



COMMONWEALTH of VIRGINIA

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COMMISSIONER

DEPARTMENT OF
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November 1, 2022

To: The Honorable Janet D. Howell, Chair, Senate Finance & Appropriations Committee
The Honorable Barry K. Knight, Chair, House Appropriations Committee

Fr: Nelson Smith, Commissioner, Department of Behavioral Health and Developmental Services

Item 311 U. of 2022 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:

"U. 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 report for Item 311 U. for fiscal year 2022 (April 1, 2022-June 30, 2022). Staff are available should you wish to discuss this request.

CC:
John Littel, Secretary, Health and Human Resources



Assertive Community Treatment – Program Funding, Cost Effectiveness, and Impact

(Item 311 U)

November 1, 2022

DBHDS Vision: A Life of Possibilities for All Virginians

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Preface

This report responds to Item 311 U of 2022 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:

"U. 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 – Program Funding, Cost Effectiveness, and Impact

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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. One of the oldest and most widely researched EBP's 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 – 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. The assessment of data indicated ACT services resulted in lower hospitalization and incarceration rates for individuals being served, and 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 FY21 was \$14,458, representing a consistent trend with the previous fiscal year.
- State hospitalization usage for all ACT served individuals admitted in FY19 was reduced by 51 percent, representing a cost avoidance of \$14,294,084 related to this population.
- All new FY19 ACT served individuals accounted for 29,669 state hospital bed days in the two years prior to their ACT admission, and just 14,499 in the two years post their ACT admission.
- Across the FY16, FY17, FY18, and FY19 cohorts, the ACT program contributed to an overall cost avoidance of \$43,580,170 in state hospital costs in the two years following initiation of ACT services.
- Local psychiatric hospitalization use for all ACT served individuals admitted in FY19 had a 51 percent reduction, which represents a cost avoidance of \$3,945,553 related to this population.
- All new FY19 ACT served individuals accounted for 9,904 local hospital psychiatric bed days in the two years prior to ACT admission, and just 4,886 in the two years post ACT admission.
- Incarceration of all ACT served individuals admitted in FY19 was reduced by 52 percent and represents a cost avoidance of \$411,212 related to this population.
- In the two years prior to admission to ACT, all new FY 2019 individuals served 7,829 days in confinement compared to only 3,730 days in the two years post entering ACT services.
- Across the FY 2016, FY 2017, FY 2018, and FY 2019 cohorts, the ACT program contributed to an overall cost avoidance of \$2,929,363 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/>

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 must 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 and Development

- Virginia operates 41 ACT teams with 35 community service boards (CSBs) teams and another six teams being operated by non-CSB providers. Providers are now benefiting from having 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.

- 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. Since “Project BRAVO” implementation, all but one of these teams has made the changes necessary under regulation in order to make the transition to licensed ACT program without the benefit of ongoing state funding.

Program Impact

The Cost of Each Team and Cost per Individual Served

Data Source: On April 25, 2022, the Department of Behavioral Health and Developmental Services (DBHDS) distributed a survey to all of Virginia’s CSBs offering ACT services in FY 2021 via email. We created the survey using Qualtrics Survey Software. The questions were as follows:

- How many years has your CSB or agency offered ACT services as of June 30, 2021?
- What is the total amount of expenditures this CSB or agency had for ACT services for FY 2021?
- How much revenue did the CSB or agency receive from its ACT services for FY 2021 by the following categories? Federal Funds; State Funds; Local Funds; Medicaid; Medicare; Private Insurance and Other Payers, Fees.

The results for CSB ACT teams are tabulated in Table 1 below.

The average cost per individual served by CSB ACT teams in FY 2021 was \$14,458 (see Table 1 below), which represents a consistent average cost per individual when compared to the previous year’s cost per person average. Figure 1 contrasts the cost per person across ACT teams in FY 2018, FY 2019, FY 2020, and FY 2021. The chart illustrates that overall, the variance in average cost across sites expanded between FY 2020 and FY 2021 including the inter-quartile range increasing by about \$1,000. The upper most point was lower this year by about \$2,000, which indicates there is no single team experiencing costs much higher than the norm.

DBHDS also sent the survey to other CSBs that provided the very similar Intensive Community Treatment (ICT) service in FY 2021 as well as some private providers that performed ACT services in FY 2021 and received some Medicaid reimbursement. The intention was to enable DBHDS to compare funding discrepancies between the different types of service providers. Three CSBs that provided ICT and three private providers that provided ACT in FY 2021 completed the optional survey. While this sample size of other providers was limited and should be considered when viewing results, the distinction in funding allotments between these types of service providers was substantial.

The two most significant differences in funding sources between the providers were proportions of revenue from State and Medicaid funds. State funds made up 47 percent of revenue for CSB ACT programs, compared to only 7 percent of the CSB ICT programs and none of the revenue for the ACT private providers. Medicaid comprised almost all of the revenue for ACT private providers, 97 percent, while only contributing to 39 percent of CSB ACT and 49 percent of CSB ICT program’s funding. Additionally, CSB ICT programs had a greater share of total revenue from Federal (18 percent) and Local (26 percent) funds than their CSB ACT program counterparts (6 percent Federal and 6 percent Local funds).

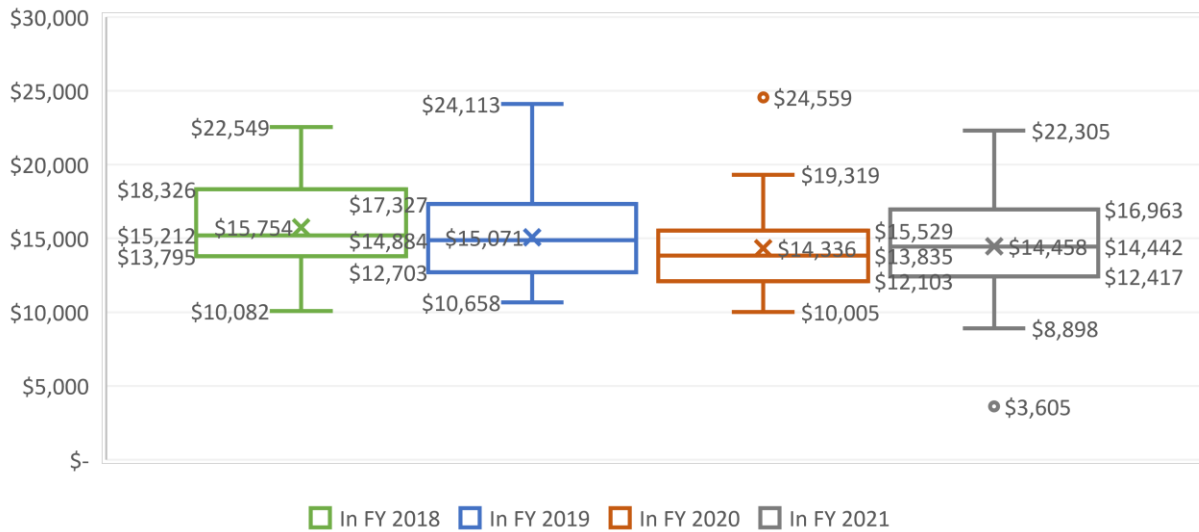
Table 1: VA CSB ACT Team Costs

Name of CSB:	Years Offering ACT a/o 6/30/2021	Total Expenditures - ACT Services FY2021	Total Revenue - ACT Services FY2021	State:	Federal:	Local:	Medicaid:	Medicare:	Private Insurance and Other Payers, Fees:	Individuals Served in FY2021	Change from FY2020	Average Cost PP in FY2021	Change from FY2020
Alexandria CSB	5	\$1,201,165	\$1,201,165	\$850,000	\$25,000	\$0	\$326,165	\$0	\$0	70	-7	\$17,160	+\$2,145
Arlington County CSB	1	\$392,911	\$1,517,859	\$665,000	\$392,911	\$292,297	\$166,025	\$1,626	\$0	109	+8	\$3,605	-\$9,126
Blue Ridge Behavioral Healthcare	23	\$1,366,711	\$1,137,979	\$700,000	\$56,158	\$0	\$374,849	\$1,918	\$5,054	107	+8	\$12,773	+\$1,316
Chesapeake Integrated Behavioral Healthcare	16	\$2,185,851	\$2,185,851	\$1,008,030	\$15,713	\$666,462	\$361,860	\$3,618	\$130,168	98	-3	\$22,305	+\$1,471
Colonial Behavioral Health	5	\$1,373,492	\$1,490,474	\$1,149,421	\$0	\$0	\$340,937	\$0	\$116	71	-10	\$19,345	+\$1,702
Danville-Pittsylvania Community Services	1	\$1,045,479	\$1,235,264	\$845,000	\$9,357	\$0	\$379,763	\$0	\$1,144	78	-14	\$13,404	-\$2
District 19 CSB	21	\$1,506,213	\$1,225,698	\$547,352	\$185,214	\$0	\$456,644	\$0	\$36,488	92	-2	\$16,372	-\$1,993
Fairfax-Falls Church CSB	23	\$1,630,356	\$1,630,356	\$971,275	\$56,158	\$407,703	\$169,621	\$3,663	\$21,936	107	-10	\$15,237	-\$328
Hampton-Newport News CSB	23	\$1,741,538	\$2,096,448	\$862,500	\$70,197	\$0	\$1,136,104	\$20,385	\$7,262	110	+3	\$15,832	-\$340
Henrico Area Mental Health & Developmental Services	26	\$1,665,784	\$1,665,784	\$500,000	\$428,146	\$156,307	\$578,873	\$1,511	\$947	141	-5	\$11,814	+\$696
Horizon Behavioral Health	23	\$1,613,266	\$1,589,085	\$700,000	\$112,316	\$0	\$776,769	\$0	\$0	108	-2	\$14,938	+\$2,081
Name of CSB:	Years Offering ACT a/o 6/30/2021	Total Expenditures - ACT Services FY2021	Total Revenue - ACT Services FY2021	State:	Federal:	Local:	Medicaid:	Medicare:	Private Insurance and Other Payers, Fees:	Individuals Served in FY2021	Change from FY2020	Average Cost PP in FY2021	Change from FY2020

Middle Peninsula - Northern Neck CSB	5	\$999,137	\$1,398,078	\$750,000	\$37,438	\$0	\$610,610	\$0	\$30	64	+4	\$15,612	-\$248
Mount Rogers CSB*	16	\$1,598,322	\$2,168,052	\$835,016	\$346,441	\$1,500	\$984,545	\$0	\$550	85	-5	\$18,804	+\$3,122
New River Valley Community Services*	21	\$4,026,284	\$5,069,663	\$386,657	\$192,409	\$0	\$4,488,373	\$0	\$2,224	210	-23	\$19,173	+\$1,838
Norfolk CSB	22	\$1,599,264	\$1,644,768	\$1,155,629	\$56,158	\$232,493	\$196,463	\$2,712	\$1,313	127	-14	\$12,593	-\$1,945
Northwestern CSB	5	\$1,183,410	\$1,451,825	\$850,000	\$0	\$106,567	\$491,264	\$0	\$3,994	133	+13	\$8,898	-\$1,760
Piedmont CSB	7	\$1,437,245	\$1,643,442	\$850,000	\$8,555	\$0	\$783,307	\$0	\$1,580	109	-1	\$13,186	+\$2,069
Prince William County CSB	5	\$1,751,761	\$1,749,490	\$850,000	\$8	\$549,142	\$332,922	\$282	\$17,136	92	+25	\$19,041	-\$5,072
Rappahannock Area CSB	6	\$1,143,667	\$1,367,038	\$850,000	\$0	\$0	\$0	\$516,359	\$679	82	-6	\$13,947	+\$1,254
Region Ten CSB*	11	\$1,823,769	\$2,365,308	\$700,000	\$156,386	\$28	\$1,489,099	\$8,743	\$11,052	115	-7	\$15,859	+\$1,106
Richmond Behavioral Health Authority	25	\$1,251,726	\$1,144,493	\$863,538	\$268,052	\$0	\$11,458	\$1,445	\$0	113	+8	\$11,077	-\$396
Valley CSB	24	\$1,028,948	\$964,969	\$446,797	\$82,364	\$0	\$415,659	\$8,897	\$11,252	96	-4	\$10,718	-\$7,306
Virginia Beach Human Services	7	\$1,384,390	\$1,626,965	\$1,067,952	\$0	\$0	\$546,971	\$0	\$12,042	107	-2	\$12,938	-\$56
Western Tidewater CSB	5	\$1,359,398	\$1,486,567	\$850,000	\$25,000	\$0	\$610,737	\$0	\$830	110	-2	\$12,358	-\$4,946
Average:	13.6	\$1,512,920	\$1,710,693	\$802,257	\$105,166	\$100,521	\$667,876	\$23,798	\$11,075	106	-2	\$14,458	-\$613

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

Figure 1: Range of CSB 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 FY 2019, ACT programs admitted 436 new individuals across the Commonwealth. The entire group of new ACT admits in FY 2019 accounted for a total of 29,669 state hospital bed days in the two years prior to admission to an ACT program. Total cost for these bed days was an estimated \$27,955,912.

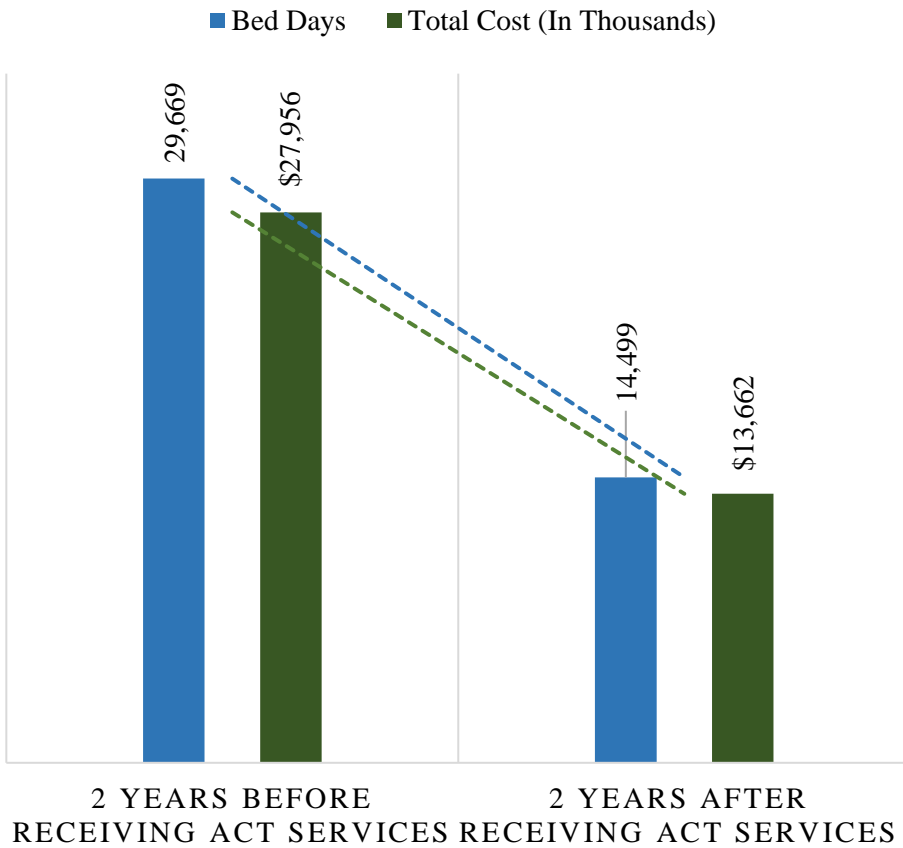
In the two years post their first ACT service in FY 2019, the group used only 14,499 bed days (estimated cost \$13,661,828). **This represents a 51 percent reduction in state hospitalization for this population, which signifies a cost avoidance of \$14,294,084 (see Figure 2).** The reduction in hospitalization is the most significant since we began tracking and reporting this metric four years ago. The 51 percent reduction was 6 points higher than the 3 year running average for this metric and 8 points higher than the previous year.

In FY 2016, FY 2017, and FY 2018, ACT admits collectively represented a cost avoidance of \$29,286,086 in state hospital costs in the two years post ACT admission. Thus, in total, the **ACT program contributed to an overall cost avoidance of \$43,580,170 in state hospital costs for the four cohort groups in the two years post initiation of ACT services.**

The costs are based on a \$942.26 average daily cost per patient figure, which is the average year-to-date cost per patient day rate from the June 2022 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 FY 2019 from state hospitalization. *Nineteen of the 24 CSBs with ACT teams (79 percent) exhibited a net reduction in state hospital bed days for their FY 2019 cohort, including 14 CSBs (58 percent) that contributed to a reduction greater than 50 percent.*

FIGURE 2: REDUCTION IN STATE HOSPITAL BED DAYS AND ASSOCIATED COSTS - ALL ACT CLIENTS ADMITTED IN FY19



Data Sources: 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.

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	847	183	-664 (↓78%)	\$625,661
Arlington County CSB	1020	522	-498 (↓49%)	\$469,245
Blue Ridge Behavioral Healthcare	801	952	151 (↑19%)	\$(142,281)
Chesapeake Integrated Behavioral Healthcare	2080	459	-1621 (↓78%)	\$1,527,403
Colonial Behavioral Health	1606	284	-1322 (↓82%)	\$1,245,668
Danville-Pittsylvania Community Services	1563	814	-749 (↓48%)	\$705,753
District 19 CSB	1868	1075	-793 (↓42%)	\$747,212
Fairfax-Falls Church CSB	1533	315	-1218 (↓79%)	\$1,147,673
Hampton-Newport News CSB	3397	1738	-1659 (↓49%)	\$1,563,209
Henrico Area Mental Health & Developmental Services	625	1399	774 (↑124%)	\$(729,309)
Horizon Behavioral Health	108	403	295 (↑273%)	\$(277,967)
Middle Peninsula - Northern Neck CSB	1570	176	-1394 (↓89%)	\$1,313,510
Mount Rogers CSB	141	426	285 (↑202%)	\$(268,544)
New River Valley Community Services	700	86	-614(↓88%)	\$578,548
Norfolk CSB	3042	496	-2546 (↓84%)	\$2,398,994
Northwestern CSB	1333	793	-540(↓41%)	\$508,820
Piedmont CSB	1293	216	-1077 (↓83%)	\$1,014,814
Prince William County CSB	1236	157	-1079 (↓87%)	\$1,016,699
Rappahannock Area CSB	374	96	-278 (↓74%)	\$261,948
Region Ten CSB	406	95	-311 (↓77%)	\$293,043
Richmond Behavioral Health Authority	1928	956	-972 (↓50%)	\$915,877
Valley CSB	160	54	-106 (↓66%)	\$99,880
Virginia Beach Human Services	1402	341	-1061 (↓76%)	\$999,738
Western Tidewater CSB	636	2463	1,827 (↑287%)	\$(1,721,509)
Total	29,669	14,499	-15,170 (↓51%)	\$14,294,084

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 FY 2019, ACT programs admitted 436 new individuals across the Commonwealth. The entire group of new ACT admits in FY 2019 accounted

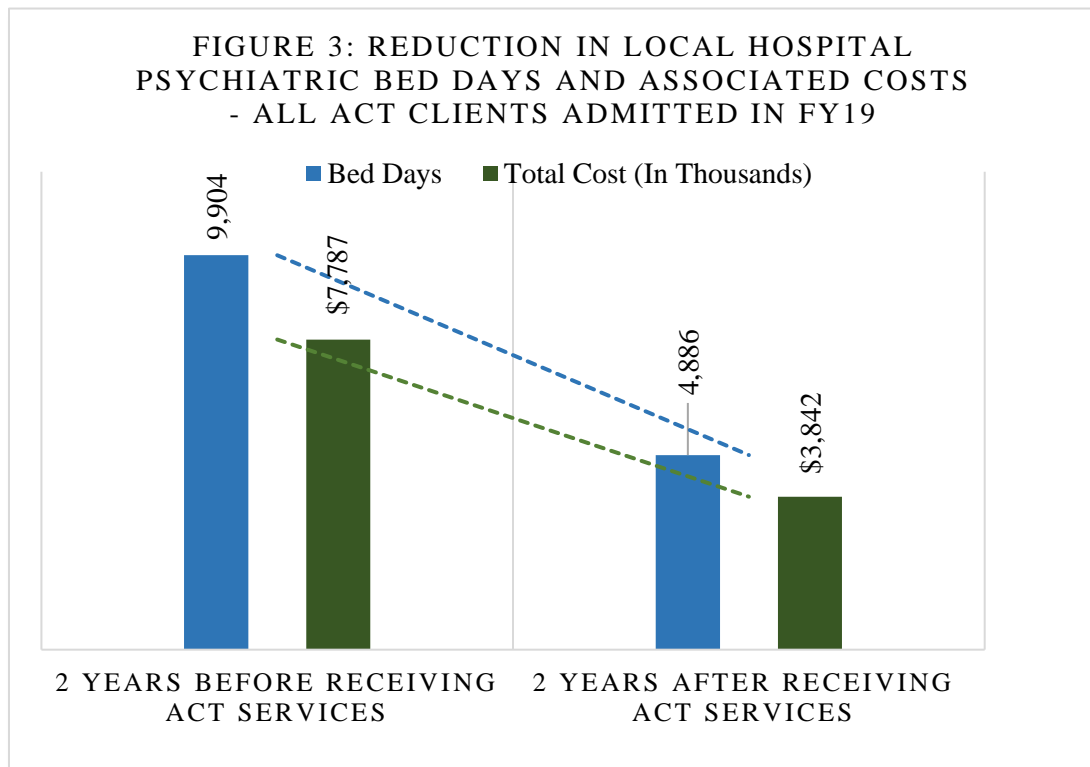
² Psychiatric bed days are defined as the following three Major Diagnostic Categories (MDC) at intake: 19 Mental Diseases and Disorders, 20 Alcohol/Drug Use or Induced Mental Disorders, and 21 Injuries, Poison and Toxic Effect of Drugs

for a total of 9,904 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 \$7,787,317.

In the two years post their first ACT service in FY 2019, these individuals used only 4,886 psychiatric bed days (estimated cost \$3,841,764). **This represents a 51 percent reduction in local psychiatric hospitalization for this population, signifying a cost avoidance of \$3,945,553 (see Figure 3).** Similar to the state hospitalization rate, the reduction in local hospitalization is the most significant since we began tracking and reporting this metric three years ago. The 51 percent reduction was 5 points higher than the 2 year running average for this metric and 4 points higher than the previous year.

The costs are based on DMAS’ FY 2022 Local Hospital Psychiatric Operating Rate per Day’s state average of \$786.28.³

Table 3 below demonstrates the impact of all ACT teams in diverting ACT served individuals admitted in FY 2019 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 FY 2019 cohort, including 15 (63 percent) that contributed to a reduction greater than 50 percent.*



Data Sources: 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.

³ Department of Medical Assistance Services. (2022). *Hospital Rates* [DRG and Psychiatric Rates]. Retrieved from <https://www.dmas.virginia.gov/for-providers/general-information/rate-setting/hospital-rates/>

Table 3: Local Hospital Psychiatric Bed Days by ACT Team

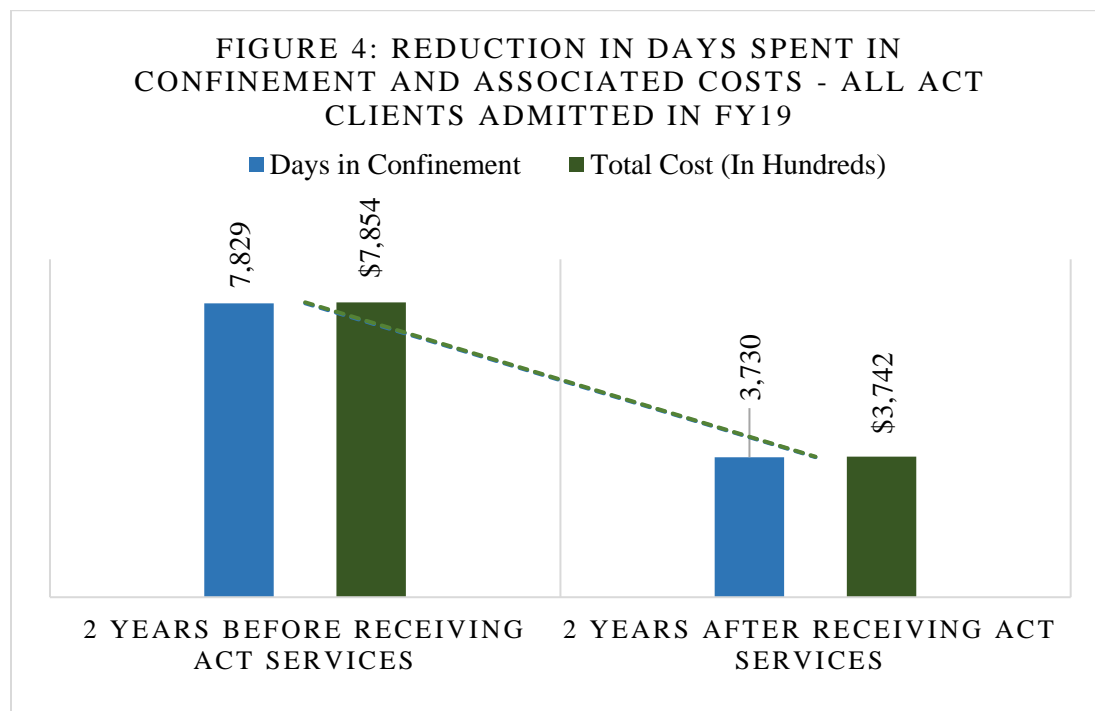
Name of CSB	Two Years Before ACT	Two Years After ACT	Difference	Cost Reduction
Alexandria CSB	1115	579	-536 (↓48%)	\$421,446
Arlington County CSB	317	57	-260 (↓82%)	\$204,433
Blue Ridge Behavioral Healthcare	402	461	59 (↑15%)	\$(46,391)
Chesapeake Integrated Behavioral Healthcare	435	518	83 (↑19%)	\$(65,261)
Colonial Behavioral Health	570	221	-349 (↓61%)	\$274,412
Danville-Pittsylvania Community Services	236	34	-202 (↓86%)	\$158,829
District 19 CSB	637	241	-396 (↓62%)	\$311,367
Fairfax-Falls Church CSB	550	331	-219 (↓40%)	\$172,195
Hampton-Newport News CSB	373	143	-230 (↓62%)	\$180,844
Henrico Area Mental Health & Developmental Services	480	246	-234 (↓49%)	\$183,990
Horizon Behavioral Health	111	46	-65 (↓59%)	\$51,108
Middle Peninsula - Northern Neck CSB	198	22	-176 (↓89%)	\$138,385
Mount Rogers CSB	73	45	-28 (↓38%)	\$22,016
New River Valley Community Services	347	67	-280 (↓81%)	\$220,158
Norfolk CSB	776	455	-321 (↓41%)	\$252,396
Northwestern CSB	168	89	-79 (↓47%)	\$62,116
Piedmont CSB	342	164	-178 (↓52%)	\$139,958
Prince William County CSB	333	150	-183 (↓55%)	\$143,889
Rappahannock Area CSB	448	304	-144 (↓32%)	\$113,224
Region Ten CSB	112	24	-88 (↓79%)	\$69,193
Richmond Behavioral Health Authority	182	79	-103 (↓57%)	\$80,987
Valley CSB	223	64	-159 (↓71%)	\$125,019
Virginia Beach Human Services	795	353	-442 (↓56%)	\$347,536
Western Tidewater CSB	681	193	-488 (↓72%)	\$383,705
Total	9,904	4,886	-5,018 (↓51%)	\$3,945,553

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 FY 2019, 436 individuals were newly admitted to ACT programs across the Commonwealth. The entire group of new ACT admits in FY 2019 served 7,829 days in confinement during the two years prior to admission to an ACT program. Total cost for these confinement days is an estimated \$785,405.

In the two years post their first ACT service in FY 2019, these individuals served only 3,730 days in confinement (cost \$374,194), for a reduction in time spent in confinement and associated costs of 52 percent (cost avoidance of \$411,212 in expected costs) (see Figure 4). In the previous three annual reports, we reported that the FY 2016, FY 2017, and FY 2018 ACT admits collectively represented a cost avoidance of \$2,518,151 in jail costs in the two years post ACT admission. Thus, in total, the **ACT program contributed to an overall cost avoidance of \$2,929,363 in jail costs for the four cohort groups in the two years post initiation of ACT services.**

The costs are based on a \$100.32 average total daily cost per inmate day figure, provided in the most recent Commonwealth of Virginia Compensation Board Report: *FY 2020 Jail Cost Report*.⁴



Data Sources: 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. (2021). *Report to the General Assembly: FY2020 Jail Cost Report – Annual Jail Revenues and Expenditures Report*. Richmond, VA.

Conclusion

ACT services are now available at 26 of the 40 CSBs across the Commonwealth. In FY 2021, ACT served 2,534 individuals who required highly proactive and persistent support through ACT services. On average, it costs the state \$14,458 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 FY 2019 ACT population exhibiting a 51 percent reduction in bed days over two years, which resulted in avoiding an estimated \$14,294,084 in costs. Similarly, the data suggests that the ACT program reduces the demand on local/private hospitals with the new FY 2019 ACT population needing 51 percent less bed days, signifying an estimated cost avoidance of \$3,945,553. These reductions in state and local hospitalization are the most significant since we began tracking and reporting these metrics for this annual report. Furthermore, findings indicate that time spent in confinement is drastically reduced, with our assessment showing individuals' confinement days cut by over half after initiation of ACT services.

Given the continued 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.

Virginia's data is reflective of other research showing that Assertive Community Treatment (ACT) produces better outcomes for individuals served and reduces costs for the broader behavioral healthcare services system.⁵ However, the effectiveness of Virginia's ACT programs will continue to depend on three things:

- 1) Workforce recruitment and retention: As much, or perhaps even more than most community-based services, ACT in particular has been plagued by ongoing workforce issues, which have only been amplified by the lingering COVID-19 pandemic. Given the intense nature of ACT service delivery, the acute needs of the population it serves, and often less-than-competitive salaries, most if not all of Virginia's ACT teams have been hampered by staff departures, key positions left vacant for extended periods of time, or both. In some cases, the burden that this places on existing staff, and its impact on their ability to provide the quality and level of care needed may call into question the program's sustainability. Simply put, if workforce shortages across ACT continue to worsen, and a more robust array of intensive, community-based services are not stood up, the safety of ACT staff and the individuals they serve may be at risk.
- 2) The quality of the particular program delivering this service, and how faithfully they implement best practice elements (known as "program fidelity"): DBHDS has continued 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*

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

Treatment (TMACT)⁶ to conduct formal fidelity evaluations of Virginia's ACT programs. Prior to the impact of the COVID-19 pandemic, DBHDS ACT Coordinator and evaluators from the UNC Institute for Best Practices had completed TMACT evaluations of six separate CSB ACT programs. While on-site fidelity evaluations remain on hold due to lingering effects of the pandemic, reviewers are currently conducting remote “desk audits” with on-site evaluations tentatively slated to resume in the fall.

- 3) **Funding:** Continued funding for existing programs is important, but more pressing may be the need for small teams that are now operating to the same standards as the larger, state-funded programs to receive similar support in order to maintain and potentially grow programming moving forward.

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.

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 GA 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

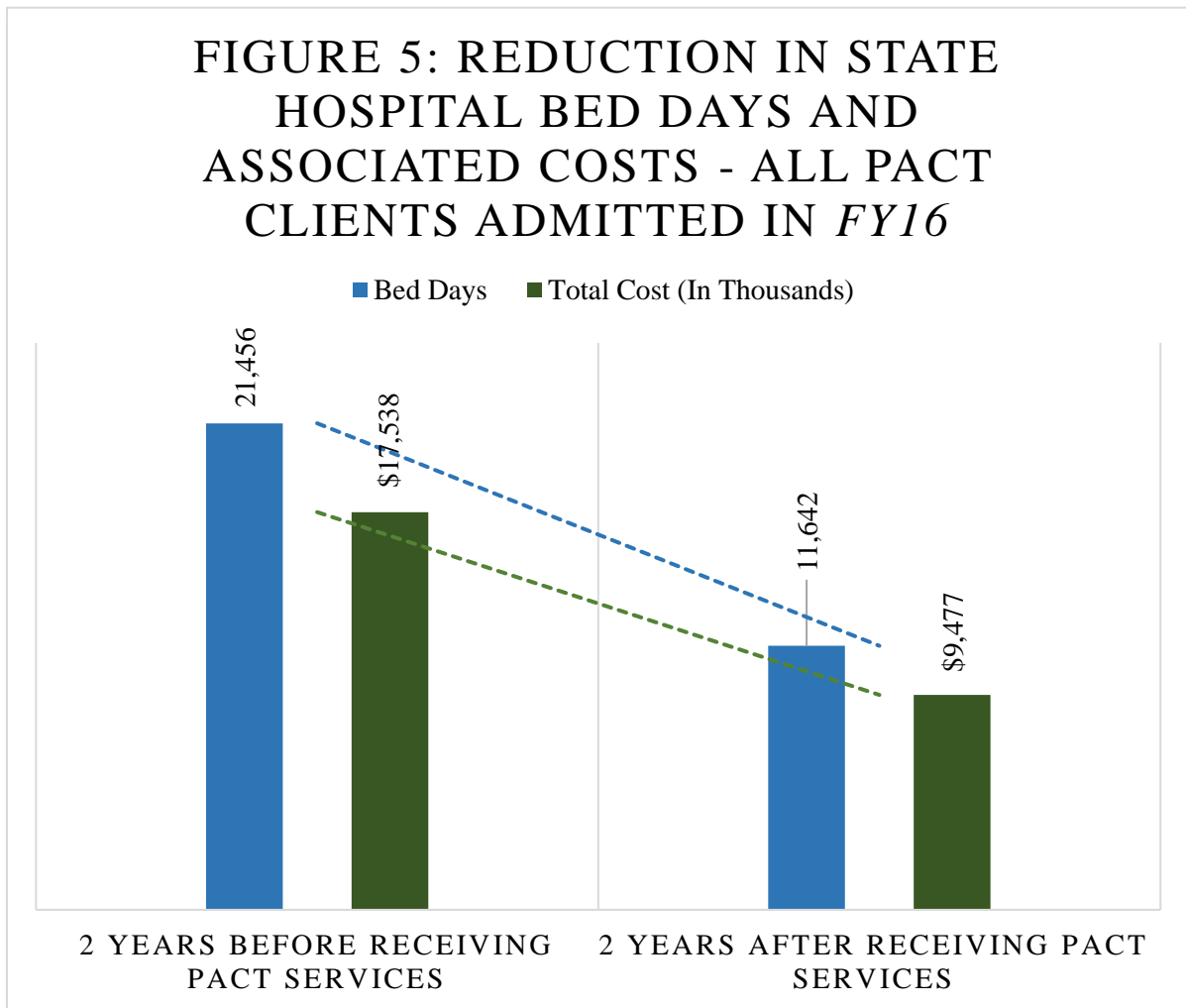


FIGURE 6: REDUCTION IN STATE HOSPITAL BED DAYS AND ASSOCIATED COSTS - ALL PACT CLIENTS ADMITTED IN *FY17*

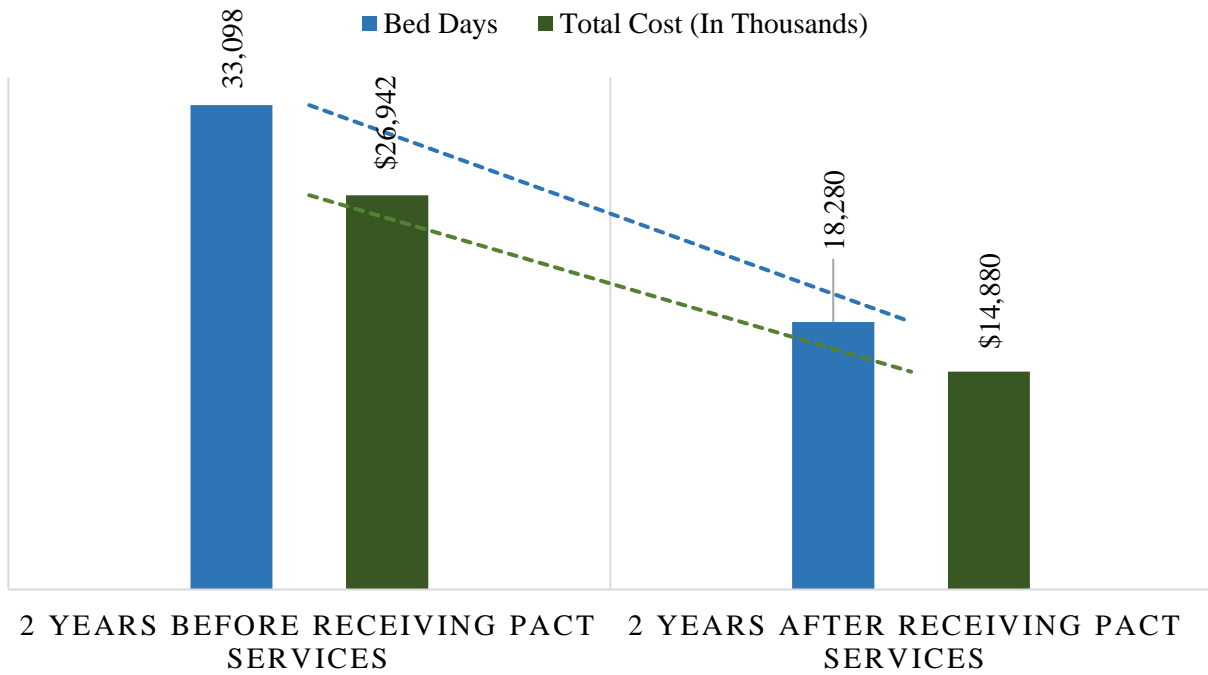
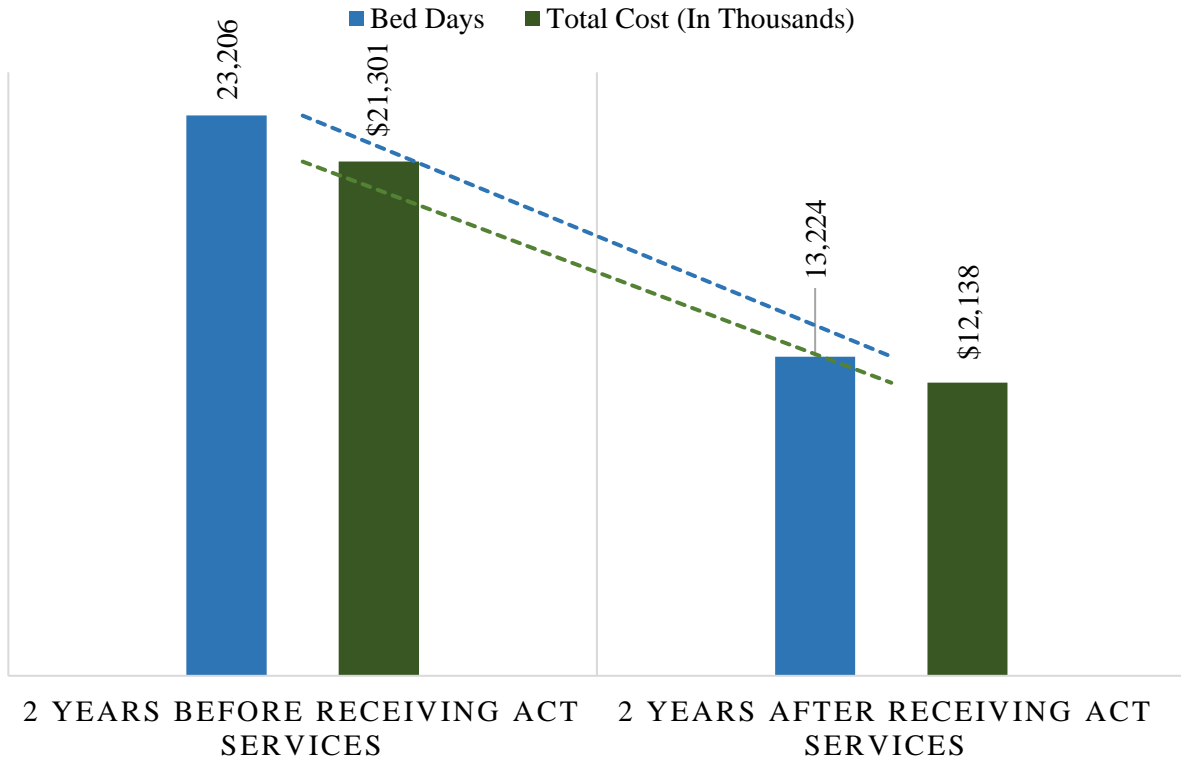


FIGURE 7: REDUCTION IN STATE HOSPITAL BED DAYS AND ASSOCIATED COSTS - ALL ACT CLIENTS ADMITTED IN *FY18*



Local Psychiatric Hospital Bed Day Reduction

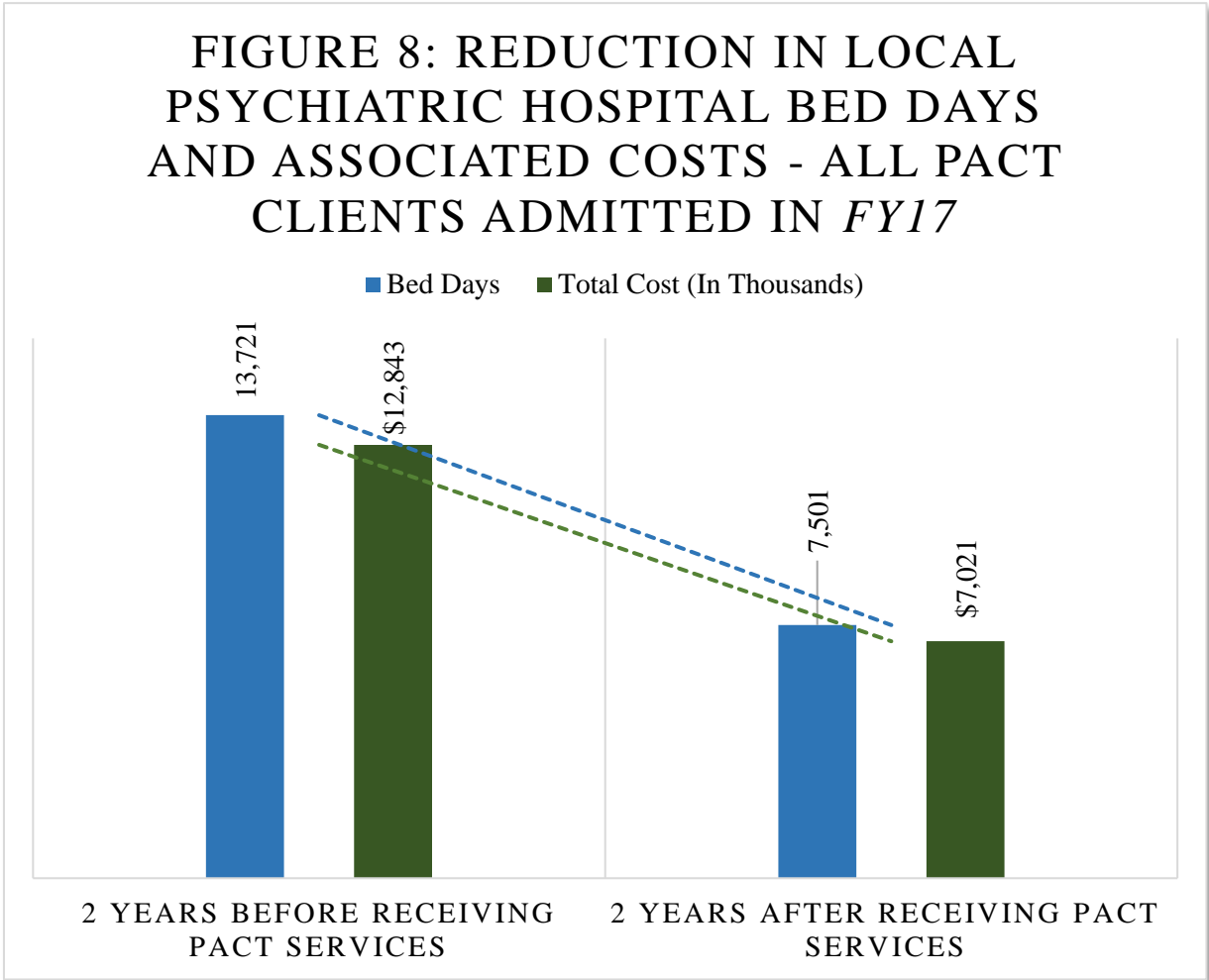
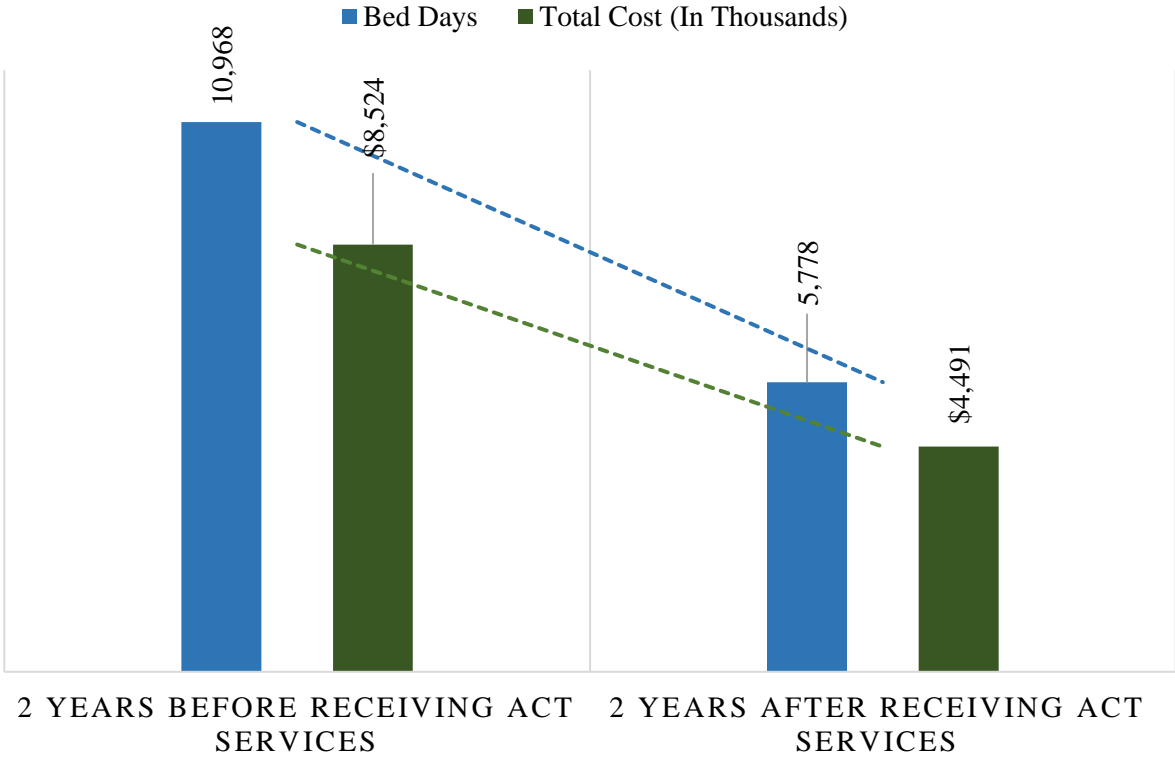


FIGURE 9: REDUCTION IN LOCAL PSYCHIATRIC HOSPITAL BED DAYS AND ASSOCIATED COSTS - ALL ACT CLIENTS ADMITTED IN *FY18*



Days Spent in Confinement Reduction

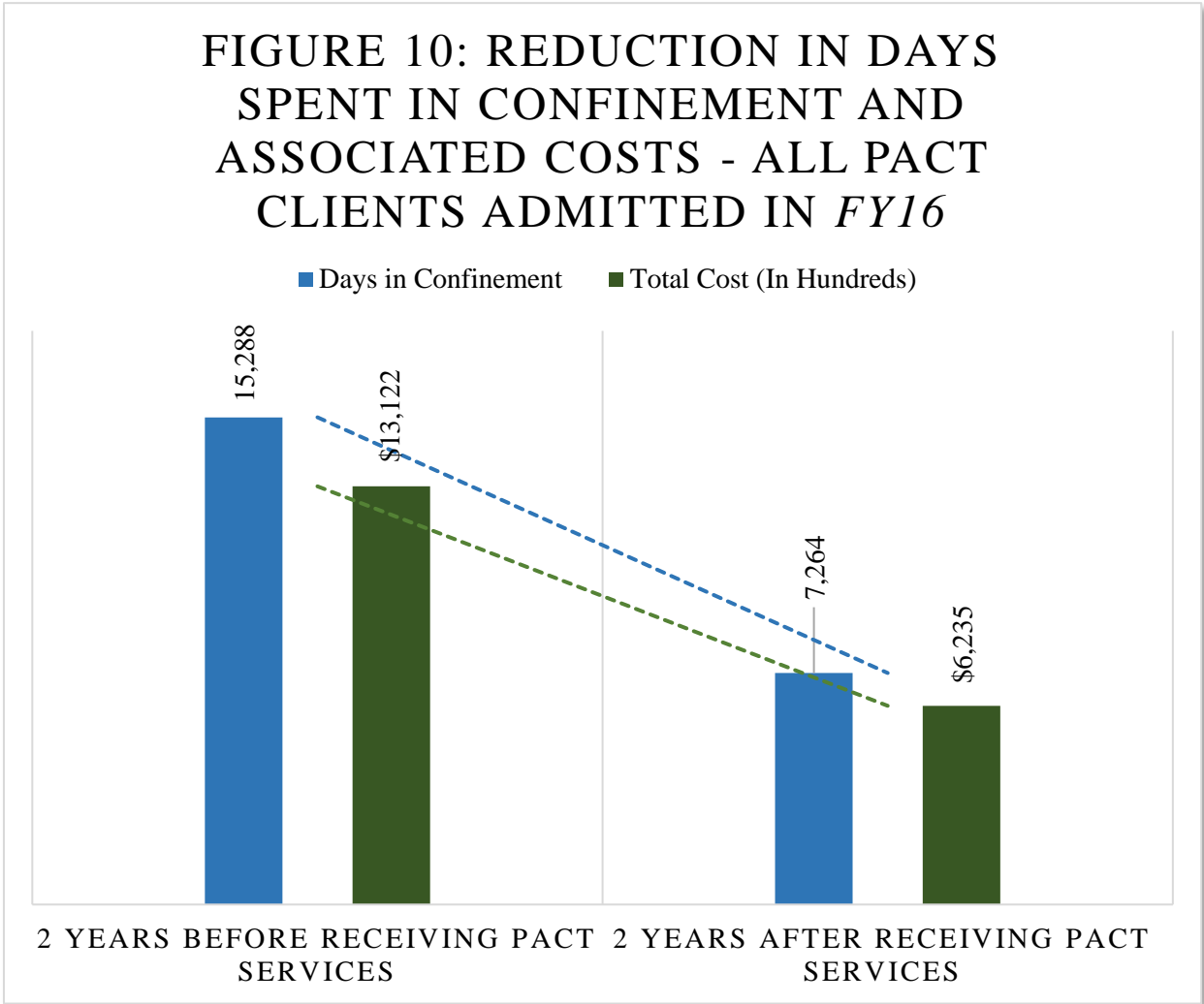


FIGURE 11: REDUCTION IN DAYS SPENT IN CONFINEMENT AND ASSOCIATED COSTS - ALL PACT CLIENTS ADMITTED IN *FY17*

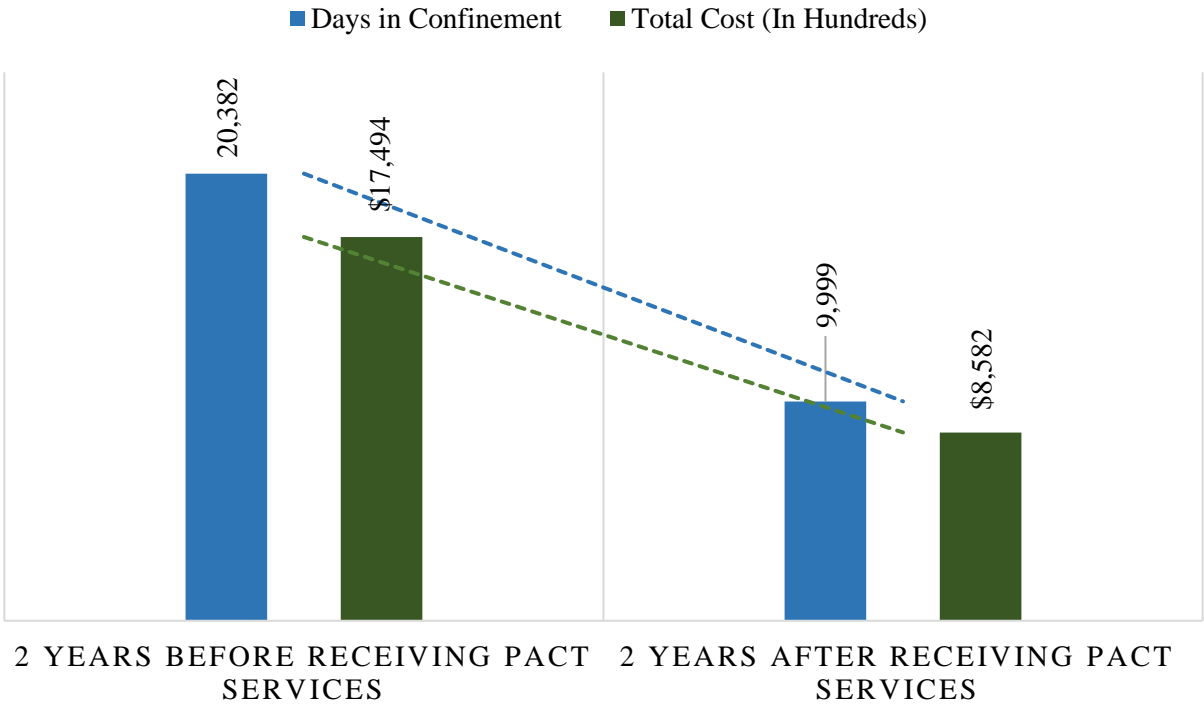


FIGURE 12: REDUCTION IN DAYS SPENT IN CONFINEMENT AND ASSOCIATED COSTS - ALL ACT CLIENTS ADMITTED IN *FY18*

