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MEMORANDUM

TO: Senate Committee on Health and Welfare
House Committee on Health Care

FROM: Melissa Bailey, Commissioner, Department of Mental Health

DATE: January 30, 2018

SUBJECT: Responses to Data Inquiries regarding Act 82 and Act 84 AHS Legislative Reports

Please find attached, response from the Department of Mental Health, submitted in response to inquiries received regarding the Act 82, Sections 3 & 4 Report¹ and Section 5 Report² submitted to the legislature on December 15, 2017, as well as responses to the Act 84, Section 31 AHS Facilities report submitted to the legislature on January 15, 2018.

¹ http://mentalhealth.vermont.gov/sites/dmh/files/documents/news/Act_82_Sections_3_and_4_12-15-17.pdf

² http://mentalhealth.vermont.gov/sites/dmh/files/documents/news/Act_82_Section_5_12-15-17.pdf

ACT 82, SECTIONS 3 & 4 Q&A

PART 1

QUESTIONS FOR DEPARTMENT OF MENTAL HEALTH ON DATA RELATED TO THE MENTAL HEALTH REPORT

EMERGENCY DEPARTMENT UTILIZATION

Source: **Q1:** What is the actual trend line, in number of persons presenting with a psychiatric complaint at HHC emergency departments annually, over the past 10 years?

+ Child/Adult breakout

A1:

Reliable data collection for emergency department wait times for **involuntary inpatient placement** started in 2013—in response to 2012 Act 79. DMH has data on waits for both children and adults for those time periods and they are presented in response to question three (3) below.

DMH worked with VAHHS in order to quantify all psychiatric complaints presenting at the emergency department, **regardless of inpatient need**. Figures are available for 2012-2017 below.

		Hospital Fiscal Year (Oct-Sep)					
		2012	2013	2014	2015	2016	2017
# ED visits related to Mental Health	Children (0-17)	944	1,112	1,087	1,239	1,252	1,363
	Adults (18+)	7,020	7,119	7,016	7,405	7,805	8,058
	Total	7,964	8,231	8,103	8,644	9,057	9,421

Data Source: Vermont Association of Hospitals and Health Systems—Network Services Organization (VAHHS-NSO), Vermont Uniform Hospital Discharge Data Set

VAHHS-NSO did not engage with hospitals to perform a patient level reconciliation. This is aggregate data pulled from the discharge data warehouse as received from Vermont Hospitals. Mental health services were identified by the CCS (clinical classification software) group of the primary diagnosis being "Mental Illness." Alcohol and substance use disorders are excluded. Counts are for encounters and do not represent individual patients. ED status is derived by inclusion of a 450 revenue code.

Finding: Total visits related to mental health at emergency departments has increased for both children and adults over the 6-year time-period.

Source: **Q2:** Do we know how this [*the trend line of persons presenting with a psychiatric complaint at emergency departments annually*] compares to emergency room utilization as a whole (for other needs)?

+ Child/Adult breakout

A2:

DMH worked with VAHHS on obtaining this data and figures are available from 2012-2017 below.

ED Visits	Hospital Fiscal Year (Oct-Sep)					
	2012	2013	2014	2015	2016	2017
Total	274,575	269,947	261,946	266,164	267,155	260,804
MH-related	7,964	8,231	8,103	8,644	9,057	9,421
not MH-related	266,611	261,716	253,843	257,520	258,098	251,383
% MH related	2.90%	3.05%	3.09%	3.25%	3.39%	3.61%

Data Source: Vermont Association of Hospitals and Health Systems – Network Services Organization (VAHHS-NSO), Vermont Uniform Hospital Discharge Data Set

VAHHS-NSO did not engage with hospitals to perform a patient level reconciliation. This is aggregate data pulled from the discharge data warehouse as received from Vermont Hospitals. Mental health services were identified by the CCS (clinical classification software) group of the primary diagnosis being "Mental Illness." Alcohol and substance use disorders are excluded. Counts are for encounters and do not represent individual patients. ED status is derived by inclusion of a 450 revenue code.

Findings: While the overall percentage of MH-related visits to the ED is a small percentage of overall ED services, the number of MH-related visits has increased while the number of non-MH related visits has decreased leading to an overall increase in proportion from 2.9% to 3.6%.

Source: **Q3a:** During that time [over the past 10 years], has the percentage of those [persons presenting with a psychiatric complaint at emergency departments annually] who are admitted, or transferred, to an inpatient unit (versus stabilized and leave the ED), changed?

Q3b: The percentage of those admitted voluntarily versus involuntarily?

Q3c: The percentage arriving as a court-ordered (forensic) referral?

+ Child/Adult breakout

A3a / A3b / A3c:

As part of our data collection on emergency room wait times, DMH has data on whether the final disposition of a person waiting was involuntary hospitalization, voluntary hospitalization, or non-admission. Data for each of our primary populations are presented below.

Note- While DMH receives data from hospitals and screeners on some individuals waiting voluntarily in emergency departments for inpatient admission, we do not have enough information to determine whether this is representative sample of all individuals waiting voluntarily.

Adults Waiting for Involuntary Inpatient Placement				
Warrants and Emergency Exams				
Total Placements by Final Disposition				
FY	Total	<u>Involuntary</u>	<u>Other Placement</u>	<u>Voluntary</u>
		<u>Inpatient</u>	<u>or Hold Expired</u>	<u>Inpatient</u>
2014	497	393	90	14
2015	544	446	88	10
2016	551	480	67	4
2017	579	459	112	8
CY				
2013*	396	310	77	9
2014	511	415	84	12
2015	523	445	69	9
2016	571	475	90	6
2017*	483	383	92	8

* Partial Years. Reliable data collection for emergency dept waits started in March 2013. 2017 data will be finalized by the end of January 2018.

Adults Waiting for Involuntary Inpatient Placement			
Court-Ordered Forensic Observations			
Total Placements by Final Disposition			
FY	Total	<u>Admitted</u>	<u>Not Admitted</u>
2014	66	50	16
2015	53	45	8
2016	65	57	8
2017	66	53	13
CY			
2013*	57	43	14
2014	54	45	9
2015	59	52	7
2016	68	57	11
2017*	62	47	15

* Partial Years. Reliable data collection for emergency dept waits started in March 2013. 2017 data will be finalized by the end of January 2018.

Youth Waiting for Involuntary Placement Total Placement by Final Disposition			
	<u>Total</u>	<u>Admitted</u>	<u>Not Admitted</u>
FY			
2014	84	78	6
2015	71	66	5
2016	56	48	8
2017	74	66	8
CY			
2013*	52	48	4
2014	77	72	5
2015	62	59	3
2016	64	55	9
2017*	68	55	13

*Partial Years. Reliable data collection for emergency dept waits started in March 2013. 2017 data will be finalized by the end of January 2018.

Source: **Q4:** Do we know how many of these persons [*presenting with a psychiatric complaint at emergency departments annually*] had been discharged from a hospital within the prior 30 days?
HHC

+ Child/Adult breakout

A4:

DMH has produced the involuntary 30-day readmission rates (refer to question 11) which we believe are comparable to what the committee is seeking and are also available in the annual Act 79 report. We do not have enough reliable common elements between our datasets for involuntary inpatient wait times and involuntary inpatient admissions to make a confident match between the two.

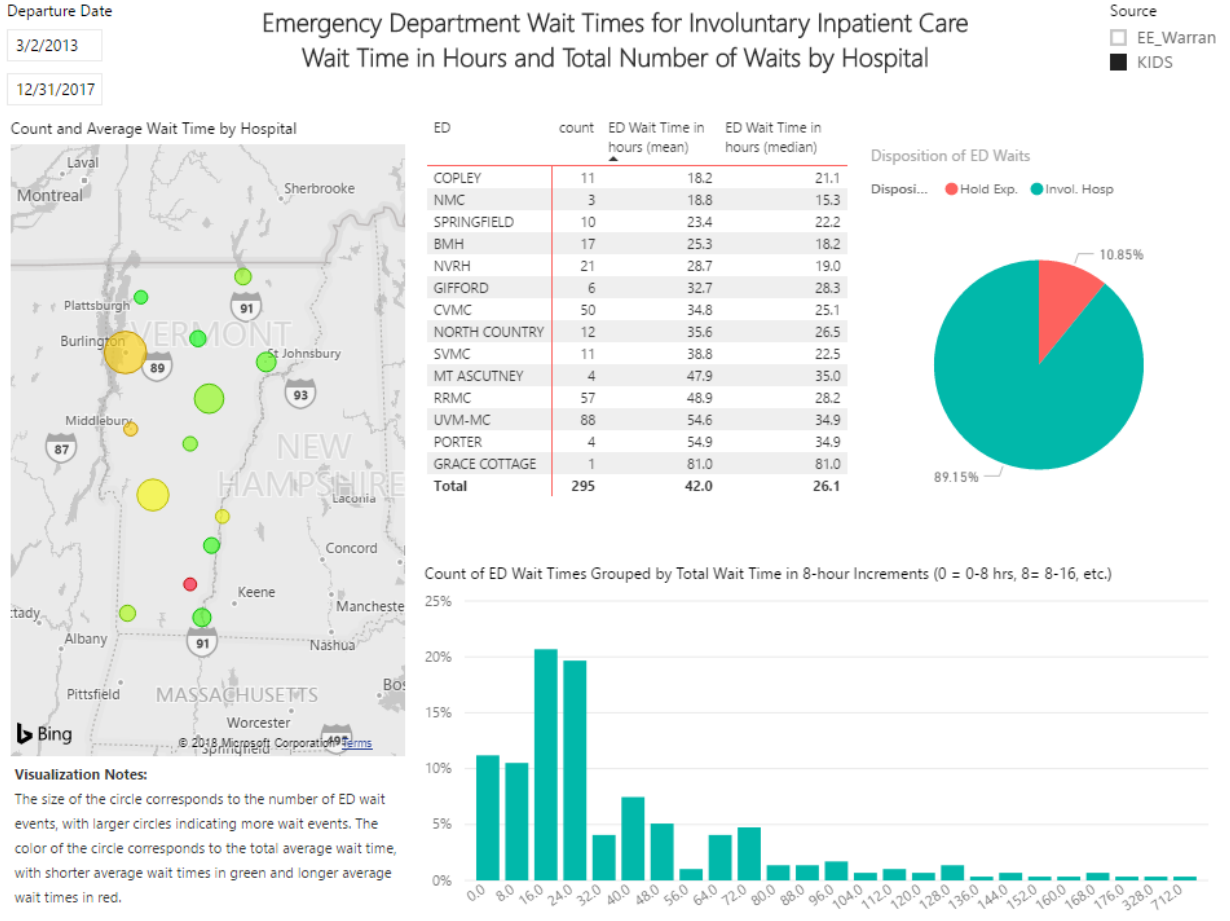
Source: **Q5:** Do we have any data on whether there are geographic differences?
HHC

+ Child/Adult breakout



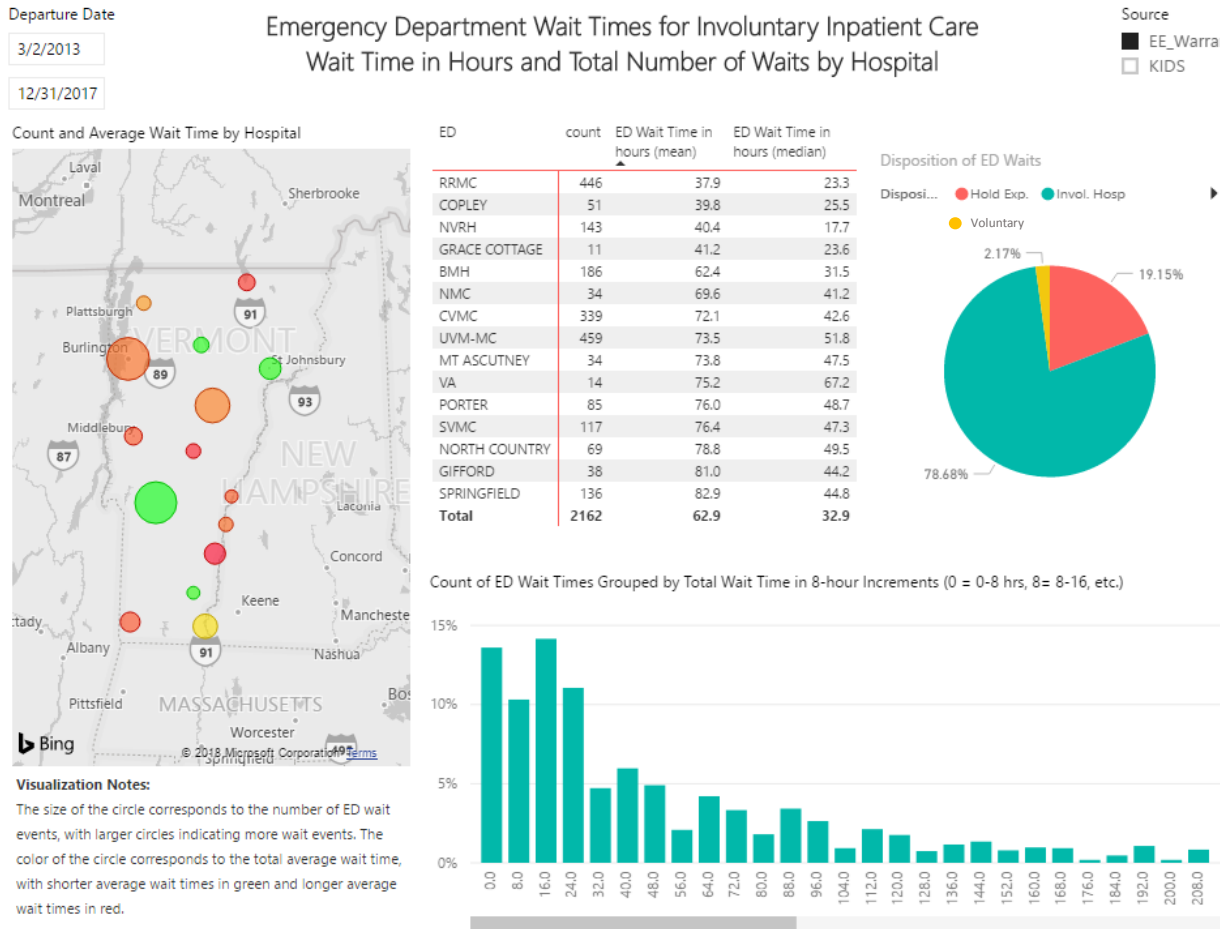
A5:

**Emergency Dept. Wait Times for Involuntary Inpatient Admissions for Children/Youth
EE/Warrants**



From March 2013 to December 2017, a total of 295 children/youth were held in emergency depts. under the temporary custody of the commissioner. UVM-MC had the most holds (88), followed by RRMC (57) and CVMC (50), which accounts for 66% of the total holds during the time period. Regional differences in wait times are included in the table above. Of the 14 hospitals, 9 had average wait times below the statewide average. Almost all of the children waiting in the EDs under the commissioner’s custody convert to voluntary at admission to inpatient.

Emergency Dept. Wait Times for Involuntary Inpatient Admissions for Adult EE/Warrants



From March 2013 to December 2017, a total of 2162 adults were held in emergency depts. under the temporary custody of the commissioner. UVM-MC had the most holds (459), followed by RRMC (446) and CVMC (339), which accounts for 58% of the total holds during the time period. Regional differences in wait times are included in the table above. Of the 15 hospitals, 5 had average wait times below the statewide average. While RRMC and UVM-MC had the same volume of EE holds for adults, RRMC’s wait time to disposition was quicker, at 38 hours on average vs 73.5 hours. Of the 15 hospitals, 5 had average wait times below the statewide average. 79% of adults waiting in the EDs under the commissioner’s custody were admitted to the hospital involuntarily.

Source: SHW Q6: What are the average ED wait times (by month) in 2017? (Separate data by voluntary and involuntarily held patients and region of the State).

A6:

Reliable data collection for emergency department wait times for **involuntary inpatient placement** started in 2013—in response to 2012 Act 79. DMH has data on waits for both children and adults for those time periods and is presented in below.

Comparison of Wait Time to Average Numbers of People Waiting Inpatient Placement for Adult Emergency Exams, Warrants, and Forensic Observations 2017				
		Avg # Waiting Per Day	Mean Wait Time	Median Wait Time
2017	Jan	4	63	45
	Feb	4	45	27
	Mar	4	60	40
	Apr	5	56	33
	May	6	76	54
	Jun	5	48	28
	Jul	8	75	52
	Aug	9	95	68
	Sep	11	135	70
	Oct	10	106	70
	Nov	6	105	62
	Dec			

INPATIENT BED DEMAND

Source: **Q7:** What is the 10-year trend line for number of [inpatient] admissions?
HHC
+ Child/Adult breakout

A7:

DMH has matchable data on involuntary hospitalizations for adults, Medicaid-paid hospitalizations for adults, and Medicaid-paid hospitalizations for children. Private-paid hospitalizations are not accessible to DMH.

DMH worked with VAHHS and has admissions data provided below. The data below does not include discharges from VPCH or Brattleboro Retreat (BR), as psychiatric hospitals were not required to report discharges to the dataset. As BR is not captured in the data, admissions for children are not representative of psychiatric admissions in Vermont (please note the Medicaid-paid children's hospitalizations were provided in part 1). Since discharge data does not capture psychiatric unit, admissions are defined by a primary diagnosis that is MH-related.

Finding: Adult MH-related inpatient admissions have increased from 2012 to 2017.

Hospital Fiscal Year (Oct-Sep)						
MH-related						
Inpatient Admissions	2012	2013	2014	2015	2016	2017
Total	1,920	2,066	1,896	1,960	2,069	2,104
Children (0-17)	8	18	5	9	27	35
Adults (18+)	1,912	2,048	1,891	1,951	2,042	2,069

Data Source: Vermont Association of Hospitals and Health Systems – Network Services Organization (VAHHS-NSO), Vermont Uniform Hospital Discharge Data Set
 VAHHS-NSO did not engage with hospitals to perform a patient level reconciliation. This is aggregate data pulled from the discharge data warehouse as received from Vermont Hospitals. Mental health services were identified by the CCS (clinical classification software) group of the primary diagnosis being "Mental Illness." Alcohol and substance use disorders are excluded. Counts are for encounters and do not represent individual patients.

Data on adult involuntary admissions by fiscal year is presented in question A8b. Data for Medicaid-paid children's inpatient is included below.

Medicaid Paid Children's Inpatient Hospitalizations		
Fiscal Year	Admissions	
	Involuntary	Voluntary
2010	54	276
2011	54	281
2012	47	271
2013	60	333
2014	49	342
2015	44	381
2016	33	388
2017	49	300

Source: **Q8a:** Has the percentage of [inpatient] admissions that are involuntary changed over time?

HHC

Q8b: Forensic evaluations?

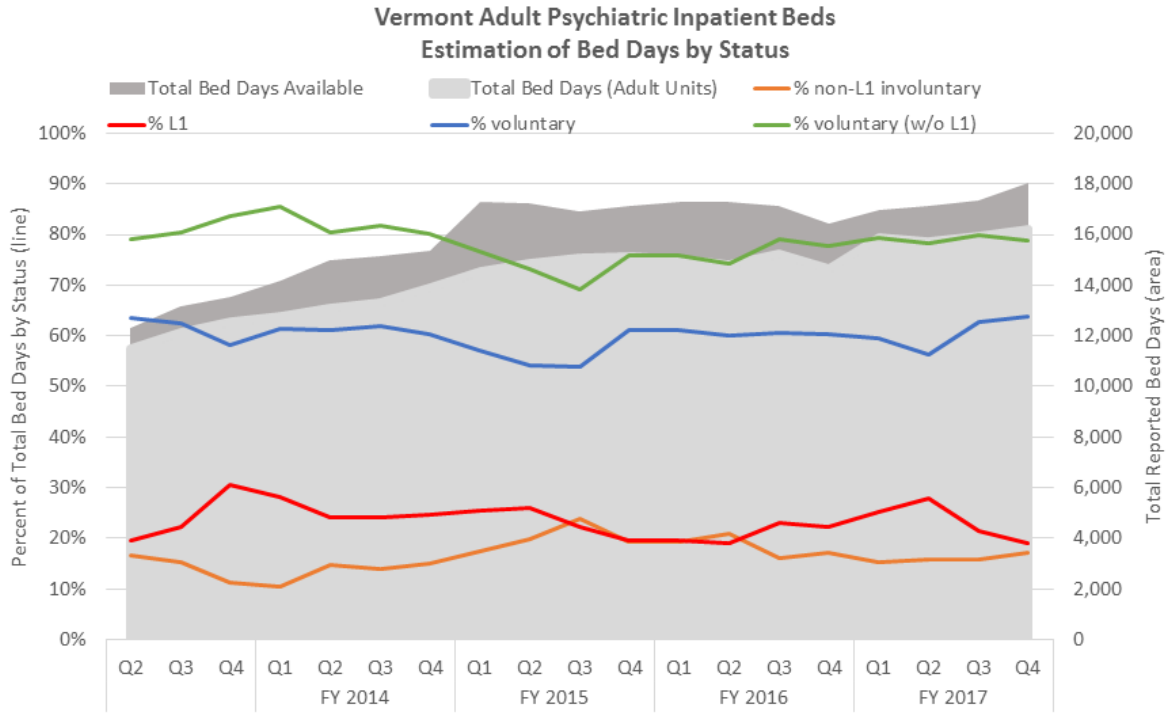
+ Child/Adult breakout

A8a:

DMH has matchable data on involuntary hospitalizations for adults, Medicaid-paid hospitalizations for adults, and Medicaid-paid hospitalizations for children. Private-paid hospitalizations are not

accessible to DMH. This limitation means that DMH does not have enough information to arrive at the percentage of admissions.

However, using the electronic bed board, DMH is able to estimate the numbers of bed days used for each population—level 1, non-level 1 involuntary, and voluntary inpatient stays (below). The percentage of bed days for voluntary care has comprised anywhere from 55%-63%. When removing beds that exclusively used for involuntary care (Level 1 beds), this percentage is anywhere from 70%-85%. These percentages have changed over time with the addition of more Level 1 beds and changes in percent occupancy.



A8b:

Data on forensic evaluations resulting in involuntary hospitalization are included below for each fiscal year.



Vermont State Hospital and Designated Hospitals: Emergency and Forensic Admissions

	Emergency Exam				Forensic Admissions				Total
	VSH	Level 1	DH	Total	VSH	Level 1	DH	Total	
2002	121	-	206	327	95	-	0	95	422
2003	85	-	241	326	107	-	0	107	433
2004	96	-	261	357	104	-	0	104	461
2005	76	-	313	389	100	-	0	100	489
2006	108	-	296	404	75	-	0	75	479
2007	130	-	272	402	75	-	0	75	477
2008	162	-	252	414	95	-	0	95	509
2009	152	-	310	462	89	-	0	89	551
2010	173	-	335	508	84	-	0	84	592
2011	188	-	262	450	58	-	0	58	508
2012	24	-	426	450	13	-	44	57	507
2013	-	177	246	423	-	32	21	53	476
2014	-	126	265	391	-	27	24	51	442
2015	-	102	348	450	-	25	21	46	496
2016	-	110	356	466	-	30	32	62	528
2017	-	104	327	431	-	33	23	56	487

Source: **Q9:** What is the trend line for length of inpatient stays? [And broken down for length of stay for involuntary patients, and forensic patients?]
HHC

+ Child/Adult breakout

A9:

DMH has matchable data on involuntary hospitalizations for adults, Medicaid-paid hospitalizations for adults, and Medicaid-paid hospitalizations for children. Private-paid hospitalizations are not accessible to DMH.

When examining LOS for involuntary adult hospitalizations (below), the LOS has increased over the period of 2011 to 2017. Forensics have longer LOS than civil holds (on avg) and there appear to be hospital differences in LOS.

Adult Involuntary Inpatient Stays by Calendar Year – Median and Average LOS for discharged patients

Year	Median of LOS	Average of LOS
2011	14.00	22.01
2012	18.00	31.69
2013	18.00	35.11
2014	20.00	45.72
2015	20.00	48.94
2016	17.00	40.42
2017	21.00	50.95

Adult Involuntary Inpatient Stays by Calendar Year –Average LOS for discharged patients by legal status

Year	Civil	Forensic
2011	21.66	27.11
2012	29.89	44.09
2013	31.70	49.54
2014	38.64	91.78
2015	38.90	70.69
2016	33.14	44.78
2017	34.15	63.24

Children’s Medicaid-paid Inpatients stays

Medicaid Paid Children’s Inpatient Hospitalizations		
Fiscal Year	Average Length of Stay (Days)	
	Involuntary	Voluntary
2010	18	13
2011	17	13
2012	19	12
2013	17	13
2014	18	15
2015	20	14
2016	12	14
2017	13	17

Source: **Q10:** Is this data different among different hospitals?
 HHC
 + Child/Adult breakout

A10:

Data on differences among hospitals is readily available for adult involuntary inpatients stays and is presented below. The question is not applicable for children as Brattleboro Retreat is the only in-state inpatient unit for children and youth.

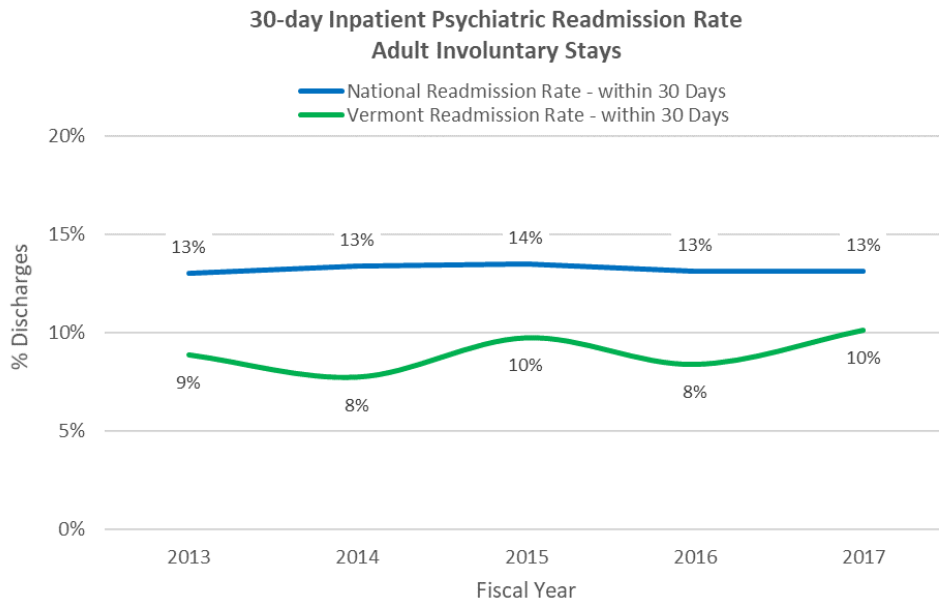
Adult Involuntary Inpatient Stays by Calendar Year – Average LOS for discharged patients by hospital

Year	BR	CVMC	RRMC	UVMC	VA	VPCH	WC
2011	28.07	11.60	16.35	21.97			10.50
2012	40.23	18.48	28.69	25.00			
2013	44.92	13.02	28.45	37.67		52.36	18.70
2014	57.50	18.71	36.14	34.11		85.97	8.00
2015	54.43	35.07	36.38	30.69		107.77	20.08
2016	42.55	21.25	26.06	29.95		90.21	26.13
2017	43.21	31.83	28.26	30.94	25.40	144.20	27.50

Source: **Q11:** Have there been any changes in the rates of rehospitalization?
 HHC
 + Child/Adult breakout

A11:

30-day readmission rates for adult involuntary stays have been consistent and below the national average. Please see the data below by fiscal year.



Source: **Q12:** Among all inpatient beds in use, has the percentage being used by those on a court-order (forensic), those pending or post-commitment (involuntary), and voluntary patients, changed over that same time period?

HHC

+ Child/Adult breakout

A12:

Please see answers to Q7 and Q8.

Source: **Q13:** In 2017, how many patients were held in a psychiatric hospital unit who no longer needed hospital level care (by month and region)? Of those patients held, what percent needed care in a geriatric or secure facility?

SHW

A13:

DMH does not collect this data for adult involuntary inpatient stays and is actively working with VAHHS, who may have sub-acute dates from their inpatient flow data pilot, as well as with DVHA, for sub-acute information that may be available as part of their prior authorization process.

OVERALL BED CAPACITY

Source: **Q14:** It would also help to have a side-by-side of the number of treatment or therapeutic setting beds that we have had historically (10 years ago), and currently, at different levels of intensity: VSH or Level 1 inpatient; other general inpatient; Retreat inpatient; secure residential; intensive residential; crisis diversion; other supported/DA groups homes; supportive housing program.

A14:

DMH has this readily available from 2011 to current:

	Numbers of Beds					
	Pre-Irene	September 2012	June 2013	July 2014	July 2015	December 2017
Non Level 1	130	113	122	143	143	154
Level 1	54	31	35	45	45	45
Crisis Beds	29	33	37	38	40	40
Secure Residential	0	0	7	7	7	7
Peer Supported Residential	0	0	0	0	5	5
Intensive Residential	20	36	36	42	42	42
Springfield Secure Unit	0	5	0	0	0	0
Total	233	218	237	275	282	293

INPATIENT VS. COMMUNITY SPEND

Source: **Q15:** Finally, from a fiscal perspective, do we have a trendline [10 years] for expenditures in inpatient versus community programs during a similar time span?

A15:

DMH is working on a response to this question.

EXPEDITED CASES

Source: **Q16:** How many cases were expedited (by month) in 2016 and 2017?
SHW

A16:

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
2016	0	0	0	0	0	0	1	1	1	0	2	1	6
2017	1	1	2	1	0	2	2	0	0	0	0	0	9

COMMITMENT AND INVOLUNTARY MEDICATION

Source: **Q17:** How many unique cases of commitment and involuntary medication occurred in 2017 (by month)?
SHW

A17:

In FY 2017, the legal division switched from manual spreadsheet capture to data capture using law manager, the document management software used by the AGs office. DMH is still working with the AGs office to develop a standardized extract so figures may change as the process is refined.

Numbers of outpatient commitments (ONH, orders of non-hospitalization) and involuntary medication filings (IVMS) are included below.

	2016						2017										
	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov
#ONHs	26	25	20	18	38	30	30	25	31	15	35	24	24	26	20	16	4
#IVMS	8	5	5	6	7	3	7	2	7	7	3	7	11	9	9	11	2
#OHs							5	3	8	7	4	7	10	11	11	9	7

Source: **Q18:** What was the average wait time for commitment and involuntary medication in expedited cases in 2017?
SHW

A18:

In FY 2017, the average time from involuntary medication filing date to medication decision date for expedited cases was 7.25 days.

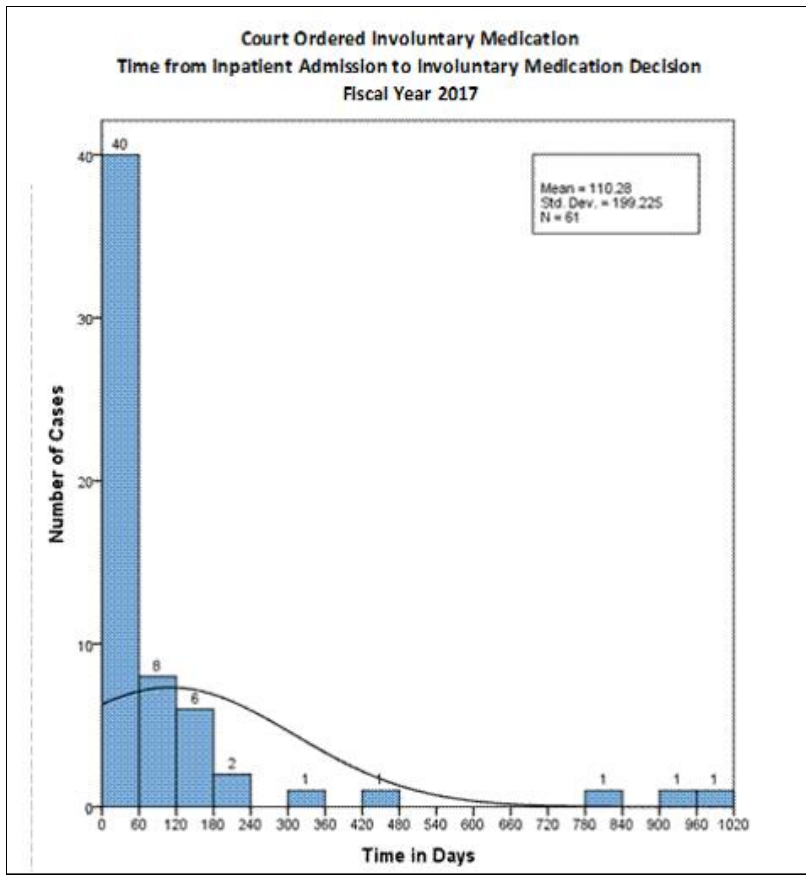
Source:
SHW

Q19: What was the average wait time for commitment and involuntary medication in non-expedited cases in 2017?

A19:

The average time from involuntary medication filing date to medication decision date for non-expedited cases was 11.28 days.

DMH has reports on total time from admission to involuntary medication decision for FY 17, presented below.



This graph illustrates all initial cases (61) filed for involuntary medication in FY 2017. The average (mean) length of time between an admission to the hospital and to the medication decision is approximately 110 days, with a small number of outliers on the longer end of the curve. This illustrates the variability in this measure across time and jurisdictions, with approximately 65% of cases resolved in less than 60 days and 78% of cases resolved in less than 120 days. When removing the four outliers, the average time between admission to decision is approximately 62 days.

COURT ORDERED (FORENSIC)

Source: **Q20:** In 2017 and 2016, what percentage of persons in the involuntary system are arriving as a court-ordered (forensic) referral (by month)?
SHW

A20:

See answers to questions 3 and 8 for answers by year. We included the information as numbers since the percentages would be very small. Breakouts that are smaller than annual figures may not be good indications of trends. Please note that this data includes forensic commitments as well as forensic observations. Data for forensic observations only can be found in question 3.

Calendar Year	Number of Forensic Admissions by month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
2017	3	4	2	5	3	6	5	4	6	5	7	-	50
2016	4	6	5	4	6	7	7	4	8	9	2	4	66

Source: **Q21:** Why are there openings in the MH docket?
SHW

A21:

There is court time that is reserved for mental health cases in the family court that is not used. This happens because the courts set blocks of cases for certain days of the week (Chittenden on Mondays, Rutland and Windham on Fridays, etc.). DMH may choose not to move forward on a case (go to hearing on it) because the patient may be taking medication and improving. If that's true, there is minimal incentive to have a hearing, as the person may be able to leave the hospital without a commitment (or be put on a stipulated ONH upon discharge). DMH primarily pushes for hearings when a patient is refusing medications.

Source: **Q22:** How long on average does it take for an independent psychiatric evaluation (§ 7614) to occur once it has been ordered by the court?
SHW

A22:

Based on 2017 data, it takes 8-9 days (8.63 mean, 7 median) for an independent psychiatric evaluation to occur for inpatient orders by the court.

FACILITIES REPORT

QUESTIONS FOR DEPARTMENT OF MENTAL HEALTH

DMH POPULATION NUMBERS

Source: **Q1:** Number of patients at VPCH and average length of stay – if possible, also, numbers of folks who have mental health needs and criminal justice involvement
HCCI

A1:

Calendar Year	Number of Discharges	Average LOS
2014	37	67
2015	55	88
2016	59	67
2017	71	71
Total	222	110

Forensic admissions below are defined as those admitted as a forensic commitment or under a court-order for forensic observation. December data are not yet complete.

Calendar Year	Number of Forensic Admissions by month												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
2017	3	4	2	5	3	6	5	4	6	5	7	-	50
2016	4	6	5	4	6	7	7	4	8	9	2	4	66

Source: **Q2:** Number of patients at Middlesex Therapeutic Community Residence (MTCR) and average length of stay
HCCI

A2:

Calendar Year	Number Served during Year	Number of Discharges	Average LOS
2013	11	5	129
2014	18	11	150
2015	16	11	226
2016	11	5	244
2017	9	9	360
Total	48	41	226

Source: **Q3:** Number of patients waiting in EDs and average length of stay

HCCI

A3:

Mean and Median Wait Time

Inpatient Placement for Adult Emergency Exams, Warrants, and Forensic Observations

Year	Month	Avg # Waiting Per Day	Mean Wait Time	Median Wait Time
2016	Jan	4	43	21
	Feb	2	30	25
	Mar	4	51	21
	Apr	2	37	17
	May	3	27	15
	Jun	5	49	23
	Jul	4	43	22
	Aug	8	79	41
	Sep	4	77	74
	Oct	7	78	56
	Nov	6	79	28
	Dec	5	77	45
2017	Jan	4	63	45
	Feb	4	45	27
	Mar	4	60	40

	Apr	5	56	33
	May	6	76	54
	Jun	5	48	28
	Jul	8	75	52
	Aug	9	95	68
	Sep	11	135	70
	Oct	10	106	70
	Nov	6	105	62
	Dec	2	41	28