

Executive Summary

Virginia's two academic health centers -- the University of Virginia Health Systems (UVA/HS) and Virginia Commonwealth University Health Systems (VCU/HS) -- play a pivotal role in the delivery of healthcare to the poor. As a part of their broader mission of education, research, and the provision of highly specialized care, these two systems serve as the primary source of healthcare to a disproportionate number of low-income people who have no or limited health insurance.

In November of 2002, Governor Mark Warner directed members of his cabinet, policy office, and representatives from Virginia's two academic health centers (AHCs) to identify long-term options for addressing operational and indigent healthcare funding issues at the State's two teaching hospitals. Five months later, the Virginia General Assembly placed language in the 2003 Appropriations Act requiring the Secretaries of Health and Human Resources and Education to report on the indigent healthcare cost trends, funding options, and opportunities for operational efficiencies at the AHCs.

The impetus for these actions was a report from staff at the Department of Medical Assistance Services on an emerging funding crisis in the State's indigent healthcare program. Based on current projections, it appears that the State's two AHCs face a funding shortfall for indigent healthcare for the next biennial budget that could range from \$34 million to more than \$83 million.

This review is being conducted at a time when important policy questions are being raised about the mission and affordability to the State of the

two AHCs. Critics of this system of healthcare argue that a changing healthcare marketplace has lessened the need for the publicly supported, mission-driven work of Virginia's AHCs. Now, it has been suggested that private hospitals deliver many of the highly specialized core services historically provided by VCU/HS and UVA/HS, but that they do so at a considerably lower cost. This calls into question efforts to continually fund the high costs associated with these institutions while other government programs face steep budget cuts.

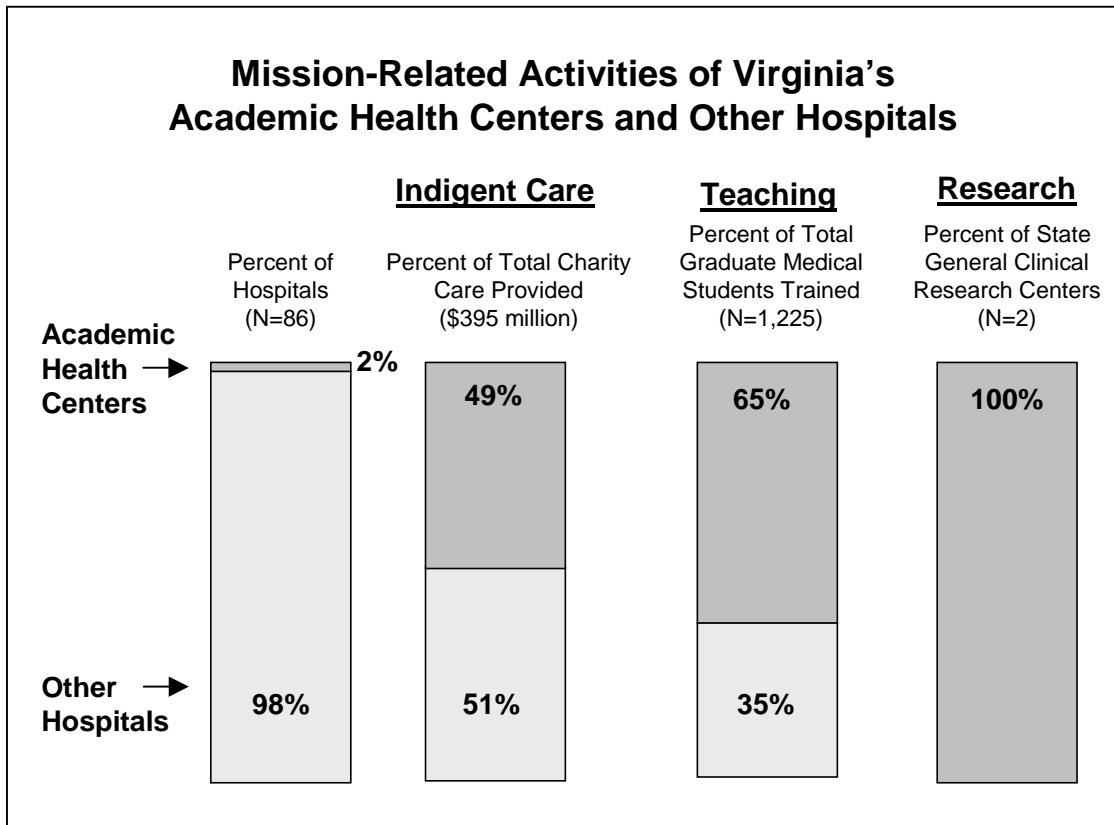
Until now, Virginia's AHCs have not faced serious public scrutiny about the value and uniqueness of their mission and the cost effectiveness of the methods they employ in delivering the education, patient care, and research for which they are noted. Accordingly, outside of the data put forward in abstruse audit reports, little is known about the overall cost of services in the AHCs, how multiple funding sources finance the major missions of the AHCs, how these institutions compare to peer institutions on basic measures of efficiency, and the cost trends associated with indigent patient care.

This report addresses these issues through an assessment of the uniqueness of mission-related activities of the AHCs, the cost of patient care, the revenue through which the care is funded, the relative efficiency of their operations, and the magnitude of the fast approaching funding shortfall.

Major Report Findings

The general findings of this study indicate that compared to other hospitals in the State, Virginia's AHCs continue to be the institutions that are primarily responsible for those activities that represent the core historical purpose

of the AHCs -- the care of the indigent population, the training of future doctors and healthcare professionals, the provision of complex specialty medical care, and the pursuit of new and innovative patient care techniques through medical research. The figure below illustrates that the AHCs play a dominant role in the performance of these missions in the Commonwealth. Moreover, because the activities associated with these missions often have the characteristics of public or merit goods, private markets cannot be relied upon to produce the level of these services that are presently purchased through UVA/HS and VCU/HS.



The overall per-patient cost of care in the AHCs was found to be higher than the levels observed for private hospitals. However, much of this difference can be attributed to the costs incurred by teaching hospitals in developing and maintaining the capacity to provide the specialized tertiary care and trauma

services not typically funded in other hospitals. Further, when AHCs are compared to their peers across the United States, their costs are generally within the expected range based on, among other factors, the characteristics of the patients treated by these facilities.

No evidence could be found to support the perception that patient care cost in the AHCs is overstated because dollars earmarked for indigent healthcare are diverted to subsidize the operating cost of the University of Virginia and Virginia Commonwealth University. For the most part, both AHCs have successfully contained growth in the inpatient component of the indigent healthcare program. However, in some years, these systems do lose money treating indigent patients but not because healthcare dollars are being diverted to the universities (see UVA/HS' flow of funds for indigent care in the figure on next page).

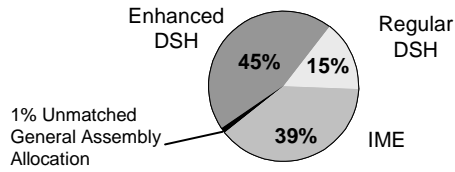
For a number of reasons, the two health systems face a significant budget shortfall in the next biennium. Further, while both of the State's AHCs can and have taken some actions that will reduce the fiscal pressure of the respective indigent healthcare programs moving forward, these changes alone will not be sufficient to close the emerging funding gap in Virginia's indigent healthcare program.

While Private Hospitals Have Taken On A Larger Role, Virginia's AHCs Continue To Maintain A Preeminent Position in the Provision of Routine and Specialized Healthcare to the Poor, Medical Training, and Clinical Research

Given the emergence of private hospitals that support teaching and indigent care, one objective of this study was to assess the degree to which

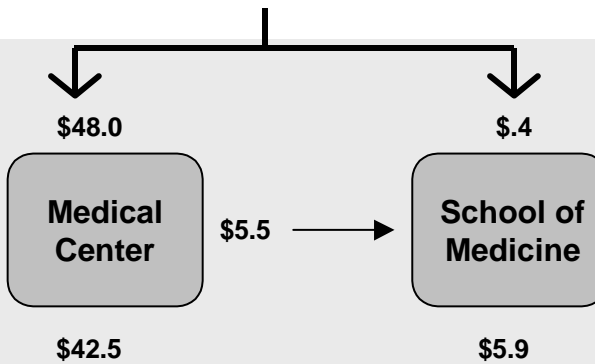
Revenues and Expenditures for Indigent Care for the University of Virginia Health System, FY 2002 (in millions)

REVENUE



**Indigent Care Revenue
\$48.4**

TRANSFERS



Operating Margin:

-\$10.2

\$0

Medicaid Funds:

\$1.6

Total Expended Funds:

\$54.3

\$5.9

EXPENDITURES



Virginia's two AHCs can still be distinguished from their private counterparts. Clearly if the competitive private market performs reasonably well in setting prices and optimally allocating various healthcare and research services traditionally associated with the missions of AHCs, the substantial public subsidies that are used to support UVA/HS and VCU/HS are more difficult to justify.

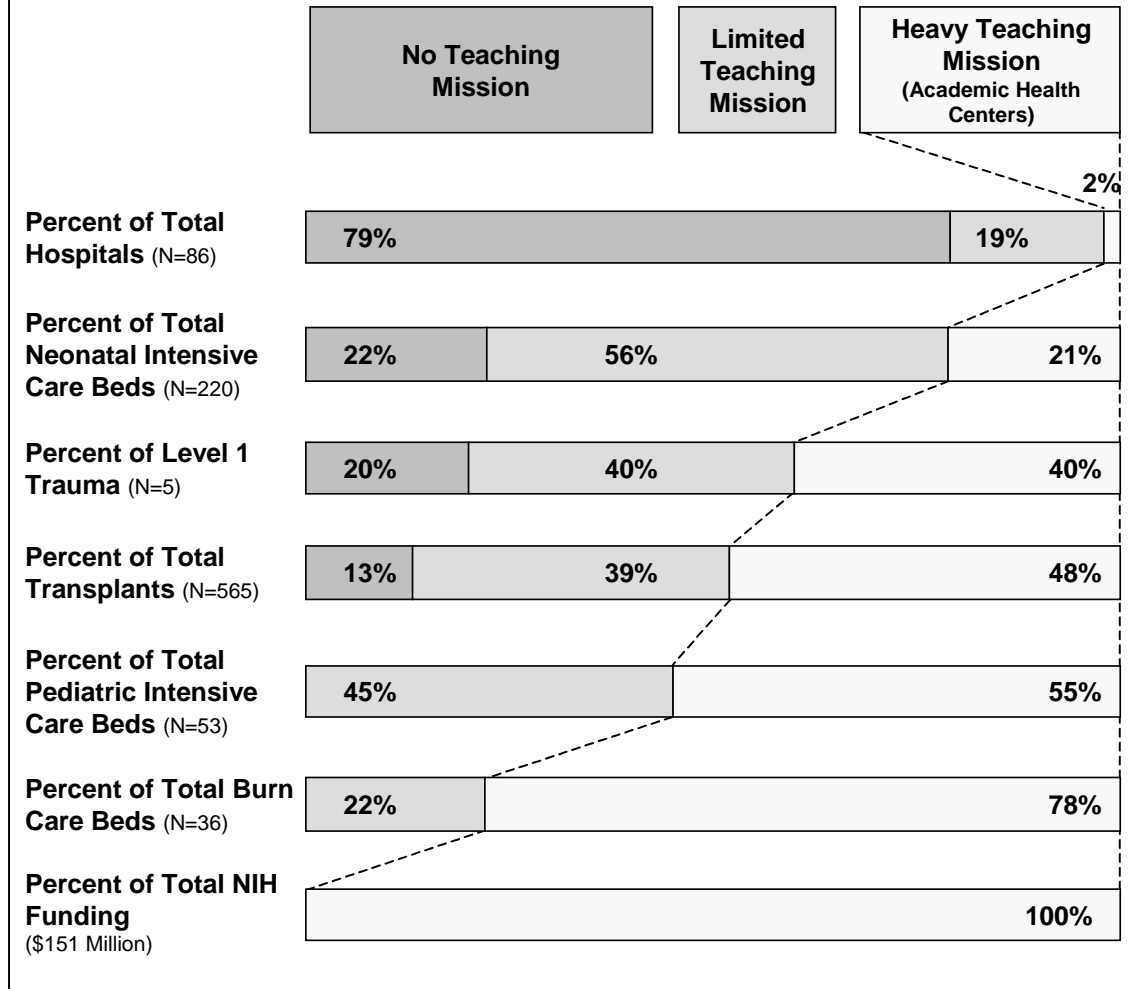
All indications from this study suggest that Virginia's AHCs maintain the primary role in the delivery of mission-related healthcare. Private hospitals, especially those that have assumed a limited teaching role, are structured to provide greater levels of one or more types of specialty care. Nonetheless, nearly four of every 10 uninsured persons in the Commonwealth who receive high cost specialty care are treated in the AHCs.

In terms of the existing capacity for specialized healthcare and research, Virginia's AHCs operate two of the five Level 1 trauma centers in the Commonwealth, perform nearly half of all transplants, staff more than half of the pediatric intensive care beds, operate nearly 80 percent of Virginia's burn care beds, and receive 100 percent of the NIH research funding distributed in the State (see figure on next page).

The Mission-Related Activities of Virginia's AHCs Add an Estimated 30 Percent to the Cost of Inpatient Care

It has been widely documented through research sponsored by the Commonwealth Task Force on Academic Health Centers, that the cost of healthcare is higher at AHCs than at private or community hospitals.

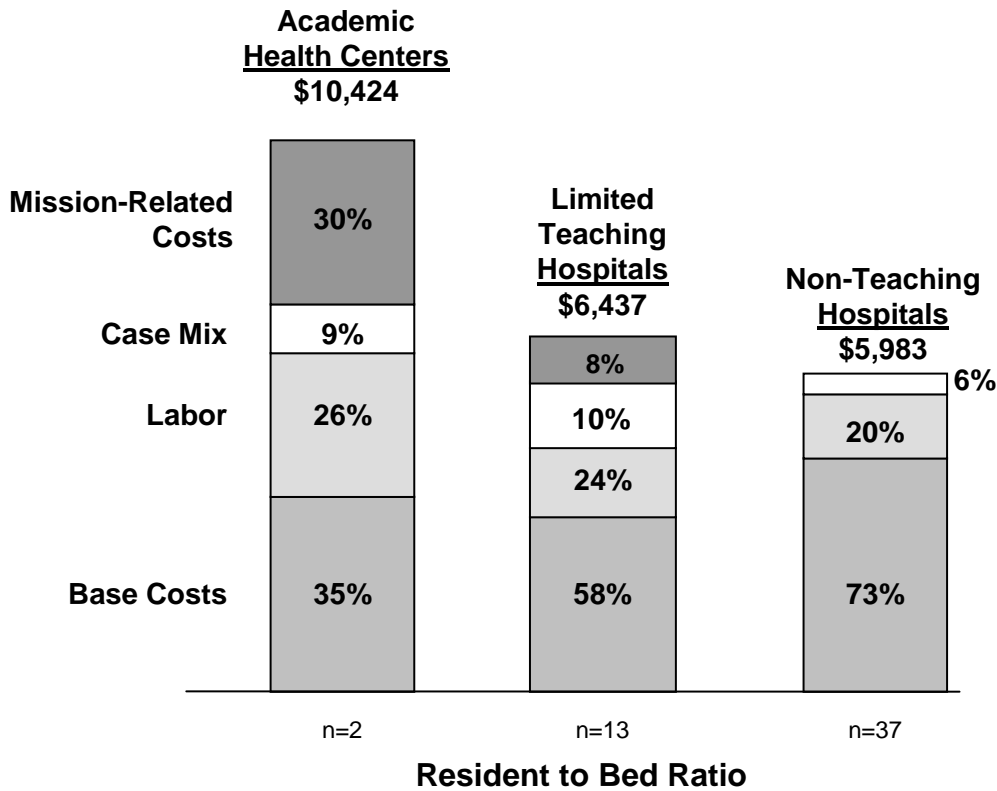
Characteristics of Virginia's Hospitals Based on the Intensity of Teaching Mission



What has not been as thoroughly examined or understood is whether and how the specific missions of AHCs contribute to these higher costs.

The results from this study reveal that the cost of inpatient care in Virginia's AHCs is higher compared to the other two groups of hospitals examined in this study, but these cost differences are driven by the mission-related activities that AHCs are funded to provide (see figure on next page). Specifically, the average cost of inpatient care in the two

**Inpatient Acute Care Costs Per Discharge for
Virginia Hospitals With 100 or More Beds
(Fiscal Years Ending in 2001)**



Sources: Estimates calculated using national weights based on the methodology developed by the Lewin Group. (See *Health Care at the Cutting Edge: The Role of Academic Health Centers in the Provision of Specialty Care*, a report of the Commonwealth Fund Task Force on Academic Health Centers.) The inpatient costs per case are calculated from the Hospital Cost Report Information System (HCRIS) cost reports submitted to the federal Center for Medicare and Medicaid Services.

AHCs -- unadjusted for case mix -- was \$10,424 per patient. By comparison, the cost for patients who received their care from hospitals with a limited teaching mission was only \$6,437 – approximately 61 percent of the cost of care in the AHCs. In hospitals with no teaching mission the cost was slightly higher (\$5,983).

The major factor distinguishing AHCs from their counterparts is the mission-related activities. Using national weights developed by the Lewin Group,

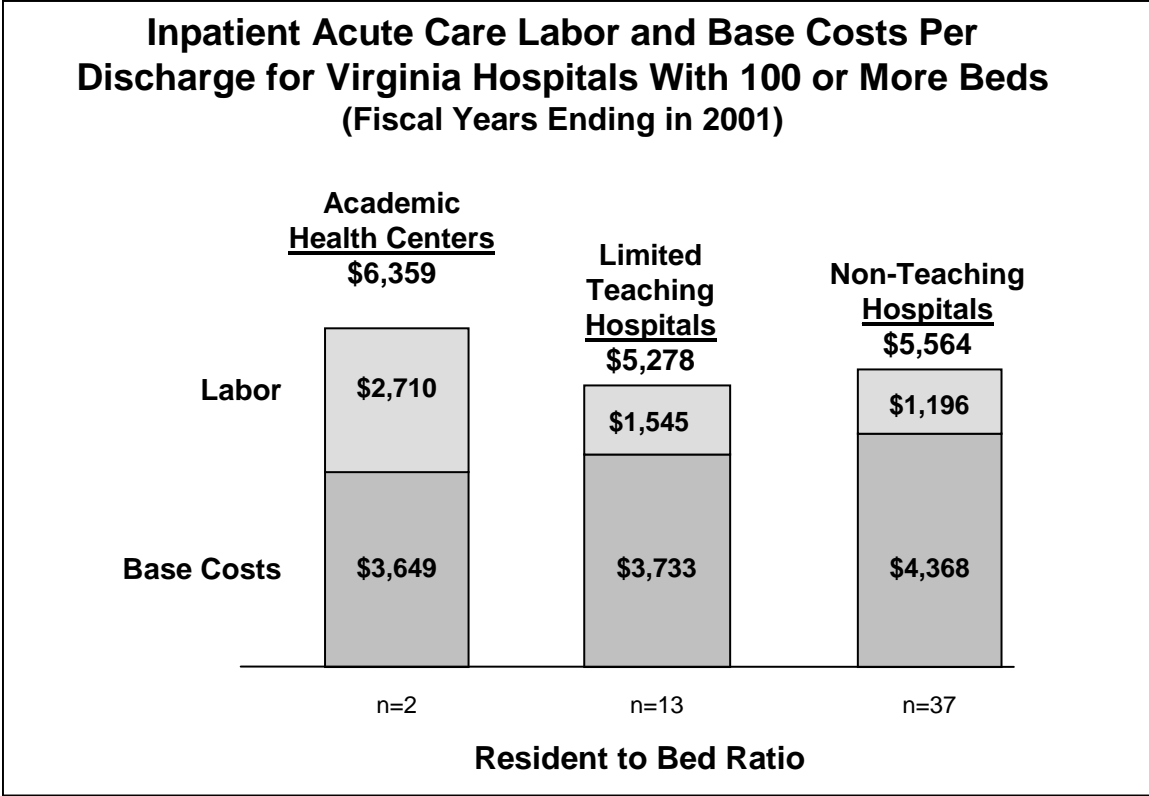
it is estimated that fully 30 percent of the costs in these facilities can be attributed to the unique role of the AHCs in the delivery of care. Only eight percent of the cost for hospitals with a limited teaching mission could be similarly categorized. As anticipated, the hospitals without a teaching mission had no mission-related patient care costs.

Further analysis indicated that most of the mission-related costs were associated with the high technology equipment and related services such as those provided in the Level 1 trauma unit. Because this equipment and the staff who operate the machines must always be available whether in use or not, these costs are sometimes referred to as “stand-by” costs.

To more closely approximate the differences in treatment costs for AHCs compared to other hospitals in Virginia, the costs associated with case-mix and the mission-related activity of the academic health centers were subtracted from the overall costs of patient care (see figure on next page). When this is done, the previously observed cost differences between Virginia’s AHC and the two groups of private hospitals are substantially reduced. Patient care costs remain higher in the AHCs due to differences in labor costs. Higher wage indices and a disproportionately large number of interns in specialty care are two of the factors believed to be responsible for these differences in labor costs.

Virginia’s AHCs Compare Favorably to Peer Hospitals Around the Nation

Because of the mission-related activities of the AHCs, comparing them with private hospitals that do not share similar goals can lead to misleading conclusions about the per-patient costs and operational efficiency of these



institutions. Therefore using analysis results from the University HealthSystem Consortium (UHC), it was possible to determine how Virginia’s AHCs compared to their peer institutions around the United States. Data on AHC hospital operations in 2001 from the UHC revealed that the measures of cost per discharge -- with adjustments to account for severity of patient illness -- for both UVA/HS (\$7,306) and VCUHS (\$7,602) were less than the 50th percentile of the comparison group of peer hospitals (\$7,644).

Moreover, the ratio of observed cost per discharge to expected cost per discharge -- based on a number of factors including the acuity level of the patients -- for UVA/HS and VCU/HS were 1.02 and 1.03 respectively. This means that the actual costs for these systems’ were essentially equal to the expected cost when compared to other participating UHC hospitals.

While Virginia's AHCs Have Worked To Control Indigent Healthcare Costs, Both Opportunities and Future Challenges Remain

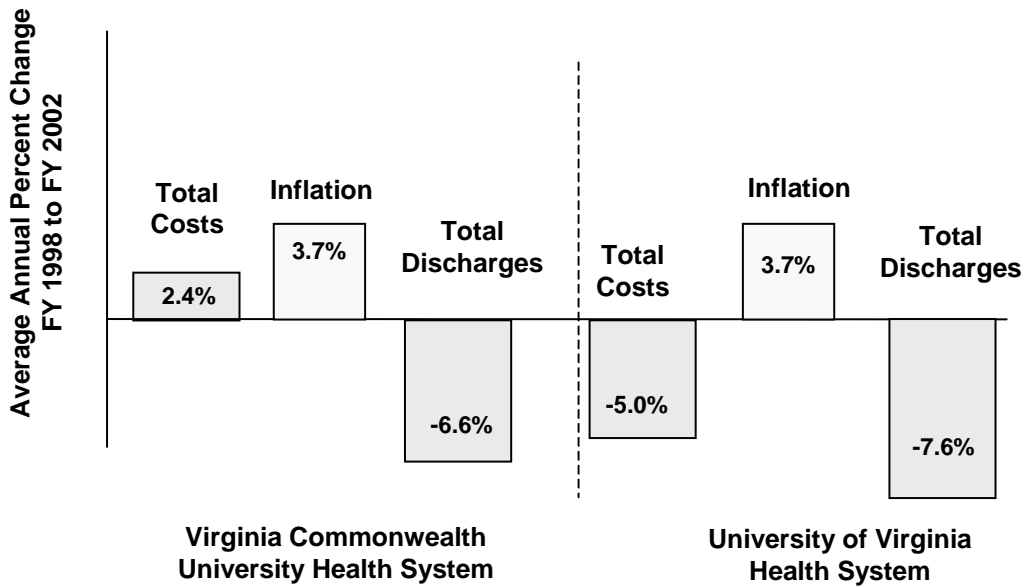
There are two major components of Virginia's indigent healthcare program: inpatient care for persons whose health problems are more acute; and ambulatory care for those whose illnesses or health problems can be treated outside of the inpatient arena (for example, through office visits). The results from an analysis of the cost trends for these programs speak to the efforts both of the AHCs have made to deliver care more cost-effectively to indigent patients.

Most notably, both systems appear to have done a good job managing cost increases in their indigent healthcare programs over the past five years. This success was largely due to the AHCs ability to contain cost in the most expensive indigent healthcare program – inpatient care. The costs for inpatient indigent care services in a five-year period from FY 1998 to FY 2002 actually declined for UVA/HS while increasing at less than the rate of hospital inflation for VCU/HS (see figure on next page). A decrease in the number of admissions and better management of hospital stays were the key factors driving these trends.

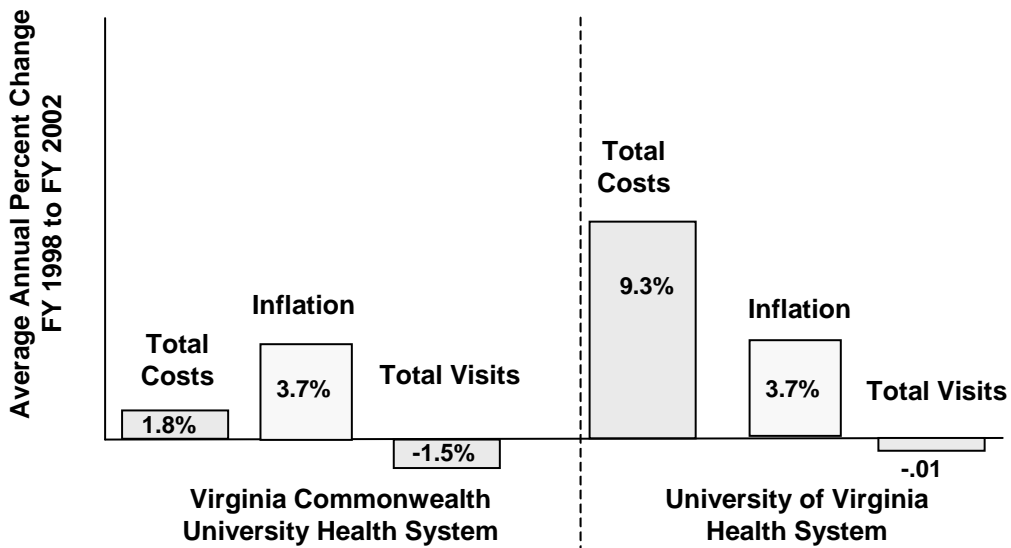
On the outpatient side, both UVA/HS and VCU/HS experienced increases in the costs associated with ambulatory care, but the cost increases were more pronounced at UVA/HS. Specifically, total outpatient costs at UVA/HS increased at a faster rate than inflation, while the number of visits slightly declined. The pattern was similar at VCU/HS but the magnitude of the increases for total outpatient costs was less than the rate of inflation. With the corresponding decline in the total number of outpatient visits, this likely means that both health systems (especially UVA/HS) are spending more on patients

A Comparison of the Trends in Indigent Healthcare Costs To Hospital Inflation (FY 1998 to FY 2002)

Change In Inpatient Indigent Care Trends



Change In Outpatient Indigent Care Trends



who are now being cared for in the outpatient clinics. Staff report that these trends can be attributed to increases in patient acuity and the types of services now being provided in the outpatient settings.

Notwithstanding these trends, management at Virginia's AHCs will face challenges as they move forward. To the extent that competition from other hospitals forces the AHCs to expand the time that faculty physicians devote to clinical services, the time available to spend teaching residents is minimized. Moreover, if both systems continue to curb costs in their inpatient program by shortening patient stays, the time available for residents to learn from patients under their care is reduced.

Finally, if either of these systems works to lower costs by moving more patients to ambulatory settings, the relevant schools of medicine will have to ensure that clinicians are available in these settings to train residents. This will be especially difficult if these clinicians are expected to take on heavy patient loads as well. So while these strategies are clearly effective vehicles for controlling the growth of indigent healthcare costs, if they are too aggressively applied, the teaching mission of both of these systems could be seriously threatened.

Possible Shift of Patients to Medicaid and FAMIS Offers Promise of Savings

One strategy available to reduce the cost of indigent healthcare to the State is to shift some patients and their associated costs to the federally funded Medicaid and FAMIS programs. It appears that once a woman has been deemed eligible for the indigent healthcare program by hospital staff at the

AHCs, she has no incentive to apply for either Medicaid even if she is eligible for one of these programs. The same holds true for children who may be eligible for Medicaid or FAMIS. In total, there were over 13,400 children who qualified for the indigent healthcare program in FY 2002 who potentially met the requirements for either FAMIS or Medicaid. The cost for treating these children and their mothers in the indigent care program, rather than through Medicaid or FAMIS, was more than \$7 million.

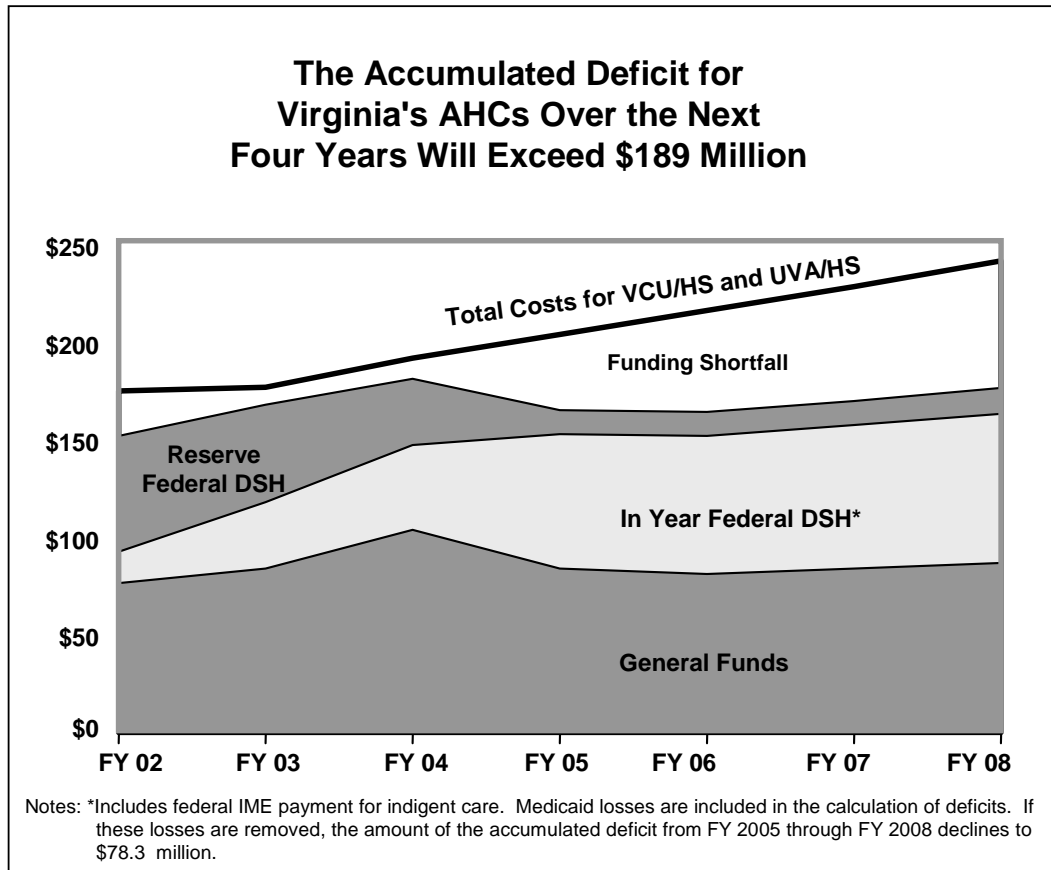
Changes to the Medicaid DSH Program Have Created a More Than \$84 Million Budget Deficit for Virginia's AHCs in the Next Biennium

Over the past twelve years, Virginia has relied heavily on the Medicaid Disproportionate Share Hospital (DSH) program to pay for indigent care at the State's two AHCs. Since Medicaid DSH payments are funded like all Medicaid payments, with 50 percent federal funds, paying for indigent healthcare through the DSH program has enabled the Commonwealth to provide the same amount of funding to the AHCs, but at half the cost to the State's general fund.

Recently, the federal government took several steps to restrict the use of DSH. Concomitantly, the growth of managed care and increased competition from private hospitals has resulted in a loss of both patients and revenue at the AHCs. This has greatly limited their ability to subsidize losses on mission-related activities, such as indigent healthcare, with other revenue sources.

Relying on unspent balances of the DSH program from previous years, Virginia has been able to maintain funding in the AHCs while minimizing the strain on the general fund. However, when those unspent balances are fully depleted in FY 2005, the current level of spending for the AHCs will not be

sustainable, thereby exacerbating already existing shortfalls, and creating a substantial budget deficit in FY 2005 and FY 2006 (see figure below).



Operational changes in the AHCs will lessen the shortfall in future years but will not be sufficient to fully address this problem. Further, private hospitals, struggling with a loss of operating margins, heavily discounted Medicaid payment rates, and the growing problem of uncompensated care are not likely to offer relief by increasing the amount of charity care they provide. This means that in the coming months, the Governor and General Assembly will need to consider a number of strategies for addressing the indigent healthcare funding problems at the State's two AHCs.

