

ANNUAL REPORT ON ELECTROCONVULSIVE THERAPY (ECT) IN VERMONT
Number and Percentage of Post-Treatment Episode Global Improvement Scale (GIS) Scores
July 1, 2018-June 30, 2019 (Fiscal Year 2019)

		Total Episodes Assessed	GIS Scores							Not Assessed
			Very much improved	Much improved	Minimally improved	No change	Minimally worse	Much worse	Very much worse	
			- 1 -	- 2 -	- 3 -	- 4 -	- 5 -	- 6 -	- 7 -	
Hospital	University of Vermont Medical Center	438	279	70	66	21	0	0	0	0
			64%	16%	15%	5%	0%	0%	0%	0%
	Veterans Administration	56	28	22	4	1	1	0	0	34
			50%	39%	7%	2%	2%	0%	0%	38%
	Springfield Hospital	0	0	0	0	0	0	0	0	8
			NA	NA	NA	NA	NA	NA	NA	100%
	Central Vermont Medical Center	0	0	0	0	0	0	0	0	17
			NA	NA	NA	NA	NA	NA	NA	100%
Gender	Male	214	130	49	23	10	1	0	0	22
			61%	23%	11%	5%	0%	0%	0%	9%
	Female	280	177	43	47	12	0	0	0	37
			63%	15%	17%	4%	0%	0%	0%	12%
Age	0-17	0	0	0	0	0	0	0	0	0
			NA	NA	NA	NA	NA	NA	NA	NA
	18-21	8	3	4	1	0	0	0	0	0
			38%	50%	13%	0%	0%	0%	0%	0%
	22-34	27	15	4	5	2	1	0	0	4
			56%	15%	19%	7%	4%	0%	0%	13%
	35-49	81	43	17	19	1	0	0	0	6
			53%	21%	23%	1%	0%	0%	0%	7%
50-64	229	144	38	31	16	0	0	0	29	
		63%	17%	14%	7%	0%	0%	0%	11%	
65+	149	102	29	14	3	0	0	0	20	
			68%	19%	9%	2%	0%	0%	0%	12%
	Unknown	0	0	0	0	0	0	0	0	0
			NA	NA	NA	NA	NA	NA	NA	NA
Treatment Type	Unilateral Only	372	249	66	39	17	0	0	0	43
			67%	18%	10%	5%	0%	0%	0%	10%
	Bitemporal Only	82	44	19	16	1	1	0	0	6
			54%	23%	20%	1%	1%	0%	0%	7%
	Bilateral Only	0	0	0	0	0	0	0	0	4
			NA	NA	NA	NA	NA	NA	NA	100%
	Bifrontal Only	10	9	0	0	1	0	0	0	0
			90%	0%	0%	10%	0%	0%	0%	0%
	LART Only	10	1	0	7	2	0	0	0	0
			10%	0%	70%	20%	0%	0%	0%	0%
Other Only	0	0	0	0	0	0	0	0	0	
		NA	NA	NA	NA	NA	NA	NA	NA	
Combination	20	4	7	8	1	0	0	0	6	
			20%	35%	40%	5%	0%	0%	0%	23%
Total	494	307	92	70	22	1	0	0	59	
			62%	19%	14%	4%	0%	0%	0%	11%
			Improved		No Change		Worse			
			469		22		1			
			95%		4%		0.2%			

Based on reports from hospitals to the Vermont Department of Mental Health. The reports contain monthly individual-level summaries for each patient.

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Number and Percentage of Individuals Receiving ECT by Age and Sex

Hospital	Total	0-17	18-21	22-34	35-49	50-64	65+	F	M
University of Vermont Medical Center Burlington	104	0 0.0%	1 1.0%	7 6.7%	20 19.2%	45 43.3%	31 29.8%	57 54.8%	47 45.2%
Veterans Administration White River Junction	45	0 0.0%	0 0.0%	7 15.6%	8 17.8%	21 46.7%	9 20.0%	8 17.8%	37 82.2%
Springfield Hospital Springfield	3	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 33.3%	2 66.7%	2 66.7%	1 33.3%
Central Vermont Medical Center Berlin	1	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 100.0%	1 100.0%	0 0.0%
All four hospitals	153	0 0.0%	1 0.7%	14 9.2%	28 18.3%	67 43.8%	43 28.1%	68 44.4%	85 55.6%

Number and Percentage of ECT Treatments, by Location and Type

Hospital	Number of Treatments		Inpatient						Outpatient					
	Total	Number of Tx per Person	Unilateral	Bitemporal	Bilateral	Bifrontal	LART	Other	Unilateral	Bitemporal	Bilateral	Bifrontal	LART	Other
University of Vermont Medical Center Burlington	1,719	16.5	289 16.8%	30 1.7%	0 0.0%	0 0.0%	2 0.1%	0 0.0%	1112 64.7%	237 13.8%	0 0.0%	13 0.8%	36 2.1%	0 0.0%
Veterans Administration White River Junction	397	8.8	226 56.9%	91 22.9%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	56 14.1%	24 6.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%
Springfield Hospital Springfield	8	2.7	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	4 50.0%	0 0.0%	4 50.0%	0 0.0%	0 0.0%	0 0.0%
Central Vermont Medical Center Berlin	17	17.0	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	17 100.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%
All four hospitals	2,141	14.0	515 24.1%	121 5.7%	0 0.0%	0 0.0%	2 0.1%	0 0.0%	1189 55.5%	261 12.2%	4 0.2%	13 0.6%	36 1.7%	0 0.0%

Number and Percentage of Individuals Receiving Treatments by Location and Type of Treatment

Hospital	Total	Inpat. Only	Outpat. Only	Both	Unilateral Only	Bitemporal Only	Bilateral Only	Bifrontal Only	LART Only	Other Only	Combination
University of Vermont Medical Center Burlington	104	11 10.6%	66 63.5%	27 26.0%	77 74.0%	7 6.7%	0 0.0%	2 1.9%	1 1.0%	0 0.0%	17 16.3%
Veterans Administration White River Junction	45	32 71.1%	4 8.9%	9 20.0%	28 62.2%	7 15.6%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	10 22.2%
Springfield Hospital Springfield	3	0 0.0%	3 100.0%	0 0.0%	2 66.7%	0 0.0%	1 33.3%	0 0.0%	0 0.0%	0 0.0%	0 0.0%
Central Vermont Medical Center Berlin	1	0 0.0%	1 100.0%	0 0.0%	1 100.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%
All four hospitals	153	43 28.1%	74 48.4%	36 23.5%	108 70.6%	14 9.2%	1 0.7%	2 1.3%	1 0.7%	0 0.0%	27 17.6%

**Individuals with Some Degree of Memory Impairment
By Number of Treatments and Treatment Type**

Hospital	Memory Impairment During FY	Total	Sum of Treatments in Year			Treatment Type Status						
			1-12	13-29	30+	Unilateral Only	Bitemporal Only	Bilateral Only	Bifrontal Only	LART Only	Other Only	Combination
All four hospitals	No	53	45	8	0	38	7	0	0	0	0	8
	Yes	88	33	46	9	64	5	0	2	1	0	16
	Unreported/ Missing	12										

Based on reports from hospitals to the Vermont Department of Mental Health. The reports contain monthly individual-level summaries for each patient.

A 'No' means no memory impairment recorded after any episode of treatment no matter how many episodes occurred throughout the year for each individual who received ECT Treatment. 'Yes' means at least one recorded memory impairment no matter how many episodes of treatment might have occurred for each individual receiving treatment. For example, if one individual received 12 treatments and experienced memory impairment after one treatment but not after the other 11 treatments, this individual would still be recorded as having some degree of memory impairment for the year.

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**Individuals with Some Degree of Memory Impairment
By Number of Treatments and Treatment Type**

Hospital	Memory Impairment During FY	Total	Sum of treatments in Year			Treatment Type Status						
			1-12	13-29	30+	Unilateral Only	Bitemporal Only	Bilateral Only	Bifrontal Only	LART Only	Other Only	Combination
University of Vermont Medical Center Burlington	No	18	13	5	0	14	2	0	0	0	0	2
	Yes	82	30	43	9	62	4	0	2	1	0	13
Veterans Administration White River Junction	No	35	32	3	0	24	5	0	0	0	0	6
	Yes	6	3	3	0	2	1	0	0	0	0	3
Springfield Hospital Springfield	No	0	0	0	0	0	0	0	0	0	0	0
	Yes	0	0	0	0	0	0	0	0	0	0	0
Central Vermont Medical Center Berlin	No	0	0	0	0	0	0	0	0	0	0	0
	Yes	0	0	0	0	0	0	0	0	0	0	0
All four hospitals	No	53	45	8	0	38	7	0	0	0	0	8
	Yes	88	33	46	9	64	5	0	2	1	0	16

Based on reports from hospitals to the Vermont Department of Mental Health. The reports contain monthly individual-level summaries for each patient.

A 'No' means no memory impairment recorded after any episode of treatment no matter how many episodes occurred throughout the year for each individual who received ECT Treatment. 'Yes' means at least one recorded memory impairment no matter how many episodes of treatment might have occurred for each individual receiving treatment. For example, if one individual received 12 treatments and experienced memory impairment after one treatment but not after the other 11 treatments, this individual would still be recorded as having some degree of memory impairment for the year.

Hospital	MMSE Baseline Mean	MMSE Follow- Up Mean	MMSE Improvement					
			Improved		Did Not Improve		No Change	
			Number	Percentage	Number	Percentage	Number	Percentage
CVMC	30.0	30.0	0	0.0%	0	0.0%	1	100.0%
SPRINGFIELD	21.3	24.0	1	50.0%	1	50.0%	0	0.0%
UVM-MC	25.7	26.2	21	21.0%	67	67.0%	12	12.0%
VA	22.6	14.0	1	100.0%	0	0.0%	0	0.0%
Total (n= 104)	24.9	23.6	23	22.1%	68	65.4%	13	12.5%

Note: Baseline values are the first reported value for that patient in the reporting period and the "Follow-Up" value are the last reported value for that patient in the reporting period. An improvement constitutes a positive change in score between baseline and follow-up.

Hospital	MADRS Baseline Mean	MADRS Follow- Up Mean	MADRS Improvement					
			Improved		Did Not Improve		No Change	
			Number	Percentage	Number	Percentage	Number	Percentage
CVMC	34.0	32.0	1	100.0%	0	0.0%	0	0.0%
SPRINGFIELD	34.0	21.0	2	100.0%	0	0.0%	0	0.0%
UVM-MC	37.2	18.2	92	94.8%	4	4.1%	1	1.0%
VA	37.6	19.9	25	78.1%	6	18.8%	1	3.1%
Total (n= 132)	35.7	22.8	120	90.9%	10	7.6%	2	1.5%

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**REPORT ON ELECTROCONVULSIVE THERAPY (ECT) IN VERMONT
July 1, 2000-June 30, 2019 (Fiscal Years 2001 - 2019)**

Number of Individuals Receiving ECT by Gender

Hospital		Fiscal Year (FY)																		
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
University of Vermont Medical Center Burlington	Total	33	43	55	66	79	79	91	87	81	84	92	76	88	98	76	69	59	84	104
	Male	11	11	17	20	20	26	33	31	29	23	34	32	33	41	23	27	20	45	47
	Female	22	32	38	46	59	53	58	56	52	61	58	44	55	57	53	42	39	39	57
Brattleboro Retreat Brattleboro*	Total	0	8	13	6	10	25	30	35	42	22	11	-	-	-	-	-	-	-	-
	Male	0	1	2	1	2	7	6	15	13	12	5	-	-	-	-	-	-	-	-
	Female	0	7	11	5	8	18	24	20	29	10	6	-	-	-	-	-	-	-	-
Veterans Administration** White River Junction	Total	13	16	16	23	18	11	0	0	0	-	-	-	14	51	45	44	1	49	45
	Male	12	16	14	21	17	9	0	0	0	-	-	-	12	42	42	41	1	46	37
	Female	1	0	2	2	1	2	0	0	0	-	-	-	2	9	3	3	0	3	8
Springfield Hospital Springfield	Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
	Male	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
	Female	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Central Vermont Medical Center*** Berlin	Total	-	-	-	-	-	-	6	20	25	17	18	7	2	3	1	1	1	1	1
	Male	-	-	-	-	-	-	2	8	13	6	10	1	0	0	0	0	0	0	0
	Female	-	-	-	-	-	-	4	12	12	11	8	6	2	3	1	1	1	1	1
Total	Total	46	67	84	95	107	115	121	128	143	131	120	94	109	151	124	114	61	134	153
	Male	23	28	33	42	39	42	39	48	50	48	45	42	46	83	65	68	21	91	85
	Female	23	39	51	53	68	73	82	80	93	83	75	52	63	68	59	46	40	43	68

Number of Treatments and Treatments Per Person

Hospital		Fiscal Year (FY)																		
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
University of Vermont Medical Center Burlington	Treatments	500	607	783	1,164	1,179	1,080	1,238	1,281	1,121	1,118	1,226	1,017	1,184	1,510	924	1,183	920	1,619	1,719
	Treatments / Person	15.2	14.1	14.2	17.6	14.9	13.7	13.6	14.7	13.8	13.3	13.3	13.4	13.5	15.4	12.2	17.1	15.6	19.3	16.5
Brattleboro Retreat Brattleboro*	Treatments	244	465	538	419	260	465	350	407	510	209	43	-	-	-	-	-	-	-	-
	Treatments / Person	--	58.1	41.4	69.8	26.0	18.6	11.7	11.6	12.1	9.5	3.9	-	-	-	-	-	-	-	-
Veterans Administration** White River Junction	Treatments	88	148	178	302	155	75	0	0	0	0	0	46	555	423	440	4	425	397	
	Treatments / Person	6.8	9.3	11.1	13.1	8.6	6.8	-	-	-	-	-	-	3.3	10.9	9.4	10.0	4.0	8.7	8.8
Springfield Hospital Springfield	Treatments	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8
	Treatments / Person	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.7
Central Vermont Medical Center*** Berlin	Treatments	-	-	-	-	-	-	31	214	266	178	124	71	5	18	5	7	7	7	17
	Treatments / Person	-	-	-	-	-	-	5.2	10.7	10.6	10.5	6.9	10.1	2.5	6.0	5.0	7.0	7.0	7.0	17.0
Total	Treatments	832	1,220	1,499	1,885	1,594	1,620	1,588	1,719	1,845	1,593	1,447	1,141	1,301	2,070	1,365	1,628	931	2,051	2,141
	Treatments / Person	18.1	18.2	17.8	19.8	14.9	14.1	13.1	13.4	12.9	12.2	12.1	12.1	11.9	13.7	11.0	14.3	15.3	15.3	14.0

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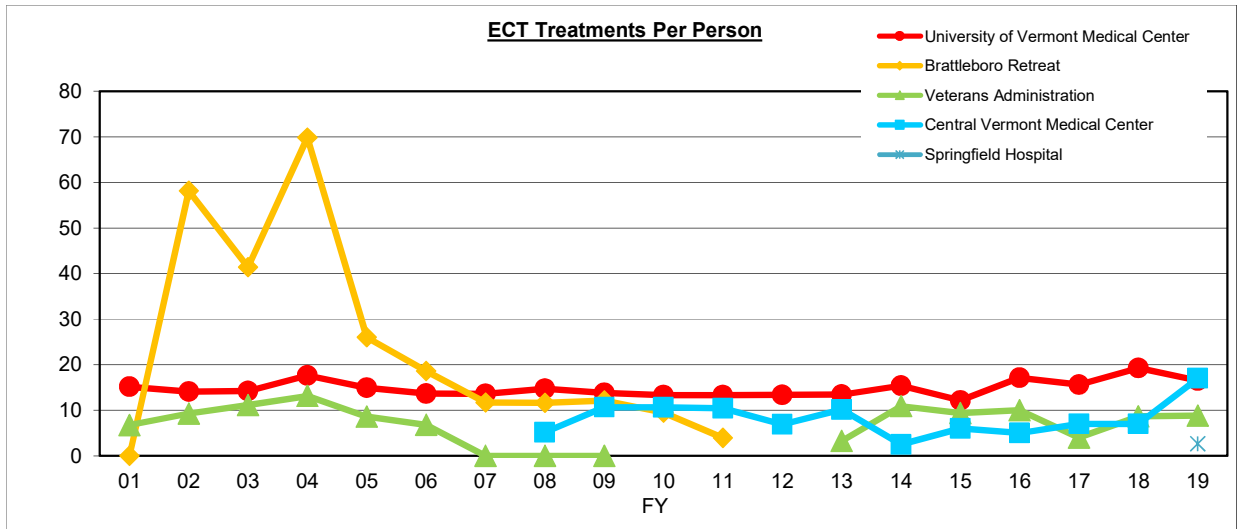
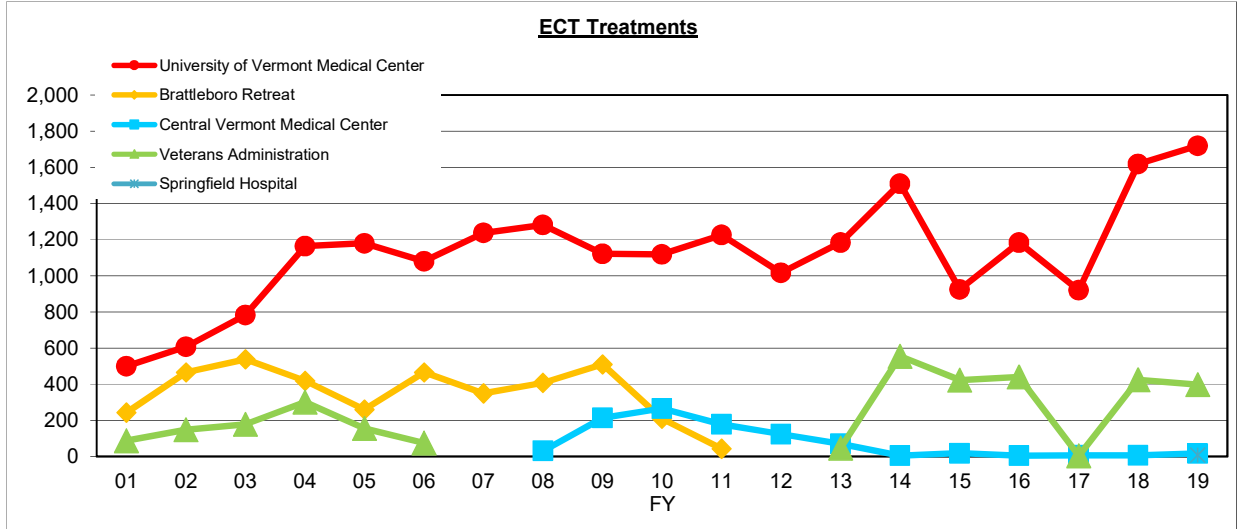
*Brattleboro Retreat discontinued ECT January 2010. FY2011 data represents a partial year of information.

**The Veterans Administration stopped providing data after FY2009 and restarted submitting data in June 2013.

***Central Vermont Medical Center did not start providing ECT until April 2008. FY2008 data represents a partial year of information.

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Number of Treatments and Treatments per Person



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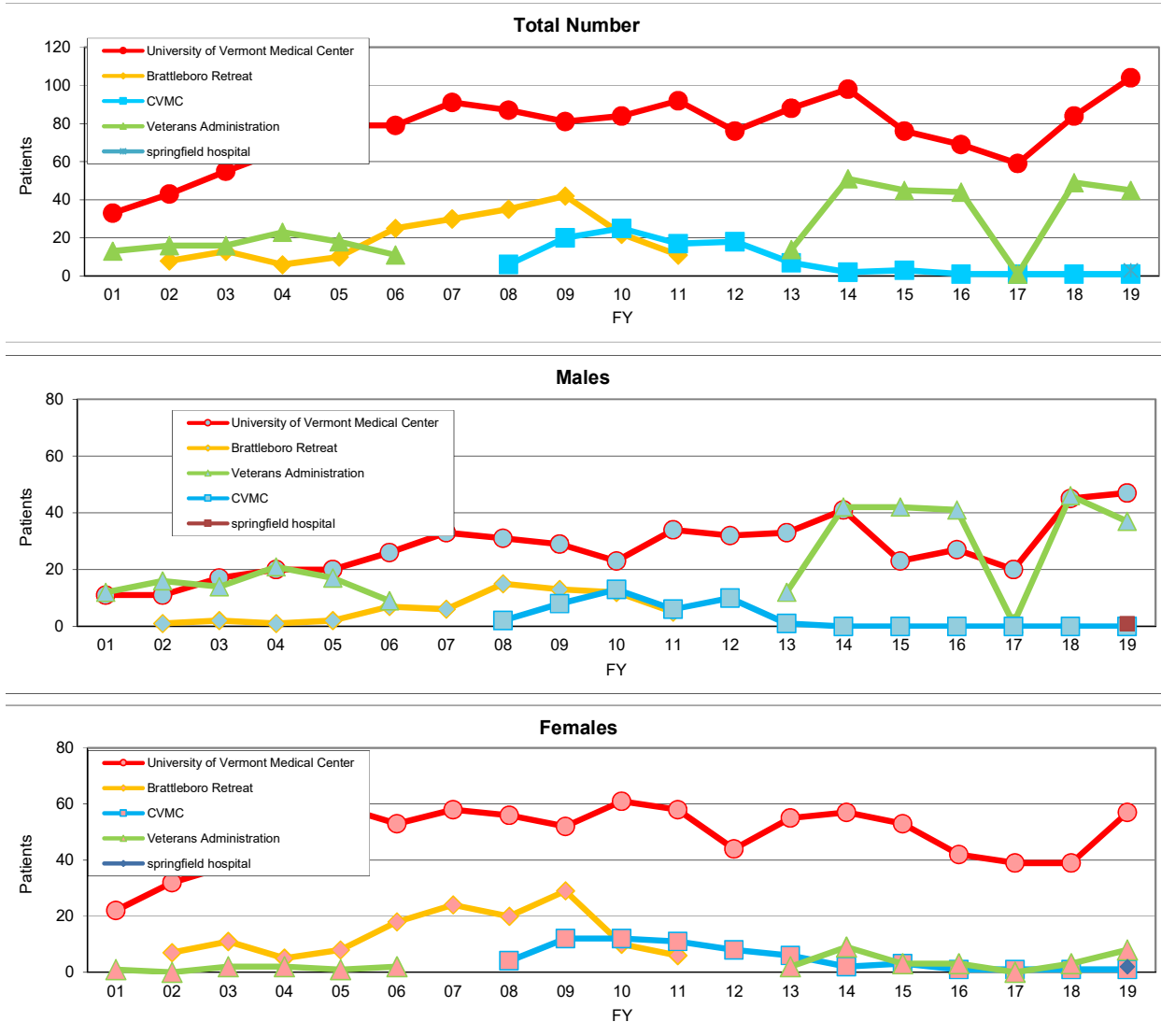
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Number of Individuals Receiving ECT Total and by Gender



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SPRINGFIELD	21.3	24.0	1	50.0%	1	50.0%	0	0.0%
UVM-MC	25.7	26.2	21	21.0%	67	67.0%	12	12.0%
VA	22.6	14.0	1	100.0%	0	0.0%	0	0.0%
Total (n= 104)	24.9	23.6	23	22.1%	68	65.4%	13	12.5%

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Hospital	MADRS Baseline Mean	MADRS Follow- Up Mean	MADRS Improvement					
			Improved		Did Not Improve		No Change	
			Number	Percentage	Number	Percentage	Number	Percentage
CVMC	34.0	32.0	1	100.0%	0	0.0%	0	0.0%
SPRINGFIELD	34.0	21.0	2	100.0%	0	0.0%	0	0.0%
UVM-MC	37.2	18.2	92	94.8%	4	4.1%	1	1.0%
VA	37.6	19.9	25	78.1%	6	18.8%	1	3.1%
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