

# Variation in Mental Health Services and Funding across Community Services Boards in Virginia

FY 2016

## Preliminary Report

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### Summary

Using data from the Virginia State Department of Behavioral Health and Developmental Services, the capacity, utilization and funding of mental health services were compared across all 40 community services boards. The association between capacity and CSB characteristics as well as the association between funding and CSB characteristics were evaluated. Both capacity and utilization were found to vary widely for most services. Level of mental health funding was the most common correlate with mental health service capacity. Proportion of local support was the strongest correlate with level of funding.

### Contents

I.	Introduction .....	2
	A. Data Source and Limitations.....	2
	B. Overview of Service Types .....	2
	C. Overview of Expenditures by CSBs on Mental Health and Substance Abuse Services in 2016.....	4
II.	Service Capacity and Specific Mental Health Services Delivered by CSBs in 2016 .....	5
III.	Analysis of Mental Health and Overall Services Expenditures.....	11
IV.	Funding across types of CSBs .....	13

## **I. Introduction**

The purpose of this report is to characterize the mental health services delivered by the Commonwealth's Community Services Boards (CSB) in 2016 and the funds expended for delivering these services. The report was commissioned by the General Assembly's Joint Subcommittee to Study Mental Health Services in the 21<sup>st</sup> Century created under SJ 47 in order to document, using the best available data, the variation across CSB in availability and delivery of behavioral health services.

### **A. Data Source and Limitations**

The following data displays compare capacity and use of mental health (MH) services across the CSBs. This report does not, on its own, provide insight into what level of capacity or utilization is necessary or sufficient for a public community services agency. Nor does it measure the quality or efficiency of services. These assessments would require outcomes data, which at present are not mandated, and are not collected consistently across all CSBs.

In describing variation in CSB services, capacity is divided by people receiving CSB services. This is better than raw capacity numbers, which do not take into account the population of the CSB catchment area. It is also better than capacity divided by total population, which does not take into account the proportion of the population which may not need CSB services. It does not take into account the number of people who are placed on a waiting list for services due to lack of capacity. The figures on utilization can give a general sense of the possibility that people are being placed on a waiting list due to lack of capacity, but there would need to be data collected on those lists in order to gain a complete picture.

The data analyzed in this report were obtained from the Community Consumer Submission 3 (CCS3) database maintained by the Virginia Department of Behavioral Health and Developmental Services (DBHDS). Services are operationally defined in the DBHDS Core Taxonomy version 7.3. The taxonomy is a tool for placing services into categories and sub-categories by function. It does not give an explicit description of every service that could be offered. All 40 Community Service Boards (CSB) are represented, with services described for fiscal year 2016. Not all services provided by CSBs are shown in this report.

Because of state and federal regulations on funding and accountability, the data are categorized separately for people with mental illness (MI) and people with substance use disorders (SUD). This report focuses on mental health services only.

### **B. Overview of Service Types**

Preventative services are services provided in order to assist a person in functioning in the community and avoiding crises. Preventative mental health (MH) services include: outpatient treatment, case management, assertive community treatment, psychosocial rehabilitation, supportive residential services and transitional employment.

Outpatient services can include evaluation, intake, counseling, behavior management, laboratory and medical services, and medication services. These services are typically provided in a clinic, but can also be provided in other facilities such as jails. For people at risk of being moved into out-of-home placement, outpatient services can be provided in-home for a limited period of time, less than six months. Case management consists of outreach, assessment and planning, locating and coordinating services.

Assertive community treatment includes intensive community treatment (ICT) and program of assertive community treatment (PACT). Both modalities offer an array of services provided in the community 24 hours a day to people with severe mental illness. Assertive community treatment can include case management, counseling, medication, crisis management, assessments, and education on daily living skills, in addition to other services. For both outpatient services and assertive community treatment, capacity is measured in FTE and usage is measured in service hours.

## C. Overview of Expenditures by CSBs on Mental Health Services in 2015

Table 1: CSB expenditures and recipients

CSB	MH Spending	MH Services Recipients	Dollars spent per MH Services Recipient	Total Budget (in Millions)	CSB Services Recipients	Dollars spent per Recipient
Alexandria	16,006,533	1,914	\$8,696.63	\$34,758,520	4,280	\$8,121.15
Alleghany	2,090,375	755	\$3,219.22	\$6,376,910	1,260	\$5,061.04
Arlington	22,114,165	3,101	\$7,791.30	\$41,046,805	5,743	\$7,147.28
Blue Ridge	15,343,743	3,540	\$4,267.57	\$26,442,624	8,603	\$3,073.65
Chesapeake	\$10,011,294	2,283	\$5,190.10	\$19,029,876	5,056	\$3,763.82
Chesterfield	\$9,049,607	2,788	\$3,607.29	\$37,208,341	5,926	\$6,278.83
Colonial	\$6,545,527	2,135	\$2,759.50	\$14,449,297	4,310	\$3,352.51
Crossroads	\$7,553,594	2,647	\$2,650.27	\$18,002,687	4,091	\$4,400.56
Cumberland Mountain	\$8,443,166	2,095	\$4,188.48	\$21,529,716	4,137	\$5,204.19
Danville	\$8,256,382	2,293	\$3,649.50	\$17,602,418	4,106	\$4,287.00
Dickenson	\$1,577,612	852	\$1,829.03	\$3,241,939	1,197	\$2,708.39
District 19	\$10,635,112	1,738	\$6,563.82	\$17,138,307	6,212	\$2,758.90
Eastern Shore	\$5,025,828	1,686	\$2,829.76	\$11,043,454	2,320	\$4,760.11
Fairfax	\$64,851,064	6,883	\$8,820.95	\$155,455,678	18,258	\$8,514.39
Goochland	\$1,805,077	436	\$4,119.71	\$4,392,310	864	\$5,083.69
Hampton-Newport News	\$35,302,964	8,057	\$5,066.90	\$61,177,616	12,513	\$4,889.12
Hanover	\$4,314,752	927	\$3,065.63	\$10,250,029	2,611	\$3,925.71
Harrisonburg	\$7,573,239	2,663	\$5,230.35	\$10,809,632	3,994	\$2,706.47
Henrico	\$13,841,158	2,667	\$4,712.88	\$33,266,740	9,359	\$3,554.52
Highlands	\$16,430,104	2,937	\$4,964.29	\$21,405,745	4,035	\$5,305.02
Horizon	\$29,027,729	7,319	\$8,397.34	\$48,502,095	11,073	\$4,380.21
Loudoun	\$12,330,232	1,501	\$4,377.08	\$27,711,840	4,298	\$6,447.61
Middle Peninsula	\$11,535,982	2,632	\$2,340.45	\$21,323,451	3,966	\$5,376.56
Mount Rogers	\$24,480,469	5,048	\$4,739.85	\$40,175,594	7,220	\$5,564.49
New River	\$27,796,657	6,681	\$4,095.81	\$46,393,666	9,731	\$4,767.62
Norfolk	\$12,049,837	2,555	\$4,623.88	\$22,748,937	6,188	\$3,676.30
Northwestern	\$6,820,766	2,630	\$4,494.74	\$14,005,061	5,249	\$2,668.14
Piedmont	\$10,752,251	4,381	\$2,372.17	\$21,181,303	6,659	\$3,180.85
Planning Dist. 1	\$6,964,361	3,563	\$2,822.78	\$13,471,647	5,307	\$2,538.47
Portsmouth	\$3,961,871	1,192	\$2,040.16	\$8,953,618	3,789	\$2,363.06
Prince William	\$17,620,228	2,748	\$3,396.83	\$33,820,815	7,360	\$4,595.22
Rappahannock	\$9,851,544	6,696	\$6,320.63	\$30,595,802	10,132	\$3,019.72
Rappahannock-Rapidan	\$5,442,031	2,083	\$1,703.17	\$16,828,479	4,424	\$3,803.91
Region Ten	\$24,328,224	3,901	\$2,222.26	\$39,187,886	8,006	\$4,894.81
Richmond	\$19,943,521	3,787	\$6,849.61	\$41,035,372	12,088	\$3,394.72
Rockbridge	\$2,836,742	1,096	\$5,164.07	\$7,239,957	1,562	\$4,635.06
Southside	\$5,916,199	2,210	\$2,650.42	\$13,373,424	3,444	\$3,883.11
VA Beach	\$21,606,328	3,664	\$5,391.86	\$52,279,611	8,167	\$6,401.32
Valley	\$9,312,346	1,934	\$4,170.62	\$19,481,725	3,258	\$5,979.66
Western Tidewater	\$8,404,292	2,018	\$6,026.18	\$25,631,459	4,655	\$5,506.22

As expected, spending on MH services varies in absolute terms across the state, as does the number of service recipients (from 436 in Goochland-Powhatan to 8057 in Hampton-Newport News). However, it is also noteworthy that expenditure per recipient served varies substantially across the Commonwealth. For example, expenditures per MH services recipient varies from more than \$8000 in Alexandria, Loudon and Fairfax to less than \$2000 in Dickenson and Rappahannock and Planning District 1. The total CSB budget and recipients should also be considered, as it takes into account recipients of emergency services. Total spending per person ranges from \$2,363.06 in Portsmouth to \$8,514.39 in Fairfax. The following sections of this report describe variations in the service capacity and delivery for specific types of services.

## **II. Service Capacity and Specific Services Delivered by CSBs in 2015**

Increased outpatient service usage is associated with fewer crisis stabilization and hospital bed days (Chi-square=9.41,  $p=0.0022$ ), controlling for population, number of MH service recipients, rurality, and case management utilization. Figure 1 shows outpatient FTE per 100 MH service recipients, compared with service hours per outpatient recipient. Outpatient staff coverage ranges from less than 0.3 FTE, in Richmond and Danville-Pittsylvania, to more than 1.3 FTE in Prince William, Highlands and Loudoun. Service hours per recipient range from 2.89 hours in Rockbridge to 16.54 hours in Arlington. Staff coverage clearly corresponds with hours of service per recipient. CSBs with comparatively high outpatient staff coverage, such as Loudoun, tend to provide more service hours per recipient, while CSBs with comparatively low staff coverage, such as Danville-Pittsylvania, tend to provide fewer hours of service per recipient.

Figure 2 shows outpatient service hours per FTE. These range from 499.52 hours in Norfolk to over 1400 in Chesapeake and Blue Ridge. Figures 1 and 2 do not closely correspond. A CSB that has comparatively high outpatient staff coverage can have comparatively high staff utilization (Arlington, 1175.56 hours), near-median utilization (Loudoun, 956.05 hours) or comparatively low utilization (Highlands, 622.18 hours).

Figure 1: Mental health outpatient staff per 100 MH services recipients, and services hours per outpatient recipients.

CSB

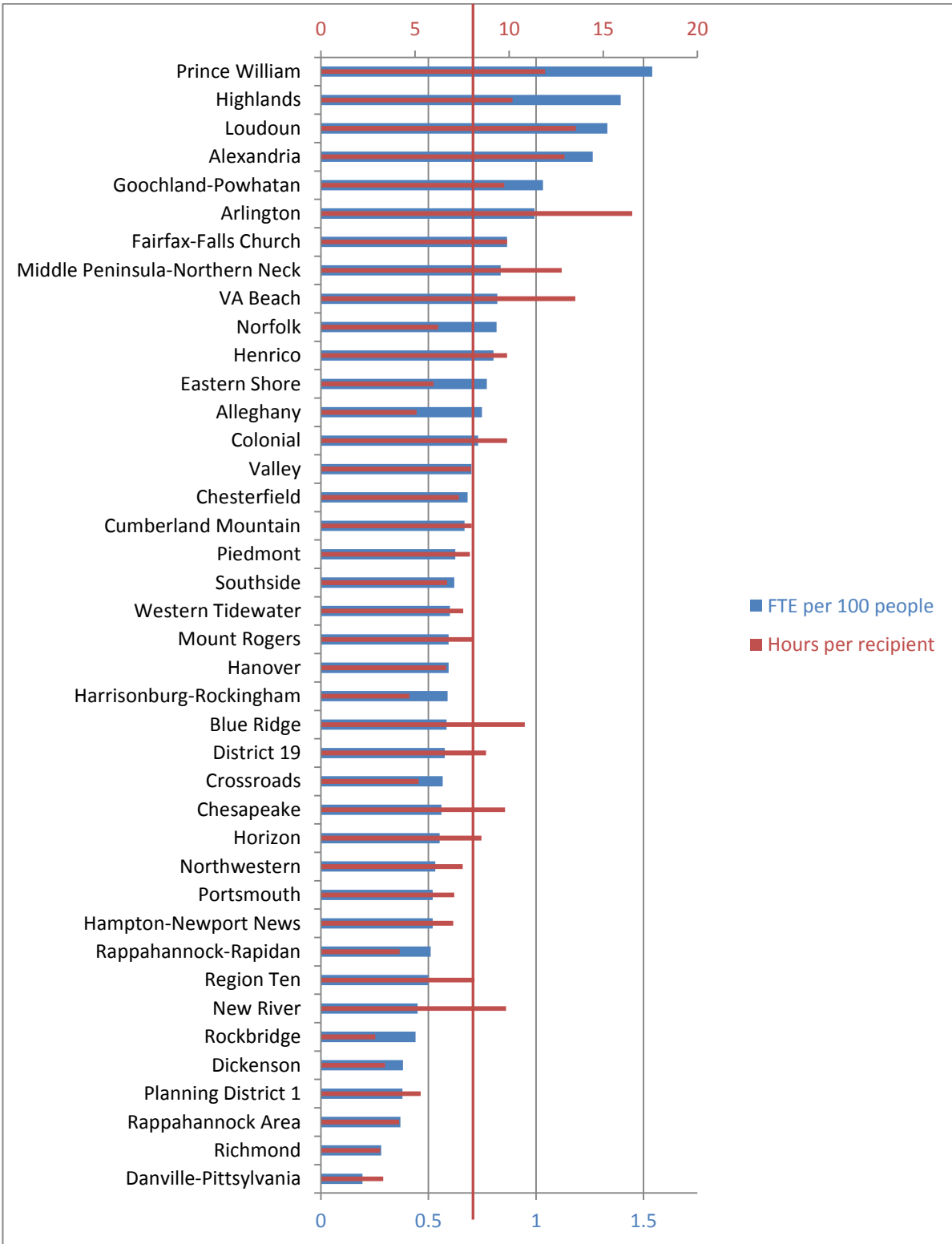


Figure 2: MH outpatient services hours per FTE staff

CSB

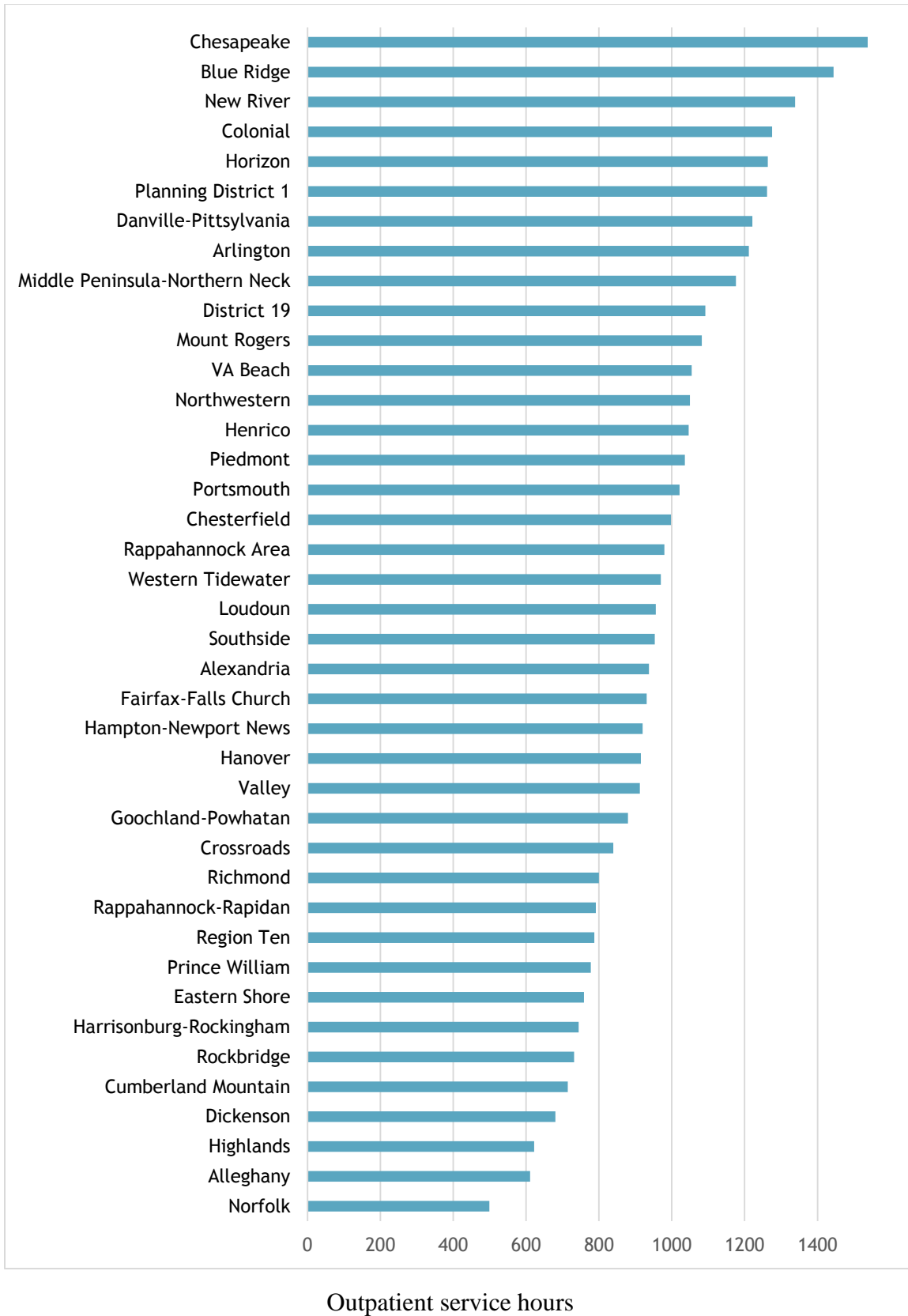


Figure 3 shows ACT staff for every 1000 MH services recipient, as well as ACT service hours per ACT recipient. Fourteen CSBs do not offer assertive community treatment. Of the 26 that do, staff coverage ranges from less than 1.5 FTE per thousand in Piedmont and Fairfax, to 8.95 per thousand in Hanover. Service hours per recipient range from less than 30 hours in Rappahannock, Western Tidewater and Middle Peninsula to 187.61 hours in Loudoun County. It should be noted that the four CSBs with the lowest hours per recipient were the four CSBs whose PACT teams were first established in 2016. High ACT coverage does not clearly correspond with more hours per service recipient.

Figure 4 shows assertive community treatment service hours per FTE. These range from less than 200 hours in Northwestern, Rappahannock and Western Tidewater to more than 1200 in Richmond, Valley and Mount Rogers. CSBs with lower ACT coverage tend to have fewer service hours per staff member. One example is Fairfax (694.35 hours). CSBs with higher ACT coverage can have more service hours per staff member (Valley, 1235.44 hours), or near-median service hours (Hanover, 1002.39 hours).



Figure 3: Assertive community treatment staff per 1000 MH services recipients, and service hours per ACT recipient.

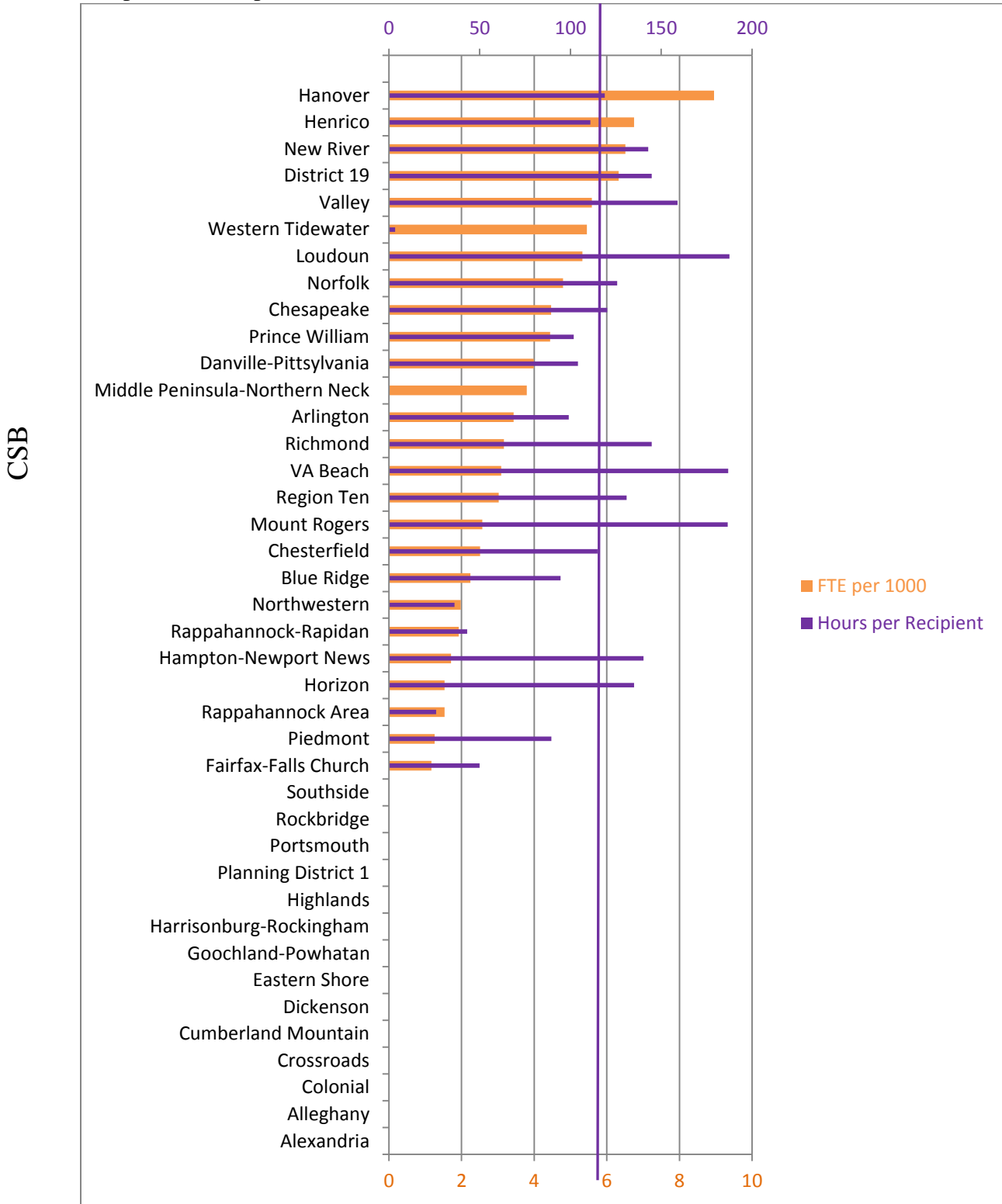
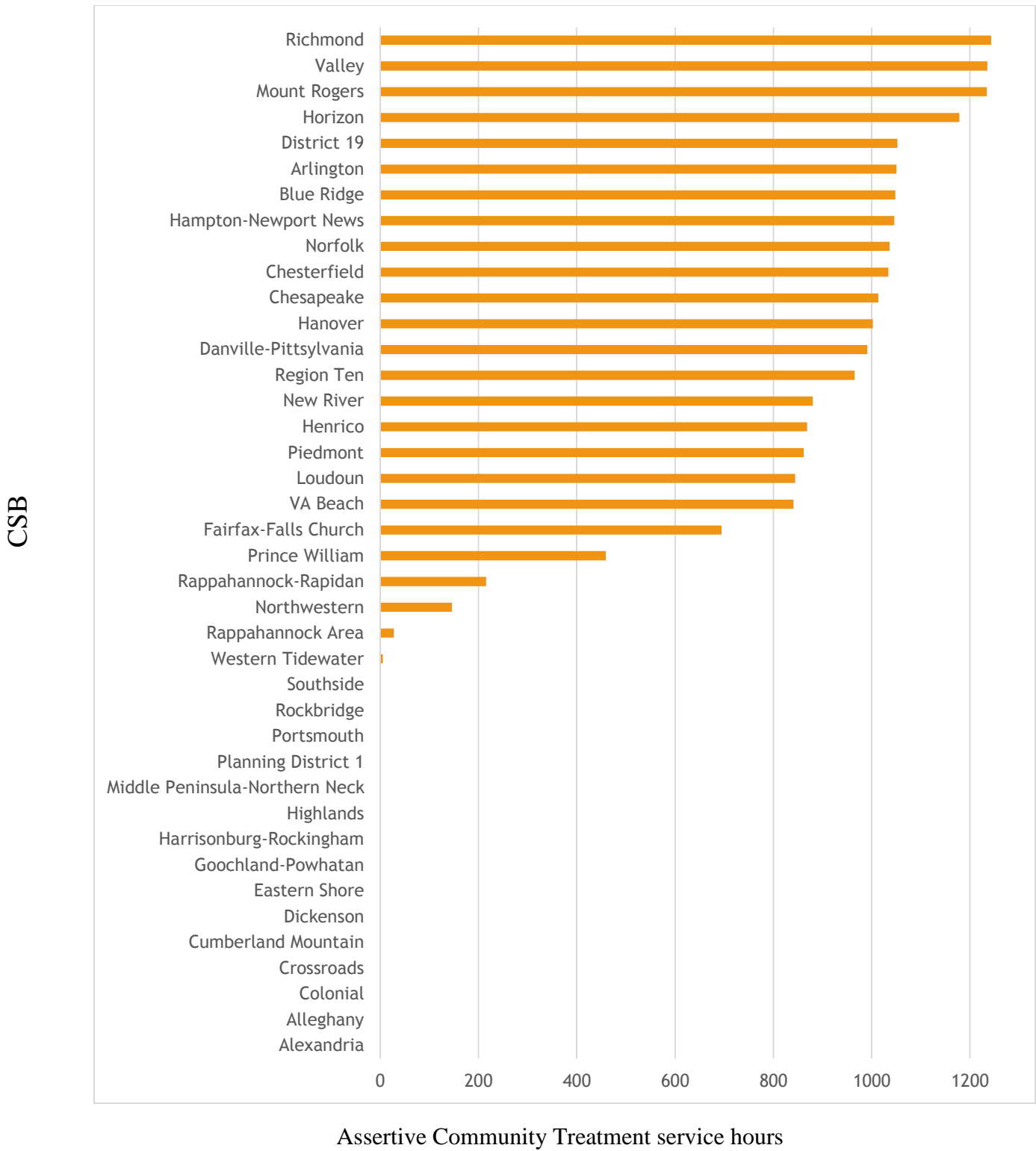


Figure 4: Assertive Community Treatment service hours per FTE staff



### **III. Analysis of Mental Health Service Expenditures**

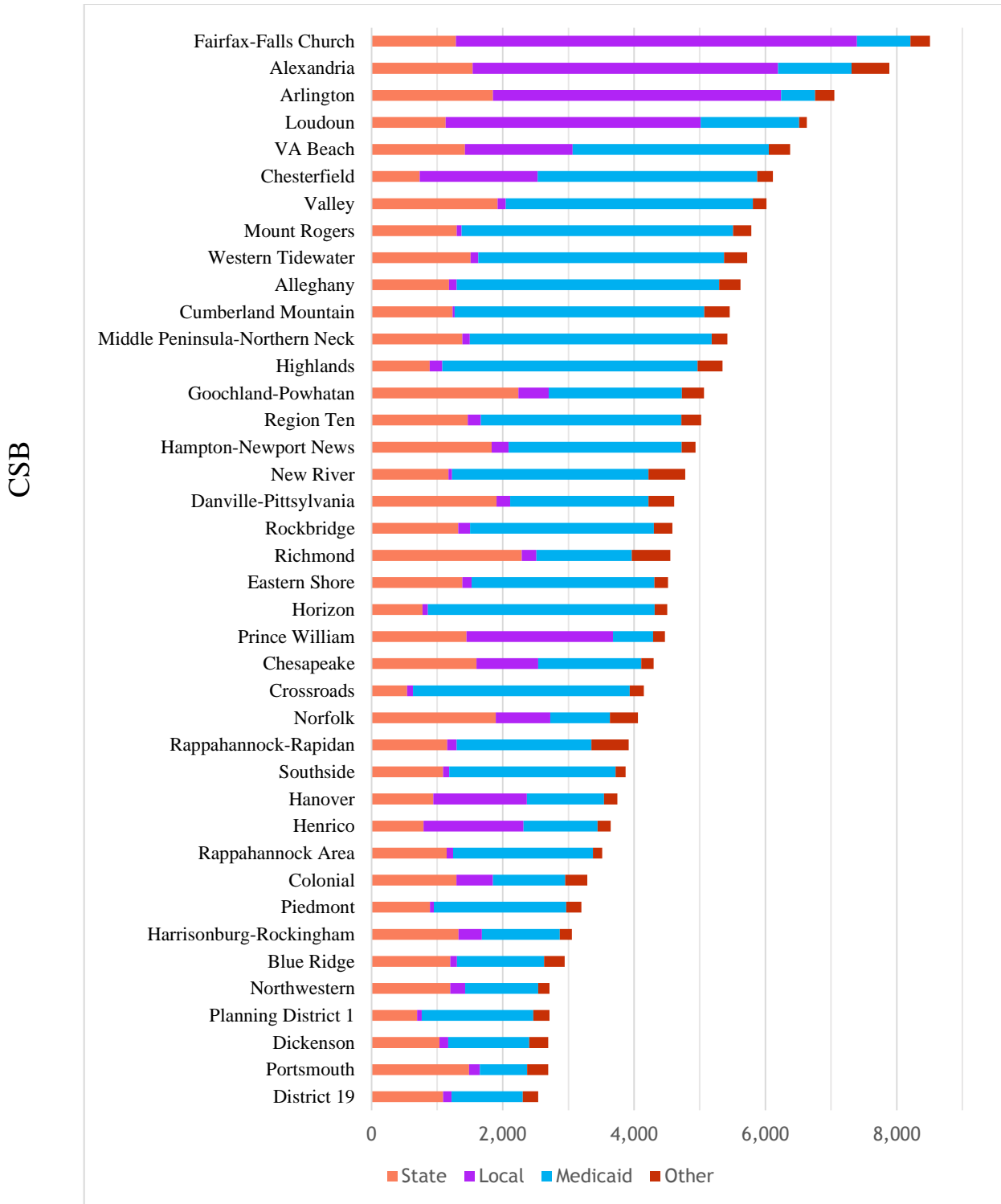
Figure 7 shows money spent on both direct and indirect costs (e.g. administrative), per CSB services recipient, per year. The share of CSB budgets covered by state general funds ranges from 12% in Chesterfield to 55% in Portsmouth. The share covered by local funds ranges from 0.6%, in Cumberland Mountain to 71% in Fairfax. Medicaid coverage ranges from 7% in Arlington to 79% in Crossroads. State CSB funding per person ranges from \$543 in Crossroads to \$2,289 in Richmond. Local CSB funding per person ranges from no money \$31 in Cumberland Mountain to \$6,109 in Fairfax. Medicaid CSB reimbursements per person range from \$518 in Arlington to \$4,136 in Horizon.

For many of the services offered by the CSBs, capacity per recipient was analyzed to determine whether or not it was related to CSB characteristics. Catchment area population, MH spending, overall CSB budget, rurality, CSB type and Medicaid dependence, were the characteristics investigated.

Rurality is determined based on population density. A CSB is considered rural if the catchment area has fewer than 200 people per square mile, or urban if it has at least 200 people per square mile. Medicaid dependence is the percentage of mental health funding that comes from Medicaid reimbursements.

Mental health expenditures per person had a moderate, positive correlation with both assertive community treatment coverage ( $r=0.54$ ,  $p=0.0003$ ) and outpatient coverage ( $r=0.47$ ,  $p=0.002$ ). Supportive residential coverage had a weak, positive correlation with mental health expenditures ( $r=0.35$ ,  $p=0.0258$ ). Mental health expenditures were moderately correlated with the number of case managers per 100 people ( $r=0.50$ ,  $p=0.001$ ). Medicaid dependence was also positively associated with case manager coverage ( $F=5.35$ ,  $p=0.0264$ ), when controlling for mental health expenditures. None of the other service capacities had a statistically significant association with any of the measured CSB characteristics.

Figure 5: CSB Expenditures, per service recipient, by source of funding



Dollars spent per CSB services recipient

#### IV: Funding across CSB types.

There are four types of CSB in Virginia: administrative, policy-advisory, operating, and behavioral health authority (BHA). Administrative CSBs are departments within the local government. Policy advisory CSBs advise local governments on the provision of behavioral and developmental services. Operating CSBs, the most common type, are separate entities. They have varying levels of accountability to their local government. Unlike local governments with administrative or policy-advisory CSBs, a local government has no accountability for services provided by an operating CSB. Richmond has the only BHA, which functions in a manner very similar to an operating CSB, but has some additional responsibilities.

Overall local funding per person was impacted by CSB type (Table 2). Median local funding among administrative CSBs was \$1716 per recipient, while median local funding among operating CSBs was \$124 per recipient. It is important to look at total funding per CSB recipient, because the total number of recipients takes into account people who only receive emergency services. These people are never placed into a disability category for funding or accountability purposes, but money has to be taken from all three funding silos to pay for their services.

Table 2: Funding by CSB Type

CSB Type	CSB	Overall local funding per person	Localities
Administrative	Fairfax	\$6,109	N/A
	Alexandria	\$4,652	
	Arlington	\$4,388	
	Prince William	\$2,233	
	Chesterfield	\$1,796	
	Virginia Beach	\$1,640	
	Henrico	\$1,522	
	Hanover	\$1,425	
	Chesapeake	\$940	
	Norfolk	\$830	
Policy-Advisory	Loudoun	\$3,885	N/A
	Portsmouth	\$167	
Behavioral Health Authority	Richmond	\$223	Richmond
Operating CSB	Colonial	\$556	York, James City
	Goochland	\$461	Goochland, Powhatan
	Harrisonburg	\$355	Rockingham
	Newport News	\$256	Hampton, Newport News
	Northwestern	\$226	Clarke, Frederick, Page, Shenandoah, Warren, Winchester
	Danville	\$210	Danville, Pittsylvania

Region 10	\$198	Albemarle, Louisa, Charlottesville, Nelson, Fluvanna, Greene
Highlands	\$191	Bristol, Washington
Rockbridge	\$178	Bath, Buena Vista
Rapp.-Rapidan	\$143	Culpeper, Fauquier, Madison, Orange, Rappahannock
Eastern Shore	\$138	Accomack, Northampton
Dickenson	\$131	Dickenson
District 19	\$128	Colonial Hts., Dinwiddie, Emporia, Greensville, Hopewell, Petersburg, Pr.George, Surrey, Sussex
Valley	\$124	Augusta, Highland, Staunton, Waynesboro
Western Tidewater	\$119	Isle of Wight, Southampton, Suffolk
Alleghany	\$114	Alleghany
Middle Peninsula	\$112	Essex, Gloucester, King Will., Lancaster, Matthews, Middlesex, Northumberland, Richmond Co., Westmoreland
Blue Ridge	\$104	Botetourt, Craig, Roanoke, Salem
Rappahannock	\$99	Caroline, Fredericksburg, King George, Spotsylvania, Stafford.
Southside	\$95	Brunswick, Halifax, Mecklenburg
Crossroads	\$88	Amelia, Buckingham, Charlotte,
Horizon	\$80	Amherst, Appomattox, Bedford, Campbell, Lynchburg
Mt. Rogers	\$76	Bland, Carroll, Galax, Grayson, Smith, Wythe
Planning District 1	\$71	Lee, Scott, Wise
Piedmont	\$60	Franklin, Henry, Martinsville, Patrick
New River Valley	\$55	Floyd, Giles, Radford, Montgomery, Pulaski
Cumberland	\$31	Buchanan, Russell, Tazewell