnesses like diabetes and heart disease receive their regular care for those conditions.

Specialist care includes visits to providers like orthopedists, cardiologists, and dermatologists, and usually occurs offsite.

Medication administration refers to inmates receiving their prescribed medications correctly and in a timely manner.

Tracking of monitoring results to ensure resolution of problems could be improved, particularly at non-contract facilities

When VADOC's current monitoring approach does identify problems at facilities, it is not clear that these problems are resolved in a timely manner because there is no doc-

Liquidated damages are fines VADOC imposes on contractors when certain contract provisions are not met.

umentation of follow-up and resolution. VADOC policy directs the quality improvement committee at headquarters to oversee the resolution of problems, but does not require documentation of the results of corrective actions. At contract facilities, where monitoring is monthly, there are more assurances that problems are resolved, since continuous problems result in liquidated damages for the contractors. Nonetheless, there is no formal documentation of which problems are resolved and which may require further corrective action. At non-contract facilities, follow-up on problems is sometimes informal because monitoring only happens quarterly. While unresolved problems would likely be identified in subsequent monitoring, there is limited documentation of how facilities implement correction action plans.

RECOMMENDATION 10

The Virginia Department of Corrections should develop and implement a formal risk-based monitoring program as part of its existing continuous quality improvement program. The program should (i) identify risk factors related to access and follow-up; (ii) monitor risk on a regular basis across all facilities; (iii) use the results of monitoring to address the problems identified; and (iv) track the resolution of the problems identified through monitoring activities.

Pilot project with a public teaching hospital could improve staffing, risk management, and operations

VADOC could expand its partnership with VCU Health and the UVA health system by having one of these hospital systems take over the provision of health care for at least one high-need VADOC facility. The structure of such a partnership could be similar to VADOC's current comprehensive health services contracts, but it would start as a pilot program with a small number of facilities. The university health system would be responsible for the leadership and staffing for onsite care in the facility and assume responsibility for the cost of offsite care and prescription drugs.

This type of partnership is most likely to be successful if it is mutually beneficial to both VADOC and the university health system. Other states have entered into such partnerships with two main goals: (1) to increase the credibility of the correctional health care system and (2) to reap long-term cost savings by providing all health care services through a single system. One strategy to make it beneficial to the university health system would be to provide a "shared risk" capitated payment for all care, so that if cost savings are realized, the university is able to share in the financial benefits, while if expenses are higher than expected, both the state and the university share the risk. VCU Health recognized that this could be a mutually beneficial partnership when it submitted a proposal in response to a 2005 RFP to provide all health care at four VADOC facilities. The proposal was ultimately not selected, because it was not the lowest cost bid, and because the proposed model would have increased the complexity of how care was delivered and paid for across facilities. These concerns were valid, but

the potential benefits from such a partnership warrant renewed consideration, given the positive experiences of other states.

VCU Health is currently experiencing challenges with having sufficient capacity to treat inmates from VADOC and other correctional populations in Virginia, and any plan for a pilot partnership should address this issue. VCU Health operates a secure medical unit for inmates, but 560 inpatient days (10 percent) for VADOC inmates in FY17 occurred in the general hospital population because the secure unit was at capacity. This places additional burdens on the hospital and VADOC due to the security needs. VCU Health often has to use a double inpatient room for just one inmate, and two VADOC correctional officers must be stationed with each inmate that is being treated in the general hospital population.

Five other states have had extensive partnerships with university health systems, and the specific financial and administrative responsibilities vary. Texas has the most comprehensive partnership, in which the state department of corrections contracts with two different university hospitals that are fully responsible for providing and paying for all inmate health care. Georgia and New Jersey partner with university hospitals to provide medical staff at correctional facilities, while Michigan partners with a university hospital to provide only medical leadership and administration (Table 4-1). Connecticut's partnership was recently terminated after the university hospital determined that it did not benefit sufficiently.

TABLE 4-1
Other states leverage university hospitals in a variety of ways to improve health care delivery and achieve cost savings

University hospitals	Texas	New Jersey	Georgia	Michigan
provide health services leadership	✓	✓	✓	✓
provide onsite staffing	✓	✓	✓	
pay for offsite services and prescription drugs	✓			

SOURCE: Interviews with other state correctional staff and other state documents.
NOTE: In New Jersey, the university hospital provides offsite care and prescription drugs, but the state department of corrections pays for the services.

A pilot program to test a more comprehensive partnership between VADOC and one of the state's university health systems could have many potential benefits, including beginning to address some of VADOC's challenges noted in this report. Chief among these are staffing challenges that must be addressed to efficiently delivery health care in each facility. VADOC would also be able to purchase discounted prescription drugs through the federal 340B program and develop a way to integrate clinical pharmacy

services as part of onsite care (Chapter 3). If a pilot program were successful and was then expanded, VADOC could benefit from

- **Access to more physicians**, particularly those who are willing to treat inmates but do not wish to work for VADOC or a contractor.
- **Access to more front-line staff**, by exposing students to correctional health care through their training, making them more likely to choose a career in the field.

VADOC could also benefit from the credibility that would come from being more closely associated with a highly respected university hospital. This would especially be the case for the care provided to inmates with very complex or unique health needs—the type of care a university hospital is known for providing effectively.

If structured properly, a pilot program that was successful and then expanded could also benefit the participating university hospital. The university would gain an additional clinical setting for its students to observe and learn from other clinicians. The university health system would have an opportunity to realize financial gains if it could reduce long-term spending by improving the health of the population and identifying efficiencies in care delivery to keep inmates out of high-cost, inpatient settings.

Entering into such a comprehensive partnership, even on a pilot basis, would bring with it substantial administrative complexities. These challenges include

- A substantial amount of staff time and effort required to plan the pilot partnership. Initial planning would require decisions about which facilities to include in the pilot, how to initially staff the facilities, how much to pay for services and how to structure those payments (capitation versus fee-for-service), and how to evaluate the effectiveness of the partnership.
- Neither VCU Health or UVA health system have experience providing onsite care in the correctional setting. This would require substantial orientation and training on the unique aspects of delivering care in this setting.

RECOMMENDATION 11

The General Assembly may wish to consider including language in the Appropriation Act directing the initiation of a pilot partnership program for a university health system to provide comprehensive medical care for at least one Virginia Department of Corrections (VADOC) facility. The program should be jointly developed by (i) the director of VADOC; (ii) the chief executive officer of the VCU Health System; and (iii) the executive vice president for health affairs at the University of Virginia. The plan should be submitted to the House Appropriations and Senate Finance Committees no later than November 1, 2020.

Appendix A: Study resolution

Rising costs of providing health care for state prison inmates

Authorized by the Commission on September 11, 2017

WHEREAS, the Virginia Department of Corrections (DOC) is granted custody of persons convicted of felonies sentenced to more than one year, and has recently been responsible for about 30,000 offenders; and

WHEREAS, DOC must provide inmates with medical and mental health care and treatment, and determine how inmates should contribute to the cost of their health care; DOC cannot deny necessary health care services to inmates who cannot afford to pay; and

WHEREAS, inmate health care costs now account for 21 percent ($199 million) of all funds appropriated to operate correctional facilities ($949 million), and the vast majority of appropriations are state general funds; and

WHEREAS, medical costs per inmate have risen more than 20 percent during the past five years, outpacing the increase in national health care costs; and

WHEREAS, for about half of inmates, DOC provides health care directly; for the other half, DOC procures services through contracts; DOC has had some difficulty with the cost and quality of services procured through contracts; and

WHEREAS, one DOC facility, the Fluvanna Correctional Center for Women, is currently under a federal court order to monitor the quality of inmate health care, and such increased scrutiny may prompt further increases in inmate health care spending; now, there be it

RESOLVED by the Joint Legislative Audit and Review Commission that staff be directed to review the rising cost of providing health care for state prisons inmates. In conducting its study, staff shall (i) compare the cost of providing health care to inmates to the cost of providing health care to other similar populations in Virginia and other states; (ii) identify the factors contributing to health care cost increases at facilities managed by DOC and those managed by contractors; (iii) assess whether DOC efficiently and effectively provides health care to inmates, and procures and administers health care contracts that leverage purchasing power across facilities; (iv) determine whether DOC sufficiently maintains and adequately uses inmate medical records to make strategic health care decisions; (v) assess whether DOC adequately partners with community and other resources to provide care; (vi) determine how well DOC is adapting its facilities and operations to its aging and less health inmate population; (vii) as appropriate, make recommendations; and (viii) as appropriate, research other issues.

All agencies of the Commonwealth, including the Department of Corrections and all state correctional facilities, Virginia Commonwealth University, the Department of Medical Assistance Services, and the Virginia Information Technologies Agency shall provide assistance, information, and data to JLARC for this study, upon request. JLARC staff shall have access to all information in the possession of state agencies pursuant to § 30-59 and § 30-69 of the Code of Virginia including all documents related to disciplinary proceedings or actions of the boards. No provision of the Code of

Virginia shall be interpreted as limiting or restricting the access of JLARC staff to information pursuant to its statutory authority.

Private or for-profit entities that receive state funding to provide health care and other services to inmates, including through contractual arrangements, are also requested to provide assistance, information, and data to JLARC for this study, upon request. JLARC staff shall, as needed, work with private entities to develop agreements that sufficiently protect proprietary information during the course of the study.

JLARC staff shall complete their work and submit a report of its findings and recommendations to the Commission by December 15, 2018.

Appendix B: Research activities and methods

JLARC staff conducted the following primary research activities as part of its study of the cost of inmate health care:

- structured interviews with VADOC leadership and employees, other state agencies, state universities, health care contractors, national experts, and other states;
- site visits to five VADOC facilities and one offsite secure medical facility;
- surveys of VADOC clinical staff and facility health administrators;
- quantitative analysis of demographic, health care encounter, grievance, and staffing data from VADOC, Department of Human Resource Management, and contractors; and
- review of VADOC documents, documents from other states, and research literature.

Structured interviews

JLARC staff conducted nearly 60 interviews with VADOC leadership and staff at headquarters and facilities, health care contractors and other stakeholders, national experts on inmate health care, and eight other states.

Structured interviews with VADOC leadership, staff, and other state agencies

Extensive interviews with VADOC leadership, particularly in Health Services, were conducted as part of this study. JLARC staff interviewed VADOC leadership outside of health services to hear about the broad issues surrounding inmate health care, including budgetary considerations and the unique aspects of delivering health care in a correctional setting. Interviews with health services leadership and staff at headquarters were conducted throughout the study to understand how health care is administered and overseen in facilities, the challenges to delivering health care to inmates, utilization management for offsite care, contract monitoring and administration, and staffing. JLARC staff also interviewed VADOC information technology leadership to learn about the agency's efforts to implement electronic medical records.

Other state agencies were also interviewed as part of this project. JLARC staff interviewed staff at the Department of Medical Assistance Services (DMAS) to understand how billing for VADOC offsite services compares to Medicaid billing. Staff from the Department of Behavioral Health and Developmental Services' (DBHDS) pharmacy operations were interviewed to understand how their model for purchasing and dispensing prescription drugs compares to VADOC. JLARC staff interviewed leadership at the Compensation Board to learn more about how health care is provided in local and regional jails, and the Virginia Parole Board to learn about Virginia's compassionate release policies. JLARC also talked with the Office of the Attorney General about inmate health care lawsuits.

Structured interviews with health care contractors and other stakeholders

JLARC staff conducted interviews with the contractors that work with VADOC to provide health care and the primary health system that treats inmates, VCU Health. VADOC's prescription drug vendor and its health care claims administrator were interviewed to understand available data, pricing structures under the contracts, and get their perspective on potential strategies to reduce spending.

JLARC staff also interviewed the state's two comprehensive health services contractors separately for their perspectives on inmate health care in the VADOC facilities where they operate, and the contracts they have with VADOC.

JLARC staff also interviewed staff at VCU Medical Center's secure unit for inmates. These interviews were designed to get a better idea of how the secure unit is run, who is seen there, and what the challenges in running the unit are. In addition, VCU Medical Center leadership were interviewed for their perspectives on VADOC's partnership with VCU, its history, any ideas for how the partnership could change, and the advantages and disadvantages of potential changes.

Structured interviews with other states and national experts

Because of their extensive work on inmate health care, JLARC staff interviewed staff at the Pew Center on the States for background about inmate health care trends throughout the country, innovative ideas other states have implemented to improve care or save money, and what may affect inmate health care costs. Staff from the Minnesota Multistate Contracting Alliance for Pharmacy (MMCAP) were interviewed to determine if VADOC may be able to find a more cost-effective way to obtain prescription drugs.

Eight other states were interviewed for this project: Michigan, Connecticut, Oregon, Maine, New Jersey, North Carolina, Texas, and Louisiana. These states were chosen either because they had significantly higher or lower per-inmate health care spending than Virginia, or because they utilize partnerships with universities to deliver inmate health care. The goal of these interviews was to understand how a state's health care delivery model might affect spending. JLARC staff also sought information on the advantages and disadvantages of partnering with public universities to deliver care and the different characteristics of these kinds of partnerships.

Site visits

JLARC staff visited a total of five VADOC facilities for this study.

- Deerfield Correctional Center
- Fluvanna Correctional Center for Women
- Sussex I State Prison
- Sussex II State Prison
- Virginia Correctional Center for Women

In addition, JLARC staff also visited the secure care unit at VCU Medical Center, where VADOC sends many of its inmates in need of care outside their facility.

The facilities were chosen to ensure a mix of men's and women's facilities, facilities with different security levels, contract and non-contract facilities, and facilities where medical units had different capabilities.

JLARC staff toured the medical units and other parts of the facilities during each site visit. Interviews with facility wardens and assistant wardens, health services unit staff, and contract monitors were conducted to understand how health services units operate in facilities, the day-to-day challenges health services units face, and possible ideas to make improvements where needed. JLARC staff also

interviewed contract monitors at three facilities to learn more about the process of contract monitoring and quality oversight.

Quantitative analyses

JLARC staff undertook a number of quantitative analyses as part of this study to understand VADOC's inmate health care spending and staffing. Table B-1 outlines the data sources used in the analyses.

TABLE B-1
Data used in JLARC quantitative analyses

Data	Health care spending	Facility spending & utilization	Health care pricing	Staffing	Grievances	Compassionate release
VADOC data						
Expenditures	✓					
Offsite and pharmacy claims		✓	✓			✓
Inmate demographic and health status		✓				✓
Inmate travel records		✓				
Facility staffing records				✓		
Liquidated damages to contractor				✓		
Inmate grievances					✓	
Comprehensive health services contractor data						
Offsite and pharmacy claims		✓	✓			✓
Facility staffing records				✓		
Other payers' data						
DMAS expenditures	✓					
DMAS demographic and health status	✓					
DMAS offsite service prices			✓			
MMCAP pharmacy prices			✓			
340B pharmacy prices			✓			

Analysis of health care spending and utilization across facilities

To understand inmate health care spending trends, JLARC staff compiled FY12-FY17 expenditure data from the Auditor of Public Accounts (APA) Data Point tool as well as Cardinal extracts provided by VADOC. JLARC staff separated spending by facility, and categorized spending into five major categories: contract payments, onsite care, offsite care, prescription drugs, and other. JLARC staff assessed how spending changed over time overall, by spending categories, and by facility. Appendix C provides more information on the results of this analysis.

JLARC staff also conducted analysis of offsite and prescription drug spending across facilities for FY15-FY17. Contract and non-contract facilities can differ significantly in inmate population needs, so JLARC staff created four regression models to predict prescription drug utilization, prescription drug spending, offsite service utilization, and offsite service spending. The regression modeling allowed staff to predict utilization and spending based on inmate demographics, health status, and diagnoses, and compare predicted values to actual utilization and spending. (See Appendix E for a more in-depth discussion of the regression analysis.)

The data included in the regression models came from several different data sources. Data from VADOC's CORIS system was used to identify inmate age, gender, race, mental health code, work code, disease flags, and facility. Claims data from Anthem, Diamond, and VCU Health were used to calculate service utilization and spending. Anthem claims data were used to sum monthly spending on offsite services for each inmate. Diamond, VADOC's prescription drug contractor, provided claims for most prescription drugs, and claims data on drugs purchased from VCU Health were provided by VADOC.

Analysis of per-person health care costs for VADOC and DMAS

To calculate a useful comparison between spending on the state's inmate population and spending on Medicaid, JLARC staff used a subset of Medicaid recipients with similar characteristics to the state's inmate population. JLARC obtained Medicaid expenditure and enrollment data for FY17 from DMAS. Spending on this subset was compared to VADOC's spending on inmate health care and adjusted to account for differences in age, gender, and health status. This was a multi-step process designed to control for a person's disability status and whether they have a severe mental illness. The proportion of people with either a disability or severe mental illness is significantly different between Medicaid recipients and VADOC inmates, and these individuals incur much higher health care costs.

To determine the percentage of VADOC inmates with a disability, JLARC staff used VADOC work codes, which vary from 1 to 4, where 1 indicates no restrictions on an inmate's work ability and a 4 indicates that an inmate cannot work in any capacity. Those inmates with a work code of 4 were considered disabled for the purposes of this comparison. To determine the percentage of VADOC inmates with a severe mental illness, JLARC staff relied on VADOC's mental health codes, which range from 0 to 4. A mental health code of 2 or higher indicates a serious mental health diagnosis.

The process also entailed adjusting for the differing compositions between the two populations in terms of gender, as females comprise a much smaller percentage of the total inmate population than of the Medicaid population. The process also controlled for differences in age, as the vast majority of inmates are between the ages of 18 and 49, while more than 50 percent of the Medicaid population

is under the age of 17 or over the age of 65. All Medicaid spending on children was excluded from this comparison.

In order to account for differences in demographics and health status between the two groups, JLARC staff first used a subset of the Medicaid population that included (1) low-income adults, (2) disabled, and (3) those with a severe mental illness. Staff used this data to calculate the per-person cost across all age, gender, and health status categories (example: females age 18-24 with a severe mental illness). JLARC staff calculated a weighted average cost for Medicaid recipients, using the composition of the population in VADOC custody.

Analysis of offsite care rates

JLARC staff compared the prices that VADOC pays for offsite care to what Medicare and Medicaid would pay for the same services. This was done for physician services, outpatient hospital services, and inpatient hospital services. The methodology for each comparison was different based on the available data.

Physician reimbursement rates

JLARC staff estimated the savings from using Medicaid rates for physician services by comparing the rates paid by VADOC in FY17 to Medicaid fee-for-service rates. JLARC staff were able to match 68 percent of all non-inpatient physician claims from FY17 (38,620 of 56,643) using a unique procedure code for each service, the Current Procedural Terminology (CPT) used by health care providers to bill for services. These claims accounted for 67 percent of total spending on these services. Major categories that were not able to be matched were anesthesia claims and the mileage component of ambulance services, because JLARC staff did not have necessary data on the amount of anesthesia used or the mileage driven to accurately price each claim using Medicaid rates. The Medicaid fee-for-service rate was compared to the actual amount VADOC paid for each service. JLARC staff compared the sum of the total VADOC payments and the total Medicaid fee-for-service rates for these claims to arrive at a percentage difference using Medicaid rates, and then applied that percentage to all non-inpatient physician claims in FY17. The savings using Medicare rates were estimated using a DMAS analysis of the difference between Medicaid and Medicare physician rates. JLARC staff applied this estimate to the estimated savings using Medicaid rates to arrive at an estimated percentage of VADOC's costs if Medicare rates were used.

Hospital reimbursement rates

JLARC staff estimated savings of using Medicaid and Medicare rates for hospital services by comparing the percent of hospital charges reimbursed by VADOC, Medicare, and Medicaid for both inpatient and outpatient services. JLARC staff included emergency room care in outpatient services for the purposes of this analysis. JLARC staff used eight hospitals in the analysis: VCU and UVA hospitals, which are both considered "Tier 1" hospitals for the purposes of Medicaid reimbursement, and six "Tier 2" hospitals. VCU and UVA hospitals account for more than 80 percent of VADOC hospital spending, and the six Tier 2 hospitals comprise a significant amount of the remaining spending. Medicaid hospital data came from the most recently completed Medicaid hospital cost settlement reports, which were for 2016. This analysis was done using the following steps (Table B-2):

- Calculated the Medicaid cost-to-charge ratio for inpatient and outpatient services
- Calculated the Medicaid reimbursement-to-charge ratio for inpatient services, and estimated the reimbursement-to-charge ratio for outpatient services using statewide estimates from DMAS for Tier 1 hospitals (75%) and Tier 2 hospitals (100% following rate increases in the 2018 Appropriations Act)
- Estimated the reimbursement-to-charge ratio if Medicaid rates were used for VADOC claims by calculating the weighted average reimbursement-to-charge ratio for inpatient and outpatient services for both Tier 1 and Tier 2 hospitals, based on the percent of VADOC hospital spending at each hospital in FY17
- Estimated the Medicare reimbursement-to-charge ratio for inpatient and outpatient services at Tier 1 and Tier 2 hospitals by using the assumption that Medicare hospital reimbursements are on average 88 percent of costs
- Applied the estimated Medicare and Medicaid reimbursement-to-charge ratios to the actual VADOC hospital charges for Tier 1 and Tier 2 hospitals in FY17

TABLE B-2
Example of estimated VADOC savings using Medicaid and Medicare rates for inpatient services at Tier 1 hospitals

	Explanation of step	Calculation	Data source
A	Calculate the total charges for services to VADOC inmates	$46.3M	VADOC claims data
B	Calculate the percent of total charges paid by VADOC	49%	VADOC claims data
C	Total VADOC inpatient hospital payments to Tier 1 hospitals (A*B)	$22.7M	VADOC claims data
D	Calculate the Medicaid reimbursement-to-charge ratio	Varies by hospital	Medicaid hospital cost reports
E	Calculate the weighted average reimbursement-to-charge ratio using VADOC payment to each hospital	22%	JLARC calculation
F	**Estimate total payments using Medicaid rates (A*E)**	**$10.2**	**JLARC calculation**
G	Calculate the average Medicaid reimbursement-to-cost ratio	69%	Medicaid hospital cost reports
H	**Estimate total payments using Medicare rates (.88/F*G)**	**$12.9**	**JLARC calculation**

SOURCE: JLARC analysis of VADOC hospital claims data and Medicaid hospital cost reports, FY17.
NOTE: This analysis was repeated for both inpatient and outpatient services at both Tier 1 and Tier 2 hospitals.

Analysis of 340B prescription drug pricing

JLARC staff compared VADOC's prescription drug costs for a sample of prescription drugs that it purchases through its prescription fill vendor to the costs if they were purchased through the federal 340B prescription drug program, available through VCU Health. The total cost for prescription drugs includes the acquisition cost of the drug and the dispensing fee, or administrative cost, paid to the pharmacy or other vendor that purchases and distributes the drug. To select the sample, JLARC staff

first identified four therapeutic classes of drugs that accounted for 52 percent of all non-340B prescription drug spending in FY17. These were Biologic/Immunologic, Pulmonary, Psychiatric, and Diabetes drugs. JLARC staff selected 21 distinct drugs within these four therapeutic classes that accounted for a significant amount of total spending on that therapeutic class (Table B-3).

TABLE B-3
Prescription drugs selected for comparison accounted for significant amount of total prescription drug spending (FY17)

Therapeutic class	Total spending on therapeutic class (% of total)	Number of drugs included in sample	Total spending on drugs included in sample (% of therapeutic class)
Biologic/Immunological	$3.49M (18%)	6	$2.84M (81%)
Pulmonary	$2.65M (14%)	5	$2.08M (78%)
Diabetes	$2.17M (11%)	5	$1.82M (84%)
Psychiatric	$1.76M (9%)	5	$0.20M (11%)

SOURCE: JLARC analysis of VADOC prescription drug claims data, FY17.
NOTE: Psychiatric drugs tend to be less expensive for an individual prescription and have many more unique drugs and drug doses, making it much more difficult to capture a large amount of spending with a small sample.

JLARC staff worked with pharmacy staff from VCU Health to obtain the actual 340B acquisition cost for each of the 21 unique prescription drugs during FY17. Drugs were matched using their National Drug Code (NDC), a unique identifier for each branded and generic drug, at each specific dose. JLARC staff used either the average 340B price during the fiscal year or the current 340B price as of June 2018 if FY17 data was unavailable. For the drugs with available FY17 data, JLARC staff analyzed the difference between current prices and average price during FY17 and did not find systematic or substantial differences. JLARC staff used this data to calculate the difference between what VADOC pays and the 340B price for each type of drug and then multiplied that time the number of prescriptions for VADOC inmates in FY17. JLARC staff then estimated the change in dispensing fees by comparing the dispensing fees under VADOC's current contracts with its prescription fill vendor and VCU Health. These two calculations were combined to reach the net estimated savings.

Analysis of MMCAP prescription drug prices

JLARC staff worked with staff at MMCAP to compare the prices VADOC pays through its prescription fill vendor for non-340B prescription drugs to what MMCAP's negotiated prices are for the same drugs. MMCAP staff provided data on what MMCAP would have paid for prescription drugs purchased by VADOC for May 2018. JLARC staff used this data to compare the acquisition cost between VADOC and MMCAP. The cost of individual drugs varied, sometimes substantially, but on average there was no significant cost difference between in prices between VADOC and MMCAP.

Analysis of VADOC and contractor turnover data

JLARC worked with VADOC and both of the comprehensive health service contractors to calculate and compare turnover rates of front-line staff and health care leadership staff at contract and non-contract facilities. To calculate turnover rates, JLARC staff divided the number of turnover events where an employee left in a given year by the total number of FTEs at each facility. For the purposes of this analysis, JLARC staff considered Registered Nurses (RNs) and Licensed Practical Nurses (LPNs) as front-line staff. JLARC staff considered Health Service Administrators (at contract sites) and Health Authorities (at non-contract sites) as leadership staff. JLARC staff defined a facility as having either high or low turnover of front-line staff based on whether its total turnover rate was above the median for all facilities. Because there are so few leadership positions, JLARC staff simply determined whether or not a facility experienced a change in leadership in a given year, rather than calculating a turnover rate. JLARC staff then categorized facilities as having high or low turnover of front-line staff, leadership, or both, resulting in each facility being defined in one of four groups (Table B-4).

TABLE B-4
Turnover of both leadership and front-line staff was higher at contract facilities (FY17)

	Non-contract facilities	Contract facilities
Low turnover of leadership and front-line staff	9	0
High turnover of front-line staff only	3	1
High turnover of leadership staff only	2	1
High turnover of leadership and front-line staff	0	9

SOURCE: JLARC analysis of VADOC and contractor staffing data, FY17.
NOTE: This analysis did not include turnover data for front-line staff at two contract facilities, as the data was not made available to JLARC staff.

Analysis of estimated savings for compassionate release policies

To estimate savings related to potential changes to Virginia's compassionate release policies, JLARC staff used actual inmate data for FY17. Demographic and spending data was used to estimate the number of inmates potentially impacted by expanding compassionate release policies and their associated health care spending. To calculate savings, only outpatient and prescription drug spending was used because most inpatient services will be covered by Medicaid following Medicaid expansion.

Once JLARC estimated the total number of people who would be potentially eligible for consideration under each compassionate release policy, staff applied three key assumptions to arrive at the number who might actually be released, and the associated cost savings:

(1) Approximately two-thirds of inmates who meet the compassionate release criteria could be considered for release because they would not have committed a violent crime that led to their current term of incarceration. This assumption was based on the 2017 Virginia Criminal Sentencing Commission annual report, which indicated that two-thirds of offenders

sentenced in FY17 were eligible for the Non-Violent Offender Risk Assessment, meaning none of the crimes in their current sentencing events were considered violent under Virginia law.

(2) Approximately 75% of seriously or terminally ill inmates could be placed with family or in an appropriate community facility given their health needs. This assumption was based on an estimated placement rate for such inmates from community re-entry staff at VADOC.

(3) The average annual cost of the inmates in these analyses includes VADOC's average cost per bed for a state-responsible inmate, not including the cost of health care ($27,201 in FY17) plus the average cost per inmate for outpatient and prescription drug services in FY17.

Release for terminal illness

For inmates with terminal illnesses, JLARC staff took spending data for each inmate who passed away of natural causes in FY17 and calculated average spending in the last 12 months prior to their passing away. There was one additional assumption for the calculation of savings related to release for inmates with terminal illnesses:

- Inmates would spend half of the last year of their life still incarcerated, given the time involved in arranging for a terminally ill inmate's release.

This assumption, along with (1), (2), and (3) above, was used in calculating potential savings if Virginia's terminal illness policy were expanded to a range of six to 12 months (Table B-5).

TABLE B-5
JLARC calculated possible savings on care for terminally ill inmates based on several assumptions (FY17)

A	Total inmates possibly eligible under new policy	65
B	Percent who committed non-violent crime	66%
C	Percent who could likely be placed in the community	75%
D	Inmates likely to be released **– (A*B)*C**	32
E	Portion of last year of life not incarcerated	50%
F	Average annual inmate cost	$43,828
G	Estimated annual savings **– (D*F)*E**	$705,083

SOURCE: JLARC analysis of VADOC demographic and outpatient/prescription drug claims data.

Release for serious illness

Inmates possibly eligible for release based on serious illness were identified using spending data from FY15 through FY17. If an inmate was in the top ten percent of health care spending for all three years, he or she was identified as an inmate with a serious illness. This group was further narrowed down by excluding anyone age 60 or older in FY17, since these inmates could be eligible for geriatric

conditional release, depending on their time served. The less restrictive policy option, which mirrors the policy in South Dakota, included 810 inmates under the age of 60 whose spending was among the highest in each of the last three years. The more restrictive policy, similar to North Carolina's, included 68 inmates under the age of 60 whose pending was among the highest in each of the last three years and who were identified in VADOC data as having a disability that left them totally unable to work in FY17.

JLARC staff based the calculation for possible savings for seriously ill inmates on assumptions (1), (2), and (3) above (Table B-6).

TABLE B-6
JLARC staff calculated possible savings on care for seriously ill inmates based on several assumptions (FY17)

		Less restrictive (SD)	More restrictive (NC)
A	Total inmates possibly eligible under new policy	810	68
B	Percent who committed non-violent crime	66%	66%
C	Percent who could likely be placed in the community	75%	75%
D	Inmates likely to be released **– (A*B)*C**	401	34
E	Average annual inmate cost	$42,067	$42,067
F	Estimated annual savings **– E*F**	$16,866,764	$1,462,224

SOURCE: JLARC analysis of VADOC demographic and outpatient/prescription drug claims data.

Analysis of inmate grievance data

JLARC staff had access to de-identified inmate health care grievances as part of this study and calculated the average health care grievances per inmate at each facility. The percentage of grievances that were founded was also calculated, and staff made comparisons across facilities to look for any patterns. JLARC staff also compared the number of health care grievances to total grievances to determine if patterns in health care grievances might be due to systematic issues at the facility.

Review of documents and research literature

JLARC staff reviewed relevant sections of the Code of Virginia, and VADOC policies and procedures to understand the legal and policy requirements governing inmate health care. Contract documents and health care oversight documents were also reviewed as part of the study. Additionally, a review of research literature and inmate health care lawsuits was conducted to identify strategies to reduce spending and the greatest legal risks associated with delivering inmate health care.

Analysis of health care compliance information

JLARC staff examined quality improvement documentation to understand the extent to which VADOC facilities may be complying with health care standards and the specific challenges different facilities and the system as a whole may be facing related to inmate health care. These documents included contract monitoring reports, corrective action plans, Continuous Quality Improvement Committee (CQI) meeting minutes, and CQI monitoring forms.

Review of research literature

As part of the study, research literature from scholarly journals, government sources, and stakeholder groups were reviewed. JLARC staff reviewed literature in the following areas:

- inmate health needs,
- electronic medical records,
- clinical pharmacy services and utilization management, and
- compassionate release policies.

The information gathered as part of these literature reviews was used for background research on each topic, and to identify common approaches and best practices in health care, both in the community and for inmates.

Review of inmate health care lawsuits

JLARC staff partnered with a law student from William and Mary School of Law to find and summarize lawsuits related to inmate health care in the U.S. Fourth Circuit and U.S. Supreme Court. The student was given a template developed by JLARC staff to gather the necessary information about each case and used LexisNexis for searching. Using the case summaries, JLARC staff analyzed the information provided to determine the common reasons for inmate health care lawsuits. This information was used to uncover the most common circumstances under which inmate health care lawsuits are filed, in order to better understand the risks that the state faces if it provides less than adequate care to inmates.

JLARC staff also identified class action inmate health care lawsuits nationwide. These cases were useful to identify the characteristics of cases against entire correctional systems and the unique risks to the state posed by these types of lawsuits.

Surveys

JLARC staff conducted surveys of two groups for this study: (1) clinicians working in VADOC facilities and (2) Health Authorities, the head administrator at each facility.

Survey of clinical staff at VADOC facilities

The survey of clinicians was administered electronically to clinicians—physicians, nurses, dentists, dental hygienists, dental assistants, psychiatrists, psychologists, and qualified mental health professionals (QMHPs)—working in VADOC facilities. The response rate for this survey was 45 percent, or 334 out of 741 of clinicians. Employees were asked about the following topics:

- what activities clinicians spent their time doing at work;
- how they viewed their workload and the impact of having too much work, where applicable;
- how often they completed tasks that could or should be done by a clinician with more or less training; and
- what changes would improve efficiency and effectiveness of health care delivery in facilities.

Survey of Health Authorities at VADOC facilities

The survey of Health Authorities was administered electronically to one administrator per facility. The Health Authority functions as the administrator of the facility's medical department. At non-contract facilities, Health Authorities are also clinicians (typically a registered nurse). The response rate for this survey was 82.5 percent, or 33 out of 40 of Health Authorities. Health Authorities, were asked about the following topics:

- measures of clinician workload, including the number of sick call, chronic care, and intake assessment completed;
- what activities clinicians spent their time doing at work;
- how they viewed clinician workload and the impact of having too much work, where applicable;
- how many, if any, additional clinicians would be needed to meet workload demands;
- what changes would improve efficiency and effectiveness of health care delivery in facilities.

Appendix C: Inmate health care spending analysis

JLARC staff analyzed data on facility-level inmate health care spending from FY12 to FY17. This data was compiled from the Auditor of Public Accounts (APA) Data Point tool as well as Cardinal extracts provided by VADOC. This appendix provides additional detail on the facilities and services that account for the greatest amount of spending on inmate health care.

Health care spending is concentrated in a few facilities with specialized services

Health care costs at VADOC, like in other health systems, are concentrated in a small number of inmates with very high health care needs. Seven VADOC facilities have specialized health care services, and patients with higher health care needs are typically sent to one of these facilities. As a result, the small number of facilities with specialized capabilities have much higher than average per-inmate health care spending (Table C-1).

TABLE C-1
Facilities with specialized services have higher per-inmate health care spending (FY17)

Facility	ADP	Total spending	Per-inmate spending	Specialized services
Marion	290	$4,137,229	$14,266	✓
Deep Meadow	1,341	17,983,012	13,410	✓
Deerfield	1,603	18,772,071	11,711	✓
Fluvanna	1,198	13,671,579	11,412	✓
Greensville	3,219	27,931,672	8,677	✓
VCCW	632	5,102,855	8,074	
Sussex I	1,144	7,264,369	6,350	
Sussex II	1,247	7,910,670	6,344	✓
Lunenburg	950	6,018,457	6,335	
Coffeewood	991	4,904,035	4,949	
Haynesville	1,147	5,367,363	4,679	
Bland	643	2,993,671	4,656	
Buckingham	1,273	5,826,581	4,577	
Augusta	1,329	6,044,025	4,548	
Dillwyn	1,142	5,047,608	4,420	
Keen Mountain	705	3,101,648	4,400	
Nottoway	1,590	6,796,646	4,275	
Indian Creek	1,008	4,136,365	4,104	
Green Rock	1,022	4,084,749	3,997	
Red Onion	877	3,497,687	3,988	
Wallens Ridge	1,081	3,556,438	3,290	
River North	969	2,964,425	3,059	
St. Brides	1,175	3,534,589	3,008	
Pocahontas	1,023	3,003,248	2,936	
Major facilities total	**27,599**	**$173,650,991**	**$6,292**	
Other spending	1,293	14,336,098	--	
Total spending	**28,892**	**$187,987,089**	**$6,507**	

SOURCE: JLARC analysis of Cardinal and Data Point data.
NOTE: Some major facilities have financial responsibility of smaller work centers and facilities. Additional ADP in "other spending" reflects inmates housed at work centers, field units, and detention and diversion centers that are not the financial responsibility of a major institution. Payments to Lawrenceville and jails are not included.

Most health care spending is for onsite care, offsite care, and prescriptions

JLARC staff categorized spending into five main groups: contract payments, onsite care, offsite care, prescription drugs, and other. Contract payments include all payments to the comprehensive service contractors. Onsite care includes spending on state-employed personnel (salaries, benefits) and individually contracted personnel; medical equipment purchased for facilities; and medical supplies purchased for facilities. Offsite care includes payments to community providers and hospitals for inpatient, outpatient, dental, and laboratory services. Spending on prescription drugs includes payments to VADOC's prescription fill vendor for most drugs and to VCU Health for drugs purchased through

the federal 340B program. Other expenditures include costs for administrative salaries, travel, and information technology, among other things.

Health care spending increased by $23.5 million between FY12 and FY17. Over these five years VADOC contracted out the health care at more facilities, increasing contract payments but decreasing direct spending for onsite care. Offsite care increased due to rising costs but also because VADOC now pays for the most expensive offsite services, inpatient hospital services. These were included in comprehensive contracts during FY12. Prescription drug spending has seen substantial increases despite more of this spending being included in comprehensive contracts (Table C-2).

TABLE C-2
Inmate health care spending by type, FY12 and FY17

Spending type	FY12	FY17
Contract payments	$67,699,538	$81,593,950
Onsite care	35,710,587	32,970,069
DOC employees	*29,285,475*	*24,974,165*
Individual contracts	*4,693,402*	*5,817,250*
Other	*1,731,710*	*2,178,654*
Offsite care	41,257,663	40,174,927
Inpatient	*22,130,732*	*27,280,508*
Outpatient	*17,228,388*	*10,058,898*
Specialty and other	*1,898,544*	*2,835,521*
Prescription drugs	13,459,664	20,351,160
Administration and other	6,383,251	12,896,983
Total	**$164,510,904**	**$187,987,089**

SOURCE: JLARC analysis of Cardinal and Data Point data.
NOTE: FY12 spending has been adjusted for inflation. This table includes only payments paid by VADOC, not its contractors. Payments to Lawrenceville and jails are not included.

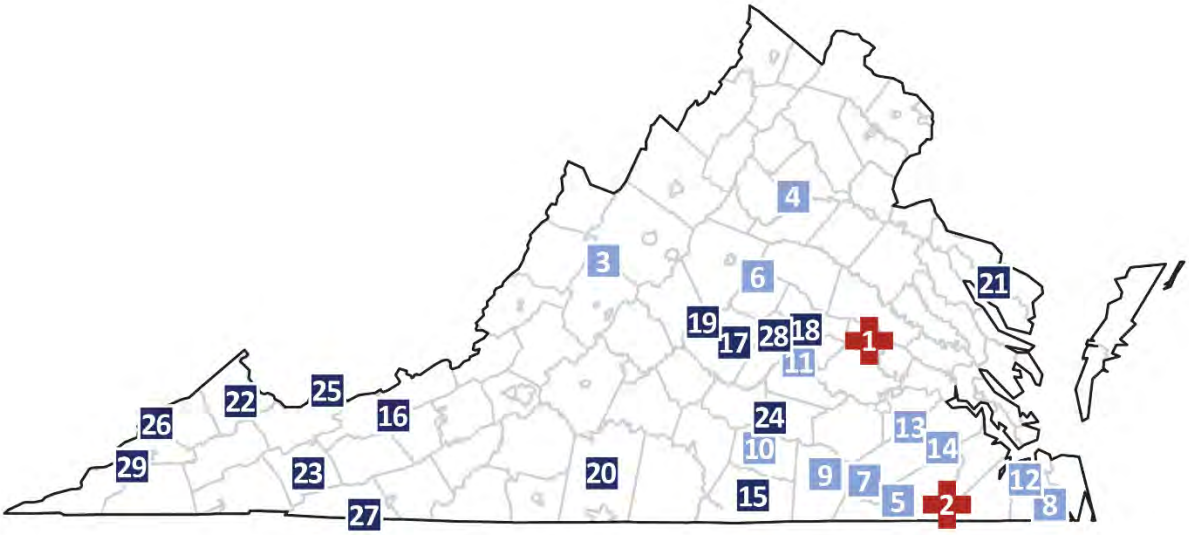
Contract facilities tend to have the highest total spending because many of them provide care to the sickest inmates (Table C-3). The onsite, offsite, and prescription drug categories at contract facilities include only what VADOC pays directly for those services. This includes inpatient hospital stays and prescription drugs purchased through VCU Health. Contract facilities with significant spending in these categories, such as Deerfield, have a large number of inpatient stays and inmates in need of high-cost medications. All services paid for by the contractors are included in the capitation payments and are not broken out separately in the table.

TABLE C-3
Inmate health care spending by type and facility (FY17)

Facility	Contract payments	Onsite care	Offsite care	Prescription drugs	Other	Total
Greensville	$22,042,842	$983,914	$3,602,360	$1,262,420	$40,136	$27,931,672
Deerfield	12,912,585	502,034	3,585,277	1,739,889	32,013	18,772,071
Deep Meadow	7,132,532	2,247,160	6,705,882	1,625,545	271,893	17,983,012
Fluvanna	11,355,383	445,858	1,257,407	451,081	161,848	13,671,579
Sussex II	5,686,469	272,613	1,247,468	696,931	7,190	7,910,670
Sussex I	5,590,216	280,912	1,036,701	342,216	14,324	7,264,369
Nottoway	--	3,038,715	2,525,988	1,147,509	84,434	6,796,646
Augusta	3,953,860	255,377	1,153,506	676,246	5,036	6,044,025
Lunenburg	3,686,289	315,291	1,567,370	442,858	6,650	6,018,457
Buckingham	--	1,621,998	3,013,849	1,174,061	16,673	5,826,581
Haynesville	--	2,041,812	2,045,833	1,260,942	18,776	5,367,363
VCCW	--	2,806,527	1,420,057	859,365	16,906	5,102,855
Dillwyn	--	2,032,719	1,863,990	1,121,439	29,460	5,047,608
Coffeewood	3,758,187	313,848	548,440	259,935	23,625	4,904,035
Marion	--	2,831,910	696,728	550,608	57,983	4,137,229
Indian Creek	2,988,572	225,248	621,552	295,197	5,796	4,136,365
Green Rock	--	1,935,485	987,083	628,885	14,562	4,084,749
Wallens Ridge	--	1,925,907	1,190,850	931,191	27,223	3,556,438
St. Brides	2,486,742	69,956	479,495	475,187	23,209	3,534,589
Red Onion	--	1,974,224	848,366	629,719	45,377	3,497,687
Keen Mountain	--	1,449,554	773,525	837,935	40,633	3,101,648
Pocahontas	--	1,388,411	642,039	944,764	28,035	3,003,248
Bland	--	1,306,726	902,989	766,285	17,671	2,993,671
River North	--	1,602,035	519,419	833,676	9,295	2,964,425
Field Units	--	673,808	600,714	276,865	2,783	1,554,169
Detention and Diversion Centers	--	482,027	338,040	120,410	7,471	893,947
Total	**$81,539,950**	**$32,970,069**	**$40,174,927**	**$20,351,160**	**$1,009,001**	**$176,099,107**

SOURCE: JLARC analysis of Cardinal and Data Point data, FY17.
NOTE: This table includes only payments paid by VADOC, not its contractors. Totals include only spending attributed to a facility. Payments to Lawrenceville and jails are not included, nor are central administration costs.

Appendix D: Map of VADOC facilities



Secure medical facilities

1 VCU Medical Center
2 Southampton Memorial Hospital

Contract facilities

3 Augusta Correctional Center
4 Coffeewood Correctional Center
5 Deerfield Correctional Center
6 Fluvanna Correctional Center
7 Greensville Correctional Center
8 Indian Creek Correctional Center
9 Lawrenceville Correctional Center
10 Lunenburg Correctional Center
11 Powhatan Reception Center
12 St. Brides Correctional Center
13 Sussex I State Prison
14 Sussex II State Prison

Non-contract facilities

15 Baskerville Correctional Center
16 Bland Correctional Center
17 Buckingham Correctional Center
18 Deep Meadow Correctional Center
19 Dillwyn Correctional Center
20 Green Rock Correctional Center
21 Haynesville Correctional Center
22 Keen Mountain Correctional Center
23 Marion Treatment Center
24 Nottoway Correctional Center
25 Pocahontas State Correctional Center
26 Red Onion State Prison
27 River North Correctional Center
28 Virginia Correctional Center for Women
29 Wallens Ridge State Prison

NOTE: Lawrenceville is a fully privatized prison. Smaller work centers and field units are not included on the map.

Appendix E: Offsite and prescription drug expenditure analysis

JLARC staff used regression analysis to compare health care utilization and spending across VADOC facilities. A primary goal of these analyses was to determine if contract facilities or non-contract facilities were able to provide health care more cost-efficiently. Because health care spending is highly dependent on patient characteristics, and inmates with high needs are sent to specific facilities, simply comparing spending levels was not sufficient. JLARC staff created four regression models to compare facility spending on offsite services and pharmaceuticals while controlling for differences in inmate populations at each facility. The models were used to predict

- offsite care utilization,
- offsite care spending,
- pharmaceutical utilization, and
- pharmaceutical spending.

The models used health care claims data for all inmates who that were incarcerated in FY15 through FY17 at a VADOC facility. This data was aggregated to an analysis file with one observation per inmate per facility in each year. For example, if an inmate was in one facility for all twelve months in the year, there was one record for that inmate. If an inmate moved to a new facility during the year, there would be two records for that inmate. Offsite and prescription drug utilization and spending was predicted for each inmate based on health and demographic information, and the predicted values were totaled for each facility. The predicted values were then compared to the actual values at each facility. Weighted averages were used to account for differences in length of time spent at facilities.

A facility that spent more than predicted is not necessarily inefficient and a facility that spent less than predicted may not necessarily be more efficient given the relatively small number of inmates at each facility. One or more inmates with very expensive care can drastically increase the average spending of an otherwise low-cost facility. However, when considering the results in aggregate, the models provide evidence of systematic utilization and spending differences between contract and non-contract facilities. The four models were analyzed separately and in combination, for fiscal years 2015, 2016, and 2017.

Data variables and sources

In the models predicting offsite and prescription drug utilization, the dependent variable was whether the inmate used offsite services or prescription drugs in that fiscal year. In the models predicting offsite and pharmacy spending, the dependent variable was the average monthly spending on offsite services or pharmaceuticals. The models included several independent variables, including inmate demographics, health status, and diagnoses (Table E-1).

TABLE E-1
Variables included in JLARC's offsite and prescription drug expenditure regression models

Variable	Definition
Offsite user (dependent variable)	Whether the inmate had offsite services spending in the period of observation (0 or 1)
Prescription drug user (dependent variable)	Whether the inmate had pharmaceutical spending in the period of observation (0 or 1)
Offsite spending (dependent variable)	Total amount charged for inmate offsite care in period of observation
Prescription drug spending (dependent variable)	Total amount charged for inmate pharmaceuticals in period of observation
Age	Age in years
Gender	Male or female
Race	Non-white or white
Dummy variables for mental health code	Mental health code (from 0-4) the inmate is assigned by VADOC. A mental health code of 2 or higher indicates a serious mental health diagnosis
Work code	Work code (from 1-4) the inmate is assigned by VADOC. A work code of 1 indicates there are no restrictions on the inmate's ability to work while a work code of 4 indicates the inmate cannot work in any capacity
Cardiovascular	Cardiovascular disease or condition flag (0 or 1)
Respiratory	Respiratory disease or condition flag (0 or 1)
Hepatitis	Hepatitis diagnosis flag (0 or 1)
Orthopedic	Orthopedic disease or condition flag (0 or 1)
Neurologic	Neurological disease or condition flag (0 or 1)
Gastrological	Gastrological disease or condition flag (0 or 1)
Hematologic	Hematologic disease or condition flag (0 or 1)
Diabetes	Diabetes diagnosis flag (0 or 1)
Cancer	Cancer diagnosis flag (0 or 1)
Dialysis need	Whether the inmate needs dialysis (0 or 1)
Infirmary need	Whether the inmate needs to be housed in an infirmary (0 or 1)
Dummy variables for facility	Facility the inmate is housed in for the period (0 or 1 for each facility)

Analysis results

With each model, the predicted utilization or spending was compared to actual utilization or spending at each facility. When comparing predicted and actual prescription drug utilization, both contract and non-contract facilities averaged slightly higher actual utilization than predicted. The difference between contract and non-contract facilities, on average, was small in FY17. Non-contract facilities had two percent higher than predicted utilization, while contract facilities had one percent higher than predicted utilization (Table E-2).

TABLE E-2
Facility-level actual and predicted prescription drug utilization (FY17)

Facility	Actual utilization	Predicted utilization	Difference
Nottoway	0.52	0.64	−0.12
Pocahontas State	0.62	0.66	−0.04
Dillwyn	0.67	0.70	−0.03
Haynesville	0.63	0.65	−0.02
VCCW	0.93	0.95	−0.02
Deep Meadow	0.62	0.63	−0.01
Wallens Ridge	0.64	0.64	0.00
Baskerville	0.57	0.57	0.01
Red Onion	0.68	0.65	0.03
Green Rock	0.69	0.65	0.04
Keen Mountain	0.73	0.67	0.06
Buckingham	0.71	0.64	0.07
Bland	0.76	0.67	0.09
River North	0.74	0.63	0.10
Marion	0.85	0.73	0.12
Non-contract average	**0.69**	**0.67**	**0.02**
St. Brides	0.56	0.64	−0.07
Coffeewood	0.61	0.65	−0.04
Indian Creek	0.62	0.63	−0.01
Sussex I	0.61	0.62	−0.01
Fluvanna	0.93	0.92	−0.01
Augusta	0.67	0.65	0.02
Sussex II	0.66	0.62	0.04
Deerfield	0.88	0.83	0.05
Lunenburg	0.71	0.65	0.05
Greensville	0.73	0.67	0.06
Contract average	**0.70**	**0.69**	**0.01**

SOURCE: JLARC analysis of VADOC CORIS data and pharmaceutical claims, FY17.
NOTE: The table does not include Powhatan, a contract facility that was a significantly high outlier. Due to rounding, the reported difference and predicted utilization may not total to reported actual utilization.

Compared to predicted and actual offsite service utilization, contract facilities appear to do slightly better. In FY17, non-contract facilities had three percent higher than predicted utilization and contract facilities' actual utilization was equal to the predicted level (Table E-3). This may indicate that contract facilities are better able to avoid sending inmates offsite for care that can be provided in the facility. However, this is balanced by higher than predicted offsite spending for inmates who are sent offsite from contract facilities.

TABLE E-3
Facility-level actual and predicted offsite utilization (FY17)

Facility	Actual utilization	Predicted utilization	Difference
Nottoway	0.06	0.15	−0.09
Pocahontas	0.10	0.17	−0.07
Dillwyn	0.14	0.18	−0.04
Baskerville	0.11	0.14	−0.03
River North	0.15	0.15	0.00
Green Rock	0.17	0.17	0.00
VCCW	0.36	0.33	0.03
Haynesville	0.20	0.17	0.03
Buckingham	0.22	0.16	0.05
Keen Mountain	0.22	0.16	0.06
Red Onion	0.23	0.15	0.08
Wallens Ridge	0.22	0.14	0.08
Bland	0.27	0.17	0.09
Deep Meadow	0.28	0.17	0.11
Marion	0.31	0.20	0.12
Non-contract average	**0.20**	**0.17**	**0.03**
St. Brides	0.08	0.15	−0.07
Coffeewood	0.12	0.17	−0.05
Augusta	0.14	0.16	−0.02
Fluvanna	0.31	0.33	−0.02
Indian Creek	0.15	0.16	−0.01
Sussex I	0.15	0.15	−0.01
Lunenburg	0.17	0.17	0.01
Greensville	0.21	0.19	0.02
Sussex II	0.18	0.16	0.02
Deerfield	0.41	0.31	0.10
Contract average	**0.19**	**0.20**	**0.00**

SOURCE: JLARC analysis of VADOC CORIS data and offsite claims, FY17.
NOTE: The table does not include Powhatan, a contract facility that was a significantly high outlier. Due to rounding, the reported difference and predicted utilization may not total to reported actual utilization.

When comparing predicted and actual prescription drug spending among prescription drug users, contract facilities may do slightly better. In FY17, non-contract facilities spent, on average, $10 more than predicted per person, per month. Contract facilities spent, on average, $8 less than predicted per person, per month (Table E-4).

TABLE E-4
Facility-level actual and predicted prescription drug spending (FY17)

Facility	Actual spending	Predicted spending	Difference
VCCW	$121	$146	−$25
Baskerville	48	63	−16
Red Onion	76	89	−13
Green Rock	94	102	−9
Wallens Ridge	69	75	−7
Pocahontas State	109	102	6
Nottoway	96	89	7
River North	91	83	8
Bland	111	100	11
Marion	159	148	12
Dillwyn	114	99	15
Haynesville	120	94	26
Buckingham	126	91	35
Keen Mountain	129	90	40
Deep Meadow	170	108	62
Non-contract average	**$109**	**$99**	**$10**
Fluvanna	141	182	−41
Indian Creek	59	96	−37
Greensville	131	157	−26
Coffeewood	76	93	−17
St. Brides	77	90	−13
Augusta	81	93	−12
Sussex I	83	92	−9
Sussex II	110	113	−3
Lunenburg	109	93	17
Deerfield	293	230	64
Contract average	**$116**	**$124**	**−$8**

SOURCE: JLARC analysis of VADOC CORIS data and pharmaceutical claims, FY17.
NOTE: Spending is reported per person, per month. Averages are only among inmates with prescription drug spending. The table does not include Powhatan, a contract facility that was a significantly high outlier. Due to rounding, the reported difference and predicted utilization may not total to reported actual utilization.

When comparing predicted and actual offsite spending among offsite service users, contract facilities do worse. Non-contract facilities spent $46 more than predicted per person, per month, while contract facilities spent $147 more than predicted per person, per month in FY17 (Table E-5). This may indicate that while contract facilities are potentially able to send inmates offsite for care less frequently than non-contract facilities, when they must send inmates to offsite providers, the costs are higher.

TABLE E-5
Facility-level actual and predicted offsite spending (FY17)

Facility	Actual spending	Predicted spending	Difference
Bland	$290	$491	−$201
River North	283	474	−192
Keen Mountain	279	439	−159
Pocahontas	523	670	−147
Red Onion	318	451	−133
Wallens Ridge	362	364	−1
Baskerville	384	366	18
VCCW	487	445	42
Green Rock	584	541	43
Deep Meadow	649	595	54
Haynesville	581	506	76
Marion	676	510	166
Nottoway	881	546	335
Dillwyn	895	553	341
Buckingham	969	525	444
Non-contract average	**$544**	**$498**	**$46**
Indian Creek	489	529	−40
Fluvanna	779	812	−33
Coffeewood	537	518	19
St. Brides	531	464	66
Sussex II	604	537	68
Deerfield	1.364	1.268	96
Greensville	1.385	1.198	187
Augusta	795	602	193
Sussex II	1027	568	458
Lunenburg	983	524	459
Contract average	**$849**	**$702**	**$147**

SOURCE: JLARC analysis of VADOC CORIS data and offsite claims, FY17.
NOTE: Spending is reported per person, per month. Averages are only among inmates with offsite spending. The table does not include Powhatan, a contract facility that was a significantly high outlier. Due to rounding, the reported difference and predicted utilization may not total to reported actual utilization.

The four models were combined to predict total spending (prescription drug and offsite). For each facility, the predicted prescription drug utilization rate was multiplied by the facility population to create a "predicted user" population, and that "predicted user" population was multiplied by the predicted prescription drug spending per person. The same process was completed for offsite service utilization and spending. This provided a predicted total spending that incorporated all four models, and could then be compared to actual total spending at each facility. JLARC staff found no evidence that contract facilities spent systematically more or less on offsite and prescription drug services in FY17 (Table E-6). The graph in Chapter 3 also presents the results of this combined analysis across all three years.

TABLE E-6
Facility-level actual and predicted total spending (FY17)

Facility	Actual spending ($)	Predicted spending ($)	Difference ($)	Difference per person-month ($)
Pocahontas State	$1,417,785	$2,151,929	−$734,144	−$62
Baskerville	433,776	495,448	−61,672	−11
River North	1,369,389	1,423,365	−53,976	−5
Red Onion	1,243,404	1,137,673	105,731	12
Green Rock	2,018,600	1,878,087	140,513	12
Keen Mountain	1,397,205	1,271,342	125,863	13
Bland	1,449,319	1,185,102	264,217	34
Wallens Ridge	1,655,441	1,212,300	443,141	36
VCCW	1,884,321	1,618,526	265,795	47
Nottoway	2,851,222	2,088,018	763,204	51
Haynesville	2,325,786	1,539,215	786,571	75
Dillwyn	2,675,529	1,774,421	901,108	86
Buckingham	3,532,890	1,729,037	1,803,853	148
Marion	1,206,420	645,908	560,512	182
Deep Meadow	2,820,041	1,331,698	1,488,343	189
Non-contract total	**$28,281,128**	**$21,482,069**	**$6,779,059**	**$47**
Fluvanna	4,676,825	5,953,583	−1,276,758	−94
St. Brides	1,359,008	1,809,641	−450,633	−32
Coffeewood	1,460,821	1,685,720	−224,899	−20
Indian Creek	1,554,833	1,779,927	−225,094	−18
Augusta	2,294,988	2,099,330	195,658	15
Sussex I	2,354,659	1,956,963	397,696	30
Sussex II	3,037,000	2,244,984	792,016	57
Greensville	12,881,762	10,931,445	1,950,317	59
Lunenburg	3,212,200	1,600,859	1,611,341	151
Deerfield	9,693,481	7,220,476	2,473,005	200
Contract total	**$42,525,577**	**$37,282,929**	**$5,242,648**	**$49**

SOURCE: JLARC analysis of VADOC CORIS data and offsite and pharmaceutical claims, FY17.
NOTE: Spending is reported per person, per month. Does not include Powhatan, a contract facility that was a significantly high outlier.

Appendix F: Compassionate release policies in other states

Compassionate release policies are a tool that states can use to reduce spending on inmate health care by releasing very ill or aged inmates to appropriate placements in the community. Amending compassionate release is a decision that must be made by state decision-makers in light of policy priorities related to humanitarian concerns, public safety, appropriate punishment for crimes, and budgetary pressures. In most cases, release of an inmate is conditional, meaning he or she can be re-incarcerated should he or she violate the terms of release or medically recover.

Compassionate release process in Virginia

In Virginia, there are two types of compassionate release: one for inmates at least 60 years old having served a certain portion of their sentence (geriatric conditional release) and one for terminally ill inmates with three months or less to live (medical clemency). Virginia does not have a specific compassionate release statute. Instead, geriatric conditional release is authorized by code, and medical clemency falls under the powers of the governor.

Investigation into suitability of inmate for release

For both types of release, the Virginia Parole Board (VPB) completes an investigation that includes an assessment of the inmate's offenses and behavior while incarcerated, his or her potential to be a public safety risk, his or her medical needs, and whether an appropriate community placement can be found for seriously/terminally ill inmates. For medical clemency, the inmate must be placed with a family member or other individual ready and willing to care for the inmate. Inmates released on geriatric conditional release can be placed in community facilities (such as nursing homes or assisted living facilities) or with family. In addition, VPB is required by law to notify any victims that the inmate is being considered for release, a process that can take up to 60 days.

Ultimately, VPB makes a recommendation as to whether the inmate should be released. For geriatric conditional release, they provide this recommendation to VADOC. In the case of medical clemency, this recommendation is provided to the Secretary of the Commonwealth for a final decision from the governor.

Geriatric conditional release

An inmate is eligible for geriatric conditional release when he or she is at least age 60 having served 10 years of his or her sentence, or age 65 having served 5 years of his or her sentence. Currently, a large number of the inmates eligible for geriatric conditional release are also eligible for discretionary parole because they were sentenced for a crime that was committed before Truth-in-Sentencing abolished discretionary parole in 1995. As a result, they are automatically considered for release when their age and sentence requirements are met. The VPB estimates there are approximately 200 to 300 inmates eligible for geriatric conditional release who are not eligible for discretionary parole, and works to notify these individuals that they may apply for geriatric conditional release. VPB estimates that 10,000 state-responsible inmates who are currently incarcerated with VADOC will be eligible for geriatric conditional release at some point during their sentences.

Medical clemency

The medical clemency process begins with an application for clemency from the inmate or inmate's family to the Secretary of the Commonwealth. Inmates may apply for medical clemency when they have been given a prognosis of three months or less to live by a physician. The final decision for clemency rests with the governor.

Compassionate release in other states compared to Virginia

Most states have compassionate release policies related to three situations:

- advanced age,
- serious illness or permanent incapacitation, and
- terminal illness.

The criteria for these types of release vary widely by state (Table F-1). Virginia only considers inmates of advanced age (geriatric conditional release) and inmates with a terminal illness and three months or less to live (medical clemency) for release. Virginia is the only state in which there is no way for seriously ill or permanently incapacitated inmates to be released.

TABLE F-1
Compassionate release criteria vary significantly by state

	Serious illness / permanent incapacitation	Terminal illness	Advanced age
Virginia		**3 months or less**	**60+ and served at least 10 years or 65+ and served at least 5 years**
Alabama	✓	12 months or less	55+
Alaska	✓	✓	60+ and at least 10 years served
Arizona	✓	6 months or less	
Arkansas	✓	2 years or less	
California	✓	6 months or less	
Colorado	✓	✓	55+
Connecticut	✓	6 months or less	
Delaware	✓		✓
District of Columbia	✓	6 months or less	65+
Florida	✓	✓	
Georgia	✓	6 months or less	62+
Hawaii	✓	✓	✓
Idaho	✓	✓	
Illinois	✓	✓	
Indiana	✓	✓	
Kansas	✓	30 days or less	
Kentucky	✓	12 months or less	

	Serious illness / permanent incapacitation	Terminal illness	Advanced age
Virginia		**3 months or less**	**60+ and served at least 10 years or 65+ and served at least 5 years**
Louisiana	✓	12 months or less	45+ and at least 25 years served or 60+ and at least 10 years served
Maine	✓	✓	✓
Maryland	✓		60+ and at least 15 years served
Massachusetts	✓	18 months or less	
Michigan	✓	✓	
Minnesota	✓	12 months or less	
Mississippi	✓	✓	60+ and at least 10 years served
Missouri	✓	6 months or less	✓
Montana	✓	6 months or less	
Nebraska	✓	✓	
Nevada	✓	12 months or less	
New Hampshire	✓	✓	
New Jersey	✓	6 months or less	
New Mexico	✓	6 months or less	65+
New York	✓	✓	
North Carolina	✓	6 months or less	65+
North Dakota	✓	✓	
Ohio	✓	6 months or less OR death imminent	6 months or less OR death imminent
Oklahoma	✓	✓	60+ and at least 10 years or 1/3 of sentence served
Oregon	✓	✓	✓
Pennsylvania	✓	12 months or less	
Rhode Island	✓	18 months or less	
South Carolina	✓	2 years or less	70+
South Dakota	✓	✓	65+ and served at least 10 years or 70+ and served at least 30 years
Tennessee	✓	✓	
Texas	✓	6 months or less	65+
Utah	✓		
Vermont	✓	✓	
Washington	✓	✓	✓
West Virginia	✓	✓	
Wisconsin	✓		60+ and served at least 10 years or 65+ and served at least 5 years
Wyoming	✓	12 months or less	✓

SOURCE: JLARC staff analysis of compassionate release policies in other states.
NOTE: Iowa has no formal compassionate release policies, and so is not included in this table.

Release for serious illness or permanent incapacitation

Virginia does not consider inmates for release based on serious illness or permanent incapacitation, and is the only state in the country that does not consider inmates for release on this basis. Forty-seven states and the District of Columbia have policies that allow inmates to be considered for release based on a serious illness or permanent incapacitation. While definitions of "serious illness" and "permanent incapacitation" vary widely, states' policies generally fall into one or more of the following categories:

- an inmate is diagnosed by a physician as having such a severe illness and/or permanent disability that he or she poses no public safety risk,
- an inmate can no longer care for himself or herself in a prison environment or perform activities of daily living, or
- an inmate has complex health needs that are extremely expensive and better addressed in the community.

Release for terminal illness

Virginia considers inmates for release if they have a terminal illness and have been given a prognosis of three months or less to live by a physician. Four states do not have this type of release available, but all of these states have policies that allow for the release of seriously ill inmates that likely includes those with terminal illnesses. For release because of a terminal illness, an inmate must have a diagnosis from a physician that he or she has a terminal illness with a defined period of time left to live.

Virginia has the second most restrictive prognosis requirement for release based on terminal illness, at three months. In Kansas, inmates must have a prognosis of 30 days or less to be considered for this type of release. However, Kansas also allows inmates to be considered for release for a serious illness, providing other terminally ill inmates with an avenue to be considered for compassionate release. Twenty-three states and the District of Columbia have prognosis requirements for terminal illness release required by law, with the majority of these being six or 12 months. An additional 21 states will consider an inmate with a terminal illness for release, but do not have a prognosis requirement under state law.

Release for advanced age

Twenty-two states, including Virginia, have policies allowing inmates to be released based on their age. Virginia's requirement of age 60 with 10 years served or age 65 with five years served is in line with the majority of other states that have defined ages for release due to advanced age. Six other states also have time served requirements by state law in addition to age requirements for this type of release. The states that do not consider inmates for release on this basis all have release based on serious illness.

Appendix G: Agency responses

As part of an extensive validation process, the state agencies and other entities that are subject to a JLARC assessment are given the opportunity to comment on an exposure draft of the report. JLARC staff sent an exposure draft of this report to the Secretary of Public Safety, the Virginia Department of Corrections, and the Virginia Office of the Attorney General. Relevant excerpts of the report were also provided to other state agencies and contractors for review and comment. Appropriate corrections resulting from technical and substantive comments are incorporated in this version of the report.

This appendix includes response letters from the Virginia Department of Corrections and the Virginia Parole Board.

COMMONWEALTH of VIRGINIA

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Mr. Hal E. Greer, Director
Joint Legislative Audit and Review Commission
919 East Main Street
Suite 2100
Richmond, VA 23219

Dear Mr. Greer:

Thank you for the opportunity to review and comment on the Joint Legislative Audit and Review Commission's Draft report, *Inmate Health Care Spending.* The draft report addresses major obstacles faced by the Virginia Department of Corrections (VADOC) regarding the high cost of healthcare for our offender population. As you know, offenders frequently enter VADOC following high risk lifestyles with the increased health problems that such lifestyles carry. Often these individuals have untreated or undiagnosed conditions due to sporadic or no healthcare prior to entering VADOC. Additionally, our offender population is increasingly aging which magnifies the health care challenges. VADOC remains committed to providing quality healthcare to offenders.

We would like to thank the commission for their staff's thorough research, thoughtful recommendations and the collaborative approach to developing the report. Through our substantive comments recently addressed by Jeff Lunardi, we believe the report addresses the challenges in both being good stewards of the Commonwealth's assets and the mandate to continue to provide a level of healthcare required by the constitution and meet the increasing standards of recent court decisions.

VADOC's long-term vision is for the department to be a progressive and proven innovative leader in the profession. We feel this report fits this vision and we appreciate the opportunity to have provided input.

Sincerely,

Harold W. Clarke,
Director

HWC:smh

COMMONWEALTH of VIRGINIA

Virginia Parole Board

October 29, 2018

Hal E. Greer, Director
Joint Legislative Audit and Review Commission
919 East Main Street
Richmond, VA 23219

Dear Mr. Greer:

On behalf of the Virginia Parole Board, I wish to thank you and your staff for the opportunity to review and comment on the exposure draft report entitled *Spending on Inmate Health Care.* The professionalism and thoughtfulness of your staff was extraordinary.

We are grateful for the consideration given to the challenges associated with releasing elderly and/or sick offenders. The exposure draft provides insight into the challenges of finding community placements for elderly and/or sick offenders whose release is compatible with public safety.

The exposure report is particularly informative as to how the Commonwealth compares to other states that have compassionate/medical release policies. We appreciate the clear statement that less restrictive policies would make more inmates eligible to be considered for release, but not affect the decision about "who is actually released". Specifically, thank you for recognizing that all releasing decisions begin first with a comprehensive investigation of whether an offender's release is compatible with public safety and the potential impact release would have on victims and the community in general.

We look forward to continuing to work with members of the General Assembly.

Respectfully,

Adrianne L. Bennett

Adrianne Bennett
Chair

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