

Time to First Follow Up Service for Community Rehabilitation and Treatment (CRT) Clients After Inpatient Psychiatric Hospitalization Discharge

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Key Findings

- The annual number of inpatient stays for CRT clients (defined by number of discharges) increased in FY 2018 for the second year in a row.
- The annual number of CRT clients with inpatient stays (defined by number of unique clients with at least one discharge) remained roughly the same as in FY 2017.
- In FY 2018, 54% of all CRT inpatient discharges received a same-day follow-up service by their CRT programs. This is an 8% improvement over FY 2017.
- In FY 2018, 83% of CRT inpatient discharges received a follow-up service within one week of being discharged.
- DAs differed markedly in how quickly they provided follow-up services after CRT inpatient discharges.

Background

Community Rehabilitation and Treatment (CRT) is a community-based outpatient program for adults with severe and persistent mental illness. CRT programs are funded by the Vermont Department of Mental Health (DMH) and administered by 10 Designated Agencies (DAs) and 1 Specialized Service Agencies (SSA) across Vermont.

This data brief provides information on the number of days between discharge from inpatient psychiatric care and the first receipt of follow up CRT services for clients who had been enrolled in CRT prior to their inpatient psychiatric admission. This measure complements the *Follow-Up After Hospitalization for Mental Illness (FUH)* recommended by the National Committee for Quality Assurance (NCQA).

Methods

Data from two DMH databases were analyzed. The CRT Inpatient Admissions Database contains basic information on CRT inpatient stays and was used to identify all inpatient psychiatric discharges for CRT enrolled clients from FY 2011 through FY 2018. The Monthly Service Report (MSR) database contains client- and service-level data on all mental health services provided by DAs and SSAs. The Centers for Disease Control and Prevention (CDC) Link Plus software was used to identify the unique CRT clients with inpatient discharges and to determine the number of discharges for each CRT client. Link Plus was then used to link each CRT client to the Monthly Service Report (MSR) database to establish the date of the first follow up service after each inpatient discharge. The difference between inpatient discharge dates and follow up service dates was used to calculate the time between discharge and follow up.

Results

Table 1 describes the number of discharges, number of clients discharged, and the range of discharges per client for CRT psychiatric inpatient stays. Each year, most CRT clients with inpatient discharges had a total of one or two discharges, but there was a small number of clients with as many as 23 discharges per year.

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Table 1
CRT Psychiatric Inpatient Stays

	Number of Discharges	Number of Clients Discharged	Range of Discharges Per Client
FY2011	587	375	1 to 11
FY2012	521	326	1 to 10
FY2013	449	306	1 to 8
FY2014	348	252	1 to 4
FY2015	355	247	1 to 6
FY2016	329	239	1 to 9
FY2017	364	245	1 to 10
FY2018	373	242	1 to 23

Table 2 lists the number of inpatient psychiatric discharges per CRT client in each fiscal year. Note that, because of the rarity of having a large number of inpatient psychiatric discharges, CRT clients with four or more discharges were collapsed into the *4 or more* category in order to protect client confidentiality.

Table 2
Number and Percent of CRT Clients by Number of Inpatient
Psychiatric Discharges

	Number of Inpatient Discharges			
	1	2	3	4 or more
FY2011	268 (72%)	60 (16%)	22 (6%)	24 (6%)
FY2012	217 (67%)	73 (22%)	16 (5%)	20 (6%)
FY2013	221 (72%)	56 (18%)	14 (5%)	15 (5%)
FY2014	183 (73%)	48 (19%)	15 (6%)	6 (2%)
FY2015	178 (72%)	49 (20%)	9 (4%)	11 (4%)
FY2016	187 (78%)	29 (12%)	16 (7%)	7 (3%)
FY2017	173 (71%)	50 (20%)	11 (5%)	11 (5%)
FY2018	175 (72%)	43 (18%)	16 (7%)	8 (3%)

Each year, with the exception of FY 2017, more than 50% of all CRT inpatient psychiatric discharges in Vermont were followed up with an outpatient CRT service within the same day. Approximately 30% of all discharges each year received a follow up CRT service within 1 to 7 days subsequent to discharge. Smaller percentages of discharges received a follow up either 8 to 30 days or more than 30 days after discharge. Each year, 2% to 4% of inpatient discharges did not receive a follow up service. Figure 1 summarizes the time between inpatient discharge and the first outpatient follow up among CRT clients across Vermont for each year of the study period.

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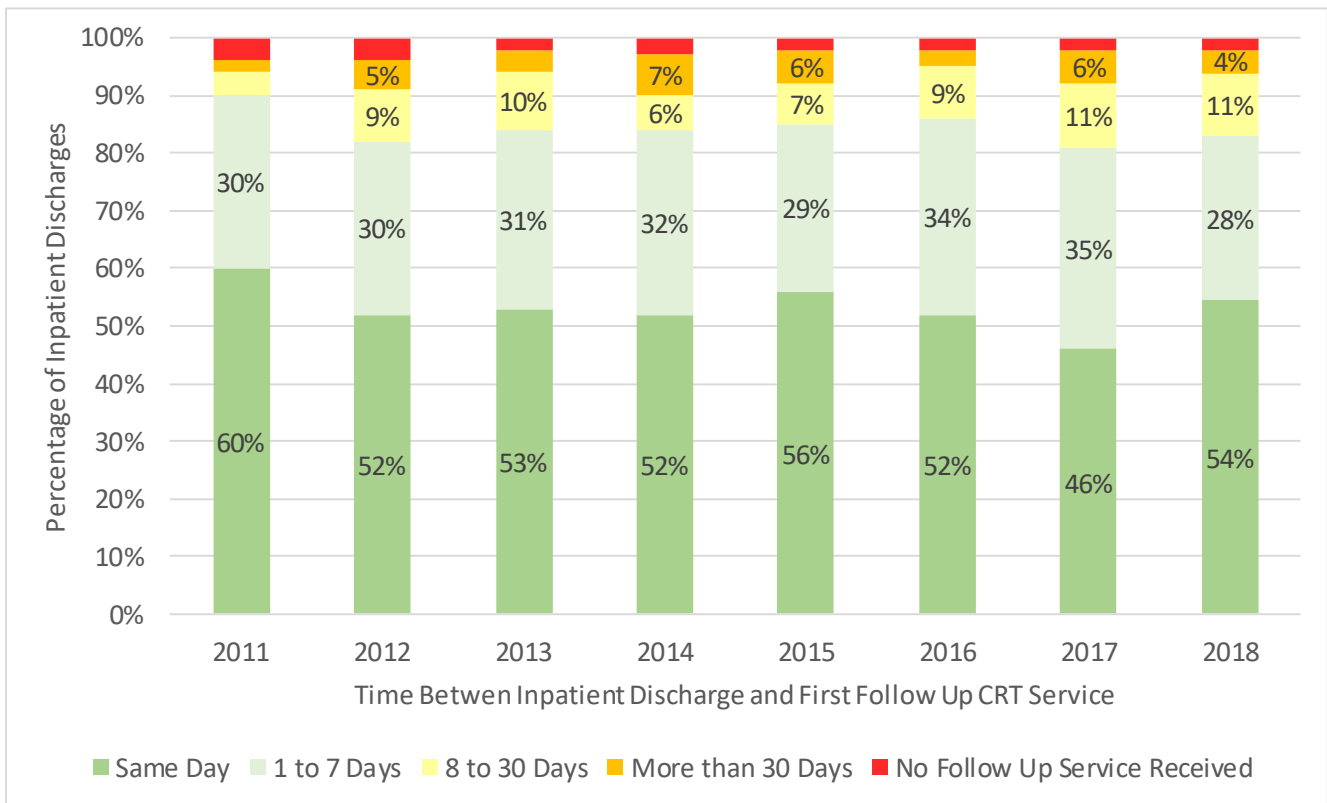


Figure 1 – Time Between Inpatient Discharge and First Follow Up CRT Service by Fiscal Year

While Figure 1 provides a useful visual representation of cumulative percent of CRT clients that fall into each of the five categories of time between inpatient discharge and the first follow up across each year of the study period, Table 3 provides the same data in greater detail (number, percent, and cumulative percent of inpatient discharges) and in tabular format.

Table 3

Number, Percent, and Cumulative Percent of Inpatient Psychiatric Discharges for CRT Client in Each Time-To-Follow-Up Group by Year

	Same Day			1 to 7 Days			8 to 30 Days			More than 30 Days			No Follow Up Service		
	#	FY %	Cml FY %	#	FY %	Cml FY %	#	FY %	Cml FY %	#	FY %	Cml FY %	#	FY %	Cml FY %
FY2011	359	60%	60%	180	30%	90%	26	4%	94%	12	2%	96%	21	4%	100%
FY2012	273	52%	52%	157	30%	83%	45	9%	91%	27	5%	96%	19	4%	100%
FY2013	239	53%	53%	140	31%	84%	43	10%	94%	18	4%	98%	9	2%	100%
FY2014	183	52%	52%	111	32%	84%	21	6%	90%	24	7%	97%	12	3%	100%
FY2015	198	56%	56%	104	29%	85%	25	7%	92%	20	6%	98%	8	2%	100%
FY2016	172	52%	52%	111	34%	86%	29	9%	95%	9	3%	98%	8	2%	100%
FY2017	167	46%	46%	129	35%	81%	39	11%	92%	21	6%	98%	8	2%	100%
FY2018	202	54%	54%	106	28%	83%	41	11%	94%	16	4%	98%	8	2%	100%

Figure 2 presents the time between inpatient discharge and first follow up CRT service in the same manner as Figure 1, but it presents only data from FY 2018 and breaks the data out across the 10 DAs and 1 SSA that are contracted to provide mental health services across Vermont.

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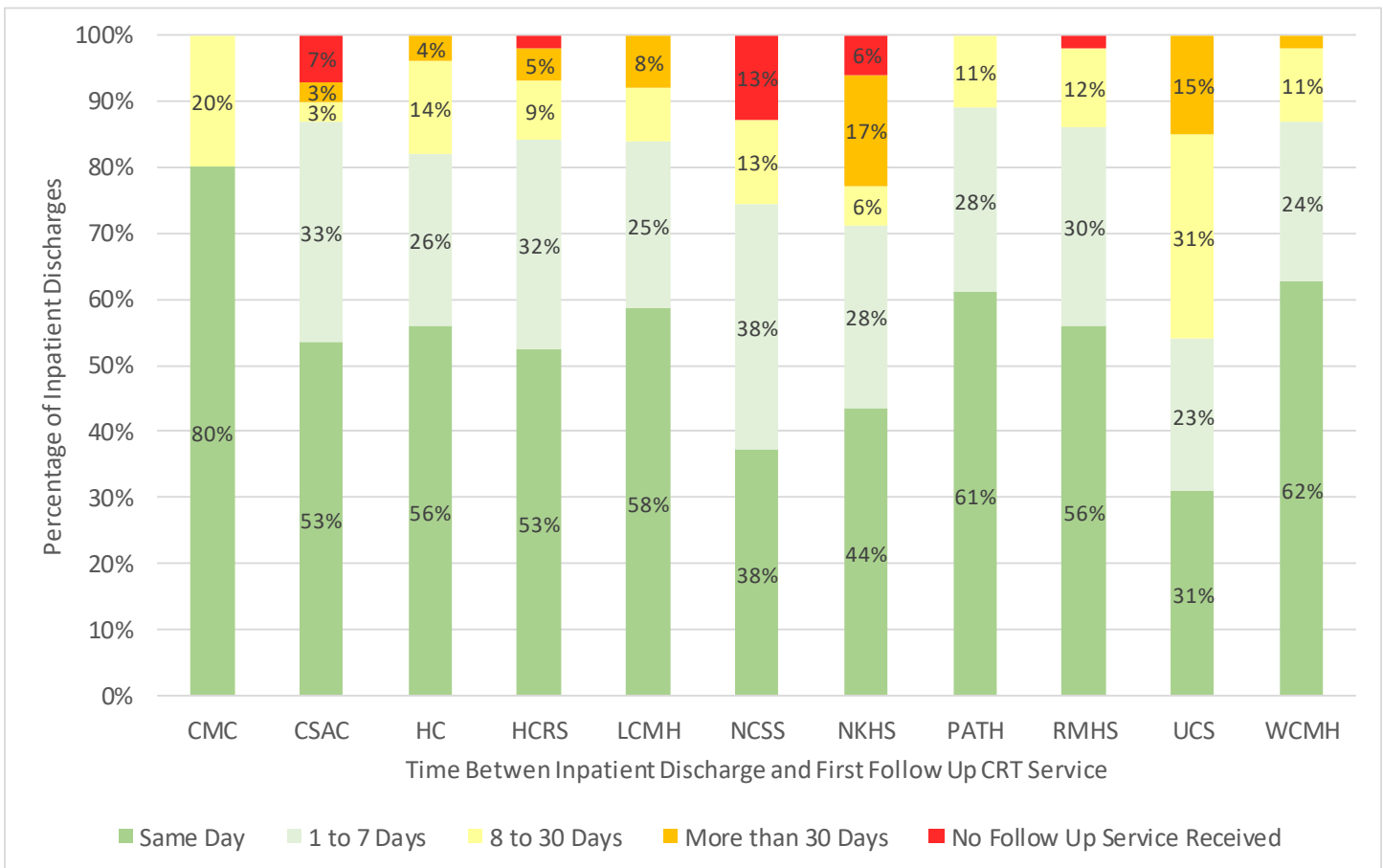


Figure 2 – Time Between Inpatient Discharge and First Follow Up CRT Service by Designated Agency, FY 2018

Table 4 presents the number and percent of inpatient discharges for CRT clients that fall into each of the five categories of time between inpatient discharge and the first follow up with an outpatient CRT service across all 10 DAs and 1 SSA in FY 2018.

Table 4
Number and Percent of Inpatient Psychiatric Discharges for CRT Enrollees in Each Time-To-Follow-Up Group by Designated Agency in FY2018

	Same Day		1 to 7 Days		8 to 30 Days		More than 30 Days		No Follow Up Service	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
CMC	4	80%	0	0%	1	20%	0	0%	0	0%
CSAC	16	53%	10	33%	1	3%	1	3%	2	7%
HC	39	56%	18	26%	10	14%	3	4%	0	0%
HCRS	58	53%	35	32%	10	9%	5	5%	2	2%
LCMH	7	58%	3	25%	1	8%	1	8%	0	0%
NCSS	3	38%	3	38%	1	13%	0	0%	1	13%
NKHS	8	44%	5	28%	1	6%	3	17%	1	6%
PATH	11	61%	5	28%	2	11%	0	0%	0	0%
RMHS	24	56%	13	30%	5	12%	0	0%	1	2%
UCS	4	31%	3	23%	4	31%	2	15%	0	0%
WCMH	28	62%	11	24%	5	11%	1	2%	0	0%

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Tables 5 through 15 present the number and percent of inpatient psychiatric discharges for CRT clients served by each of the 10 DAs and 1 SSA for each year of the study period.

Table 5
Number and Percent of Inpatient Psychiatric Discharges for CRT Enrollees served by CMC in Each Time-To-Follow-Up Group by Fiscal Year

	CMC									
	Same Day		1 to 7 Days		8 to 30 Days		More Than 30 Days		No Follow Up Service	
FY2011	51	65%	25	32%	2	3%	0	0%	1	1%
FY2012	19	56%	11	32%	0	0%	1	3%	3	9%
FY2013	12	52%	9	39%	0	0%	0	0%	2	9%
FY2014	12	52%	4	17%	0	0%	6	26%	1	4%
FY2015	7	39%	7	39%	0	0%	3	17%	1	6%
FY2016	10	59%	5	29%	0	0%	1	6%	1	6%
FY2017	9	45%	8	40%	0	0%	1	5%	2	10%
FY2018	4	80%	0	0%	1	20%	0	0%	0	0%

Table 6
Number and Percent of Inpatient Psychiatric Discharges for CRT Enrollees served by CSAC in Each Time-To-Follow-Up Group by Fiscal Year

	CSAC									
	Same Day		1 to 7 Days		8 to 30 Days		More Than 30 Days		No Follow Up	
FY2011	25	61%	12	29%	1	2%	2	5%	1	2%
FY2012	35	71%	7	14%	5	10%	0	0%	2	4%
FY2013	21	57%	10	27%	5	14%	1	3%	0	0%
FY2014	15	65%	5	22%	2	9%	0	0%	1	4%
FY2015	13	57%	4	17%	4	17%	1	4%	1	4%
FY2016	10	53%	4	21%	1	5%	3	16%	1	5%
FY2017	11	42%	8	31%	4	15%	3	12%	0	0%
FY2018	16	53%	10	33%	1	3%	1	3%	2	7%

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Table 7

Number and Percent of Inpatient Psychiatric Discharges for CRT Enrollees served by HC in Each Time-To-Follow-Up Group by Fiscal Year

	HC									
	Same Day		1 to 7 Days		8 to 30 Days		More Than 30		No Follow Up	
FY2011	52	51%	32	32%	8	8%	4	4%	5	5%
FY2012	50	46%	31	29%	20	19%	6	6%	1	1%
FY2013	49	60%	23	28%	7	9%	2	2%	1	1%
FY2014	21	38%	21	38%	4	7%	8	15%	1	2%
FY2015	44	61%	19	26%	5	7%	3	4%	1	1%
FY2016	39	54%	21	29%	10	14%	0	0%	2	3%
FY2017	31	43%	27	37%	9	12%	5	7%	1	1%
FY2018	39	56%	18	26%	10	14%	3	4%	0	0%

Table 8

Number and Percent of Inpatient Psychiatric Discharges for CRT Enrollees served by HCRS in Each Time-To-Follow-Up Group by Fiscal Year

	HCRS									
	Same Day		1 to 7 Days		8 to 30 Days		More Than 30		No Follow Up	
FY2011	56	55%	40	40%	2	2%	1	1%	2	2%
FY2012	44	45%	39	40%	7	7%	5	5%	3	3%
FY2013	35	41%	28	33%	14	16%	6	7%	3	3%
FY2014	37	55%	20	30%	5	7%	3	4%	2	3%
FY2015	24	46%	20	38%	2	4%	6	12%	0	0%
FY2016	24	36%	32	48%	7	10%	3	4%	1	1%
FY2017	32	38%	31	40%	13	16%	6	7%	2	2%
FY2018	58	53%	35	32%	10	9%	5	5%	2	2%

Table 9

Number and Percent of Inpatient Psychiatric Discharges for CRT Enrollees served by LCMH in Each Time-To-Follow-Up Group by Fiscal Year

	LCMH									
	Same Day		1 to 7 Days		8 to 30 Days		More Than 30		No Follow Up	
FY2011	10	67%	1	7%	1	7%	0	0%	3	20%
FY2012	7	39%	3	17%	3	17%	2	11%	3	17%
FY2013	12	60%	7	35%	1	5%	0	0%	0	0%
FY2014	6	67%	2	22%	0	0%	0	0%	1	11%
FY2015	6	43%	3	21%	3	21%	2	14%	0	0%
FY2016	7	50%	6	43%	0	0%	0	0%	1	7%
FY2017	7	50%	6	43%	0	0%	0	0%	1	7%
FY2018	7	58%	3	25%	1	8%	1	8%	0	0%

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Table 10
Number and Percent of Inpatient Psychiatric Discharges for CRT Enrollees served by NCSS in Each Time-To-Follow-Up Group by Fiscal Year

	NCSS									
	Same Day		1 to 7 Days		8 to 30 Days		More Than 30		No Follow Up	
FY2011	11	69%	3	19%	1	6%	1	6%	0	0%
FY2012	11	73%	4	27%	0	0%	0	0%	0	0%
FY2013	9	75%	2	17%	1	8%	0	0%	0	0%
FY2014	10	67%	5	33%	0	0%	0	0%	0	0%
FY2015	5	50%	3	30%	1	10%	0	0%	1	10%
FY2016	5	83%	1	17%	0	0%	0	0%	0	0%
FY2017	1	33%	1	33%	1	33%	0	0%	0	0%
FY2018	3	38%	3	38%	1	13%	0	0%	1	13%

Table 11
Number and Percent of Inpatient Psychiatric Discharges for CRT Enrollees served by NKHS in Each Time-To-Follow-Up Group by Fiscal Year

	NKHS									
	Same Day		1 to 7 Days		8 to 30 Days		More Than 30		No Follow Up	
FY2011	24	73%	6	18%	1	3%	1	3%	1	3%
FY2012	8	29%	7	25%	5	18%	5	18%	3	11%
FY2013	13	50%	6	23%	4	15%	2	8%	1	4%
FY2014	6	55%	1	9%	2	18%	2	18%	0	0%
FY2015	8	42%	5	26%	3	16%	2	11%	1	5%
FY2016	6	55%	3	27%	0	0%	1	9%	1	9%
FY2017	13	72%	3	17%	2	11%	0	0%	0	0%
FY2018	8	44%	5	28%	1	6%	3	17%	1	6%

Table 12
Number and Percent of Inpatient Psychiatric Discharges for CRT Enrollees served by PATH in Each Time-To-Follow-Up Group by Fiscal Year

	PATH									
	Same Day		1 to 7 Days		8 to 30 Days		More Than 30		No Follow Up	
FY2011										
FY2012										
FY2013										
FY2014										
FY2015	5	71%	0	0%	1	14%	1	14%	0	0%
FY2016	5	50%	4	40%	0	0%	1	10%	0	0%
FY2017	4	31%	2	15%	2	15%	0	0%	1	8%
FY2018	11	61%	5	28%	2	11%	0	0%	0	0%

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Table 13

Number and Percent of Inpatient Psychiatric Discharges for CRT Enrollees served by RMHS in Each Time-To-Follow-Up Group by Fiscal Year

	RMHS									
	Same Day		1 to 7 Days		8 to 30 Days		More Than 30		No Follow Up	
FY2011	38	60%	20	32%	2	3%	0	0%	3	5%
FY2012	41	61%	19	28%	2	3%	3	4%	2	3%
FY2013	34	49%	30	43%	2	3%	3	4%	0	0%
FY2014	30	56%	18	33%	2	4%	2	4%	2	4%
FY2015	33	62%	15	28%	2	4%	1	2%	2	4%
FY2016	38	62%	17	28%	6	10%	0	0%	0	0%
FY2017	21	51%	16	39%	2	5%	2	5%	0	0%
FY2018	24	56%	13	30%	5	12%	0	0%	1	2%

Table 14

Number and Percent of Inpatient Psychiatric Discharges for CRT Enrollees served by UCS in Each Time-To-Follow-Up Group by Fiscal Year

	UCS									
	Same Day		1 to 7 Days		8 to 30 Days		More Than 30		No Follow Up	
FY2011	23	53%	15	35%	2	5%	1	2%	2	5%
FY2012	13	62%	6	29%	0	0%	2	10%	0	0%
FY2013	15	56%	6	22%	3	11%	2	7%	1	4%
FY2014	12	55%	9	41%	0	0%	0	0%	1	5%
FY2015	11	55%	6	30%	2	10%	0	0%	1	5%
FY2016	8	50%	6	38%	1	6%	0	0%	1	6%
FY2017	7	64%	1	9%	1	9%	1	9%	1	9%
FY2018	4	31%	3	23%	4	31%	2	15%	0	0%

Table 15

Number and Percent of Inpatient Psychiatric Discharges for CRT Enrollees served by WCMH in Each Time-To-Follow-Up Group by Fiscal Year

	WCMH									
	Same Day		1 to 7 Days		8 to 30 Days		More Than 30		No Follow Up	
FY2011	55	65%	21	25%	4	5%	2	2%	2	2%
FY2012	55	65%	21	25%	4	5%	2	2%	2	2%
FY2013	39	58%	19	28%	6	9%	2	3%	1	1%
FY2014	27	53%	21	41%	1	2%	0	0%	2	4%
FY2015	42	63%	22	33%	2	3%	1	1%	0	0%
FY2016	20	56%	12	33%	4	11%	0	0%	0	0%
FY2017	31	51%	22	36%	5	8%	3	5%	0	0%
FY2018	28	62%	11	24%	5	11%	1	2%	0	0%

Discussion

The number of inpatient psychiatric discharges produced by CRT clients dropped from 587 in FY 2011 to 373 in FY 2018. Similarly, the number of CRT clients with inpatient admissions dropped from 375 in FY 2011 to 242 in FY 2018. However, while there was a slight decrease in number of CRT clients with inpatient admissions from FY 2017 to FY 2018, there was also a slight increase in the number of psychiatric discharges produced by CRT clients. Each year, most CRT clients with inpatient psychiatric discharges were only hospitalized once. The percent of CRT clients with only one hospitalization remained consistent from year to year (approximately 72%). The number and percent of CRT clients with multiple psychiatric hospitalizations has remained approximately 28% from FY 2011 to FY 2018. When considering these statistics, it should be noted that Vermont's state hospital was closed in August of 2011 due to Tropical Storm Irene and this impacted the availability of inpatient psychiatric care across the state.

As Figure 1 indicates, in FY 2018, 46% of all inpatient psychiatric discharges for CRT clients were followed up with an outpatient CRT service on the same day as the discharges. This marks a noteworthy increase in same day follow ups since FY 2017 and a return to more typical results for same day follow up when compared to all eight years of the study period (see Table 3). On average, 31% of all inpatient psychiatric discharges for CRT clients were followed up with an outpatient CRT service one to seven days after being discharged. Taken together, these findings demonstrate that, each year, approximately 85% of clients who were receiving state-provided outpatient care prior to psychiatric hospitalization received a CRT outpatient follow up service within one week of being discharged from inpatient care. Relatively few discharges were followed up with CRT services after 8 days and approximately 3% of discharges for CRT clients were not followed up with an outpatient CRT service.

Across the last eight years, there was a statewide decrease in the percent of inpatient psychiatric discharges that received CRT follow up services on the same day as the discharge. However, DAs differed quite noticeably in how quickly they provided CRT follow up services after their clients were discharged from inpatient care (see Tables 5-15). In FY 2018, the percent of inpatient psychiatric discharges for CRT clients that were followed up with an outpatient CRT service on the same day ranged from 80% for CMC to 31% for UCS. The percent of inpatient psychiatric discharges for CRT clients that were not followed up with an outpatient CRT service ranged from 0% for CMC, HC, LCMH, PATH, and UCS to 13% for NCSS. However, it should be noted that the DAs that serve a small number of clients may exhibit greater variability in the percent of CRT clients in each time-to-follow-up category. This is particularly true in the time-to-follow-up categories with fewer clients such as the No Follow Up category.

When eight-year trends were compared across the different DAs it became apparent that the percent of CRT clients followed up on the same day has decreased for most DAs. Of particular note, NCSS saw 31% decrease in the number of discharges followed up in the same day. Four other DAs saw a substantial decrease in the percent of discharges followed up the same day: NKHS's same day follow up dropped by 29%, UCS's dropped by 22%, CMC's dropped by 15%, LCMH's dropped by 9%. NKHS and UCS saw increases in the percent of inpatient discharges followed up after 30 days and NCSS saw an increase in those not followed up at all.