



COMMONWEALTH of VIRGINIA

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COMMISSIONER

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November 17, 2021

The Honorable Janet Howell, Chair
Senate Finance and Appropriations Committee
The Honorable Luke Torian, Chair
House Appropriations Committee
Pocahontas Building
900 East Main Street
Richmond, VA 23219

Dear Senator Howell and Delegate Torian,

Item 320.V. of the 2020 Appropriations Act directs the Department of Behavioral Health and Developmental Services (DBHDS) to report on Virginia's Assertive Community Treatment programs. The language states:

The Department of Behavioral Health and Developmental Services shall report on the allocation and funding for Programs of Assertive Community Treatment (PACT) in the Commonwealth. The report shall include information on the cost of each team, the cost per individual served and the cost effectiveness of each PACT in diverting individuals from state and local hospitalization and stabilizing individuals in the community. The department shall provide the report to the Chairmen of the House Appropriations and Senate Finance Committees by November 1, of each year.

In accordance with this item, please find enclosed the combined report. Staff are available should you wish to discuss this request.

Sincerely,

Alison G. Land, FACHE

Commissioner
Department of Behavioral Health & Developmental Services

CC:

Vanessa Walker Harris, MD

Susan Massart

Mike Tweedy



Report on Item 320.V. of the 2020 Appropriations Act

Annual Report on the Allocation and Funding for Programs of
Assertive Community Treatment (PACT) in the Commonwealth

To the Chairs of the House Appropriations and Senate Finance and Appropriations
Committees

November 17, 2021

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Executive Summary

Assertive Community Treatment (ACT) is an evidence-based practice (EBP) proven to improve outcomes for people with severe mental illness. As one of the oldest and most widely researched EBPs in behavioral healthcare for people with severe mental illness, research shows that ACT reduces hospitalizations and incarceration, increases housing stability, and improves quality of life for people with the most severe symptoms of mental illness.¹ To do so, ACT utilizes a multidisciplinary, community-based team of medical, behavioral health, and rehabilitation professionals who work together to meet the needs of the individuals that they serve.

In response to the General Assembly's request to provide recent data on ACT, the Department of Behavioral Health and Development Services (DBHDS) assessed general financial figures including costs per team and costs per individual served, the program's impact on state and local hospitalization and incarceration, and the associated cost implications from diverting ACT clients from these more expensive services. DBHDS used a cohort approach to analyze the impact of PACT overtime on PACT clients admitted in FY18. The assessment of data indicated ACT services resulted in lower hospitalization and incarceration rates for individuals being served with substantial associated cost reductions.

Some of the main findings in this report supporting the value of investment in ACT services across the Commonwealth include:

- The average cost per individual served by ACT teams across the Commonwealth in FY20 was \$14,336, representing a reduction from last fiscal year.
- State hospitalization usage for all ACT served individuals admitted in FY18 was reduced by 43%, representing a cost avoidance of \$9,162,378 related to this population.
- All new FY18 ACT served individuals accounted for 23,206 state hospital bed days in the two years prior to their ACT admission, and just 13,224 in the two years post their ACT admission.
- Across the FY16, FY17, and FY18 cohorts, the ACT program contributed to an overall cost avoidance of \$29,286,086 in state hospital costs in the two years following initiation of ACT services.
- Local psychiatric hospitalization use for all ACT served individuals admitted in FY18 had a 47% reduction, which represents a cost avoidance of \$4,033,564 related to this population.
- All new FY18 ACT served individuals accounted for 10,968 local hospital psychiatric bed days in the two years prior to ACT admission, and just 5,778 in the two years post ACT admission.
- Incarceration of all ACT served individuals admitted in FY18 was reduced by 64% and represents a cost avoidance of \$938,278 related to this population.
- In the two years prior to admission to ACT, all new FY18 individuals served 15,847 days in confinement compared to only 5,645 days in the two years post entering ACT services.
- Across the FY16, FY17, and FY18 cohorts, the ACT program contributed to an overall cost avoidance of \$2,518,151 in jail costs in the two years post initiation of ACT services.

¹ For a collection of relevant research, see: UNC Institute for Best Practices. (2019). *ACT* [Research]. Retrieved from <http://www.institutebestpractices.org/act/research/>

To ensure that Virginia continues to achieve and improve upon the outcomes and cost reductions ACT has achieved to date, ongoing support and funding for not only the service itself, but also provider training, formal program fidelity evaluations, and expansion of staffing infrastructure at the state level will remain significant priorities.

Preface

This report responds to Item 320 V of 2020 Appropriation Act requiring the Department of Behavioral Health and Developmental Services (DBHDS) to submit a report on the Commonwealth's Assertive Community Treatment (ACT) programs. The language states:

The Department of Behavioral Health and Developmental Services shall report on the allocation and funding for Programs of Assertive Community Treatment (PACT) in the Commonwealth. The report shall include information on the cost of each team, the cost per individual served and the cost effectiveness of each PACT in diverting individuals from state and local hospitalization and stabilizing individuals in the community. The department shall provide the report to the Chairmen of the House Appropriations and Senate Finance Committees by November 1, of each year.

Assertive Community Treatment (ACT) Overview

Assertive Community Treatment (ACT), is an evidence-based practice (EBP) proven to improve outcomes for people with severe mental illness. The program consists of a self-contained trans-disciplinary team comprised of a team leader, a psychiatric care provider, nurses, social workers, therapists, and specialists, such as in the area of co-occurring substance use disorder treatment, employment and educational services, and recovery focused peer-support services. Team members work closely together to help adults with severe mental illness live independently in the community instead of an institution or on the streets. Some of the services provided include:

- Helping individuals find and maintain safe, affordable housing;
- Assistance with finding and maintaining meaningful, competitive employment;
- Education around mental health challenges and treatment choices;
- Assistance with harm reduction and substance use disorder recovery strategies;
- Psychiatric rehabilitation and the development of practical life skills; and
- Medication management and support

To be most effective, ACT is to be recovery-oriented, strengths-based, and person-centered. Treatment is assertive in that the team is proactive and persistent in efforts to engage, and retain in services, individuals who would likely benefit from this level of support.

Individuals who are appropriate for ACT do not benefit from receiving services across multiple, disconnected providers, thus a fundamental charge of ACT is to be the first-line (and generally sole provider) of all the services that individuals who receive ACT need. Being the single point of responsibility necessitates a higher frequency and intensity of community-based contacts, and a very low individual-to-staff ratio.

Other important characteristics of ACT programs include:

- Services are delivered in an ongoing, rather than time-limited, framework to aid the process of recovery and ensure continuity of care.
- Services are delivered according to a recovery-based philosophy of care, where the team promotes self-determination, respects the individual as expert in his or her own right, and engages peers in the process of promoting hope that the individual can experience sustained recovery from the symptoms related to their mental illness, as well as regain meaningful roles and relationships in the community.
- ACT teams assist individuals in advancing towards personal goals with a focus on enhancing community integration and regaining of valued roles (e.g. employee, spouse, parent, tenant). Because ACT teams work with individuals who may passively or actively resist services, ACT teams are expected to thoughtfully carry out planned assertive engagement techniques, which consist largely of rapport-building strategies, facilitating meeting of basic needs, and motivational interviewing techniques. These techniques are

used to identify and focus on the individual’s life goals and what they are motivated to change.

History & Development

- Virginia began providing state-funded Assertive Community Treatment in 1996 with its first “demo” ACT team.
- The number of ACT teams in Virginia has grown as funds from the General Assembly have become available. As of the last new ACT appropriation in FY17, Virginia was operating 25 full-sized ACT teams from 24 of the 40 Community Services Boards (CSBs).
- In 2016, five CSBs in the southeastern portion of the state received an additional \$200,000 in ongoing funds to create a forensic enhancement to their ACT teams, aimed at addressing the needs of this particular population.
- State funds in the amount of \$20,099,630 were provided to CSB-operated ACT teams in FY19. State funding for ACT has differed with each appropriation and varies between \$403,822 to \$850,000 for individual CSBs. State funds have never been specifically allocated for the smaller “ICT” (similar to ACT) teams or to support the non-CSB providers offering the same service.
- As a result of Project Bravo’s efforts to develop new and enhanced Medicaid rates, ICT teams (both CSB and private providers) are now able to bill the new ACT reimbursement rate and are more closely aligned with fidelity to the ACT model.

Virginia now operates 35 ACT teams out of 24 of our 40 Community Service Boards (CSBs) with another five teams being operated by non-CSB providers. Providers now have the flexibility to operate small, medium, or large teams which allows for “right-sizing” the model to reflect the specific needs and resources of each individual community.

Program Impact

The Cost of Each Team and Cost Per Individual Served

Data Source: On June 1, 2021, the Department of Behavioral Health and Developmental Services (DBHDS) distributed a survey to all of Virginia’s CSBs offering ACT services via email. The questions were as follows:

1. How many years has your CSB offered ACT services as of 6/30/2020?
2. What is the total amount of expenditures this CSB had for ACT services for SFY2020?
3. How much revenue did the CSB receive from its ACT services for SFY2020 by the following categories?
 - a. Federal Funds:
 - b. State Funds:
 - c. Local Funds:
 - d. Medicaid:
 - e. Medicare:
 - f. Private Insurance and Other Payers, Fees:

The results are tabulated in Table 1 below.

The average cost per individual served by ACT teams in FY 2020 was \$14,336 (see Table 1 below), which represents a slight reduction in average cost per individual from the FY 2019 cost per person average. Figure 1 contrasts the cost per person across ACT teams in FY 2018, FY 2019, and FY 2020. The chart illustrates that overall, the variance in average cost across sites narrowed between FY 2019 and FY 2020 and that the inter-quartile range dropped by about \$2,000. The upper most point was slightly higher this year, which was impacted by one significant outlier – the next highest cost per individual average that year was over \$5,000 less, at \$19,319.

Table 1: Virginia ACT Team Costs

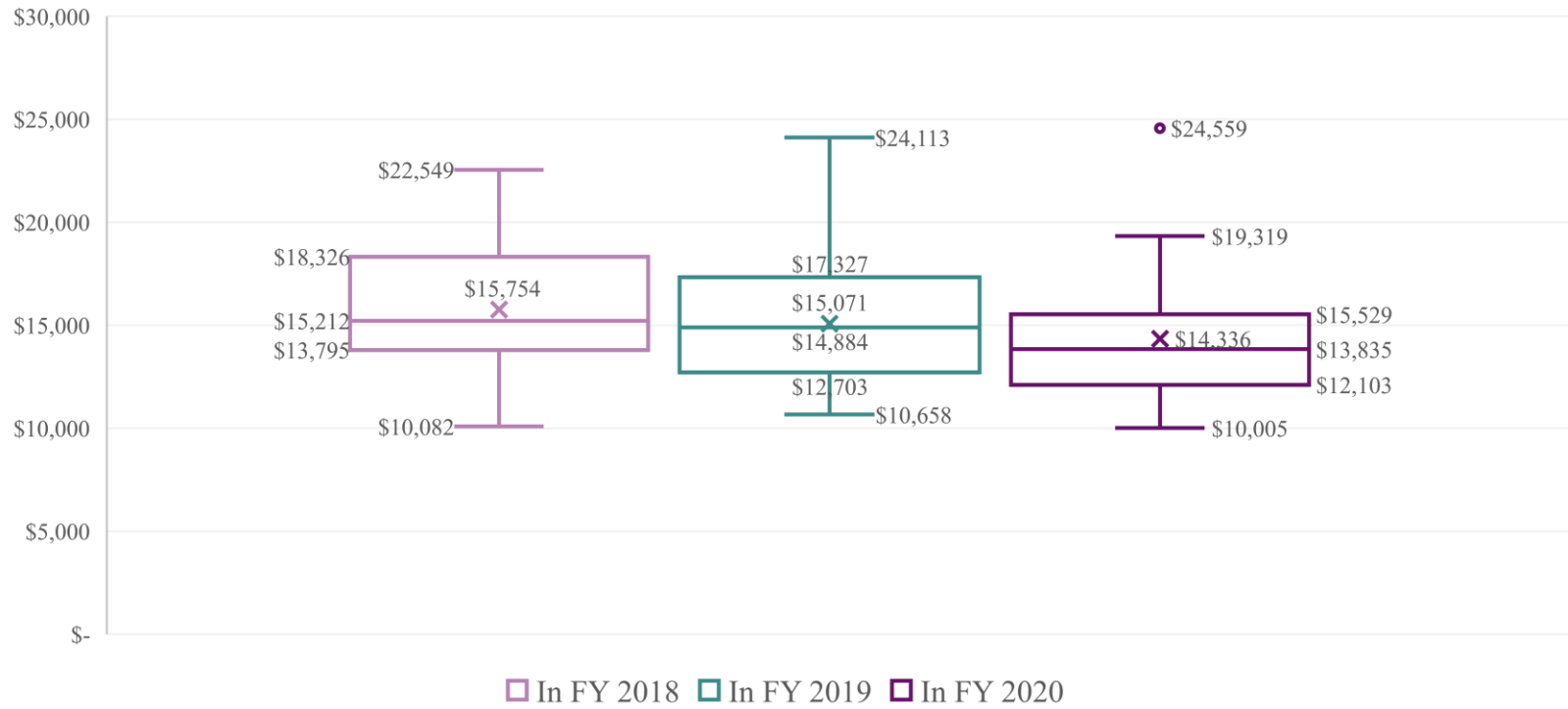
Name of CSB	Years Offering ACT a/o 6/30/20	Total Expenditures - ACT Services FY2020	Total Revenue - ACT Services FY2020	State	Federal	Local	Medicaid	Medicare	Private Insurance and Other Payers, Fees	Individuals Served in FY2020	Change from FY2019	Avg. Cost PP in FY2020	Change from FY2019
Alexandria CSB	4	\$1,153,318	\$1,153,318	\$850,000	\$0	\$0	\$303,318	\$0	\$0	77	+1	\$14,978	-\$36
Arlington County CSB	20	\$1,504,328	\$1,504,328	\$665,000	\$70,547	\$357,883	\$407,837	\$3,061	\$0	101	-1	\$14,894	+\$2,163
Blue Ridge Behavioral Healthcare	21	\$1,102,007	\$1,011,564	\$702,620	\$56,158	\$0	\$228,302	\$3,153	\$21,331	99	+5	\$11,131	-\$325
Chesapeake Integrated Behavioral Healthcare	15	\$1,951,213	\$1,951,213	\$1,008,030	\$15,713	\$397,563	\$486,491	\$3,697	\$39,719	101	+11	\$19,319	-\$1,514
Colonial Behavioral Health	3	\$1,424,373	\$1,606,298	\$1,166,587	\$0	\$0	\$439,651	\$0	\$60	81	+13	\$17,585	-\$58
Danville-Pittsylvania Community Services	16	\$1,194,687	\$1,239,287	\$853,364	\$6,932	\$0	\$374,747	\$0	\$4,244	92	-2	\$12,986	-\$420
District 19 CSB	20	\$1,706,116	\$1,706,116	\$956,903	\$217,464	\$0	\$520,150	\$0	\$11,599	94	+6	\$18,150	-\$214
Fairfax-Falls Church CSB	22	\$1,715,756	\$1,715,756	\$967,574	\$0	\$408,474	\$0	\$0	\$339,708	117	+11	\$14,665	-\$900
Hampton-Newport News CSB	22	\$1,462,177	\$1,770,456	\$730,731	\$70,197	\$0	\$952,260	\$14,835	\$2,433	107	-2	\$13,665	-\$2,507
Henrico Area Mental Health & Developmental Services	24	\$1,665,784	\$1,665,784	\$500,000	\$428,146	\$156,307	\$578,873	\$1,511	\$947	146	+4	\$11,409	+\$291
Horizon Behavioral Health	22	\$1,540,579	\$1,549,958	\$700,000	\$56,158	\$0	\$776,600	\$921	\$16,279	110	+11	\$14,005	+\$1,149

Name of CSB:	Years Offering ACT a/o 6/30/2020	Total Expenditures - ACT Services FY2020	Total Revenue - ACT Services FY2020	Federal:		Medicaid:	Medicare:	Private Insurance and Other Payers, Fees:	Individuals Served in FY2020	Change from FY2019	Average Cost PP in FY2020	Change from FY2019	
				State:	Local:								
Middle Peninsula - Northern Neck CSB	4	\$931,738	\$1,102,976	\$750,000	\$37,438	\$0	\$296,348	\$0	\$19,190	60	+4	\$15,529	-\$330
Mount Rogers CSB*	15	\$1,281,982	\$1,612,085	\$835,000	\$5,616	\$1,500	\$768,184	\$0	\$1,785	90	+8	\$14,244	-\$1,438
New River Valley Community Services*	20	\$3,897,964	\$4,571,255	\$395,850	\$192,409	\$3,580	\$3,975,215	\$0	\$4,201	233	+49	\$16,729	-\$605
Norfolk CSB	21	\$1,827,473	\$1,847,017	\$1,152,500	\$56,158	\$267,929	\$359,437	\$3,129	\$7,864	141	+12	\$12,961	-\$1,576
Northwestern CSB	5	\$1,463,576	\$1,443,972	\$850,000	\$0	\$0	\$590,737	\$0	\$3,236	120	+6	\$12,196	+\$1,538
Piedmont CSB	3	\$1,186,138	\$1,215,860	\$850,000	\$0	\$0	\$365,746	\$25	\$89	110	+6	\$10,783	-\$334
Prince William County CSB	4	\$1,645,482	\$1,645,482	\$850,000	\$0	\$502,974	\$277,381	\$4,988	\$10,139	67	-7	\$24,559	+\$447
Rappahannock Area CSB	4	\$1,062,360	\$1,261,026	\$850,000	\$0	\$0	\$409,954	\$0	\$1,071	88	-7	\$12,072	-\$621
Region Ten CSB	20	\$1,220,641	\$1,339,997	\$700,000	\$56,158	\$0	\$572,254	\$617	\$10,968	122	+34	\$10,005	-\$4,748
Richmond Behavioral Health Authority	23	\$1,630,555	\$1,809,673	\$863,538	\$268,052	\$0	\$678,083	\$0	\$0	105	+5	\$15,529	+\$4,056
Valley CSB	22	\$1,158,118	\$1,147,413	\$630,000	\$82,364	\$10,824	\$397,617	\$0	\$26,608	100	+20	\$11,581	-\$6,443
Virginia Beach Human Services	6	\$1,397,115	\$1,397,115	\$1,050,000	\$0	\$0	\$322,816	\$0	\$24,299	109	+2	\$12,818	-\$176

Western Tidewater CSB	5	\$1,373,828	\$1,466,765	\$850,000	\$0	\$0	\$616,141	\$0	\$624	112	+34	\$12,266	-\$5,038
Average:	14.2	\$1,520,721	\$1,613,946	\$821,987	\$67,48	\$87,793	\$612,423	\$1,497	\$22,766	108	+9	\$14,336	-\$735

*New River Valley CS and Mount Rogers
CSB each have two separate ACT teams

Figure 1: Range of ACT Team's Average Cost Per Person Served



Cost Effectiveness of ACT in Diverting Individuals from Hospitalization

State Hospitals

DBHDS assessed hospitalization cost effectiveness by comparing individuals' number of bed days (and associated costs) in the two years prior to ACT admission with the number of bed days (and associated costs) the two years following admission to ACT. In FY18, ACT programs admitted 470 new individuals across the Commonwealth. The entire group of new ACT admits in FY18 accounted for a total of 23,206 state hospital bed days in the two years prior to admission to an ACT program. Total cost for these bed days was an estimated \$21,300,555.

In the two years post their first ACT service in FY18, the group used only 13,224 bed days (estimated cost \$12,138,177). **This represents a 43% reduction in state hospitalization for this population, which signifies a cost avoidance of \$9,162,378 (see Figure 2).** In the previous two annual reports, we reported that the FY16 and FY17 ACT admits collectively represented a cost avoidance of \$20,123,708 in state hospital costs in the two years post ACT admission. Thus, in total, the **ACT program contributed to an overall cost avoidance of \$29,286,086 in state hospital costs for the three cohort groups in the two years post initiation of ACT services.**

The costs are based off a \$917.89 average daily cost per patient figure, which is the average year-to-date cost per patient day rate from the June 2021 DBHDS Monthly Cost Report. This figure excludes the three training centers and Commonwealth Center for Children and Adolescents (CCCA) that do not serve ACT-related individuals to calculate the average.

Table 2 below demonstrates the impact of all ACT teams in diverting individuals served by ACT services in FY18 from state hospitalization. Nineteen of the 24 CSBs with ACT teams (79%) exhibited a net reduction in state hospital bed days for their FY18 cohort, including 14 CSBs (58%) that contributed to a reduction greater than 50%.

State Hospitalization information comes from DBHDS' AVATAR Database. This is the client-level DBHDS inpatient facility database that includes demographic, clinical, and service information about individuals receiving inpatient services in DBHDS hospitals.

ACT individuals for this study are designated as receiving ACT services by CSBs in DBHDS' CCS3 Database – Virginia's unique, consumer-level data collection system that is used in partnership with CSBs statewide. CCS3 is a compilation of demographic, clinical, and service utilization data for all individuals receiving services from CSBs.

**FIGURE 2: REDUCTION IN STATE HOSPITAL
BED DAYS AND ASSOCIATED COSTS - ALL
ACT CLIENTS ADMITTED IN FY18**

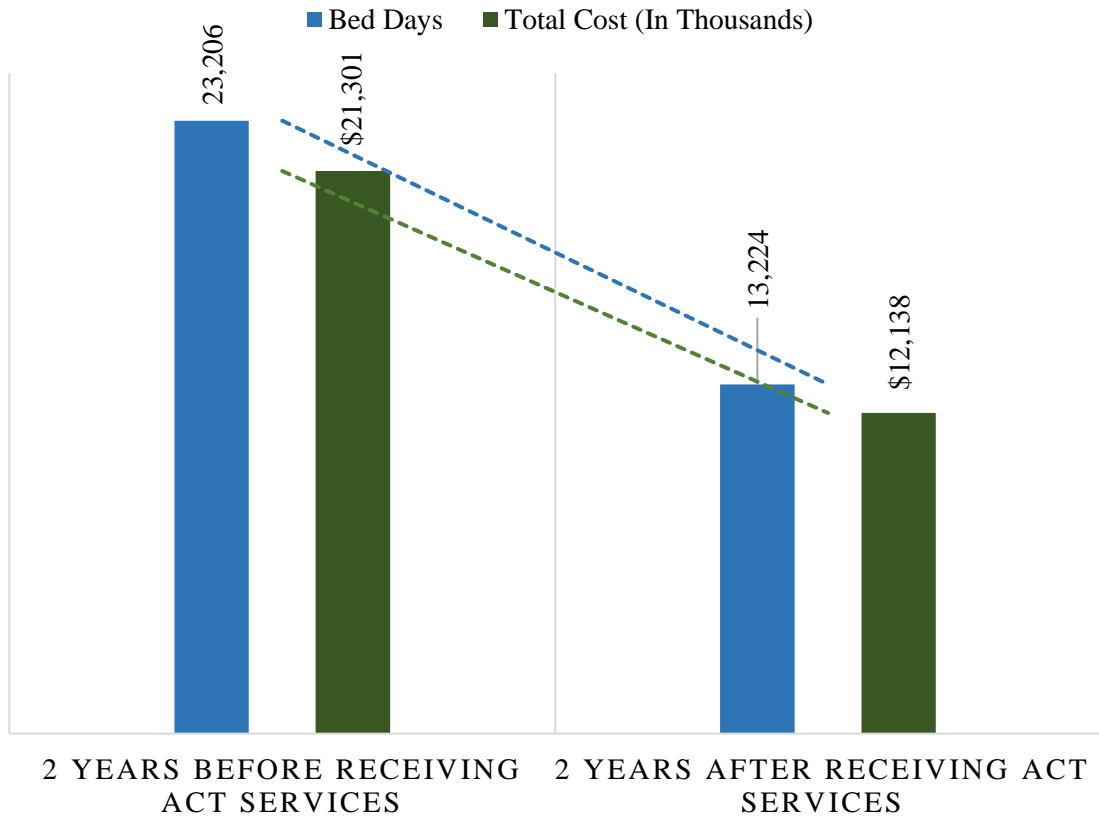


Table 2: State Hospital Bed Days by ACT Team

Name of CSB	Two Years Before ACT	Two Years After ACT	Difference	Cost Reduction
Alexandria CSB	2019	687	-1332 (↓66%)	\$1,222,629
Arlington County CSB	572	369	-203 (↓36%)	\$186,332
Blue Ridge Behavioral Healthcare	1205	1132	-73(↓6%)	\$67,006
Chesapeake Integrated Behavioral Healthcare	140	67	-73 (↓52%)	\$67,006
Colonial Behavioral Health	1164	305	-859 (↓74%)	\$788,468
Danville-Pittsylvania Community Services	1062	55	-1007 (↓95%)	\$924,315
District 19 CSB	38	87	49 (↑180%)	\$(44,977)
Fairfax-Falls Church CSB	561	1572	1011 (↑141%)	\$(927,987)
Hampton-Newport News CSB	2146	624	-1522 (↓71%)	\$1,397,029
Henrico Area Mental Health & Developmental Services	1095	610	-485 (↓44%)	\$445,177
Horizon Behavioral Health	446	192	-254 (↓57%)	\$233,144
Middle Peninsula - Northern Neck CSB	466	10	-456 (↓98%)	\$418,558
Mount Rogers CSB	626	9	-617 (↓99%)	\$566,338
New River Valley Community Services	260	30	-230 (↓89%)	\$211,115
Norfolk CSB	1609	768	-841 (↓52%)	\$771,945
Northwestern CSB	1295	843	-452(↓35%)	\$414,886
Piedmont CSB	496	637	141 (↑28%)	\$(129,422)
Prince William County CSB	884	695	-189 (↓21%)	\$173,481
Rappahannock Area CSB	1784	410	-1374 (↓77%)	\$1,261,181
Region Ten CSB	795	381	-414 (↓52%)	\$380,006
Richmond Behavioral Health Authority	403	117	-286 (↓71%)	\$262,517
Valley CSB	494	184	-310 (↓63%)	\$284,546
Virginia Beach Human Services	340	371	31 (↑9%)	\$(28,455)
Western Tidewater CSB	814	1379	565 (↑69%)	\$(518,608)
CSB Unassigned or Unknown at Time of Discharge from Hospital	2492	1690	-802 (↓45%)	\$736,148
Total	23,206	13,224	-9,982 (↓43%)	\$9,162,378

Local Hospitals

DBHDS assessed local hospitalization cost effectiveness by comparing individuals' number of psychiatric bed days² (and associated costs) in the two years prior to ACT admission with the number of bed days (and associated costs) the two years post admission to ACT. In FY18, ACT programs admitted 470 new individuals across the Commonwealth. The entire group of new ACT admits in FY18 accounted for a total of 10,968 local hospital psychiatric bed days in the two years prior to admission to an ACT program. Total cost for these bed days was an estimated \$8,524,110.

In the two years following their first ACT service in FY18, these individuals used only 5,778 psychiatric bed days (estimated cost \$4,490,546). **This represents a 47% reduction in local psychiatric hospitalization for this population, signifying a cost avoidance of \$4,033,564 (see Figure 3).**

The costs are based on DMAS' FY21 Local Hospital Psychiatric Operating Rate per Day's state average of \$717.18.³

Table 3 below demonstrates the impact of all ACT teams in diverting ACT served individuals admitted in FY18 from local psychiatric hospitalization. *Twenty-two of the 24 CSBs with ACT teams demonstrated a net reduction in local hospital psychiatric bed days for their FY18 cohort, including 17 (71%) that contributed to a reduction greater than 30%.*

ACT individuals for this study are designated as receiving ACT services by CSBs in DBHDS' CCS3 Database - Virginia's unique, consumer-level data collection system that is used in partnership with CSBs statewide. CCS3 is a compilation of demographic, clinical, and service utilization data for all individuals receiving services from CSBs.

Local hospital use was discerned through Virginia Health Information's (VHI) patient level database system, which includes patient demographic, administrative, clinical and financial information on every discharge that occurs in Virginia licensed hospitals.

² Psychiatric bed days are defined as the following three Major Diagnostic Categories (MDC) at intake: 19 Mental Diseases and Disorders, 20 Alcohol/Drug Use or Induced Mental Disorders, and 21 Injuries, Poison and Toxic Effect of Drugs

³ Department of Medical Assistance Services. (2021). *Hospital Rates* [DRG and Psychiatric Rates]. Retrieved from <https://www.dmas.virginia.gov/for-providers/general-information/rate-setting/hospital-rates/>

FIGURE 3: REDUCTION IN LOCAL PSYCHIATRIC HOSPITAL BED DAYS AND ASSOCIATED COSTS - ALL ACT CLIENTS ADMITTED IN FY18

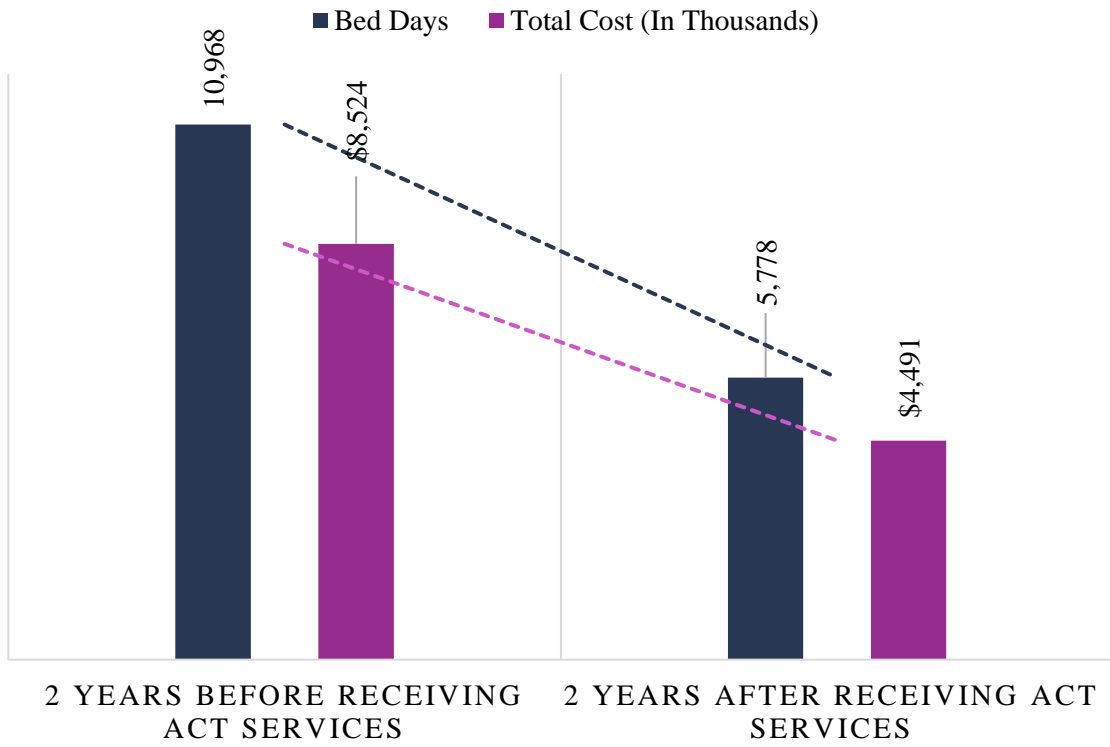


Table 3: Local Hospital Psychiatric Bed Days by ACT Team

Name of CSB	Two Years Before ACT	Two Years After ACT	Difference	Cost Reduction
Alexandria CSB	954	404	-550 (↓58%)	\$427,449
Arlington County CSB	499	302	-197 (↓39%)	\$153,104
Blue Ridge Behavioral Healthcare	576	437	-139 (↓24%)	\$108,028
Chesapeake Integrated Behavioral Healthcare	273	224	-49 (↓18%)	\$38,082
Colonial Behavioral Health	969	371	-598 (↓62%)	\$464,754
Danville-Pittsylvania Community Services	410	40	-370 (↓90%)	\$287,557
District 19 CSB	125	16	-109 (↓87%)	\$84,713
Fairfax-Falls Church CSB	426	263	-163 (↓38%)	\$126,680
Hampton-Newport News CSB	204	56	-148 (↓73%)	\$115,023
Henrico Area Mental Health & Developmental Services	643	337	-306 (↓48%)	\$237,817
Horizon Behavioral Health	226	38	-188 (↓83%)	\$146,110
Middle Peninsula - Northern Neck CSB	607	305	-302 (↓50%)	\$234,708
Mount Rogers CSB	46	43	-3 (↓7%)	\$2,332
New River Valley Community Services	67	93	26 (↑39%)	\$(20,207)
Norfolk CSB	728	445	-283 (↓39%)	\$219,942
Northwestern CSB	484	351	-133 (↓27%)	\$103,365
Piedmont CSB	271	117	-154 (↓57%)	\$119,686
Prince William County CSB	857	407	-450 (↓53%)	\$349,731
Rappahannock Area CSB	874	459	-415 (↓47%)	\$322,530
Region Ten CSB	352	397	45 (↑13%)	\$(34,973)
Richmond Behavioral Health Authority	230	110	-120 (↓52%)	\$93,262
Valley CSB	131	123	-8 (↓6%)	\$6,217
Virginia Beach Human Services	369	83	-286 (↓78%)	\$222,273
Western Tidewater CSB	647	357	-290 (↓45%)	\$225,382
Total	10,968	5,778	-5,190 (↓47%)	\$4,033,564

Cost Effectiveness of ACT in Reducing Incarceration

DBHDS assessed reduction in incarceration and corresponding cost effectiveness by comparing individuals' number of total days in confinement in the two years prior to ACT admission with the number of total days in confinement the two years post admission to ACT. In FY18, 470 individuals were newly admitted to ACT programs across the Commonwealth. The entire group of new ACT admits in FY18 served 15,847 days in confinement during the two years prior to admission to an ACT program. Total cost for these confinement days is an estimated \$1,457,449.

In the two years post their first ACT service in FY18, these individuals served only 5,645 days in confinement (cost \$519,171), for a reduction in time spent in confinement and associated costs of 64% (cost avoidance of \$938,278 in expected costs) (see Figure 4). This represents a significant improvement from the 51% reduction exhibited by the FY17 cohort. In the previous two annual reports, we reported that the FY16 and FY17 ACT admits collectively represented a cost avoidance of \$1,579,873 in jail costs in the two years post ACT admission. Thus, in total, the **ACT program contributed to an overall cost avoidance of \$2,518,151 in jail costs for the three cohort groups in the two years post initiation of ACT services.**

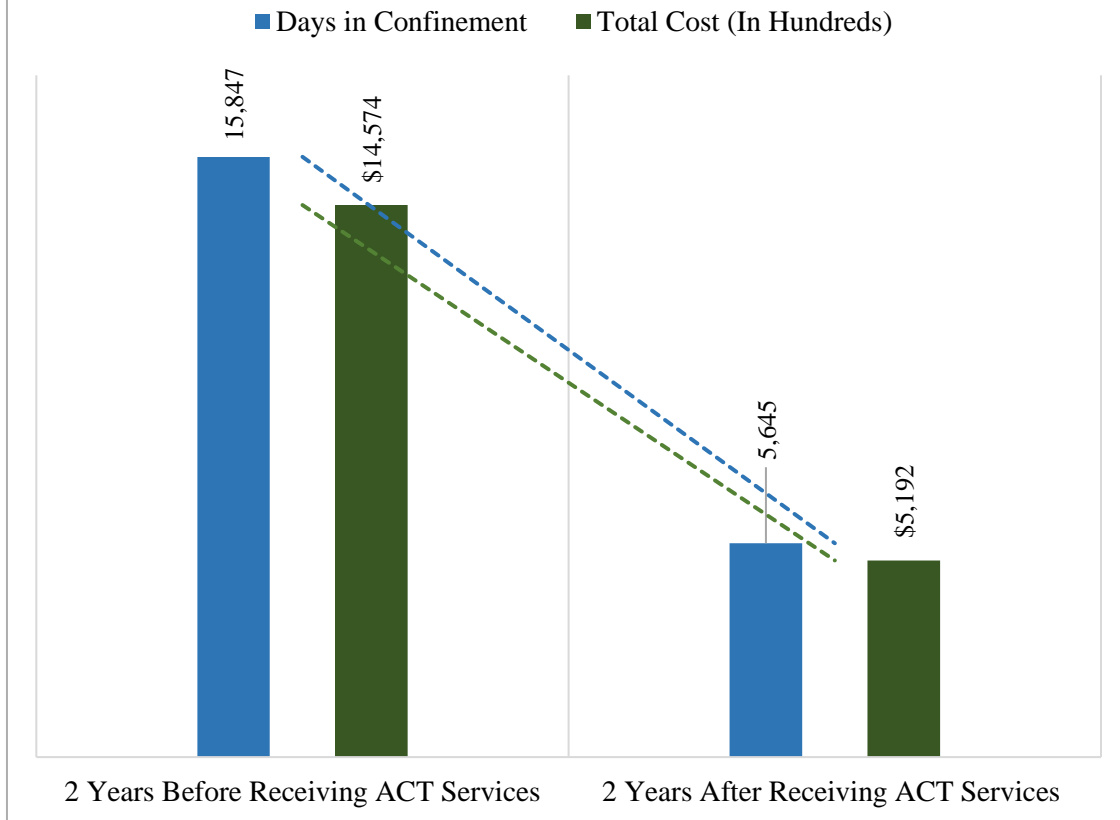
The costs are based off a \$91.97 average total daily cost per inmate day figure, provided in the most recent Commonwealth of Virginia Compensation Board Report to the General Assembly: *FY2019 Jail Cost Report*.⁴

Confinement data came from Virginia State Compensation Board's Local Inmate Data System (LIDS). The primary function of LIDS is to track persons entering and exiting local and regional jails in the Commonwealth of Virginia for the purpose of determining appropriate per diem payments. LIDS contains detailed information about persons incarcerated in Virginia's jails, including demographic information, court information, charges, and legal status.

ACT individuals for this study are designated as receiving ACT services by CSBs in DBHDS' CCS3 Database - Virginia's unique, consumer-level data collection system that is used in partnership with CSBs statewide. CCS3 is a compilation of demographic, clinical, and service utilization data for all individuals receiving services from CSBs.

⁴ Commonwealth of Virginia Compensation Board. (2020). *Report to the General Assembly: FY2019 Jail Cost Report – Annual Jail Revenues and Expenditures Report*. Richmond, VA.

FIGURE 4: REDUCTION IN DAYS SPENT IN CONFINEMENT AND ASSOCIATED COSTS - ALL ACT CLIENTS ADMITTED IN FY18



Conclusion

In what started as a small state-grant for a single pilot ACT team in 1996, ACT has grown to 35 teams across the Commonwealth. In FY20, ACT served 2,582 individuals who required highly proactive and persistent support through ACT services. On average, it costs the state \$14,336 per individual to provide this level of care. This investment has produced significant outcomes. The program reduces ACT-served individuals' state hospitalization, evidenced by the new FY18 ACT population exhibiting a 43% reduction in bed days over two years, which resulted in avoiding an estimated \$9,162,378 in estimated costs. Similarly, the data suggests that the ACT program reduces the demand on local/private hospitals with the new FY18 ACT population needing 47% less bed days, signifying an estimated cost avoidance of \$4,033,564. Furthermore, findings indicate that time spent in confinement is drastically reduced, with our assessment showing individuals' confinement days cut by nearly two-thirds after initiation of ACT services.

Virginia's data is reflective of other research showing that Assertive Community Treatment (ACT) can produce better outcomes for individuals served and reduce costs for the broader

behavioral healthcare services system.⁵ However, the effectiveness of Virginia’s ACT programs will continue to depend on the quality of the particular program delivering this service, and how faithfully they implement best practice elements (known as “program fidelity”).

To that end, DBHDS continues its partnership with national ACT experts from the University of North Carolina's Institute for Best Practices, including the co-author of the widely used *Tool for Measurement of Assertive Community Treatment (TMACT)*⁶ to conduct formal fidelity evaluations of Virginia's ACT programs. Prior to the impact of the COVID-19 pandemic, the DBHDS ACT Coordinator and evaluators from the UNC Institute for Best Practices had completed TMACT evaluations of six separate CSB ACT programs. On-site fidelity evaluations currently remain on hold, however, they are slated to resume on or around July 2022.

Given the success of the Virginia ACT teams at reducing hospitalization, ACT was selected as one of six priority services for Project Bravo, a joint initiative between DMAS and DBHDS to ensure that Medicaid behavioral health services are high quality, trauma informed, evidence based, and cost effective. To this end, a rate study was completed during calendar year 2019, and funding for rate changes and regulatory authority for DBHDS licensing changes were included in the Governor’s budget for the current (2021-2022) biennium and passed by the General Assembly. A new ACT rate, which is based on a per diem rate with tiers of fidelity to the ACT model, went into effect on July 1, 2021. Regulatory changes to allow small, medium, and large teams to develop (to ensure that ACT can be available across geographically diverse areas) were approved which has allowed both smaller CSBs and private providers to continue or stand-up new programs more closely aligned with ACT fidelity.

To ensure that Virginia continues to achieve and improve upon the outcomes and cost reductions ACT has achieved to date, ongoing support and funding for not only the service itself, but also provider training, formal program fidelity evaluations, and expansion of staffing infrastructure at the state level will remain significant priorities.

⁵ For a collection of relevant research, see: UNC Institute for Best Practices. (2019). *ACT* [Research]. Retrieved from <http://www.institutebestpractices.org/act/research/>

⁶ Monroe-DeVita, M., Moser, L.L. & Teague, G.B. (2013). The Tool for Measurement of Assertive Community Treatment (TMACT). In M. P. McGovern, G. J. McHugo, R. E. Drake, G. R. Bond, & M. R. Merrens. (Eds.), *Implementing Evidence-Based Practices in Behavioral Health*. Center City, MN: Hazelden.

Appendix

Charts from Past Annual Reports

Note: In past General Assembly reports, the ACT program was referred to as the Program of Assertive Community Treatment (PACT).

State Hospital Bed Day Reduction

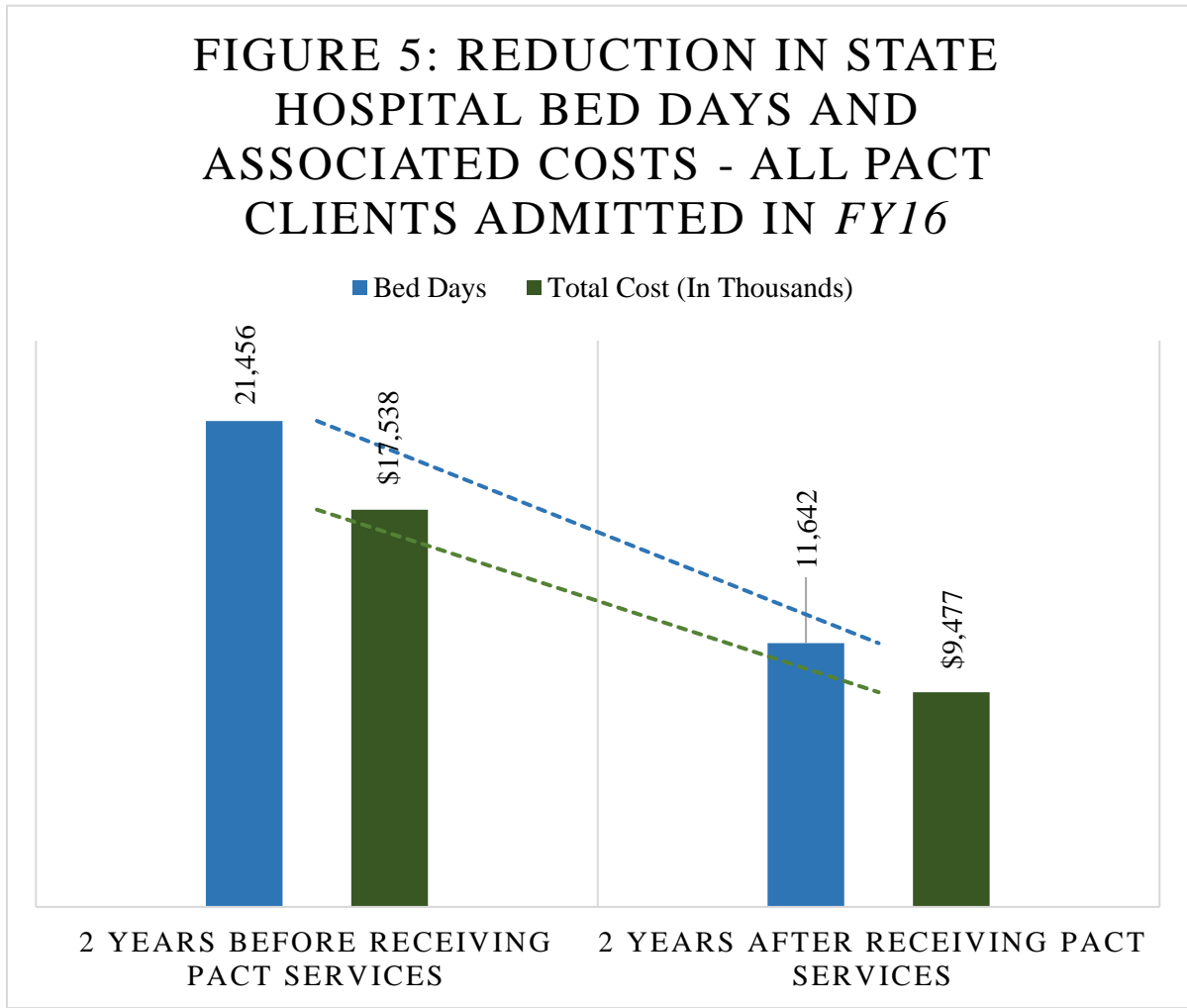
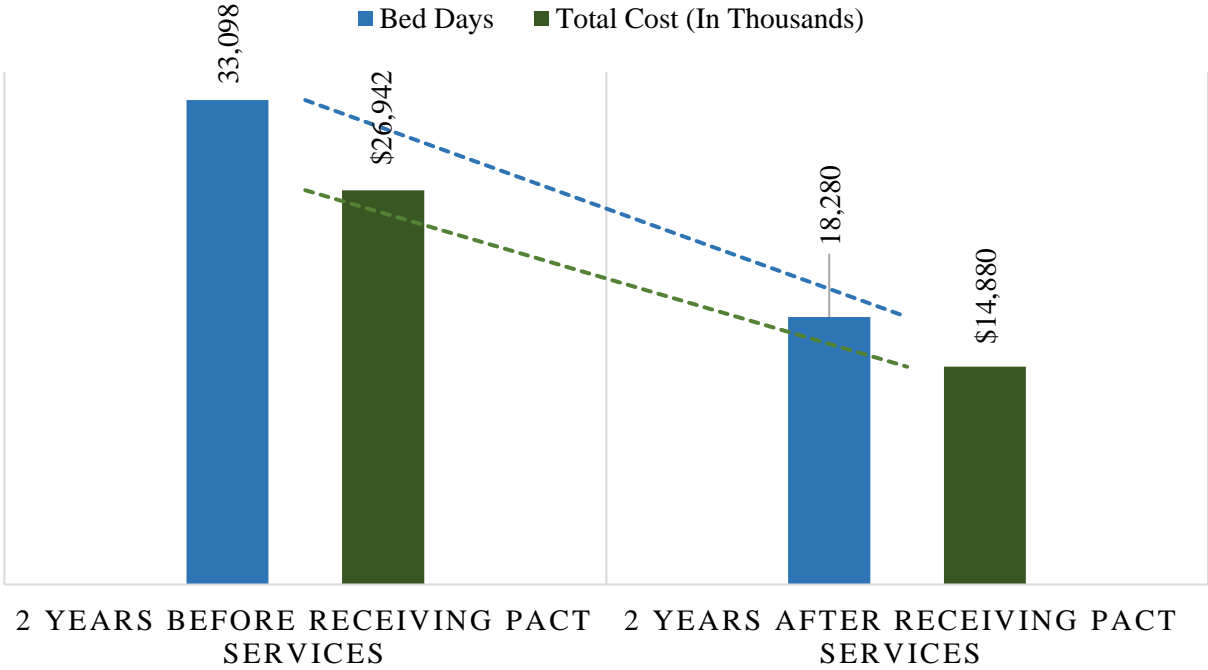
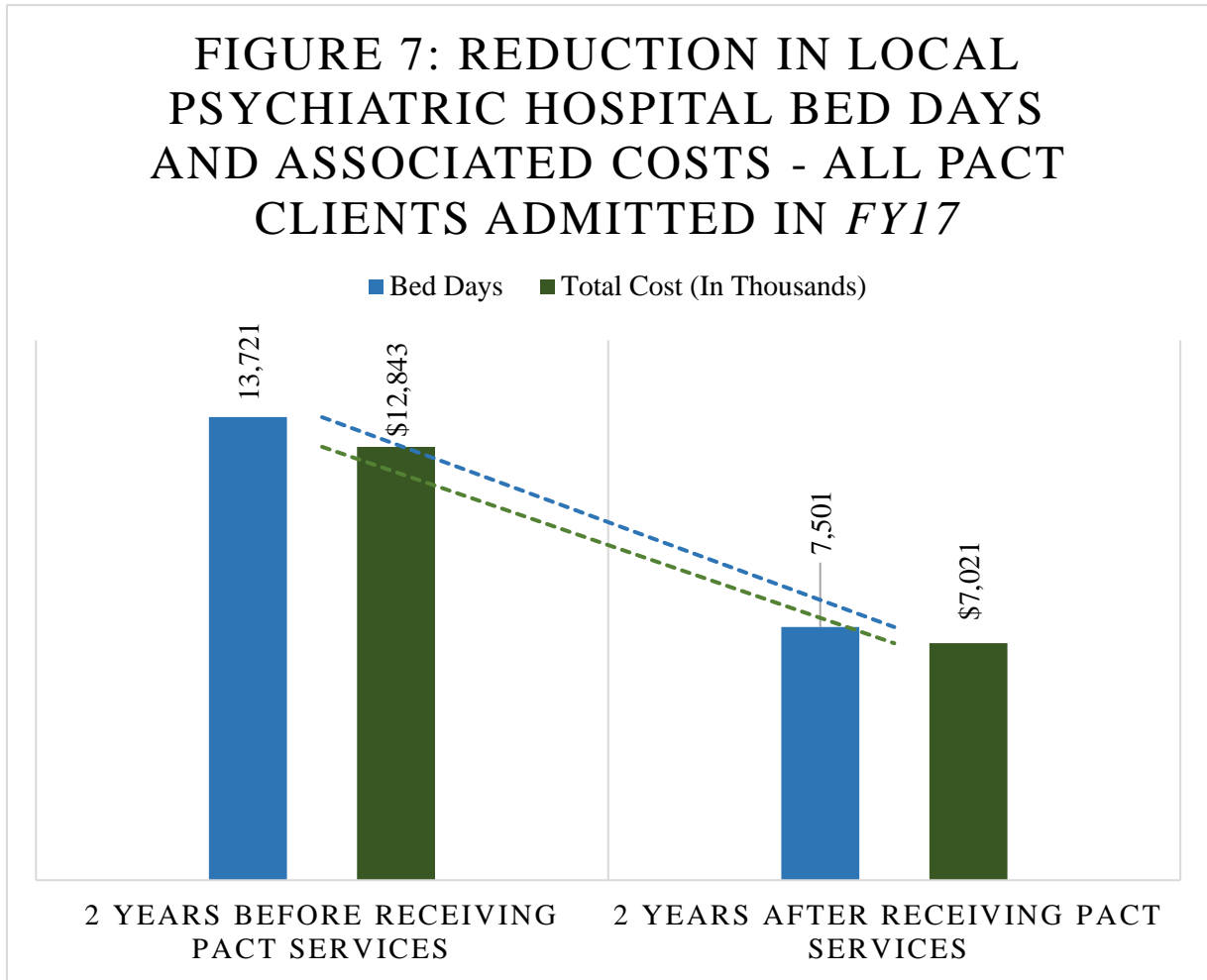


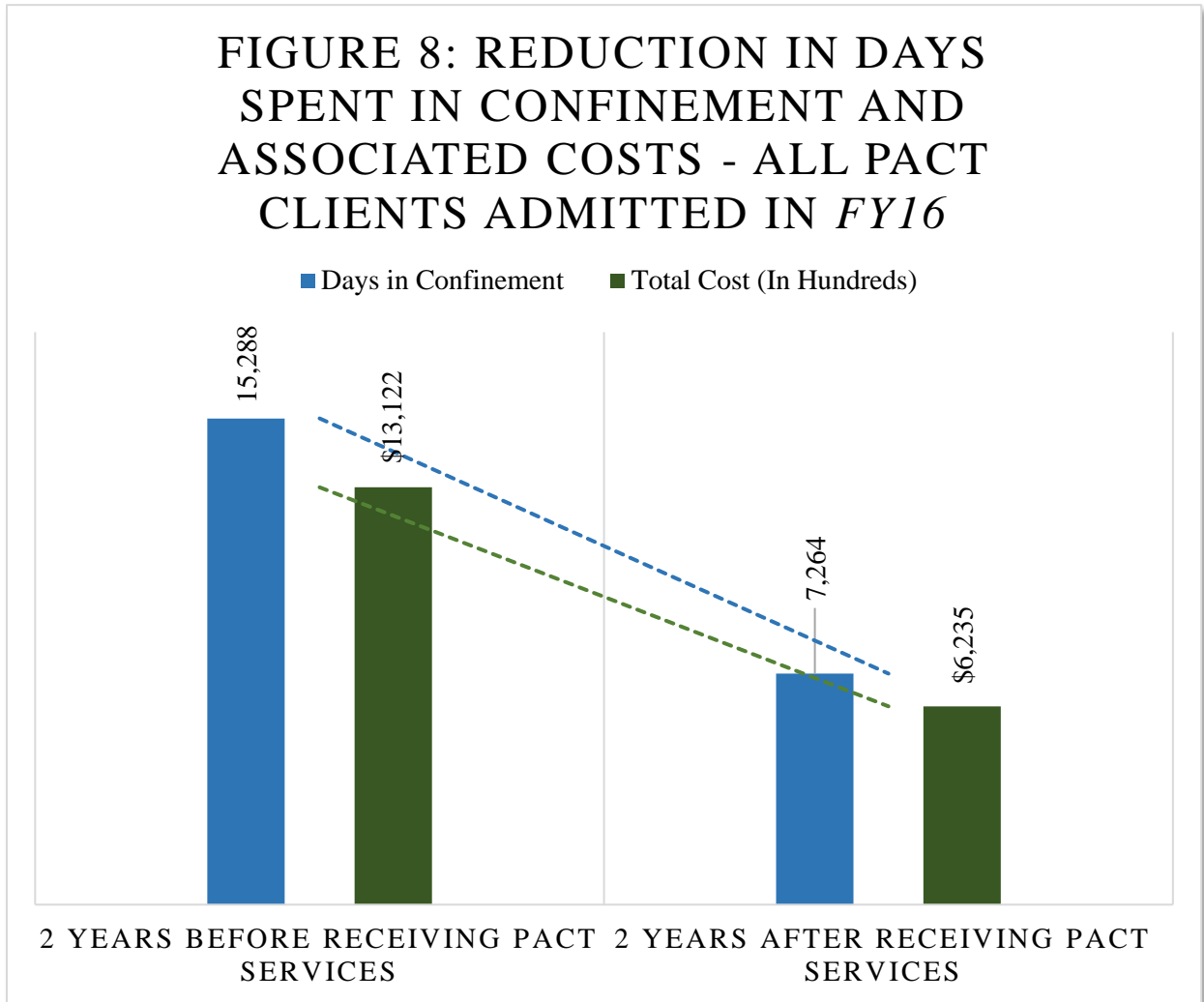
FIGURE 6: REDUCTION IN STATE HOSPITAL BED DAYS AND ASSOCIATED COSTS - ALL PACT CLIENTS ADMITTED IN *FY17*



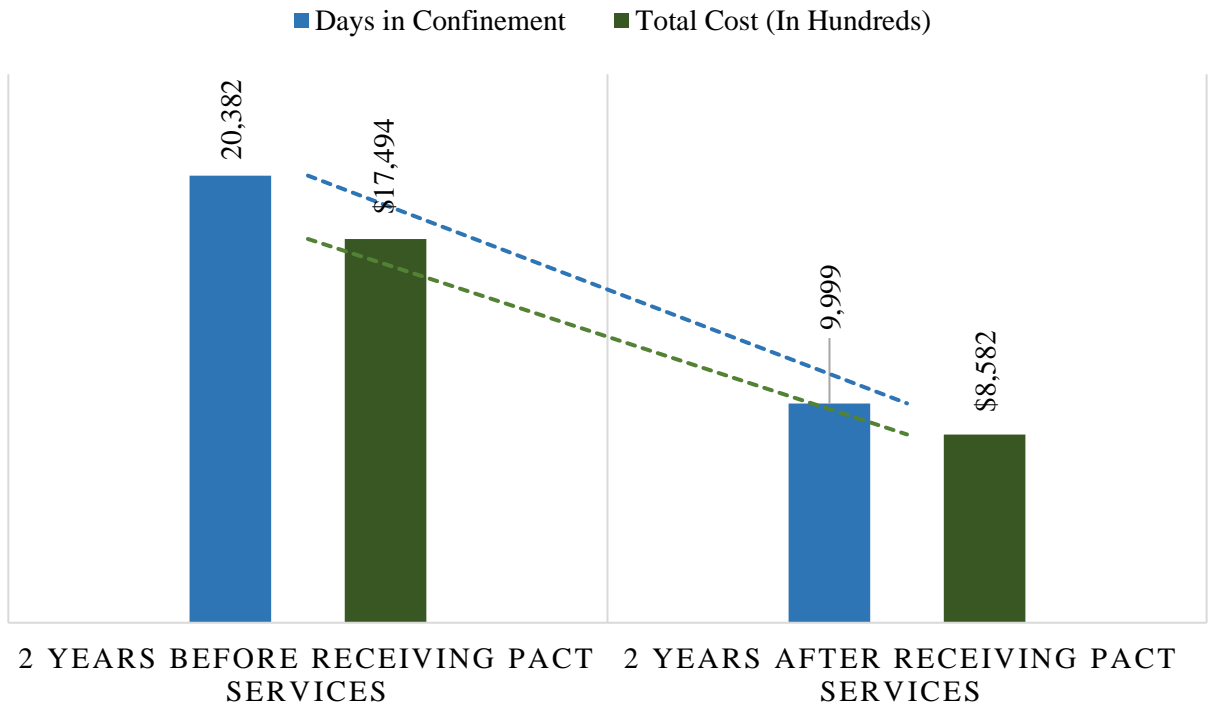
Local Psychiatric Hospital Bed Day Reduction



Days Spent in Confinement Reduction

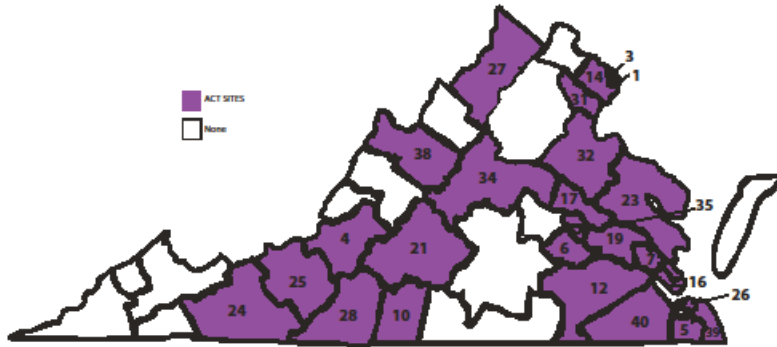


**FIGURE 9: REDUCTION IN DAYS SPENT
IN CONFINEMENT AND ASSOCIATED
COSTS - ALL PACT CLIENTS ADMITTED
IN *FY17***



Assertive Community Treatment (ACT)

Virginia's Community Services Boards ACT Sites



Map #	CSB/BHA Name	Size & # ACT Sites	Map #	CSB/BHA Name	Size & # ACT Sites
1	Alexandria CSB	1 Medium	23	Middle Peninsula-Northern Neck CSB	1 Medium
3	Arlington County CSB	1 Large	24	Mount Rogers CS	2 Medium
4	Blue Ridge Behavioral Healthcare	1 Large	25	New River Valley CS	3 Medium & 1 Large
5	Chesapeake Integrated Behavioral Healthcare	1 Large	26	Norfolk CSB	1 Large
6	Chesterfield CSB	1 Small	27	Northwestern CSB	1 Large
7	Colonial Behavioral Health	1 Medium	28	Piedmont CSB	1 Small & 1 Large
10	Danville-Pittsylvania CS	1 Large	31	Prince William County CSB	1 Large
12	District 19 CSB	1 Medium	32	Rappahannock Area CSB	2 Small
14	Fairfax-Falls Church CSB	1 Large	34	Region Ten CSB	1 Medium & 1 Large
16	Hampton-Newport News CSB	1 Large	35	Richmond Behavioral Health Authority	1 Large
17	Hanover County CSB	1 Small	38	Valley CSB	1 Small
19	Henrico Area Mental Health & Developmental Services	1 Small & 1 Large	39	Virginia Beach Human Services	1 Large
21	Horizon Behavioral Health	1 Small & 1 Medium	40	Western Tidewater CSB	1 Large

Small ACT teams shall maintain a caseload of no more than 50 individuals
 Medium ACT teams shall maintain a caseload of no more than 74 individuals
 Large ACT teams shall maintain a caseload of no more than 120 individuals

Twenty-Seven CSBs are licensed and providing ACT as of July 2021