



COMMONWEALTH of VIRGINIA

DEPARTMENT OF BEHAVIORAL HEALTH AND DEVELOPMENTAL SERVICES

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ALISON G. LAND, FACHE
COMMISSIONER

October 19, 2020

The Honorable Janet Howell, Chair
Pocahontas Building
900 East Main Street
Room No: E509
Richmond, VA 23219

Dear Senator Howell:

Item 320.V of the 2020 Appropriations Act directs the Department of Behavioral Health and Developmental Services (DBHDS), in conjunction with other state agencies and stakeholders, to evaluate the role of the acute psychiatric bed registry. Specifically, 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 report for Item 320.V of the 2020 Appropriations Act. Staff are available should you wish to discuss this request.

Sincerely,

A handwritten signature in blue ink that reads "Alison Land".

Alison G. Land, FACHE
Commissioner

Department of Behavioral Health & Developmental Services

CC:
Vanessa Walker Harris, MD
Susan Massart
Mike Tweedy



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ALISON G. LAND, FACHE
COMMISSIONER

October 19, 2020

The Honorable Luke Torian, Chair
Pocahontas Building
900 East Main Street
Room Number: W1304
Richmond, VA 23219

Dear Delegate Torian:

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Alison G. Land, FACHE
Commissioner
Department of Behavioral Health & Developmental Services

CC:

Vanessa Walker Harris, MD
Susan Massart
Mike Tweedy



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

(Item 320.V)

October 19, 2020

DBHDS Vision: A Life of Possibilities for All Virginians

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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 Program of Assertive Community Treatment (PACT). 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.

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

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Executive Summary

Assertive Community Treatment (ACT, or PACT as it is currently known in Virginia) is an evidence-based practice (EBP) proven to improve outcomes for people with severe mental illness. One of the oldest and most widely researched EBPs 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 PACT, 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 PACT clients from these more expensive services. DBHDS used a cohort approach to analyze the impact of PACT overtime on PACT clients admitted in FY17. The assessment of data indicated PACT 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 PACT services across the Commonwealth include:

- The average cost per individual served by PACT teams across the Commonwealth in FY19 (the most recent full year of data available at the time of report preparation) is \$15,071, representing a reduction from the previous fiscal year in FY18.
- State hospitalization usage for all PACT served individuals admitted in FY17 was reduced by 45%, representing a cost avoidance of \$12,061,852 related to this population.
- All new FY17 PACT served individuals accounted for 33,098 state hospital bed days in the two years prior to their PACT admission, and just 18,280 in the two years post their PACT admission.
- Across the FY16 and FY17 cohorts, the PACT program contributed to an overall cost avoidance of \$20,123,708 in state hospital costs in the two years following initiation of PACT services.
- Local psychiatric hospitalization use for all PACT served individuals admitted in FY17 had a 45% reduction, which represents a cost avoidance of \$5,821,920 related to this population.
- All new FY17 PACT served individuals accounted for 13,721 local hospital psychiatric bed days in the two years prior to PACT admission, and just 7,501 in the two years post PACT admission.
- Incarceration of all PACT-served individuals admitted in FY17 was reduced by 51% and represents a cost avoidance of \$891,173 related to this population.
- In the two years prior to admission to PACT, all new FY17 individuals served 20,382 days in confinement compared to only 9,999 days in the two years post entering PACT services.
- Across the FY16 and FY17 cohorts, the PACT program contributed to an overall cost avoidance of \$1,579,873 in jail costs in the two years post initiation of PACT 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/>

Program of Assertive Community Treatment (PACT) Overview

Assertive Community Treatment (ACT, or PACT as it is currently known in Virginia) 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

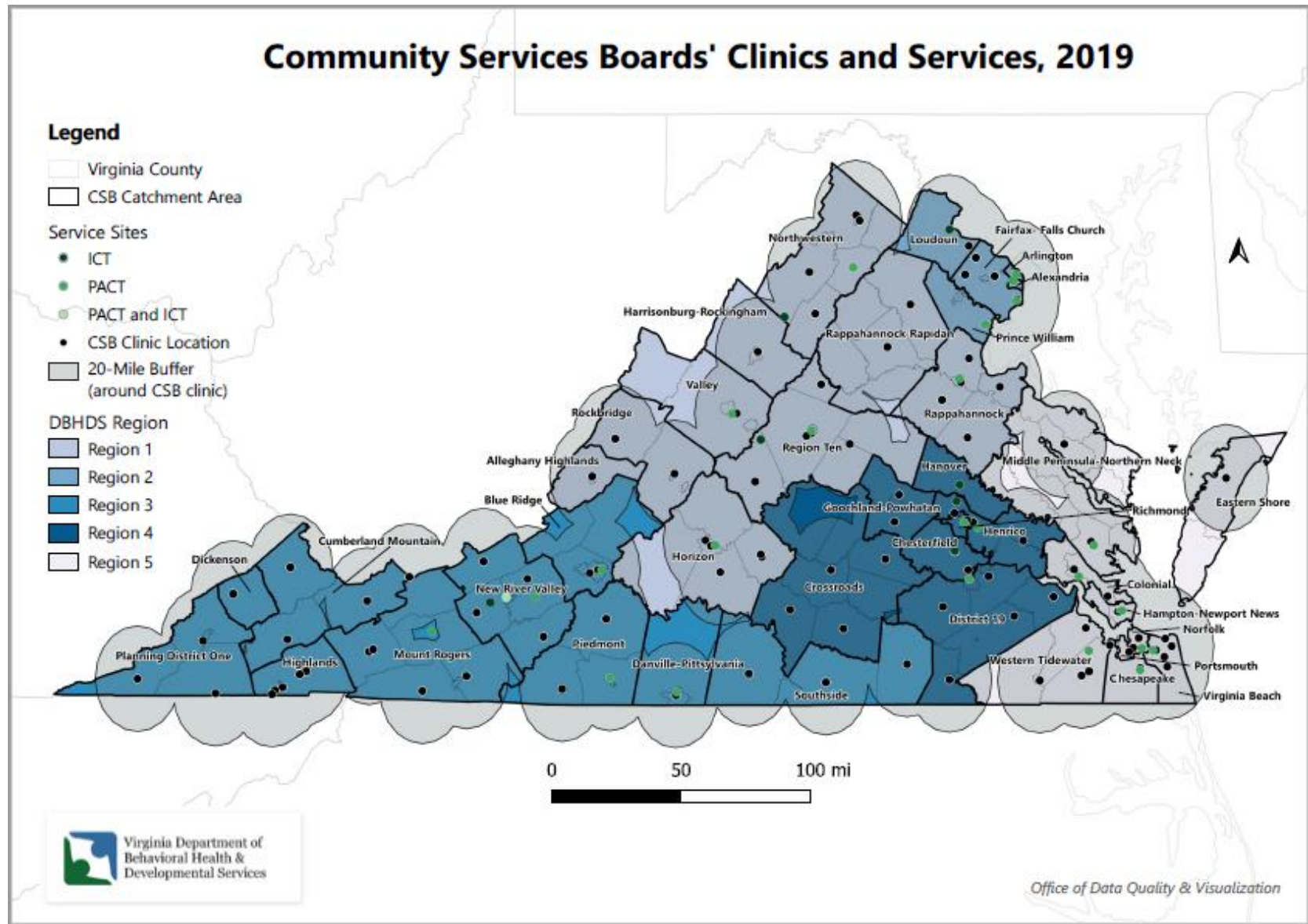
To be most effective, ACT is to be recovery-oriented, strengths-based, and person-centered. Treatment is assertive in that the team is proactive and persistent in efforts to engage, and retain in services, individuals who would likely benefit from this level of support.

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 needed services for individuals who receive ACT. 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.

Map 1



Virginia began providing state-funded Assertive Community Treatment in 1996 with its first ‘demo’ PACT team. With the most recent expansion of PACT in FY17, Virginia now operates 25 full-sized PACT teams out of 24 of 40 Community Service Boards (CSBs) (See Map 1).

State funds in the amount of \$20,099,630 were provided to PACT teams in FY19. State funding for PACT has differed with each appropriation and varies between \$403,822 to \$850,000 for individual 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 PACT teams, aimed at addressing the needs of the justice-involved population.

Program Impact

On June 11, 2020, the Department of Behavioral Health and Developmental Services (DBHDS) distributed a survey to all of Virginia’s CSBs offering PACT services via email. The questions were as follows:

- How many years has your CSB offered PACT services as of 6/30/2019?
- What is the total amount of expenditures this CSB had for PACT services for SFY2019?
- How much revenue did the CSB receive from its PACT services for SFY2019 by the following categories?
 - Federal Funds:
 - State Funds:
 - Local Funds:
 - Medicaid:
 - Medicare:
 - Private Insurance and Other Payers, Fees:

The results are tabulated in Table 1 below.

The average cost per individual served by PACT teams in FY 2019 was \$15,071 (see Table 1 below), which represents a slight reduction in average cost per individual from the FY 2018 cost per person average \$15,574. Figure 1 contrasts the cost per person across PACT teams in FY 2018 and FY 2019. The chart illustrates that overall, the variance in average cost across sites was fairly consistent between FY 2018 and FY 2019; however, the inter-quartile range dropped by about \$1,000 per person. The top whisker is larger in FY 2019 but the plot point represents one CSB as a significant outlier – the next highest CSB cost per individual average that year was more than \$3,000 less, at \$20,833.

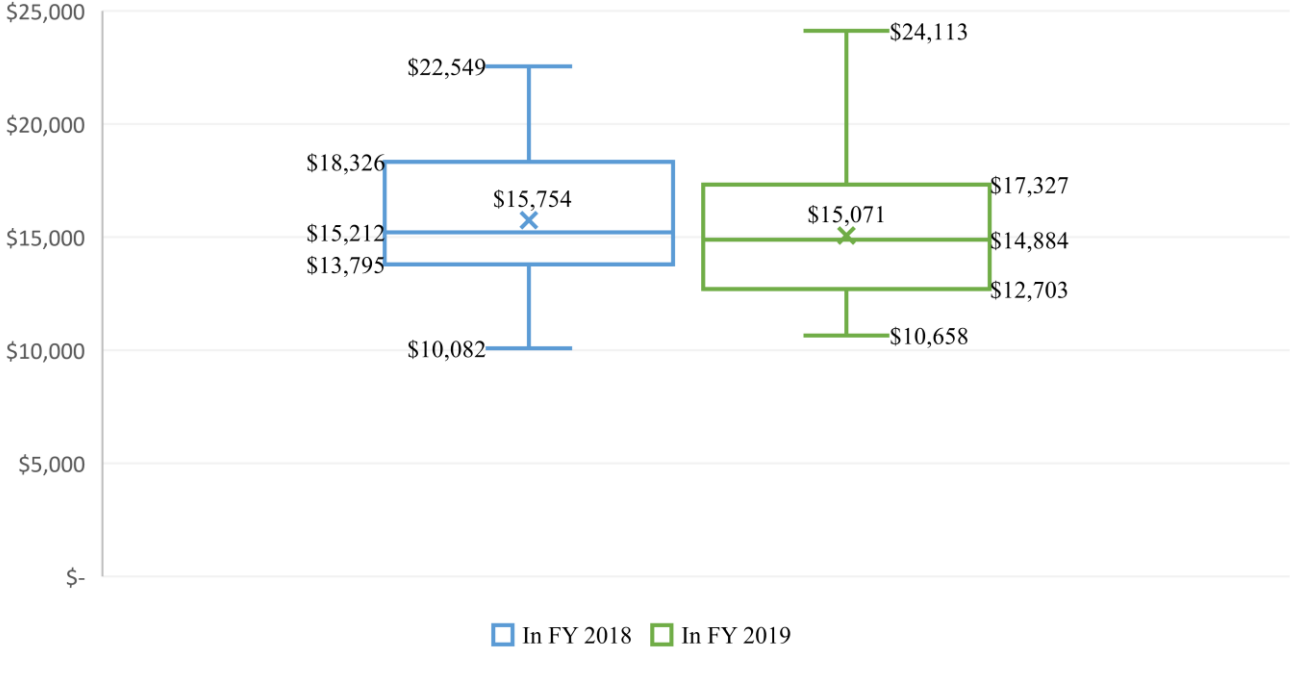
Table 1: Virginia PACT Team Costs

Name of CSB:	Years Offering PACT a/o 6/30/2019	Total Expenditures - PACT Services FY2019	Total Revenue - PACT Services FY2019							Private Insurance and Other Payers, Fees:	Individuals Served in FY2019	Change from FY2018	Average Cost PP in FY2019	Change from FY2018
				State:	Federal:	Local:	Medicaid:	Medicare:						
Alexandria CSB	3	\$1,141,076	\$1,141,076	\$850,000	\$0	\$161,190	\$129,886	\$0	\$0	76	+25	\$15,014	-\$3,144	
Arlington County CSB	20	\$1,298,549	\$1,298,549	\$665,000	\$0	\$254,377	\$375,916	\$3,256	\$0	102	-2	\$12,731	-\$954	
Blue Ridge Behavioral Healthcare	21	\$1,076,934	\$967,878	\$700,000	\$0	\$0	\$253,519	\$5,927	\$8,432	94	+2	\$11,457	\$244	
Chesapeake Integrated Behavioral Healthcare	14	\$1,875,003	\$1,875,003	\$1,352,803	\$0	\$41,736	\$420,464	\$0	\$60,000	90	+4	\$20,833	-\$1,311	
Colonial Behavioral Health	2	\$1,199,708	\$1,481,763	\$1,241,200	\$0	\$0	\$240,563	\$0	\$0	68	+18	\$17,643	-\$2,389	
Danville-Pittsylvania Community Services	15	\$1,260,122	\$9,943,681	\$861,235	\$0	\$0	\$4,534,816	\$0	\$4,547,630	94	+2	\$13,406	-\$555	
District 19 CSB	22	\$1,616,073	\$1,616,073	\$918,953	\$71,908	\$0	\$607,586	\$0	\$17,626	88	+4	\$18,364	-\$793	
Fairfax-Falls Church CSB	21	\$1,649,885	\$1,649,885	\$847,005	\$0	\$523,713	\$0	\$0	\$279,167	106	0	\$15,565	\$1,268	
Hampton-Newport News CSB	22	\$1,762,781	\$1,971,467	\$862,500	\$0	\$0	\$1,024,506	\$11,999	\$72,462	109	+1	\$16,172	\$918	
Henrico Area Mental Health & Developmental Services	23	\$1,578,832	\$1,575,832	\$500,000	\$297,112	\$309,526	\$466,594	\$1,466	\$1,134	142	+9	\$11,119	\$1,037	
Horizon Behavioral Health	20	\$1,272,809	\$1,409,164	\$700,000	\$0	\$0	\$701,918	\$1,901	\$5,345	99	-4	\$12,857	-\$894	

Name of CSB:	Years Offering PACT a/o 6/30/2019	Total Expenditures - PACT Services FY2019	Total Revenue - PACT Services FY2019							Private Insurance and Other Payers, Fees:	Individuals Served in FY2019	Change from FY2018	Average Cost PP in FY2019	Change from FY2018
				State:	Federal:	Local:	Medicaid:	Medicare:						
Middle Peninsula - Northern Neck CSB	3	\$888,117	\$1,046,450	\$750,000	\$0	\$0	\$271,652	\$0	\$24,798	56	+7	\$15,859	-\$6,689	
Mount Rogers CSB*	16	\$1,285,904	\$1,579,195	\$835,000	\$0	\$1,500	\$736,490	\$0	\$6,205	82	-3	\$15,682	-\$337	
New River Valley Community Services*	19	\$3,189,534	\$4,400,366	\$403,822	\$0	\$0	\$3,996,544	\$0	\$0	184	+12	\$17,334	-\$1,048	
Norfolk CSB	20	\$1,875,304	\$1,888,434	\$1,005,275	\$0	\$489,880	\$388,974	\$483	\$3,822	129	+9	\$14,537	-\$632	
Northwestern CSB	3	\$1,215,043	\$1,277,950	\$877,804	\$0	\$0	\$386,847	\$2,765	\$10,534	114	+30	\$10,658	-\$28	
Piedmont CSB	2	\$1,156,183	\$1,216,884	\$850,000	\$0	\$0	\$364,061	\$0	\$2,823	104	+23	\$11,117	-\$1,093	
Prince William County CSB	3	\$1,784,355	\$1,784,355	\$867,804	\$0	\$709,120	\$194,858	\$7,655	\$4,918	74	+3	\$24,113	\$4,363	
Rappahannock Area CSB	4	\$1,205,886	\$1,405,240	\$850,000	\$0	\$0	\$554,325	\$0	\$915	95	+17	\$12,694	-\$1,316	
Region Ten CSB	20	\$1,298,264	\$1,174,575	\$700,000	\$0	\$0	\$440,668	\$5,177	\$28,730	88	+4	\$14,753	-\$1,981	
Richmond Behavioral Health Authority	21	\$1,147,308	\$1,640,229	\$931,229	\$168,052	\$0	\$540,948	\$0	\$0	100	+1	\$11,473	-\$2,454	
Valley CSB	22	\$1,441,931	\$1,234,502	\$630,000	\$0	\$0	\$525,415	\$0	\$79,087	80	-5	\$18,024	\$3,527	
Virginia Beach Human Services	5	\$1,390,351	\$1,390,351	\$1,050,000	\$0	\$0	\$320,396	\$0	\$19,955	107	+10	\$12,994	-\$2,924	
Western Tidewater CSB	3	\$1,349,746	\$1,364,336	\$850,000	\$0	\$0	\$510,345	\$0	\$3,991	78	+6	\$17,304	\$796	
Average:	13.5	\$1,456,654	\$1,930,552	\$837,485	\$22,378	\$103,793	\$749,470	\$1,693	\$215,732	98		\$15,071		

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

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



Cost Effectiveness of PACT 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 PACT admission with the number of bed days (and associated costs) the two years following admission to PACT. DBHDS has determined that at least two years of hospitalization data for each individual receiving PACT services is required to conduct an adequate pre/post comparison of the program. In FY17, PACT programs admitted 630 new individuals across the Commonwealth. The entire group of new PACT admits in FY17 accounted for a total of 33,098 state hospital bed days in the two years prior to admission to a PACT program. Total cost for these bed days was an estimated \$26,941,772.

In the two years following their first PACT service in FY17, the group used only 18,280 bed days (estimated cost \$14,879,920). **This represents a 45% reduction in state hospitalization for this population, which signifies a cost avoidance of \$12,061,852 (see Figure 2).** Last year, DBHDS reported that the FY16 PACT admits represented a cost avoidance of \$8,061,856 in state hospital costs in the two years post PACT admission (see Figure 3). Thus, in total, the **PACT program contributed to an overall cost avoidance of \$20,123,708 in state hospital costs for the two cohort groups in the two years post initiation of PACT services.**

The costs are based on an \$814 average daily hospitalization cost per patient figure, which is the average year-to-date cost per patient day rate from the June 2018 DBHDS Monthly Cost Report. This figure excludes the three training centers and CCCA that do not serve PACT-related individuals to calculate the average.

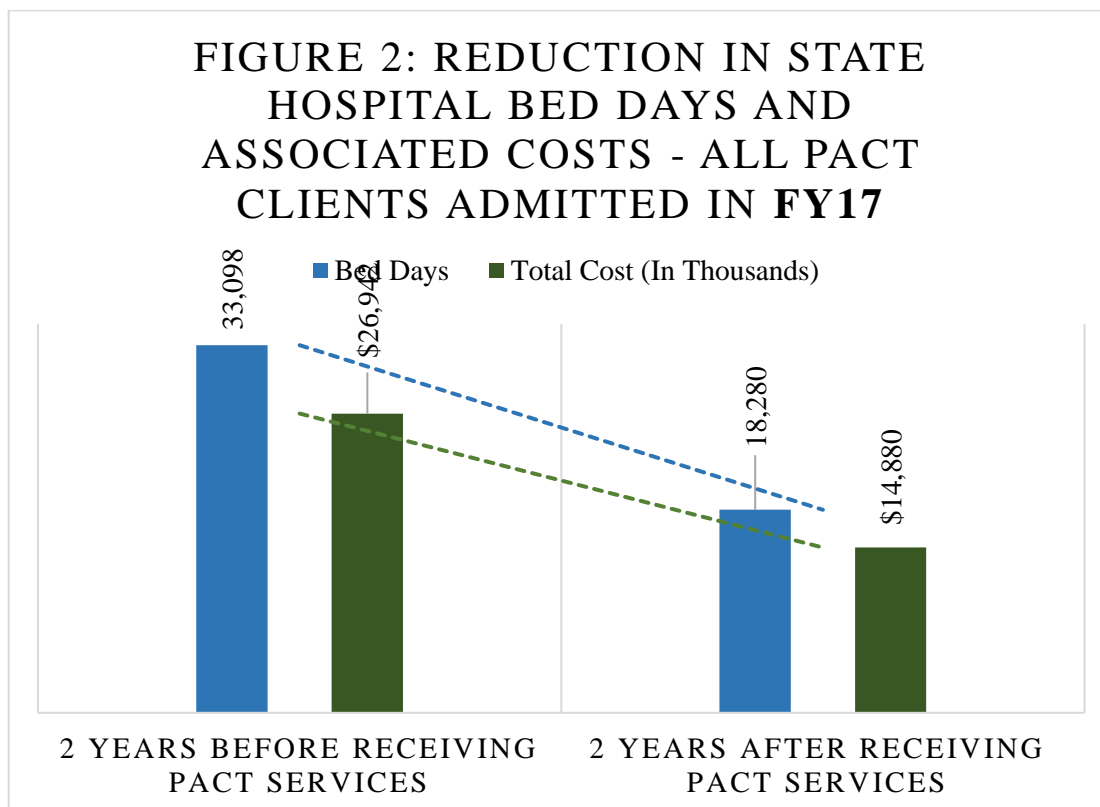


FIGURE 3: REDUCTION IN STATE HOSPITAL BED DAYS AND ASSOCIATED COSTS - PACT CLIENTS ADMITTED IN FY16

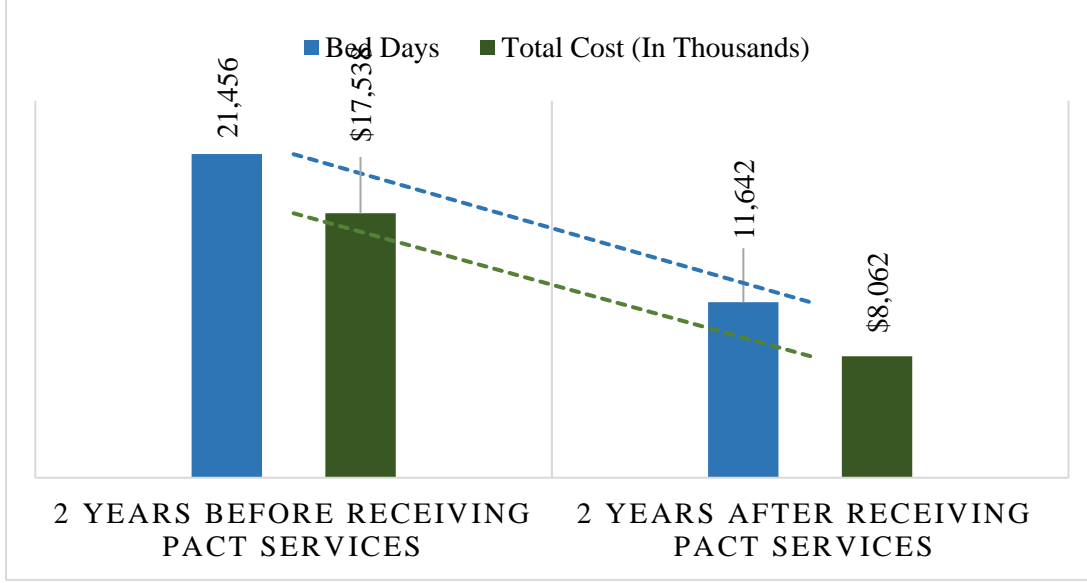


Table 2 below demonstrates the impact of all PACT teams in diverting individuals served by PACT in FY17 from state hospitalization. Nineteen of the 24 CSBs with PACT teams (79%) exhibited a net reduction in state hospital bed days for their FY17 cohort. Furthermore, **the average cost reduction per PACT team improved by 43% for the FY17 admits compared to the FY16 admits, from \$350,515 per CSB to \$502,577.**²

² 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.

PACT individuals for this study are designated as receiving PACT 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 PACT Team

Name of CSB	Two Years Before PACT	Two Years After PACT	Difference	Cost Reduction
Alexandria CSB	922	833	-89 (↓10%)	\$72,446
Arlington County CSB	1358	859	-499 (↓37%)	\$406,186
Blue Ridge Behavioral Healthcare	1670	684	-986 (↓59%)	\$802,604
Chesapeake Integrated Behavioral Healthcare	48	122	74 (↑154%)	(\$60,236)
Colonial Behavioral Health	152	256	104 (↑68%)	(\$84,656)
Danville-Pittsylvania Community Services	432	518	86 (↑20%)	(\$70,004)
District 19 CSB	110	228	118 (↑107%)	(\$96,052)
Fairfax-Falls Church CSB	1589	761	-828 (↓52%)	\$673,992
Hampton-Newport News CSB	3561	2321	-1240 (↓35%)	\$1,009,360
Henrico Area Mental Health & Developmental Services	996	780	-216 (↓22%)	\$175,824
Horizon Behavioral Health	2660	1569	-1091 (↓41%)	\$888,074
Middle Peninsula - Northern Neck CSB	762	3	-759 (↓99%)	\$617,826
Mount Rogers CSB	316	55	-261 (↓83%)	\$212,454
New River Valley Community Services	1330	1609	279 (↑21%)	(\$227,106)
Norfolk CSB	1575	536	-1039 (↓66%)	\$845,746
Northwestern CSB	755	344	-411 (↓54%)	\$334,554
Piedmont CSB	803	476	-327 (↓41%)	\$266,178
Prince William County CSB	3921	1704	-2217 (↓57%)	\$1,804,638
Rappahannock Area CSB	1357	1083	-274 (↓20%)	\$223,036
Region Ten CSB	1069	369	-700 (↓65%)	\$569,800
Richmond Behavioral Health Authority	3442	588	-2854 (↓83%)	\$2,323,156
Valley CSB	1506	999	-507 (↓34%)	\$412,698
Virginia Beach Human Services	898	598	-300 (↓33%)	\$244,200
Western Tidewater CSB	1866	985	-881 (↓47%)	\$717,134
Total	33,098	18,280	-14,818 (↓45%)	\$12,061,852

Local Hospitals

DBHDS assessed local hospitalization cost effectiveness by comparing individuals' number of psychiatric bed days (and associated costs) in the two years prior to PACT admission with the number of bed days (and associated costs) the two years following admission to PACT.³ In FY17, PACT programs admitted 630 new individuals across the Commonwealth. The entire group of new PACT admits in FY17 accounted for a total of 13,721 local hospital psychiatric bed days in the two years prior to admission to a PACT program. The total cost for these bed days was an estimated \$12,842,856.

In the two years following their first PACT service in FY17, these individuals used only 7,501 psychiatric bed days (estimated cost \$7,020,936). **This represents a 45% reduction in local psychiatric hospitalization for this population, signifying a cost avoidance of \$5,821,920 (see Figure 4).**

The costs are based on DMAS' FY19 Local Hospital Psychiatric Operating Rate per Day's state average of \$936.⁴

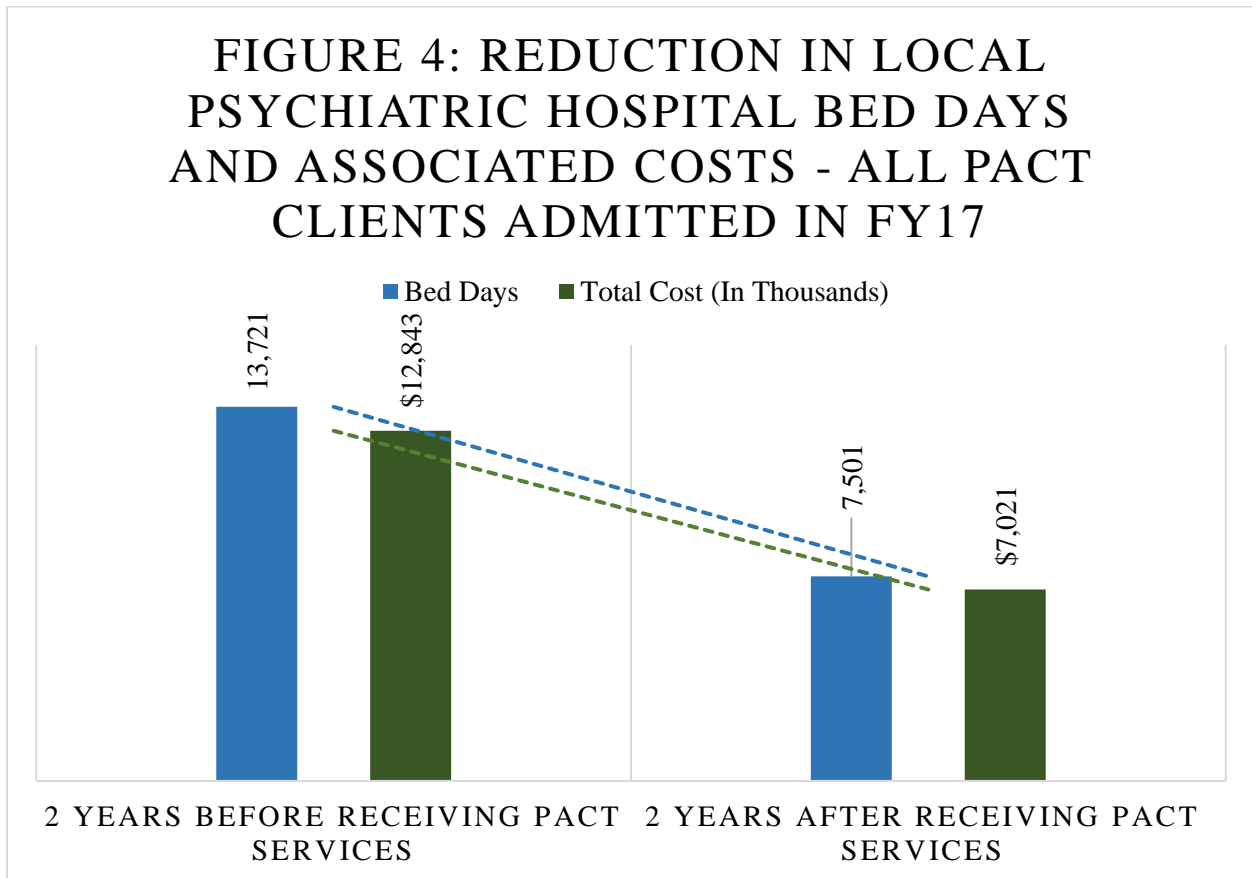


Table 3 below demonstrates the impact of all PACT teams in diverting PACT-served individuals admitted in FY17 from local psychiatric hospitalization. *All of the 24 CSBs with PACT teams* demonstrated a net

³ 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

⁴ Department of Medical Assistance Services. (2019). *Hospital Rates* [DRG and Psychiatric Rates]. Retrieved from <http://www.dmas.virginia.gov/#/hospitalrates>

reduction in local hospital psychiatric bed days for their FY17 cohort. Furthermore, **the average cost reduction per PACT team was \$242,580.** ⁵

Table 3: Local Hospital Psychiatric Bed Days by PACT Team

Name of CSB	Two Years Before PACT	Two Years After PACT	Difference	Cost Reduction
Alexandria CSB	542	368	-174 (↓32%)	\$162,864
Arlington County CSB	558	279	-279 (↓50%)	\$261,144
Blue Ridge Behavioral Healthcare	583	346	-237 (↓41%)	\$221,832
Chesapeake Integrated Behavioral Healthcare	157	80	-77 (↓49%)	\$72,072
Colonial Behavioral Health	480	230	-250 (↓52%)	\$234,000
Danville-Pittsylvania Community Services	92	35	-57 (↓62%)	\$53,352
District 19 CSB	418	163	-255 (↓61%)	\$238,680
Fairfax-Falls Church CSB	629	323	-306 (↓49%)	\$286,416
Hampton-Newport News CSB	281	94	-187 (↓67%)	\$175,032
Henrico Area Mental Health & Developmental Services	751	502	-249 (↓33%)	\$233,064
Horizon Behavioral Health	1157	565	-592 (↓51%)	\$554,112
Middle Peninsula - Northern Neck CSB	501	196	-305 (↓61%)	\$285,480
Mount Rogers CSB	128	73	-55 (↓43%)	\$51,480
New River Valley Community Services	446	251	-195 (↓44%)	\$182,520
Norfolk CSB	1159	495	-664 (↓57%)	\$621,504
Northwestern CSB	147	88	-59 (↓40%)	\$55,224
Piedmont CSB	436	229	-207 (↓47%)	\$193,752
Prince William County CSB	1001	708	-293 (↓29%)	\$274,248
Rappahannock Area CSB	1000	631	-369 (↓37%)	\$345,384
Region Ten CSB	388	87	-301 (↓78%)	\$281,736
Richmond Behavioral Health Authority	946	795	-151 (↓16%)	\$141,336
Valley CSB	194	122	-72 (↓37%)	\$67,392
Virginia Beach Human Services	893	505	-388 (↓43%)	\$363,168
Western Tidewater CSB	834	336	-498 (↓60%)	\$466,128
Total	13,721	7,501	-6,220 (↓45%)	\$5,821,920

⁵ Data Sources:

PACT individuals for this study are designated as receiving PACT 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.

Cost Effectiveness of PACT 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 PACT admission with the number of total days in confinement the two years post admission to PACT. In FY17, 630 individuals were newly admitted to PACT programs across the Commonwealth. The entire group of new PACT admits in FY17 served 20,382 days in confinement during the two years prior to admission to a PACT program. Total cost for these confinement days is an estimated \$1,749,387.

In the two years post their first PACT service in FY17, these individuals served only 9,999 days in confinement (cost \$858,214), for a reduction in time spent in confinement and associated costs of 51% (cost avoidance of \$891,173 in expected costs) (see Figure 5). Last year we reported that the FY16 PACT admits represented a cost avoidance of \$688,700 in jail costs in the two years post PACT admission (see Figure 6). Thus, in total, the **PACT program contributed to an overall cost avoidance of \$1,579,873 in jail costs for the two cohort groups in the two years post initiation of PACT services.**

The costs are based off an \$85.83 average total daily cost per inmate day figure, provided in the Commonwealth of Virginia Compensation Board Report to the General Assembly: *FY2017 Jail Cost Report*.⁶

⁶ Commonwealth of Virginia Compensation Board. (2018). *Report to the General Assembly: FY2017 Jail Cost Report – Annual Jail Revenues and Expenditures Report*. Richmond, VA.

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.

PACT individuals for this study are designated as receiving PACT 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 5: REDUCTION IN DAYS SPENT IN CONFINEMENT AND ASSOCIATED COSTS - ALL PACT CLIENTS ADMITTED IN FY17

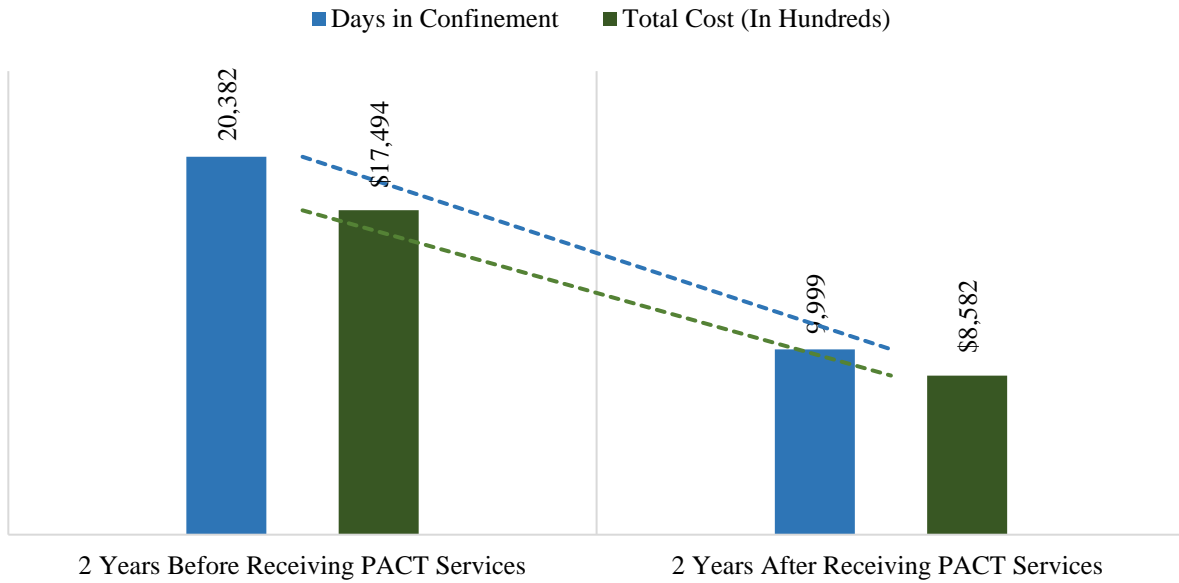
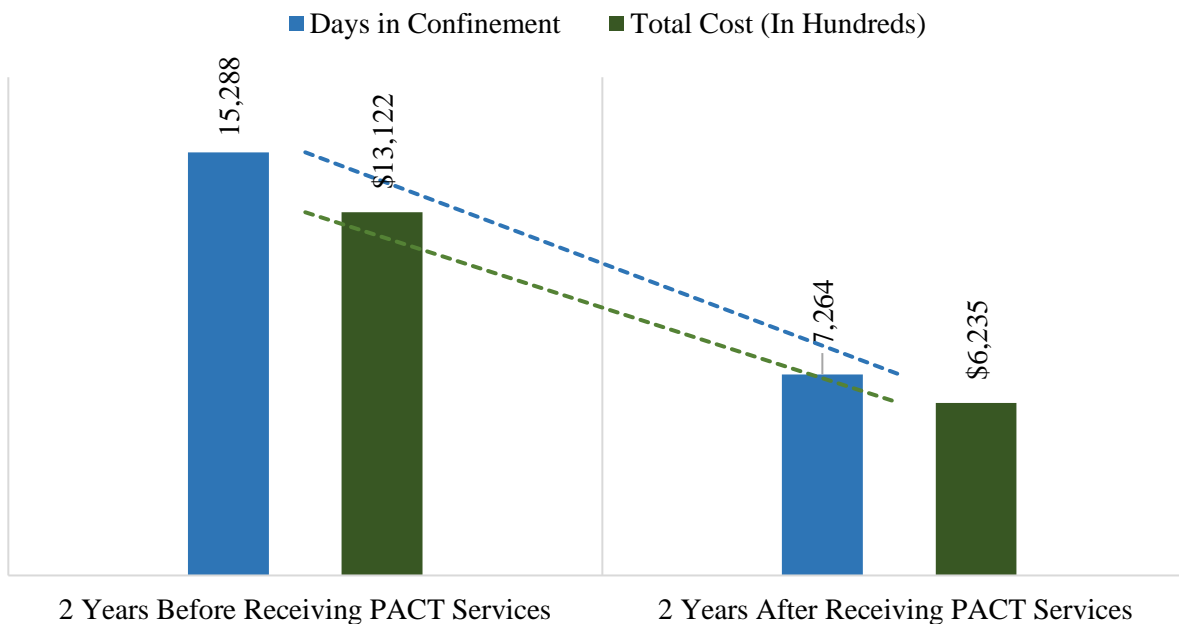


FIGURE 6: REDUCTION IN DAYS SPENT IN CONFINEMENT AND ASSOCIATED COSTS - ALL PACT CLIENTS ADMITTED IN FY16



Conclusion

What began as a small state-grant for a single pilot PACT team in 1996, PACT has grown to 25 teams across the Commonwealth. In FY19, PACT served 2,359 individuals who required highly proactive and persistent support through PACT services. On average, it costs the state \$15,071 per individual to provide this level of care. This investment has produced significant outcomes. The program reduces PACT-served individuals' state hospitalization rates, evidenced by the new FY17 PACT population exhibiting a 45% reduction in bed days over two years, which resulted in avoiding an estimated \$12,061,852 in expected costs. Similarly, the data suggests that the PACT program reduces the demand on local/private hospitals with the new FY17 PACT population needing 45% fewer bed days, signifying an estimated cost avoidance of \$5,821,920. 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 PACT 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.⁷ However, the effectiveness of Virginia's PACT 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 to rely on 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), to conduct formal fidelity evaluations of Virginia's PACT programs.⁸ Prior to the impact of the COVID-19 pandemic, DBHDS PACT Coordinator and evaluators from the UNC Institute for Best Practices had completed TMACT evaluations of six separate CSB PACT programs. On-site fidelity evaluations are currently on hold, however, while evaluators determine the best course of action to monitor program fidelity to account for necessary service modifications programs have implemented in response to the COVID crisis.

Given the success of the Virginia PACT teams at reducing hospitalization, ACT was selected as one of six priority services for Behavioral Health Enhancements, 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. ACT rates, which were based on a per diem rate with tiers of fidelity to the ACT model, would have gone into effect January 1, 2021. Due to the COVID-19 pandemic, Behavioral Health Enhancement budget items were unallotted. Both agencies remain committed to the Behavioral Health Enhancement initiative, and DBHDS is proceeding with regulatory changes to allow small, medium, and large teams to develop (to ensure that ACT can be available across geographically diverse areas), as we await further budget clarifications for the current 2021-2022 biennium.

⁷ For a collection of relevant research, see: UNC Institute for Best Practices. (2019). *ACT* [Research]. Retrieved from <http://www.institutebestpractices.org/act/research/>

⁸ 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.

To ensure that Virginia continues to achieve and improve upon the outcomes and cost reductions PACT has achieved to date, ongoing investment in not only the service itself, but also provider training, formal program fidelity evaluations, and expansion of staffing infrastructure at the state level continue to be priorities.