



**Ohio Department of Mental Health and Addiction Services**

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**Seclusion and Restraint Data Report Results:  
Inpatient Psychiatric Service Providers  
January through December 2015**

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### A Note about Ohio’s Trauma-Informed Care Initiative

*Individual trauma results from an event, series of events, or set of circumstances that is experienced by an individual as physically or emotionally harmful or threatening and that has lasting adverse effects on the individual's functioning and physical, social, emotional or spiritual well-being. (SAMHSA, 2012)*

OhioMHAS recognizes that hospitalization for mental health disorders, in and of itself, can be a traumatizing event. Therefore, the agency is working with the Ohio Department of Developmental Disabilities to encourage all providers to adopt “Trauma-Informed Care.” This approach explicitly acknowledges the role trauma plays in people’s lives and develops an organizational and clinical culture that considers and addresses its impact on the person’s disease and recovery. Through Regional Collaboratives, OhioMHAS and its partners provide technical assistance to help providers avoid re-traumatizing an individual in their care. A reduction in seclusion and restraint can be an indicator of trauma-informed care implementation.

## Summary

### For private hospitals serving adults:

- Adult-serving hospitals reported using a higher total number of Seclusions and a lower number of Physical Restraints; this pattern was generally consistent when averaging the frequency per 1000 patient days.
- Average duration per incident was longer for Mechanical Restraints followed by Seclusions, with a lower average duration for Physical Restraints. This pattern was consistent with past reports.
- When private hospitals were analyzed by groups such as geographical region or capacity group, the effect of a single outlier upon group averages was more prominent than when as a whole. Therefore, with the exceptions of the frequency of adult seclusions, and adult mechanical restraints by reporting period, no consistent patterns were found.

### For hospitals serving children and youth:

- Youth-serving hospitals reported using a higher total number of Physical Restraints, a slightly smaller number of Seclusions, and a lower number of Mechanical Restraints. When averaging the frequency per 1000 patient days for all youth-serving hospitals there was a higher number of Seclusions, followed by Physical Restraints.
- Average duration of physical restraint per incident was longer among child and adolescent providers than adult hospitals.
- Due in part to the small number of youth providers, outliers with high rates for one to two-month periods created large jumps between reporting periods for all types of seclusion and restraints.

### Comparing hospitals serving adults to hospitals serving children and youth:

- Hospitals serving children and youth report fewer total Seclusions and Restraints. When looking at frequencies per 1000 Patient Days, compared with hospitals serving adults, hospitals serving youth report higher rates of seclusions and physical restraints. For the January-June reporting period, youth and adult providers had about the same number of mechanical restraints.
- When compared with adult hospitals, child and adolescent providers reported longer average duration mechanical restraints throughout the analysis period.
- Hospitals serving adults have a longer average duration of Seclusions and Mechanical Restraints.
- The longest average duration of any of the Seclusions and Restraint types are Mechanical Restraints in adult-serving hospitals.

## Methods

Ohio Department of Mental Health & Addiction Services (OhioMHAS) OAC 5122-14-14 requires that inpatient hospital providers report certain incident data every six months (January – June, and July – December). Mental health providers that are required to report incidents include Type 1 Residential Facilities, Inpatient Psychiatric Service Providers, and Community Mental Health Agencies.

Hospital providers are comprised of psychiatric inpatient units within general hospitals and freestanding psychiatric hospitals in Ohio. OhioMHAS licenses acute inpatient beds on these units for adults, adolescents, and children; some adult licensed units have programming specific to the geriatric population. All acute inpatient units and/or hospitals provide programming and treatment for individuals who are experiencing an acute psychiatric crisis and require hospitalization.

Hospitals were required to report their service utilization. Patient days<sup>1</sup>, number and minutes of Seclusion<sup>2</sup>, Physical Restraints<sup>3</sup>, Mechanical Restraints<sup>4</sup>, number of patient injuries or illnesses, and number of injuries to staff resulting from Seclusion and Restraint. The number of licensed facilities may differ between months and/or reporting periods. Therefore, aggregate data displayed over 12 months only includes those providers open for service during both reporting periods.

Comparisons: In order to compare across organizations of varying size, frequencies were calculated on both the number of Seclusions and Restraints per 1000 patient days and the average duration per Seclusion and Restraint.

$$\text{Seclusion/Restraints per 1000 Patient Day} = \frac{\text{Total \# of Seclusions/Restraints}}{\text{Total \# of Patient Days}} \times 1000$$

$$\text{Avg. Duration per Seclusion/Restraint} = \frac{\text{Total mins of Seclusion/Restraint}}{\text{Total \# of Seclusions/Restraints}}$$

For example, if an organization reported 600 patient days, 15 incidents of Seclusion, and 500 total minutes of Seclusion, the Seclusions per 1000 patient days would be 25 (15/600=25) and the average duration would be 33.3 minutes (500/15=33.3).

### Geographic Areas Served

There were 78 total hospitals operating in January – June 2015. The total increased to 81 hospitals operating in July – December 2015. Table 1 below reports the total number of hospitals serving adults and youth for the state as well as within each geographical area. The county map below shows the geographical areas based on referral regions for the six Regional Psychiatric Hospitals (RPHs).

- The number of child and adolescent providers remained stable between reporting periods for all regions.
- The Northeast region had the highest number of hospitals for both adults and children and youth for both reporting periods.
- The number of adult-serving providers within the Southwest region increased by one during the July-December reporting period. The region accounted for approximately 21 percent of total number of hospitals serving adults.

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<sup>1</sup> Patient days are the sum of all census days less the sum of all leave days.

<sup>2</sup> Seclusion means a staff intervention that involves the involuntary confinement of a patient alone in a room where the patient is physically prevented from leaving.

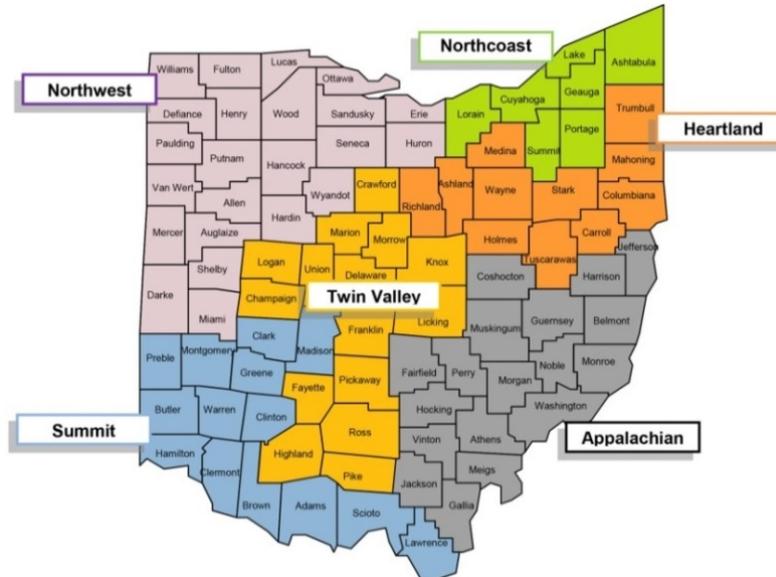
<sup>3</sup> Physical Restraint, also known as Manual Restraint, means a staff intervention that involves any method of physically/manually restricting a patient's freedom of movement, physical activity, or normal use of his or her body without the use of Mechanical Restraint devices.

<sup>4</sup> Mechanical Restraint means a staff intervention that involves any method of restricting a patient's freedom of movement, physical activity, or normal use of his or her body, using an appliance or device manufactured for this purpose.

<sup>7</sup> Outlier data from agencies have been verified and included within the report. In addition, all branch offices have reported data separately, thereby increasing the January-June 2015 sample size. Therefore, results seen here may vary from previous releases of Jan-June 2015 data.

- The Southeast region gained an adult-serving hospital between the two reporting periods.
- The Southwest region gained one adult-serving hospital between the two reporting periods.
- As of December 2015, the Southeast region held the smallest percentage of adult-serving hospitals (N=7, 10.4%). The Southeast region also had the smallest percentage of child/adolescent providers (N=1, 5.9%).

Results will be reported by region for hospitals serving adults; the subsample size was too small to report results by region for the child and youth-serving hospitals.



**Table 1. Inpatient Psychiatric Service Hospitals by Geographical Region.**

	Adult Private Inpatient				Child/Youth Private Inpatient			
	Jan-Jun 2015	Jan-Jun 2015	Jul-Dec 2015	Jul-Dec 2015	Jan-Jun 2015	Jan-Jun 2015	Jul-Dec 2015	Jul-Dec 2015
	N	%	N	%	N	%	N	%
TOTAL	67 <sup>5</sup>		71 <sup>4</sup>		17 <sup>4,7</sup>		17 <sup>4,7</sup>	
Northeast/Northcoast	18	26.9	20	28.2	4	23.5	4	23.5
Heartland	8	11.9	7	9.9	2	11.8	2	11.8
Southeast/Summit	7	10.4	8	11.3	1	5.9	1	5.9
Southwest/Appalachia	14	20.9	15	21.1	4	23.5	4	23.5
Central/Twin Valley	9	13.4	9	12.7	3	17.6	3	17.6
Northwest	11	16.4	11	16.9	3	17.6	3	17.6

<sup>4</sup> Mechanical Restraint means a staff intervention that involves any method of restricting a patient’s freedom of movement, physical activity, or normal use of his or her body, using an appliance or device manufactured for this purpose.

<sup>5</sup> 7 hospitals serve both adults and youth.

<sup>7</sup> Outlier data from agencies have been verified and included within the report. In addition, all branch offices have reported data separately, thereby increasing the January-June 2015 sample size. Therefore, results seen here may vary from previous releases of Jan-June 2015 data.

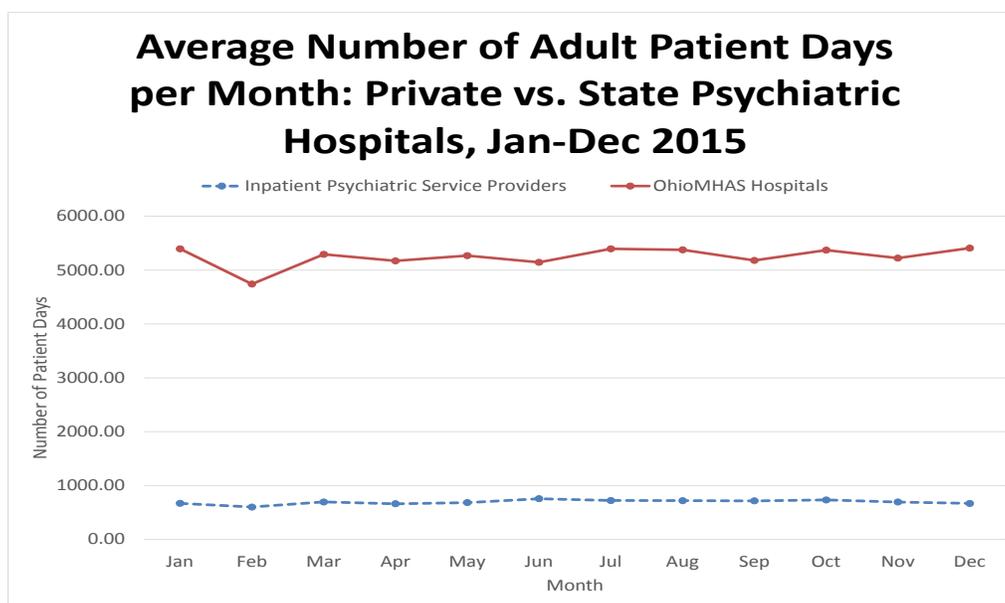
## Inpatient Psychiatric Hospitals Serving Adults

### Service Utilization: *Patient Days*

Patient days<sup>6</sup> summarize hospital service utilization. Table 2 below reports the monthly averages and six-month total patient days for the RPHs and the inpatient psychiatric service providers serving adults. On average, private inpatient hospitals reported 676 patient days per month January – June, and 707 days per month July – December 2015. Public hospitals reported an average of 5,169 patient days per month January – June, and 5,326 during the July – December 2015 reporting period.

**Table 2. Total number of patient days per month**

		Jan-Jun Total	Jan	Feb	Mar	Apr	May	Jun	Jul-Dec Total	Jul	Aug	Sep	Oct	Nov	Dec
Inpatient Psychiatric Service Providers	Mean	676.71	669.07	599.42	694.00	660.49	682.63	754.64	4246.54	721.04	718.55	714.01	732.13	693.37	667.44
(Adult-serving)	SD	635.75	573.15	541.29	608.66	584.57	593.77	913.03	3901.45	661.48	666.01	669.77	669.89	639.14	618.41
	Min	251.00	0.00	0.00	0.00	0.00	42.00	90.00	674.00	0.00	0.00	0.00	0.00	0.00	0.00
	Max	17381.00	2890.00	2730.00	3017.00	2836.00	2989.00	6451.00	19457.00	3452.00	3474.00	3682.00	3170.00	2948.00	2731.00
OhioMHAS Hospitals	Mean	31017.83	5394.50	4742.33	5294.00	5172.83	5268.50	5145.67	31956.83	5395.00	5377.83	5181.17	5372.00	5221.83	5409.00
(N=6)	SD	13906.26	2338.52	2140.20	2372.26	2332.78	2381.66	2357.05	15548.84	2636.33	2643.48	2530.17	2623.77	2529.24	2593.17
	Min	13083.00	2472.00	2112.00	2223.00	2116.00	2081.00	2079.00	12993.00	2196.00	2160.00	2119.00	2234.00	2141.00	2143.00
	Max	49051.00	8404.00	7565.00	8370.00	8155.00	8386.00	8171.00	50607.00	8554.00	8566.00	8301.00	8386.00	8213.00	8587.00



<sup>6</sup> Patient days are the sum of all census days less the sum of all leave days.<sup>7</sup> Outlier data from agencies have been verified and included within the report. In addition, all branch offices have reported data separately, thereby increasing the January-June 2015 sample size. Therefore, results seen here may vary from previous releases of Jan-June 2015 data.

## Capacity

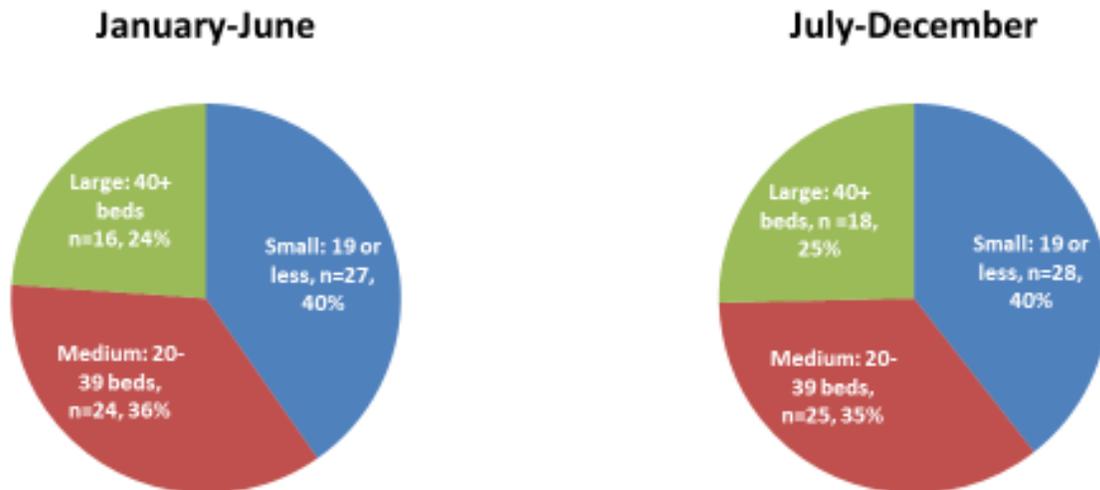
Private psychiatric units/hospitals are licensed annually and full licensure renewal requires an on-site survey every three years. In January-June 2015, the minimum number of licensed beds by a hospital was 6, and the maximum number of licensed beds by a hospital was 96; during the July-December reporting period, the maximum number of beds increased to 100. The average number of licensed beds was 31.08 (sd=22.13) January – June and increased slightly to 32.1 (sd=23.08) July – December 2015.

Based on the number of licensed beds, hospitals were grouped in to 3 capacity groups:

- Hospitals with less than 20 beds
  - Jan-Jun: N=27, 40.3%
  - Jul-Dec: N=28, 39.4%
- Hospitals with 20-39 beds
  - Jan-Jun: N= 24, 35.8%
  - Jul-Dec: N=25, 35.2%
- Hospitals with 40 or more beds
  - Jan-Jun: N=16, 23.9%
  - Jul-Dec: N=18, 25.4%

Seclusion and Restraint results will be reported by hospital capacity groups.

### Adult Capacity Group by Report Period: 2015



## Occupancy

Occupancy was calculated for each hospital. The formula used to calculate occupancy was:

$$\text{Occupancy} = \frac{\text{Total \# of Patient Days}}{\text{\# of licensed beds * \# days in the 6-month period}}$$

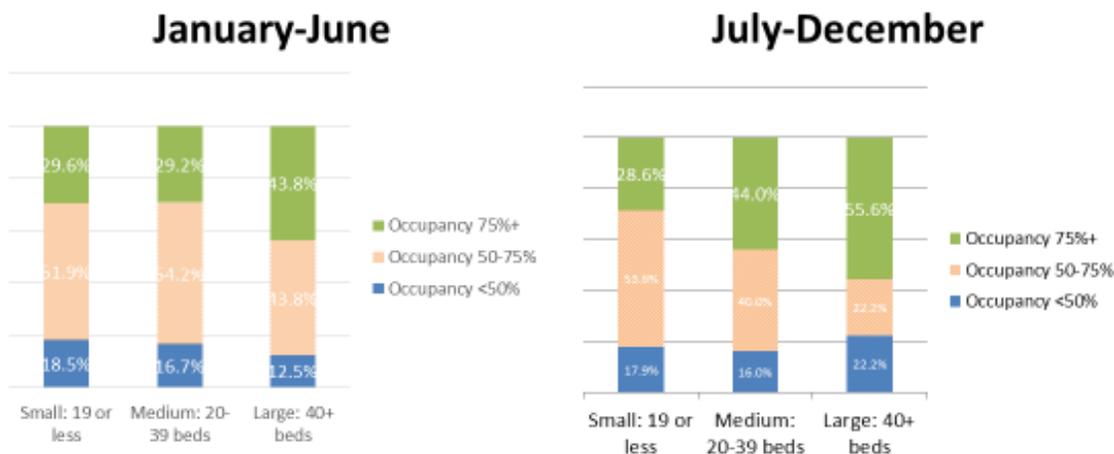
The minimum occupancy rate increased from 4.62% January – June to 8.79% July – December: The average occupancy decreased from 69.6% (sd=23.9%) January – June, to 68.3% (sd=23.0%) July – December.

Based on the occupancy percentages of past years, hospitals were grouped in to 3 occupancy groups:

- Hospitals with less than 50% occupancy
  - Jan-Jun: N=11, 16.4%
  - Jul-Dec: N=13, 18.3%
- Hospitals with 50 – 75% occupancy
  - Jan-Jun: N=34, 50.7%
  - Jul-Dec: N=29, 40.8%
- Hospitals with over 75% occupancy
  - Jan-Jun: N=22, 32.8%
  - Jul-Dec: N=29, 40.8%

The figures below demonstrate the relationship between capacity and occupancy. In January – June, small capacity hospitals (Less than 20 beds) had the largest number of hospitals in both the lowest occupancy category, under 50%, n = 5, and the Middle occupancy rate category, 50%-75%, n = 14.

### Occupancy by Capacity



The pattern changed slightly in July-December, particularly among large facilities. The percentage of large capacity hospitals (40 or more beds) within the lowest occupancy group (less than 50%) increased from 12.5 percent (January to June) to 22.2 percent (July to December). In addition, the proportion of medium-sized facilities with occupancy rates of 75 percent or higher increased from 29.2 to 44 percent. The percentage of facilities within the 50-75 percent occupancy group decreased between reporting periods for both medium and large facilities.

## Average Daily Census

The Average Daily Census (ADC) was calculated for each hospital. The formula used to calculate ADC was:

$$ADC = \frac{\text{Total \# of Patient Days}}{182 \text{ (days in the 6-month period)}}$$

The minimum ADC increased slightly between reporting periods (January to June= 1.39, July – December=3.66); the maximum ADC also increased (96.03 January to June to 105.74 July – December). The average ADC increased slightly from January – June (M=22.43, sd=20.31 to July – December (M=23.1, sd=21.2). RPHs ADC increased slightly from January – June (M=171.37) to July – December (M=173.67).

Based on the ADC figures, private hospitals were grouped in to 3 census groups:

Hospitals with ADC 0-10 patients per day:

- Jan-Jun: N=25, 37.3%
- Jul-Dec: N=26, 36.6%

Hospitals with ADC 11-19 patients per day:

- Jan-Jun: N=16, 23.9%
- Jul-Dec: N=18, 25.4%

Hospitals with ADC 20+ patients per day:

- Jan-Jun: N=26, 38.8%
- Jul-Dec: N=30, 42%

Seclusion and Restraint results will be reported below by hospital ADC groups.

### Utilization of Seclusion or Restraint

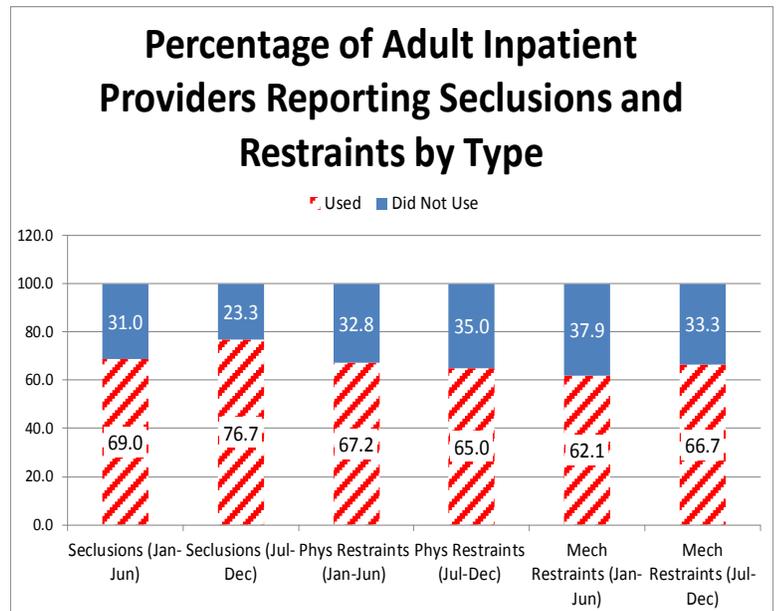
In an effort to better understand the data, OhioMHAS analysts calculated the frequency data three ways. First, the frequencies were calculated by each Seclusion/Restraint type only for hospitals that used that type:

- Annually, about 73 percent of adult hospitals reported Seclusions (N=40 January – June, N=46 July – December).
- The number of adult hospitals reporting Physical Restraints remained relatively stable from Jan-June (N=40) to July – December (N=39).
- And the number of adult hospitals reporting Mechanical Restraints increased from January – June (N=36) to July – December (N=40).

Next, frequencies were calculated by the number of adult hospitals that reported any of the three types of Seclusion or Restraint (January – June: N=58; July – December: N=60). Because the data reporting form does not ask about hospital policy allowing or prohibiting the use of Seclusion or Restraint, this frequency is a proxy measure of adult hospitals that allow Seclusion/Restraint. A few hospitals serving adults (January – June: N=9; July – December N=11) did not utilize any type of Seclusion or Restraint.

Finally, frequencies of each type of intervention were calculated for all adult hospitals (January – June: N=67; July – December: N=71). As the denominator increases across each of these calculation methods, the average frequency scores decrease.

Additionally, private hospitals were compared with the public hospitals in regards to their use of Seclusions and Restraints. As a result, the Seclusions and Restraints cases for the six RPHs have been aggregated and included.

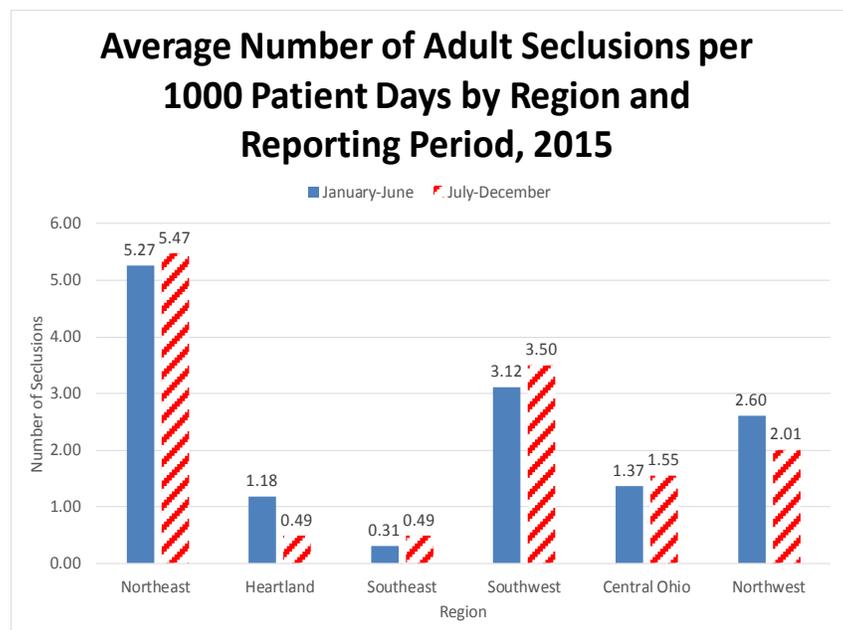
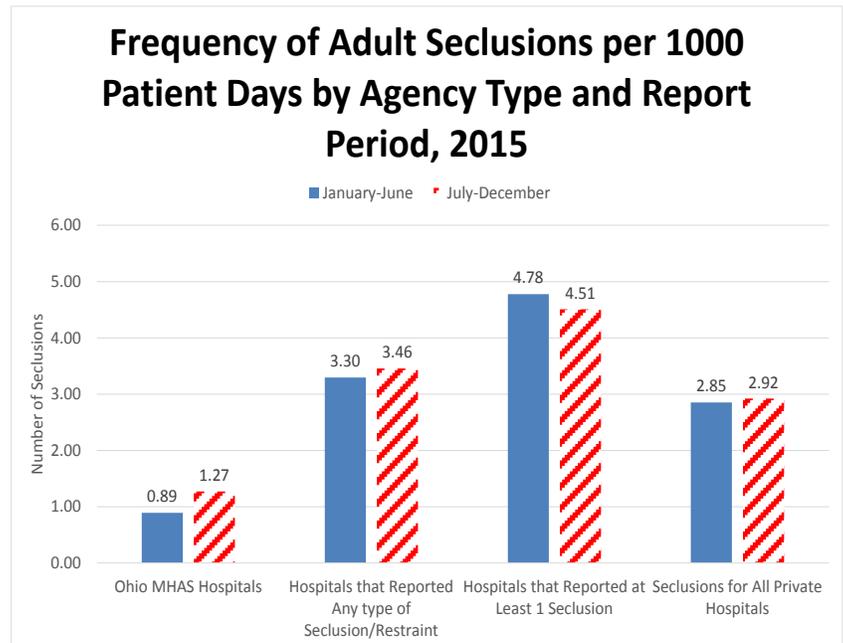


## Seclusions

### Frequency

Table 3 reports the frequency of seclusions. The total number of Seclusions reported in 2015 was 2587 (1431 in January – June and 1156 in July – December).

- Of the hospitals that did report seclusions, the maximum number reported by a hospital increased between January – June (N=177) and July – December (N=188). The average number of Seclusions increased slightly between January – June (M=23.5) and July – December (M=23.8).
- When standardizing across hospitals by patient days, the average number of Seclusions per 1000 patient days for all private hospitals increased slightly from January – June (M=2.85) to July – December (M=2.92).
- The average number of Seclusions per 1000 patient days increased between reporting periods (M= 3.3 January – June; M=3.5 July – December) for hospitals that reported any type of Seclusion or Restraint in 2015. Within this group, the averages for both reporting periods were higher than the previous year.
- Within private hospitals, the average number of Seclusions per 1000 patient days was 3.0 or above in April, May, November and December.
- The six RPHs reported a slight increase in average Seclusions per 1000 patient days between reporting periods (M=0.9 January – June; M=1.3 July – December). The highest average seclusions were reported in July, November and December.

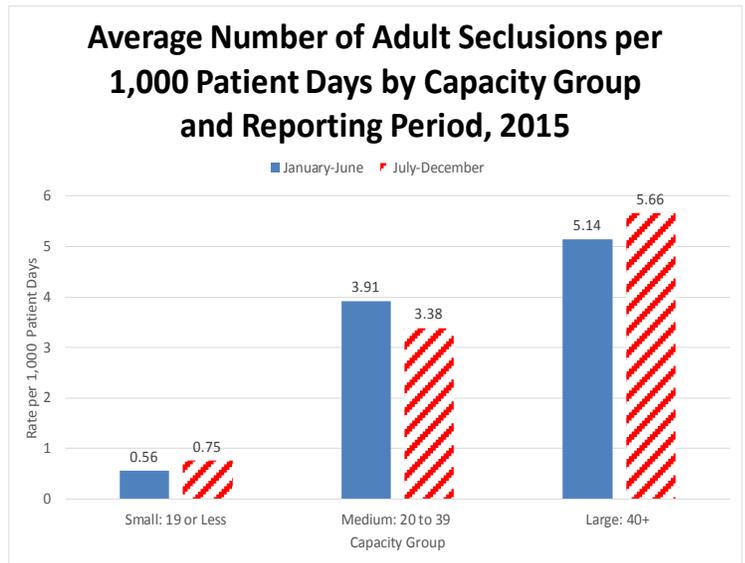


### By Geographical Area:

- Hospitals in the Northeast region reported the highest average frequency of seclusion per 1000 patient days from January to June (M =5.3) and from July to December (M =5.5).
- Hospitals within the Heartland and Northwest regions reported a decrease in the average frequency of Seclusions per 1000 patient days between the January-June and July-December reporting periods. All other regions reported an increase between reporting periods. With regards to adult seclusions, hospitals within the Southeast region reported the highest percent increase (56.34%) between reporting periods.

**By Capacity and Average Daily Census**

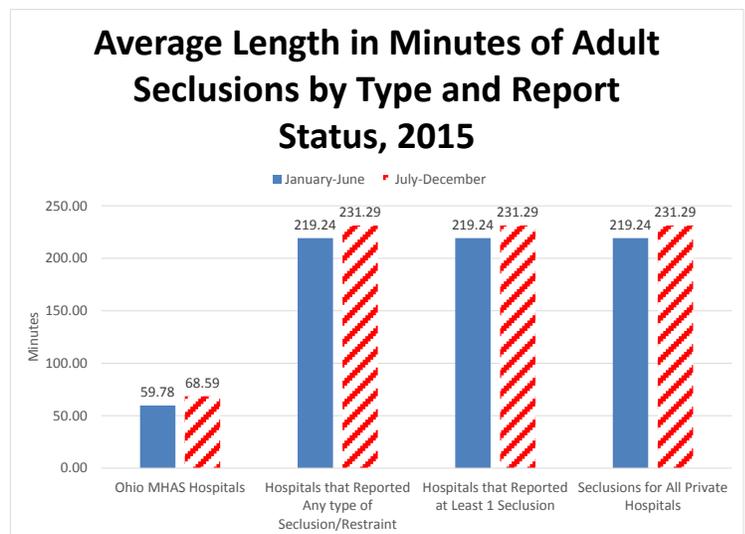
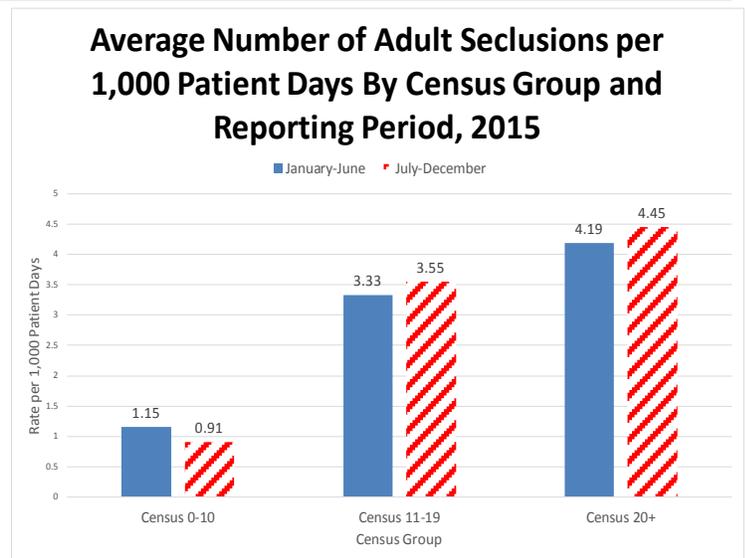
- The average frequency of Seclusions per 1000 patient days increased with capacity across both reporting periods, from a low of 0.56 and 0.75 for hospitals with less than 20 beds, to a high of 5.14 and 5.66 for hospitals with more than 40 beds.
- The average frequency of Seclusions per 1000 patient days also increased by Average Daily Census group within each reporting period, from a low of 1.15 and .91 for hospitals with 0-10 Census days, to a high of 4.19 and 4.45 for hospitals with 20 or more Census days.



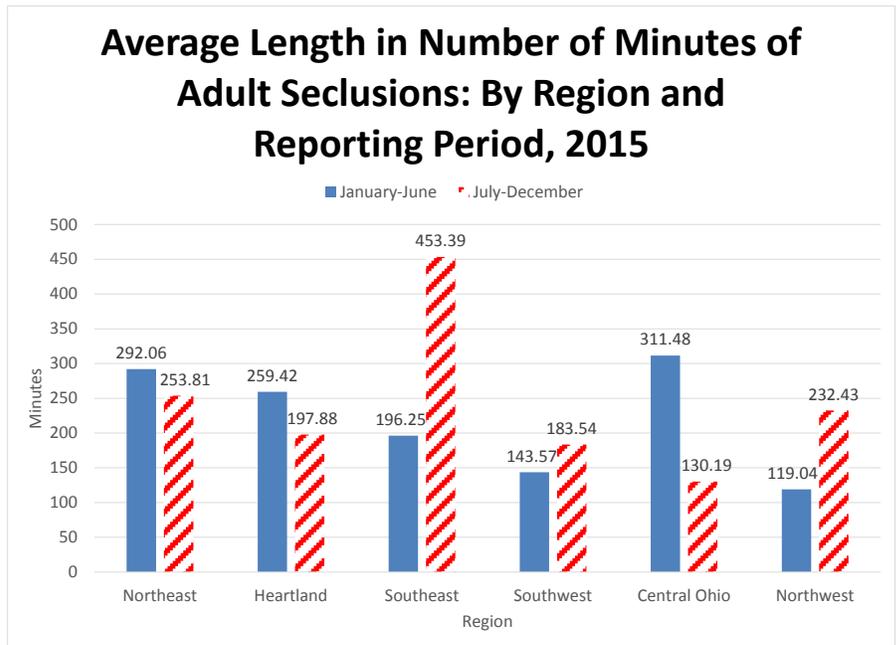
**Duration of Seclusion**

Hospitals reported on the duration of seclusions by number of minutes. Private hospitals remained well above Ohio MHAS hospitals. Table 4 reports the average duration of Seclusions. Table 5 reports the frequency and duration of Seclusions by Geographical Area, by Capacity, and by Average Daily Census.

- Among providers that reported seclusions, the minimum length of Seclusion reported by a hospital increased between reporting periods, from 30 minutes January – June to 50 minutes July – December. The maximum number of minutes decreased from 128,431 in January – June to 98,274 July – December.
- The average number of minutes per hospital decreased from 7,305 January – June to 6,957 July - December.
- Average duration was computed to standardize across hospitals, using only the hospitals that reported incidents (see calculation above). The minimum average duration increased from 7.5 minutes January – June to 28 minutes July – December. The maximum average length decreased from 1861 minutes January – June to 1276 minutes July – December. And the average duration of Seclusions increased from 219 minutes January – June to 231 minutes July – December.
- Among private hospitals, the shortest average duration of Seclusions (below 200 minutes) occurred in April, August and September. The longest average duration occurred in January (356 minutes).



- The six RPHs reported an average seclusion duration of 59.8 minutes from January to June, increasing to 68.6 minutes during the July to December reporting period. The average duration fluctuated throughout the second half of the year. Among RPHs, the longest average durations occurred in June (88.1 minutes) and August (80.4 minutes).

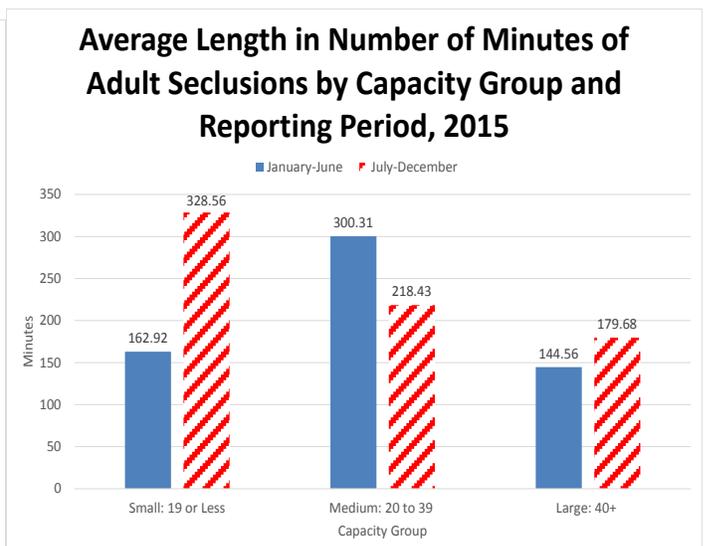
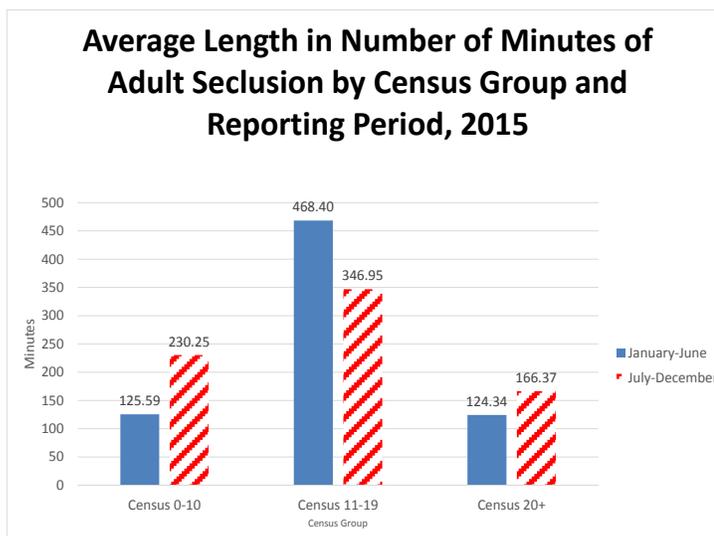


**By Geographical Area:**

- From January to June, hospitals in the Heartland region had the longest average duration of seclusions (M=421.65 minutes). Despite an increase within the Heartland region, hospitals within the Southeast region reported the longest average seclusions from July to December (M = 720 minutes).
- For both reporting periods, hospitals in the Southwest region had the shortest average duration (M=126.84 and 129.74 minutes). The average length of seclusions increased between the two reporting periods for the Heartland, Southeast and Northwest regions, while the Southwest and Central regions remained relatively stable in average length. Finally, the average length of seclusions within the Northeast region decreased by 24.4% between the two reporting periods.

**By Average Daily Census and Capacity:**

- Hospitals within the Census 11-19 group reported longer average seclusions than hospitals within the small or large capacity groups. This relationship remained stable across both reporting periods.
- During the January to June reporting period, hospitals within the Medium Census group reported the highest average duration of seclusions, at M=300.31 minutes. Within the July to December reporting period, the average length of seclusions demonstrated a reverse relationship with average daily census group.



**Table 3. Frequency of Seclusions per 1000 Patient Days (Means across Hospitals)**

		Jan-Jun Avg.	Jan	Feb	Mar	Apr	May	Jun	Jul-Dec Avg.	Jul	Aug	Sep	Oct	Nov	Dec	
Private Hospitals	Hospitals that reported seclusions	Mean	4.8	4.1	4.5	4.9	5.1	5.2	4.5	4.5	3.8	3.5	4.3	4.0	4.9	6.5
		SD	6.2	5.6	7.3	7.7	9.2	9.9	7.3	6.1	7.1	6.7	6.4	6.5	7.6	9.3
	Hospitals that reported any Seclusion/Restraint	Mean	3.3	2.8	3.1	3.4	3.5	3.6	3.1	3.5	2.9	2.7	3.3	3.0	3.7	4.9
		SD	5.6	5.0	6.4	6.8	7.9	8.5	6.4	5.7	6.4	6.0	5.8	6.0	7.0	8.5
	All Private Adult Hospitals	Mean	2.9	2.5	2.7	3.0	3.1	3.1	2.7	2.9	2.5	2.2	2.8	2.6	3.1	4.1
		SD	5.3	4.8	6.1	6.5	7.5	8.0	6.1	5.3	6.0	5.6	5.5	5.6	6.5	8.0
Regional Psychiatric Hospitals	Mean	0.9	1.2	0.4	1.0	1.0	0.5	1.2	1.3	1.2	1.2	1.1	0.7	1.8	1.7	
	SD	0.6	0.8	0.4	0.8	0.8	0.4	0.9	1.5	1.1	1.2	1.1	1.0	2.4	2.3	

**Table 4. Average Length in Minutes of Seclusion (Means across Hospitals)**

Provider Type		Jan-Jun Avg	Jan	Feb	Mar	Apr	May	Jun	Jul-Dec Avg	Jul	Aug	Sep	Oct	Nov	Dec
All Private Hospitals	N	40.0	25.0	27.0	23.0	22.0	24.0	24.0	46.0	27.0	24.0	28.0	28.0	28.0	26.0
	Mean	219.2	355.8	209.7	247.8	190.8	211.6	278.1	231.3	334.3	186.1	165.3	215.6	293.8	238.9
	SD	329.2	717.7	342.8	515.8	248.7	307.9	472.4	272.4	377.9	213.4	189.0	365.8	595.7	298.7
Regional Psychiatric Hospitals	N	6.0	6.0	4.0	5.0	5.0	4.0	5.0	6.0	5.0	4.0	5.0	3.0	4.0	4.0
	Mean	59.8	48.4	42.7	55.1	65.3	51.3	88.1	68.6	61.4	80.4	68.2	52.9	57.6	71.2
	SD	22.9	16.3	28.2	19.6	28.8	13.2	45.5	21.8	17.3	4.1	25.2	14.9	11.3	31.3

Please note: The formula for computing duration only includes hospitals that reported seclusions for that period. Therefore, the total number changes based upon the number of providers that report cases during a given month.

**Table 5. Average Adult Seclusion Frequency and Duration**

		Frequency per 1000 Patient Days				Average Duration (Minutes)			
		January-June		July-December		January-June		July-December	
		N	Mean	N	Mean	N	Mean	N	Mean
Geographical Area	Northeast	18	5.3	20	5.5	13	292.1	15	253.8
	Heartland	8	1.2	7	0.5	3	259.4	4	197.9
	Southeast	7	0.3	8	0.5	2	196.3	3	453.4
	Southwest	14	3.1	15	3.5	9	143.6	10	183.5
	Central Ohio	9	1.4	9	1.6	5	311.5	4	130.2
	Northwest	11	2.6	12	2.0	8	119.0	10	232.4
Capacity	Small: 19 or Less	27	0.6	28	0.8	10	162.9	11	328.6
	Medium: 20 to 39	24	3.9	25	3.4	18	300.3	19	218.4
	Large: 40+	16	5.1	18	5.7	12	144.6	16	179.7
Avg. Daily Census	Census 0-10	25	1.2	26	0.9	9	125.6	10	230.3
	Census 11-19	16	3.3	18	3.6	11	468.4	13	346.9
	Census 20+	26	4.2	27	4.5	20	124.3	23	166.4

## Physical Restraint

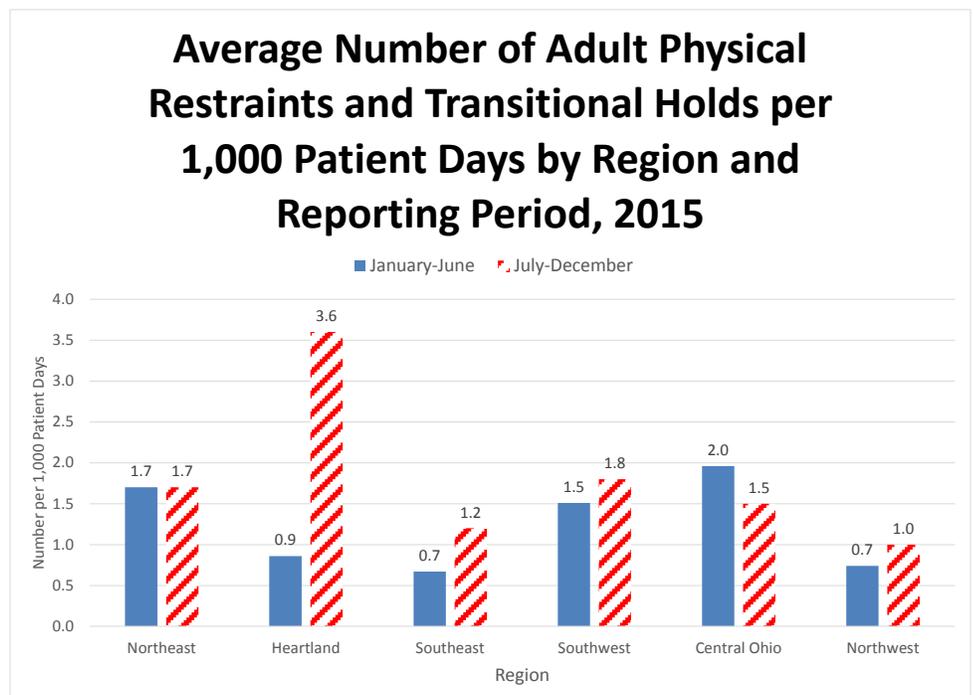
### Frequency

In 2015, the total number of Physical Restraints reported by all hospitals was 2149 (N=1082 January – June; N=1067 July – December).

- Of the hospitals that did report Physical Restraints and/or transitional holds, the maximum number reported by a hospital for both reporting periods was 81. The average total number reported increased from 10.18 (January – June) to 11.2 (July – December).
- When standardizing across hospitals by patient days, the average number of Physical Restraints per 1000 patient days among hospitals that reported at least 1 case decreased from January – June (M=2.2) to July – December (M=3.1).
- The average number of Physical Restraints per 1000 patient days increased from January-June (M=1.5) to July-December (M=2.0) among hospitals that reported any type of Seclusion or Restraint.
- The average number of Physical Restraints per 1000 patient days increased (M=1.3 January – June; M=1.7 July – December) for all private hospitals.
- Among private hospitals, the average number of Physical Restraints per 1000 patient days was highest in July (M=2.3), March (M=1.87) and December (M=1.86). All other monthly averages remained at or below 1.6 restraints per 1,000 patient days.
- The six RPHs reported an average of 3.2 Physical Restraints and Transitional Holds per 1000 patient days similar across reporting periods (M=3.4 January – June; M=3.0 July – December). The lowest average physical restraint and Transitional Hold rates were reported in July and August. The highest averages were reported in January and March.

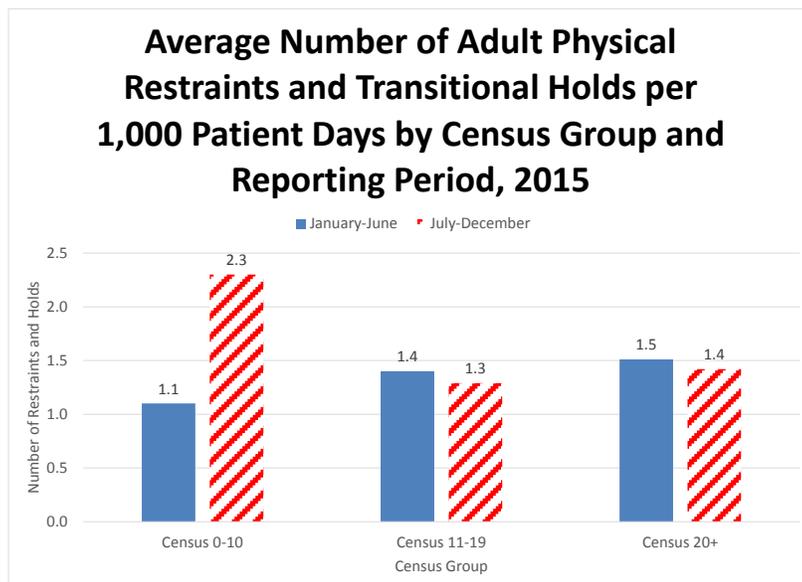
By Geographical Area:

- Hospitals in the Northwest and Southeast regions had low average frequencies across both reporting periods.
- Physical restraints increased in the second half of 2014 for hospitals in several regions. The largest increase occurred among hospitals within the Heartland region, due to an outlier (MΔ +300%).
- The frequency of physical restraints remained stable among hospitals within the Northeast Region, and decreased slightly across reporting periods for hospitals within the Central Ohio region.



## By Capacity and Average Daily Census

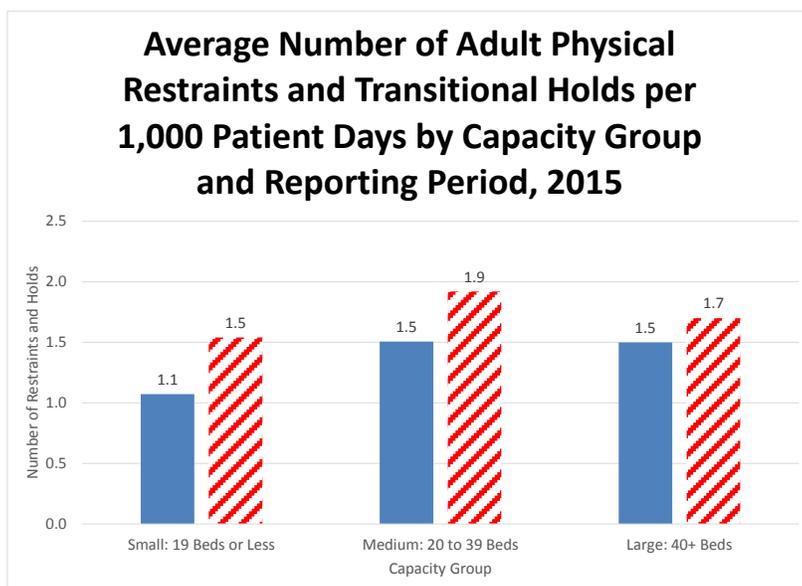
- The average frequency of Adult Physical Restraints per 1000 patient days showed a similar trend in both reporting periods, with a low frequency for hospitals with a small capacity and low (0-10) census group. Within the January-June reporting period, there was no difference between medium and large facilities with regard to average number of adult physical restraints and transitional holds. The average frequency of Physical Restraints per 1000 patient days by Average Daily Census varied for the two reporting periods, with no repeating pattern.



## Duration

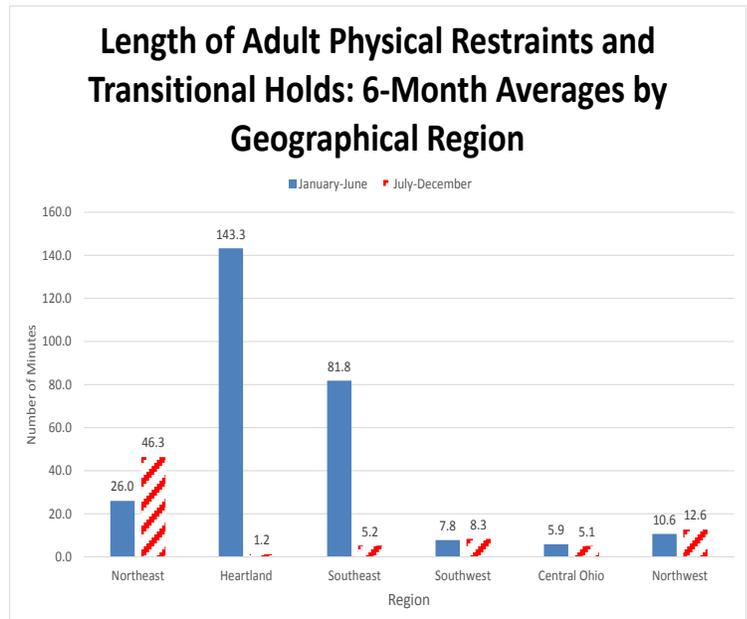
Hospitals reported on the minutes of Physical Restraint per month.

- The minimum number of minutes of Physical Restraint reported by a private hospital remained stable (1 minute) between the January-June and July-December reporting periods. The maximum number of minutes for a single private hospital increased from January-June (N=1004) to July-December (N=2247).
- Average duration was computed to standardize across private hospitals, using only the hospitals that reported incidents (see calculation above). The minimum average duration decreased slightly from 1.0 minute January-June, to .78 minute July-December. The average duration of Adult Physical Restraints and transitional holds decreased from 32.1 minutes January-June, to 19.7 minutes July-December. The averages were when compared with 2014 results, due to outliers. The presence of outliers is also supported by the high standard deviations within several of the monthly durations.
- Among private hospitals, the average duration of Physical Restraints varied between months; the longest average durations were in February, June, and July. The longest average duration was in February, at 44.3 minutes.
- When compared with private hospitals, the six RPHs reported much shorter average durations across the two reporting periods (2.5 and 2.7 minutes) and the average duration remained fairly stable across the twelve months, with slight increases in February (M=3.7 minutes), August (M=3.2 minutes) and September (M=3.1 minutes).



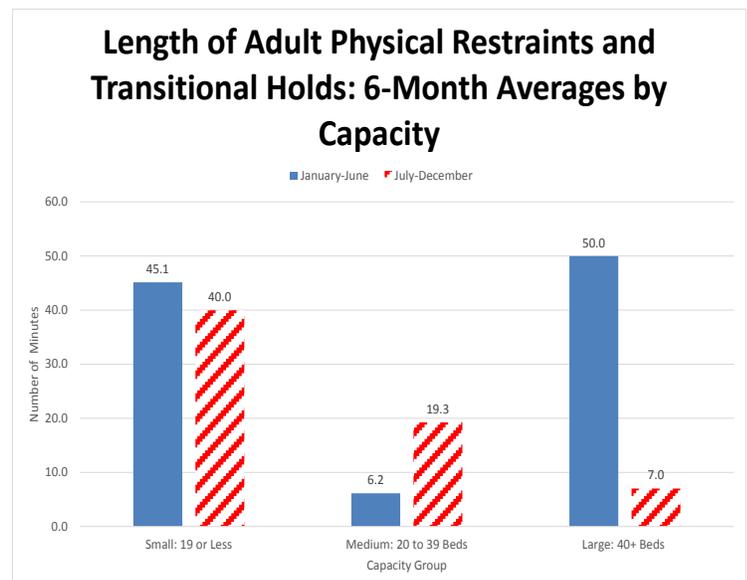
By Geographical Area:

- From January to June, the length of adult physical restraints showed no pattern across regions. The Heartland region had the longest average duration of Physical Restraints (M=143.3 minutes). The region’s high standard deviation (sd=262.79) suggests the presence of an outlier. Therefore, the data should be viewed with caution.
- From July to December, the Northeast region had the longest average duration of Physical Restraints (M=46.3 minutes); the region’s high standard deviation (sd=103.26) suggests the presence of an outlier. Therefore, the data should be viewed with caution. The Heartland region reported the shortest average length (M=1.2 minutes). There were no patterns found at the regional level in average length between the January –June and July-December reporting periods.



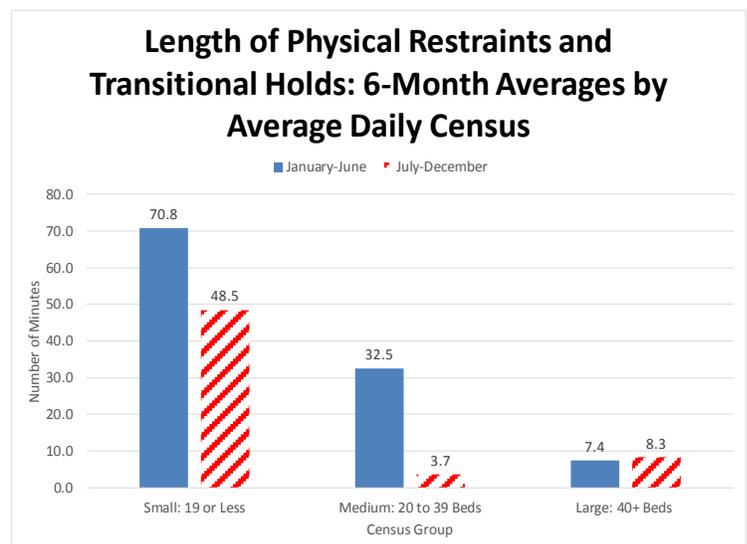
By Capacity:

- During the January – June reporting period, average duration of Physical Restraints was high, but showed no relationship with Capacity. In contrast, the July-December data a direct, negative correlation between Capacity Group and average length of Physical Restraints. Specifically, there was a 51.75% decrease in the average length of physical restraints between small and medium-sized hospitals, and a 63.7% decrease between medium and large capacity/census hospitals. Interestingly, the reverse relationship between capacity and length of physical restraints was found in past reports.



By Average Daily Census:

- The average length of physical restraints had an inverse relationship with Average Daily Census Group during the January-June reporting period. Data from this period reporting period showed that hospitals within the lowest census group (0-10) had the highest average length of physical restraints (M=48.5 minutes). Within the July-December report, no consistent relationship between Average Daily Census and restraint length emerged.



**Table 6. Frequency of Physical Restraints per 1000 Patient Days (Means across hospitals)**

Facility Type		Jan-Jun Avg	Jan	Feb	Mar	Apr	May	Jun	Jul-Dec Avg	Jul	Aug	Sep	Oct	Nov	Dec	
Private Hospitals	Hospitals that reported holds, physical restraints	Mean	3.2	3.2	3.3	1.7	2.6	5.6	3.0	2.3	1.7	2.0	2.2	2.9	2.2	2.9
		SD	3.0	4.6	5.9	2.8	4.3	7.2	4.1	2.8	3.2	3.6	3.8	7.5	3.7	4.3
	Hospitals that reported any Seclusion/Restraint	Mean	3.2	3.2	3.3	1.7	2.6	5.6	3.0	1.3	1.0	1.1	1.2	1.7	1.2	1.6
		SD	3.0	4.6	5.9	2.8	4.3	7.2	4.1	2.4	2.5	2.9	3.1	5.8	3.0	3.5
	All Private Hospitals	Mean	1.4	1.4	1.4	0.7	1.1	2.4	1.3	1.1	0.9	1.0	1.1	1.4	1.1	1.4
		SD	2.5	3.4	4.2	2.0	3.1	5.5	3.1	2.3	2.4	2.7	2.9	5.5	2.8	3.4
Regional Psychiatric Hospitals		Mean	2.5	2.6	1.7	2.7	3.0	3.0	2.0	3.3	2.9	2.9	2.7	3.2	3.3	4.6
		SD	1.4	1.9	1.2	2.2	2.3	1.7	1.5	2.0	2.4	1.2	1.4	2.5	2.6	3.0

**Table 7. Average Length in Minutes of Physical Restraints (Means across hospitals)**

		Jan-Jun Avg	Jan	Feb	Mar	Apr	May	Jun	Jul-Dec Avg	Jul	Aug	Sep	Oct	Nov	Dec
All Private Hospitals	N	40	17	17	21	22	21	22	39	21	19	18	19	19	17
	Mean	32.1	10.0	44.3	10.9	4.7	24.2	29.4	19.7	41.0	13.5	23.1	7.6	3.2	6.6
	SD	97.5	15.8	110.4	35.4	5.7	71.3	113.6	59.0	108.0	28.7	80.4	9.9	3.2	13.4
Ohio MHAS Hospitals	N	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
	Mean	2.5	1.9	3.2	2.1	2.2	2.5	2.6	2.7	2.6	3.2	3.1	2.0	2.2	2.4
	SD	0.7	0.7	2.0	0.7	0.7	0.9	1.6	1.2	1.6	1.7	2.2	0.8	0.4	1.3

Please note: The formula for computing duration only includes hospitals that reported physical restraints for that period. Therefore, the total number changes based upon the number of providers that report during a given month.

**Table 8. Average Physical Restraints/Holds: Frequency and Duration**

		Frequency per 1000 Patient Days				Average Duration (Minutes)			
		January-June		July-December		January-June		July-December	
		N	Mean	N	Mean	N	Mean	N	Mean
Geographical Area	Northeast	18	1.7	20	1.7	11	26.0	12	46.3
	Heartland	8	.9	7	3.6	4	143.3	1	1.2
	Southeast	7	.7	8	1.2	3	81.8	3	5.2
	Southwest	14	1.5	15	1.8	11	7.8	13	8.3
	Central Ohio	9	2.0	9	1.5	5	5.9	5	5.1
	Northwest	11	.7	12	1.0	6	10.6	5	12.6
Capacity	Small: 19 or Less	27	1.1	28	1.5	12	45.1	9	40.0
	Medium: 20 to 39 Beds	24	1.5	25	1.9	15	6.2	17	19.3
	Large: 40+ Beds	16	1.5	18	1.7	13	50.0	13	7.0
Avg. Daily Census	Census 0-10	25	1.1	26	2.3	12	70.8	12	48.5
	Census 11-19	16	1.4	18	1.3	9	32.5	8	3.7
	Census 20+	26	1.5	27	1.4	19	7.4	19	8.3

### ***Mechanical Restraints***

Table 9 reports the frequency of Mechanical Restraints, Table 10 reports the average duration of Mechanical Restraints, and Table 11 reports the frequency and duration of Mechanical Restraints by Geographical Area, by Capacity, and by Average Daily Census.

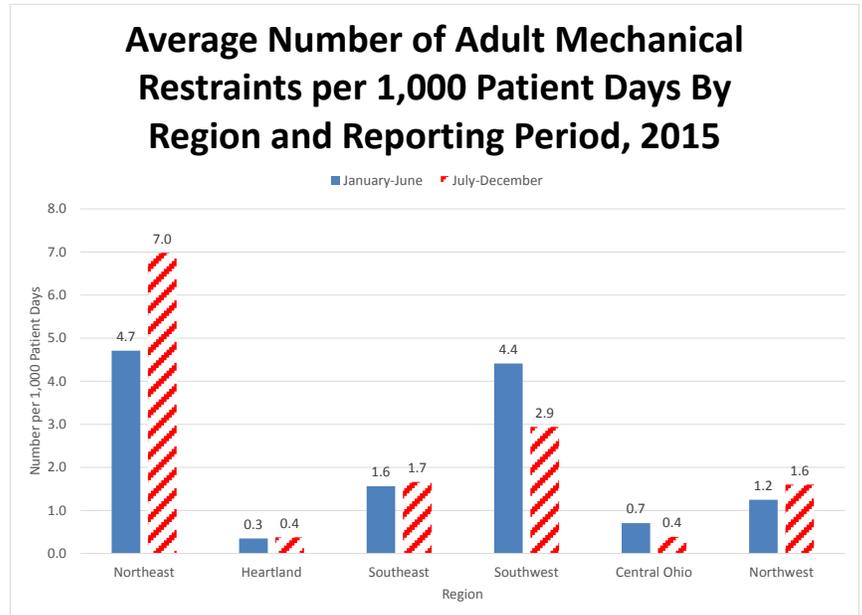
#### Frequency

The total number of Mechanical Restraints reported in 2015 by all hospitals was 3,047 (1,314 in January – June, and 1,733 in July – December).

- Of the hospitals that did report Mechanical Restraints, the maximum number reported by a hospital increased from January – June (N=243) to July – December (N=521). Within this group, the average total number of Mechanical Restraints per hospital increased from January – June (M=14.09) to July – December (M=16.11).
- When standardizing across hospitals by patient days, the average number of Mechanical Restraints per 1000 patient days for all adult hospitals increased from January – June (M=2.69) to July – December (M=3.13).
- The average number of Mechanical Restraints per 1000 patient days increased between reporting periods (M=3.11 January – June; M=3.71 July – December) for hospitals that reported any type of seclusion or restraint.
- The six RPHs reported an average of 2.62 Mechanical Restraints per 1000 patient days from January-June. The rate increased to 3.39 during the July-December reporting period. The highest frequencies were in September, November and December.

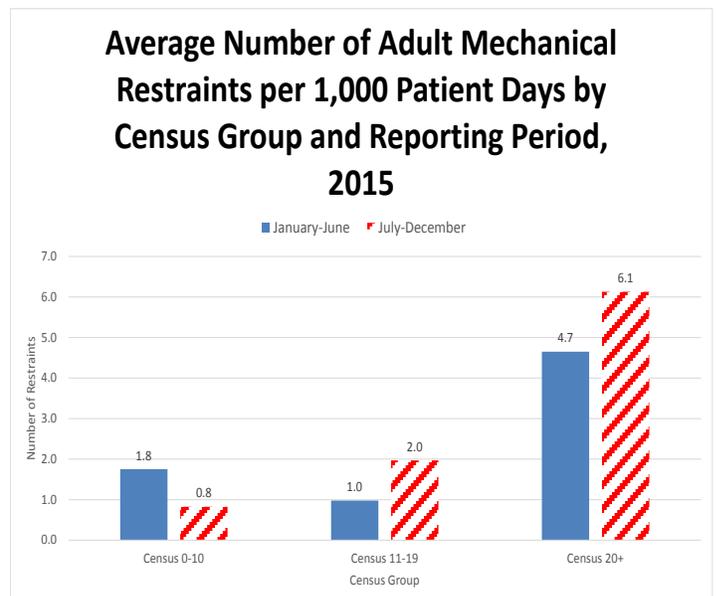
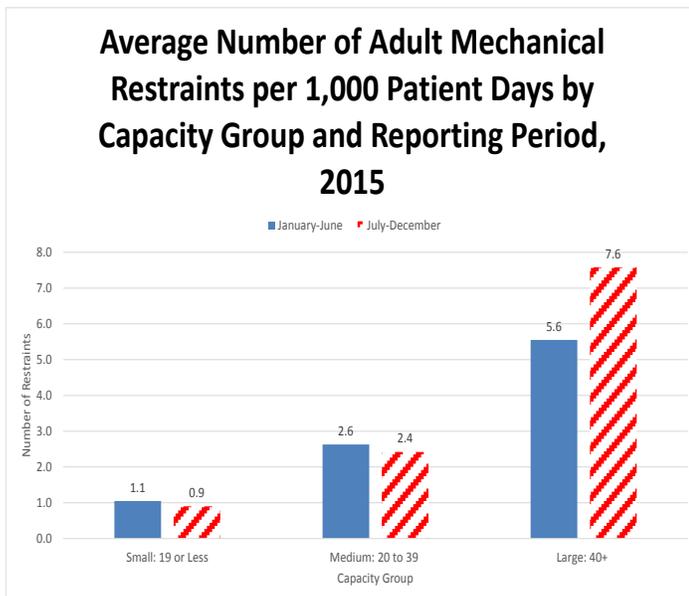
By Geographical Area:

- January-June: across most regions, the hospitals average frequency of Mechanical Restraint per 1000 patient days was somewhat similar (Means ranged from 0.3 to 1.6). In contrast, the Northeast (4.7) and Southwest (4.4) reported higher restraint rates during this time period.
- No pattern when compared within between reporting periods. Adult Mechanical Restraints remained relatively stable within the Heartland and Southeast regions. However, only the Central Ohio and Southwest regions reported decreases in average frequency of mechanical restraints between the two reporting periods. Hospitals within the Northeast region reported the largest percent increase between reporting periods ( $M\Delta=+75\%$ ).



By Capacity/Census Group:

- For the average frequency of Mechanical Restraints per 1000 patient by Capacity Groups, the restraint frequency increased with capacity/census group. Though the averages varied within each reporting period, this pattern was similar across both reporting periods.
- A similar pattern was seen when comparing Mechanical Restraints by Census Group, but only within the July-December reporting period.



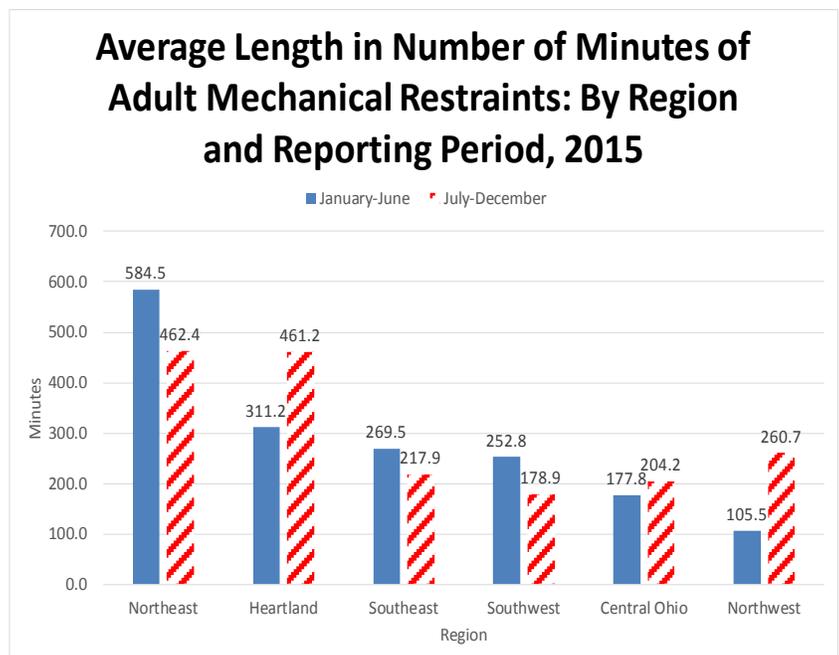
## Duration

Hospitals reported on the minutes of Mechanical Restraint per month.

- The minimum number of minutes of Mechanical Restraint reported by a hospital was 95 minutes in January – June, and was reduced to 60 minutes during the July – December report. The maximum number of minutes decreased from 203,411 January – June to 153,262 July – December. The average total number of minutes decreased from 9,781 in January – June, to 8,725 in July – December.
- Average duration was computed to standardize across hospitals, using only the hospitals that reported incidents (see calculation above). Among private hospitals, the minimum average duration increased from 20 minutes January – June, to 39 minutes July – December. The maximum average length decreased from 3,588 minutes January – June, to 3,495 July – December. The average duration of Mechanical Restraints increased from 356 minutes January – June to 300 minutes July - December. For all private hospitals, the average duration of mechanical Restraints was longer during January through June (M=356.14) than in July through December (M=299.56), with the longest average duration in February (M=670.43 minutes).
- The six RPHs reported a decrease in the average duration of mechanical restraints between the two reporting periods (99.42 minutes January-June, 84.54 minutes July-December). The average length rose above two hours once in June (160.49 minutes). Additional spikes in length of adult mechanical restraints occurred in February (103.81 minutes), March (110.91 minutes), and December (114.75 minutes).

By Geographical Area:

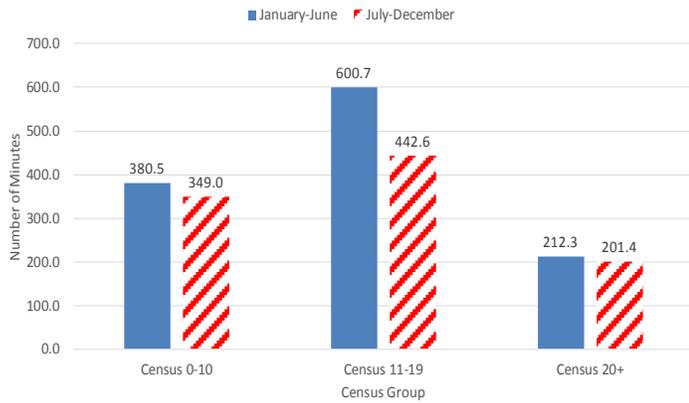
- Hospitals within the Heartland, Central Ohio and Northwest regions saw an increase in average duration of adult mechanical restraints between the two reporting periods. Hospitals within the Northwest region reported the largest increase (MΔ=155.2 minutes, 147% increase).
- Hospitals in the Northeast, Southeast and Southwest regions showed decreases in average duration of adult mechanical restraints between the two reporting periods. Hospitals within the Southwest region reported the largest decrease (73.9 minutes, MΔ=-29.2%).



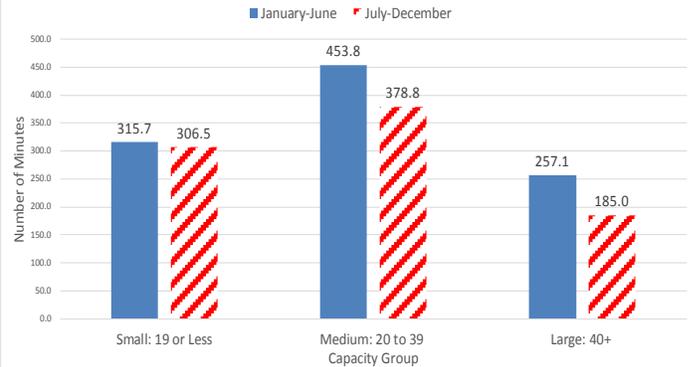
By Capacity and Average Daily Census:

- When adult-serving hospitals were grouped by both Average Daily Census and Capacity, the Medium Capacity and Middle Census groups reported the highest mechanical restraint rates. This pattern was consistent across reporting periods. No other patterns emerged.

**Length of Adult Mechanical Restraints:  
6-Month Averages by Average Daily  
Census**



**Average Length in Minutes of Adult  
Mechanical Restraints By Capacity  
Group and Reporting Period, 2015**



**Table 9. Frequency of Mechanical Restraints per 1000 Patient Days (Means across hospitals)**

			Jan-Jun Avg	Jan	Feb	Mar	Apr	May	Jun	Jul-Dec Avg	Jul	Aug	Sep	Oct	Nov	Dec
Private Hospitals	Hospitals that reported mechanical restraints	Mean	5.0	5.4	4.4	5.5	2.8	7.1	4.9	5.6	5.4	5.1	6.7	5.4	5.3	5.3
		SD	8.3	9.5	10.1	11.4	5.2	15.2	6.6	14.4	13.8	15.6	16.7	14.2	16.1	13.9
	Hospitals that reported any Seclusion/Restraint	Mean	3.1	3.4	2.7	3.4	1.8	4.4	3.0	3.7	3.6	3.5	4.5	3.7	3.6	3.6
		SD	7.0	7.9	8.2	9.4	4.3	12.4	5.7	12.0	11.6	13.0	14.1	11.9	13.4	11.7
	All Private Hospitals	Mean	2.7	3.0	2.4	3.0	1.5	3.8	2.6	3.1	3.1	2.9	3.8	3.1	3.0	3.0
		SD	6.6	7.5	7.7	8.8	4.0	11.6	5.4	11.1	10.7	12.0	13.0	11.0	12.4	10.8
Regional Psychiatric Hospitals		Mean	2.6	2.8	2.5	2.6	3.5	2.1	2.1	3.4	3.4	2.5	4.3	2.5	4.0	3.6
		SD	1.1	2.1	1.6	1.0	2.1	1.2	1.4	1.7	1.6	1.9	2.3	1.5	2.5	3.5

**Table 10. Average Length in Minutes of Mechanical Restraints (Means across hospitals)**

			Jan-Jun Avg	Jan	Feb	Mar	Apr	May	Jun	Jul-Dec Avg	Jul	Aug	Sep	Oct	Nov	Dec
All Private Hospitals	N	36	20	19	20	18	24	25	40	24	19	23	21	24	22	
	Mean	356.1	228.5	670.4	425.5	180.6	276.1	233.7	299.6	201.4	216.1	588.3	282.9	242.0	217.6	
	SD	608.5	283.5	1499.1	605.0	211.3	341.2	251.6	548.8	178.9	212.6	1907.1	449.5	284.8	164.9	
Regional Psychiatric Hospitals	N	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
	Mean	99.4	70.5	103.8	110.9	78.6	76.0	160.5	84.5	63.7	88.5	91.0	67.0	86.1	114.8	
	SD	78.6	20.3	86.6	117.6	50.7	28.7	225.6	27.7	20.7	44.0	25.0	18.1	51.9	123.0	

Please note: The formula for computing duration only includes hospitals that reported mechanical restraints for that period. Therefore, the total number changes based upon the number of providers that report during a given month.

Table 11. Average Mechanical Restraints Frequency and Duration

		Frequency per 1000 Patient Days				Average Duration (Minutes)			
		January-June		July-December		January-June		July-December	
		N	Mean	N	Mean	N	Mean	N	Mean
Geographical Area	Northeast	18	4.7	20	7.0	13	584.5	14	462.4
	Heartland	8	0.3	7	0.4	2	311.2	2	461.2
	Southeast	7	1.6	8	1.7	2	269.5	3	217.9
	Southwest	14	4.4	15	2.9	12	252.8	12	178.9
	Central Ohio	9	0.7	9	0.4	4	177.8	4	204.2
	Northwest	11	1.2	12	1.6	3	105.5	5	260.7
Capacity	Small: 19 or Less	27	1.1	28	0.9	9	315.7	9	306.5
	Medium: 20 to 39	24	2.6	25	2.4	17	453.8	18	378.8
	Large: 40+	16	5.6	18	7.6	10	257.1	13	185.0
Avg Daily Census	Census 0-10	25	1.8	26	0.8	10	380.5	7	349.0
	Census 11-19	16	1.0	18	2.0	9	600.7	12	442.6
	Census 20+	26	4.7	27	6.1	17	212.3	21	201.4

## Inpatient Psychiatric Hospitals Serving Children and Adolescents<sup>7</sup>

### Patient Days

Patient days summarize hospital service utilization. Table 12 below reports the monthly average and six-month total patient days for the inpatient psychiatric service providers serving children and youth. On average, private inpatient hospitals serving children and adolescents reported fewer patient days in January – June (M=395) than in July – December (M=411). There was lower utilization during the months of June, July and August.

**Table 12. Total number of patient days per month, child/adolescent providers**

		Jan-Jun Total	Jan	Feb	Mar	Apr	May	Jun	Jul-Dec Total	Jul	Aug	Sep	Oct	Nov	Dec
Inpatient Psychiatric Service Providers	Mean	2367.6	403.3	401.7	453.6	402.0	411.7	295.4	2463.3	337.8	345.7	437.9	492.7	452.6	396.7
	SD	2205.0	367.3	368.5	423.2	349.6	397.0	309.8	2084.3	307.7	306.1	357.2	408.9	374.5	359.0
	Min	107	21	13	26	28	4	15	757	52	90	130	155	158	108
	Max	9139	1484	1460	1720	1488	1666	1321	9350	1399	1391	1645	1750	1588	1577

### Capacity

Private psychiatric units/hospitals licenses are renewed annually and full licensure renewal requires an on-site survey every three years. The minimum number of children/youth licensed beds by a hospital was 8. The maximum number of licensed beds by a hospital was 84. The average number of licensed beds (M=23.82) was stable across reporting periods. Because of the small number of hospitals serving children and youth, capacity groups were not used in subsequent analyses.

### Occupancy

Occupancy was calculated for each hospital. The formula used to calculate occupancy was:

$$\text{Occupancy} = \frac{\text{Total \# of Patient Days}}{\# \text{ of licensed beds} * 182 \text{ (days in the 6-month period)}}$$

The minimum occupancy for hospitals serving children and youth increased from 1.26 January – June, to 36.68 July – December. The maximum occupancy remained relatively stable between reporting periods (84.48 January – June, 83.42 July – December). Similarly, the average occupancy rate showed little variance across reporting periods (56.83 January – June, 56.71 July – December). Because of the small number of hospitals serving children and youth, occupancy groups were not created.

<sup>7</sup>Data from outlier agencies have been verified and included within the report. In addition, all branch offices have reported data separately, thereby increasing the January-June 2015 sample size. Therefore, results seen here may vary from previous releases of Jan-June 2015 data.

### Average Daily Census

The Average Daily Census (ADC) was calculated for each hospital. The formula used to calculate ADC was:

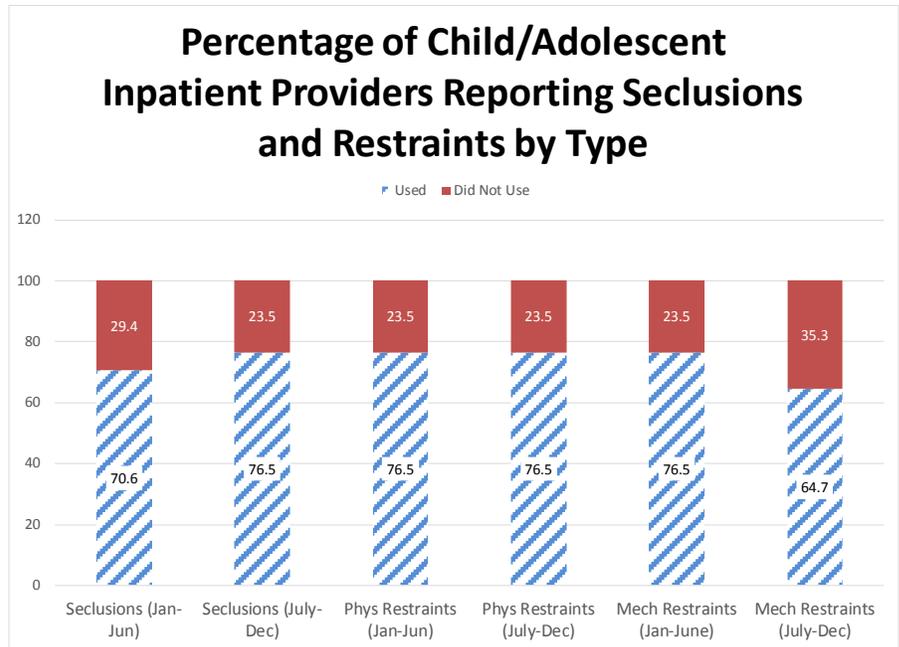
$$\text{ADC} = \frac{\text{Total \# of Patient Days}}{182 \text{ (days in the 6-month period)}}$$

The minimum ADC for hospitals serving children and youth was .58 for January – June and 4.11 for July – December. The maximum ADC increased slightly from January – June (49.67) to July – December (50.82). The average ADC also

increased slightly from January – June (M=12.86) to June – December (M=13.39). Due to the small number of hospitals serving children and youth, census groups were not created.

### Utilization of Seclusion or Restraint

- In an effort to better understand the data, OhioMHAS has calculated the frequency data two ways. First the frequencies were calculated by each Seclusion/Restraint type only for hospitals that used that type:
- During the January-June reporting period, 70.6% of child/adolescent providers utilized seclusion. Over three-fourths of child/adolescent hospitals reported using Seclusions (N=13, 76.5%) during the July-December reporting period.
- Two-thirds of hospitals with child/adolescent beds reported Physical Restraints in January – June (N=10, 66.7%) and over three-fourths in July – December (N=10, 76.9%).
- Approximately three-fourths of hospitals serving children and adolescents reported Mechanical Restraints in January – June (N=13, 76.5%); the number of providers using Mechanical Restraint decreased during the July – December reporting period (N=11, 64.7%).



Because the data reporting form does not ask about hospital policy allowing or prohibiting the use of Seclusion or Restraint a proxy measure of hospitals that allow Seclusion/Restraint would be frequencies reported by the number of hospitals that reported any of the three types of Seclusion or Restraint. However, within each reporting period, all of the youth-serving hospitals reported at least one of the three types of Seclusion and Restraint.

Frequencies were calculated for all hospitals (N=17). Table 13 reports the frequency of Seclusions and Restraints, and Table 14 reports the average duration of Seclusions and Restraints. As the denominator increases across each of these calculation methods, the average frequency scores decrease. Additionally, the private hospitals wished to compare their Seclusions and Restraints with the public hospitals. Upon request, seclusions and restraints for the six RPHs were included within the adult hospital analyses above. There are no RPHs serving children and youth.

### Seclusions

#### Frequency

The total number of Seclusions reported in 2015 for hospitals serving children and youth was 1716 (869 January – June, 847 July – December).

- Of the hospitals that did report Seclusions, the maximum number reported increased from January – June (N=245) to July – December (N=351). The average total number reported decreased from January – June (M=72.4) to July – December (M=65.1).
- When standardizing across hospitals by patient days, the average number of Seclusions per 1000 patient days decreased across reporting periods (M=84.5 January – June; M=20.9 July – December). The difference was due to an outlier agency that reported 700.93 seclusions per 1,000 patient days during the January-June reporting period.

- The monthly average Seclusion rate per 1000 patient days among child and adolescent providers remained above 30 cases throughout the first reporting period. In contrast, the average number of seclusions per 1,000 patient days only approached 30 cases during the month of July (M=29.6).

**Duration**

Hospitals reported on the minutes of Seclusion per month.

- The minimum number of minutes of Seclusion reported by a hospital decreased from January – June (N=133) to July – December (N=40).

The maximum number of minutes reported by a hospital decreased between the January – June (N=10,826) and July – December (N=9,013) reporting periods. The average number of minutes decreased from January – June (M=3,085) to July – December (M=2,009).

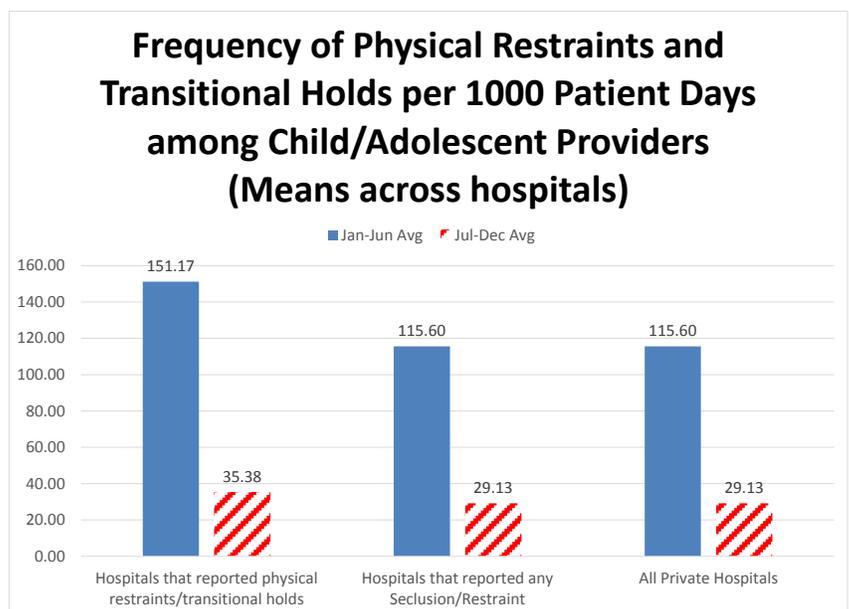
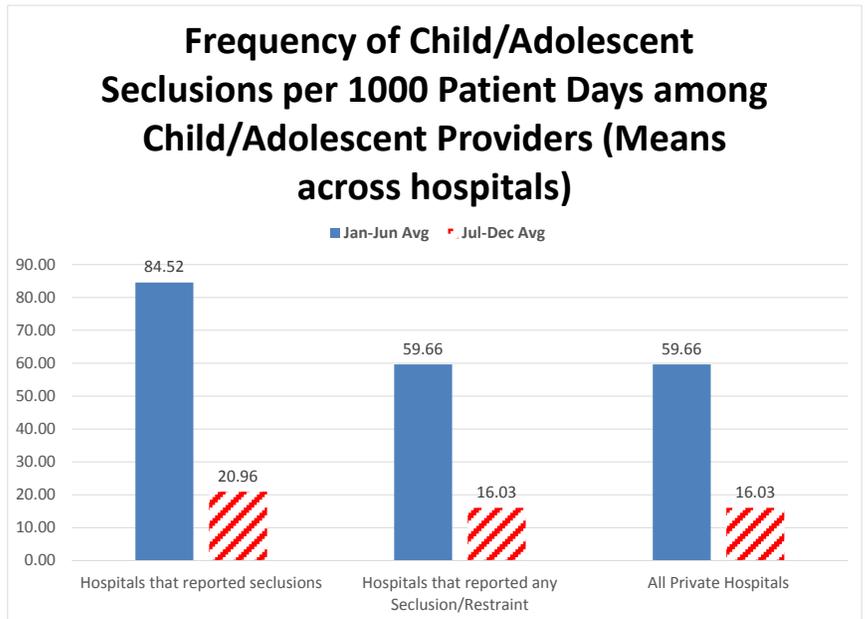
- Average duration was computed to standardize across hospitals, using only the hospitals that reported incidents (see calculation above). The minimum average duration decreased from January – June (N=16.90 minutes) to July – December (N=14.13 minutes). The maximum average duration also decreased from January – June (N=106.14 minutes), to July – December (N=81.18 minutes). Finally, the mean average duration of Seclusions across hospitals decreased from January – June (M=46.11 minutes) to July – December (M=41.07 minutes).
- The average duration of child seclusions exceeded 50 minutes only twice, in June (61.1 minutes) and September (52.3 minutes); the longest average duration reported was in June, at M=61.1 minutes.

***Physical Restraints***

**Frequency**

The total number of Physical Restraints reported in 2015 by all youth-serving hospitals was 2783 (N=1360 January – June; N=1423 July – December)

- Of the hospitals that did report Physical Restraints, the maximum number reported increased from January – June (N=508) to July – December (N=620). The average total number reported increased slightly from January – June (M=104.6) to July – December (M=126.0).
- When standardizing across hospitals by patient days, the average number of Physical Restraints and transitional holds per 1000 patient days for

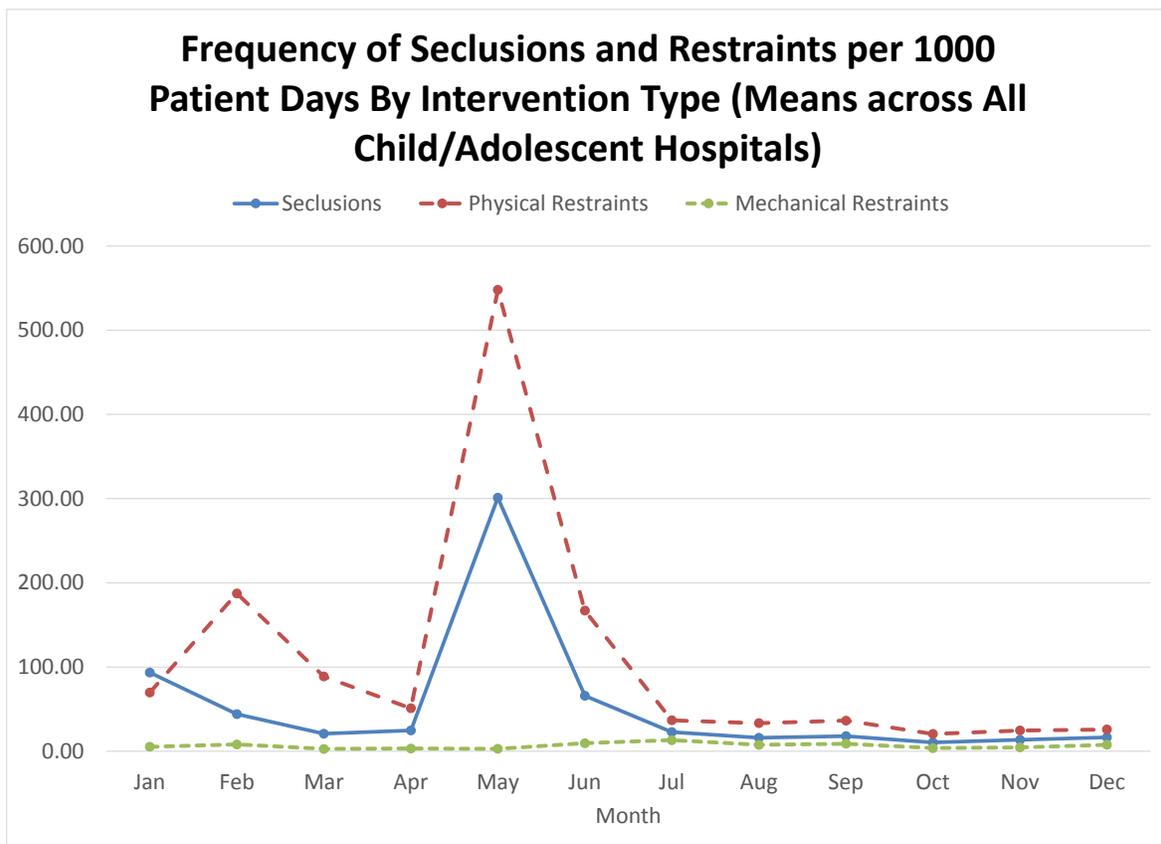


hospitals that reported such restraints decreased from January – June (M=151.17) to July – December (M=35.38). A provider reported a high number of physical restraints and transitional holds within a single month. The presence of the outlier and the small sample of child providers combined to drive averages high within child and adolescent physical restraints (see chart on page 30).

- The presence of outliers also affected the monthly rates. Specifically, the monthly averages for Physical Restraints per 1000 patient days ranged from 24.9 to 716.6 across the twelve months, with the highest average frequencies in February, May June. The lowest average frequencies for physical restraints occurred in October and November.

Duration

- The minimum number of minutes of Physical Restraint reported by a hospital decreased from January-June (15 minutes) to July-December (6 minutes). In contrast, the maximum number of minutes increased from January – June (N=2019 minutes) to July – December (N=3136 minutes). Finally, the average number of minutes increased from January – June (M=390.0 minutes) to July – December (M=564.0 minutes).
- Average duration was computed to standardize across hospitals, using only the hospitals that reported incidents (see calculation above). The minimum average duration stable across reporting periods, at approximately 1 minute. The maximum average duration increased from January – June (N=15.0 minutes) to July – December (N=8.8 minutes). Finally, the average duration of Physical Restraints decreased from January – June (M=5.3 minutes) to July – December (M=4.6- minutes).
- The average duration of Physical Restraints remained fairly low and consistent across all twelve months.

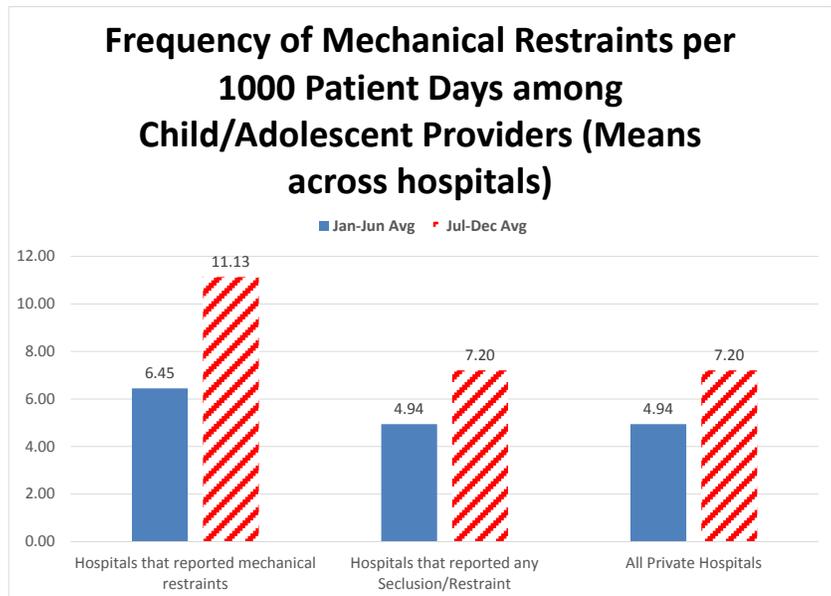


## ***Mechanical Restraints***

### Frequency

The total number of Mechanical Restraints reported in 2015 by youth-serving hospitals was 692 (272 in January – June, and 420 in July – December).

- Of the hospitals that did report Mechanical Restraints, the maximum number reported by a hospital decreased from January – June (N=152) to July – December (N=232). The average total number reported increased from January – June (M=16.00) to July – December (M=38.09).
- Within that same group, when standardizing across hospitals by patient days, the average number of Mechanical Restraints per 1000 patient days increased between January-June (M=6.45) and July-December (M=11.13) reporting periods. The large difference between the six-month averages may be explained by one outlier with an average rate of 124.62 restraints per 1,000 patient days within the month of July. In contrast, the highest rate reported within the January-June reporting period was 74.92, within the month of June.
- The average number of Mechanical Restraints per 1000 patient days varied across the twelve months with the highest frequencies reported during July, August, September and December.



### Duration

Hospitals reported on the minutes of Mechanical Restraint per month.

- Of the hospitals that did report Mechanical Restraints, the minimum number of minutes of Mechanical Restraint increased slightly from January – June (N=54 minutes) to July – December (N=56 minutes). The maximum number of minutes increased from January – June (N=8,459 minutes) to July – December (N=14,500 minutes). And the average number of minutes increased from January – June (M=1,165.6 minutes) to July – December (M=2,176.7 minutes).
- Average duration was computed to standardize across hospitals, using only the hospitals that reported incidents (see calculation above). The minimum average duration decreased from January – June (N=20.25 minutes) to July – December (N=18.67 minutes). Next, the maximum average duration of Mechanical Restraints more than doubled from January – June (M=385 minutes) to July – December (M=170.6 minutes). In contrast, the average duration of mechanical restraints among child and adolescent providers remained stable between reporting periods (January – June= 78.06 minutes; July – December= 78.53 minutes). These findings revealed an outlier during the January to June reporting period regarding the duration of child and adolescent mechanical restraints.
- The average duration of Mechanical Restraints fluctuated over the twelve-month period, with the average duration above 90 minutes in both January (M=102.4 minutes) and August, which had the longest average duration (M=112.4 minutes).

Table 13. Frequency of Child/Adolescent Seclusions and Restraints per 1000 Patient Days among Child/Adolescent Providers (Means across hospitals.)

			Jan-Jun Avg	Jan	Feb	Mar	Apr	May	Jun	Jul-Dec Avg	Jul	Aug	Sep	Oct	Nov	Dec
Private Hospitals	Hospitals that reported seclusions	Mean	84.52	132.43	62.24	29.37	34.83	426.42	93.15	20.96	29.61	20.81	23.29	13.44	17.60	21.41
		SD	197.17	408.61	135.93	64.00	54.86	1287.01	194.18	37.50	61.16	36.68	46.80	22.06	27.75	44.50
	Hospitals that reported any Seclusion/Restraint	Mean	59.66	93.49	43.94	20.73	24.59	301.00	65.75	16.03	22.65	15.91	17.81	10.27	13.46	16.37
		SD	168.24	344.47	116.44	54.83	48.34	1085.76	166.84	33.74	54.53	33.04	41.79	19.99	25.23	39.66
	All Private Hospitals	Mean	59.66	93.49	43.94	20.73	24.59	301.00	65.75	16.03	22.65	15.91	17.81	10.27	13.46	16.37
		SD	168.24	344.47	116.44	54.83	48.34	1085.76	166.84	33.74	54.53	33.04	41.79	19.99	25.23	39.66
Private Hospitals	Hospitals that reported physical restraints/transitional holds	Mean	151.17	91.18	244.98	116.10	66.60	719.61	218.21	35.38	44.52	40.43	44.13	24.87	29.88	31.33
		SD	442.44	234.26	761.21	358.70	124.84	2489.17	661.35	64.41	68.00	76.70	92.47	41.80	53.53	69.62
	Hospitals that reported any Seclusion/Restraint	Mean	115.60	69.73	187.34	88.78	50.93	548.00	166.87	29.13	36.66	33.29	36.35	20.48	24.61	25.80
		SD	388.82	206.76	667.87	314.76	111.97	2178.33	580.64	59.70	63.74	70.94	85.14	38.93	49.66	63.95
	All Private Hospitals	Mean	115.60	69.73	187.34	88.78	50.93	548.00	166.87	29.13	36.66	33.29	36.35	20.48	24.61	25.80
		SD	388.82	206.76	667.87	314.76	111.97	2178.33	580.64	59.70	63.74	70.94	85.14	38.93	49.66	63.95
Private Hospitals	Hospitals that reported mechanical restraints	Mean	6.45	6.78	10.37	3.43	4.10	3.60	12.36	11.13	20.18	11.65	13.65	5.60	6.96	11.79
		SD	6.75	9.30	13.60	4.66	7.59	4.34	21.41	15.77	37.02	20.86	22.90	7.99	8.67	15.50
	Hospitals that reported any Seclusion/Restraint	Mean	4.94	5.18	7.93	2.62	3.13	2.75	9.45	7.20	13.06	7.54	8.83	3.62	4.51	7.63
		SD	6.49	8.59	12.62	4.30	6.81	4.08	19.32	13.62	30.91	17.46	19.31	6.89	7.66	13.56
	All Private Hospitals	Mean	4.94	5.18	7.93	2.62	3.13	2.75	9.45	7.20	13.06	7.54	8.83	3.62	4.51	7.63
		SD	6.49	8.59	12.62	4.30	6.81	4.08	19.32	13.62	30.91	17.46	19.31	6.89	7.66	13.56

Please note: All child and adolescent providers reported some form of seclusion or restraint within the January-June 2015 reporting period.

Table 14. Average Length in Minutes of Child/Adolescent Seclusion and Restraint (Means across hospitals)

		Jan-Jun Avg	Jan	Feb	Mar	Apr	May	Jun	Jul-Dec Avg	Jul	Aug	Sep	Oct	Nov	Dec
Seclusions	N	12	10	9	9	10	11	9	13	10	9	10	12	9	7
	Mean	46.1	31.4	41.1	34.3	42.8	45.2	61.1	41.1	41.4	36.2	52.3	41.3	36.3	35.9
	SD	31.0	30.0	30.0	18.0	21.6	29.7	34.6	22.3	23.3	21.4	41.9	30.2	22.1	22.5
Physical Restraints	N	13	9	10	8	11	11	9	14	10	9	11	11	11	11
	Mean	5.3	5.6	4.8	4.5	4.4	4.8	3.6	4.6	5.9	6.2	3.7	2.9	6.9	6.0
	SD	3.8	5.2	3.4	2.2	4.2	3.4	2.7	2.3	4.4	3.6	2.2	1.3	8.4	8.5
Mechanical Restraints	N	13	7	9	6	4	6	8	11	7	5	6	6	7	6
	Mean	78.1	102.4	49.9	61.3	54.5	57.3	46.4	78.5	78.3	112.4	54.0	44.2	48.3	50.7
	SD	94.9	128.6	27.6	30.0	10.7	16.8	22.5	49.4	59.7	77.3	9.2	17.5	26.6	23.9

Please note: The formula for computing duration only includes hospitals that reported incidences of a particular intervention for that period. Therefore, the total number changes based upon the number of providers that report during a given month.

**Table 15. Frequency of Injury or Illness Related to Seclusion and Restraint**

	Patient Injury or Illness				Seclusion/Restraint Injuries to Staff			
	Injuries requiring emergency/unplanned medical treatment or hospitalization		Illness/Medical emergency requiring immediate admission to a hospital		Injuries requiring emergency/unplanned medical treatment or hospitalization		Illness/Medical emergency requiring immediate admission to a hospital	
	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec
# Hospitals reporting injuries	12	25	67	61	21	16	0	0
Mean	2.17	1.03	11.91	11.73	1.24	1.89	N/A	N/A

## Patient Injury or Illness

Hospitals reported on the number of patient-related injuries and illness (injury and illnesses are reported for both adult and youth-serving hospitals combined). An injury is an event requiring medical treatment that is not caused by a physical illness or medical emergency, and does not include scrapes, cuts or bruises. An illness is a sudden, serious or abnormal medical condition of the body that requires immediate or unplanned admission to a hospital medical unit for treatment. Table 15 above reports the number of patient and staff injuries and illnesses reported.

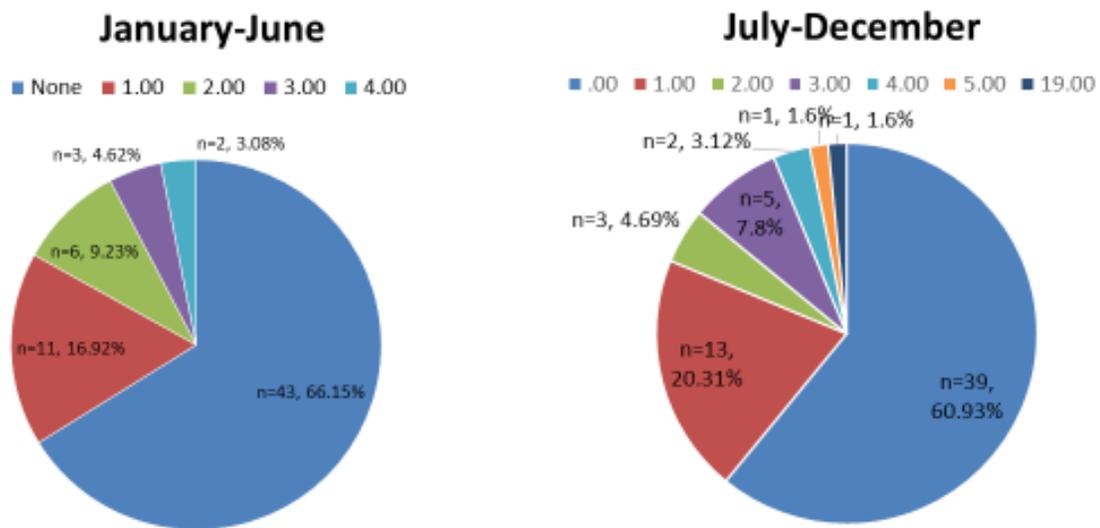
- The total number of patient injuries requiring emergency/unplanned medical treatment or hospitalization for 2015 was 1549 (Jan to June N=798, July-Dec N=751).
  - The number of hospitals that reported injuries requiring emergency/unplanned treatment increased from January – June (N=12) to July – December (N=25).
  - For the hospitals that reported injuries, the average number of injuries per hospital decreased from January – June (M=2.17) to July – December (M=1.03).
- The total number of patient illness/medical emergency requiring immediate and/or unplanned admission to a hospital medical unit for 2015 was 106.
  - The number of hospitals that reported such patient illnesses/emergencies increased from January – June (N=40) to July – December (N=66).
  - For the hospitals that reported illnesses, the average number of patient illnesses and medical emergencies increased from January – June (M=) to July – December (M=).

## Injuries to Staff from Seclusions and Restraints

Hospitals also reported on the number of injuries to staff members related to Seclusion and Restraint (adult and youth-serving hospitals data are combined).

- The percent of hospitals that reported injuries to staff requiring first aid increased January – June (N=21, 24.1%) to July – December (N=19, 27.1%).
  - For the hospitals that reported injuries, the average number of injuries requiring first aid increased from January – June (M=4.2) to July – December (M=6.9).
  - For hospitals that reported injuries, the average number of injuries requiring emergency/ unplanned medical intervention decreased slightly from January – June (M=1.24) to July – December (M=1.10).

## Private Adult Providers: Number of Employee Injuries Requiring Emergency or Unplanned Medical Treatment or Hospitalization



Child/Adolescent providers: no cases of emergency or unplanned medical treatment/hospitalization were reported between July and December of 2015.

No hospitals reported injuries to staff that required hospitalization.