



Government of the District of Columbia
Department of Behavioral Health (DBH)



SAINT ELIZABETHS HOSPITAL



FY13

TREND ANALYSIS

Hospital Statistics

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Data Disclaimer

The primary source of data extracted and analyzed herein is Avatar, the Saint Elizabeths Hospital’s current client information management system that stores official electronic medical records of all individuals served by the Hospital. Additional data source includes the Hospital’s Unusual Incident Database. Data reflects information as entered in each system by users. The Office of Statistics and Reporting (OSR) has access to back-end tables of each database and extracted data set as needed. The OSR does not guarantee the accuracy, timeliness, reliability, or completeness of data although it has made reasonable efforts to ensure that data and its accompanying information are as accurate and up-to-date as possible at the time of publication. The OSR is not liable for any misinterpretation or misuse of the data. However, notification of any errors or questions on data presented in this report will be appreciated and can be directed to Won-ok Kim, Director of OSR at the Saint Elizabeths Hospital, at Won-ok.Kim@dc.gov or 202-299-5430.

EXECUTIVE SUMMARY

Saint Elizabeths Hospital (SEH or Hospital) is a public psychiatric facility of the Government of the District of Columbia, serving individuals with serious and persistent mental illness who need intensive inpatient care to support their recovery. SEH also provides mental health evaluations and care to individuals committed by the courts. Founded by the United States Congress in 1855, SEH was the first psychiatric hospital and, at its peak, served thousands of individuals. However, thanks to the nationwide efforts to expand community-based health care, the inpatient population residing at SEH declined over time. During September 2013, SEH served an average of 266 individuals in care on a given day.

On June 25, 2007, the Government of the District of Columbia and the United States Department of Justice (DOJ) signed a Settlement Agreement (Agreement) that requires vigorous efforts to improve the quality of patient care at SEH. In addition to the Agreement's requirement that the Hospital track and analyze data for actionable indicators and targets, the leadership of the Hospital further recognized the urgency of improving data collection and performance monitoring.

In response to the need for a regular data reporting mechanism, the Office of Statistics and Reporting (OSR)¹ started to compile the Hospital's key data. On December 19, 2007, OSR published the first edition of the *Trend Analysis Report*, which was published bi-monthly thereafter. The *Trend Analysis Report* was replaced by a new monthly report, *PRISM (Performance Related Information for Staff and Managers)*, in April 2009. Since then, *PRISM* has been serving as a primary statistical report that presents monthly data with 12-month trends on census, basic demographics, and selected performance indicators, while the *Trend Analysis Report* was transformed as an annual report providing data and long-term trends with more in-depth analyses in a variety of expanded areas related to patient care. The *Trend Analysis Report*, along with *PRISM*, is aimed at promoting a data-driven culture within the Hospital so staff at all levels routinely and proactively use data in assessing our service delivery and developing evidence-based strategies to address issues. We believe that this will continue to improve the quality of services to individuals in our care.

Areas covered in this *Trend Analysis Report* include the Hospital's census, admission, discharge and transfer information; demographic characteristics of individuals in care; lengths of stay; readmissions; clinical profile captured in all five axes of DSM-IV-TR and psychiatric assessments; and findings from unusual incident data including violence, falls, and injury. Analysis results are presented visually in charts and tables, along with bullet points describing findings and interpretations in detail for every section. Below are some highlighted trends of the key findings.

The Hospital census declined for several years as admissions decreased. In FY13, the downward trend of admissions reversed but the census continued to decrease because discharges exceeded admissions. Particularly, the number of admissions with a civil legal status (*Civil*) was consistently outpaced by the number of

¹ OSR was previously known as Office of Monitoring Systems (OMS) in the Performance Improvement Department (PID). The trend analysis reports prior to FY11 were published under OMS.

Civil discharges while the number of admissions with a forensic pre-trial legal status (*Pre-trial*) exceeded the number of *Pre-trial* discharges for the past four consecutive years. An increase of admissions in FY13 contributed to an increase in the percentage of individuals with a shorter length of stay (LOS), and as a result, the median LOS for individuals remaining in care declined in FY13. The percentage of those with 10 year or longer LOS also decreased due in part to the Hospital's concerted efforts to discharge long-term residents.

While the census declined, the proportion of the elderly population in care consistently increased over the past several years. As of September 30, 2013, 35% of individuals in care were 60 years or older while this age group comprised only 23% in November 2007. Despite the continued increase of older adults in care during FY13, the percentage of individuals with a major medical condition or physical disorder decreased from FY12. Additionally, the frequency of medical emergency incidents, transfers to outside medical facilities, fall incidents and injuries all noticeably declined. This may reflect the Hospital's improved management of medical treatment and preventive care.

One area of concern regarding the trend of clinical characteristics is an increase of the obese and overweight population in our care. Although the percentage of obese and overweight population at end of FY13 remained the same as a year ago, the *Body Mass Index* (BMI) data illustrates that more individuals in our care have higher BMIs: the percentage of individuals with a 35 or higher BMI increased from 16% in FY12 to 20% in FY13. Also, about four of five individuals admitted in FY13 gained weight within 60 days of admission and the likelihood of becoming obese increased throughout their first year of hospitalization: 29% were obese at admission but the percentage of obesity population increased to above 50% by the eighth month of admission.

In FY13, the total number of unusual incidents (UIs) increased. However, this increase is attributed to a significant increase of medication variance reports and non-patient UIs. When they are excluded, the patient UI rate actually declined for the past three years. The trend of patient involved UIs, particularly violence related incidents, is largely influenced by the volume of recent admissions and census: in FY13, the patient UI rate increased following an increase of admissions and census, and decreased once the census declined. A majority of violence related incidents, particularly severe ones, were often triggered by recently admitted individuals with a *Pre-trial* legal status.

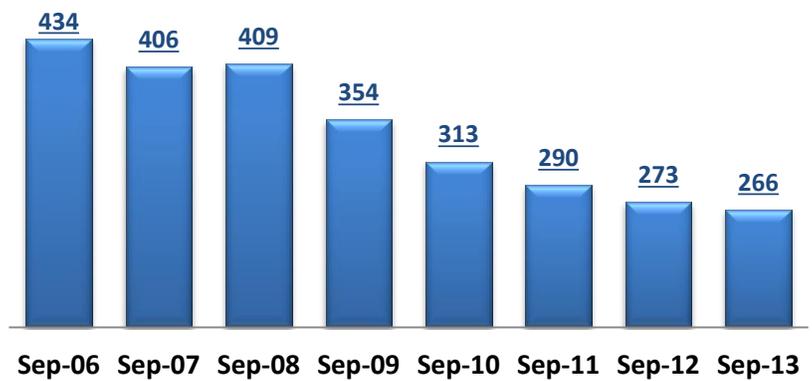
Over the past three years, the frequency of physical assaults decreased while the number of aggressive behaviors increased. This trend may be due in part to an increase of reporting for incidents involving aggressive behaviors as the 'aggressive behavior' is a recently added UI category. But, this trend also suggests that improved responses and interventions by the treatment team, when an individual exhibits an aggressive behavior, may have contributed to a decrease in physical assaults as the treatment team successfully prevented many aggressive behaviors from turning into assaults. The decrease in physical assaults is even more noteworthy since more recently-admitted individuals presented a higher level of risk for violence at admission: nearly half (48%) of admission in FY13 were assessed to have a moderate or severe level of risk for aggression while only 30% were so in FY12.

Please refer to the respective chapter for detailed data and additional analyses.

I. Census, Admissions, Discharges, and Transfers

- *The previous downward trend of admissions and discharges for the past several years reversed in FY13, but because discharges continued to exceed admissions, the census continued to decline: it was an average of 266 in care per day during September 2013.*
- *On a given day in FY13, four out of ten individuals in care were in a civil legal status, another four were in a forensic post-trial legal status, and the other two were in a pre-trial legal status.*
- *The number of civil admissions increased over the past few years but was consistently outpaced by the number of civil discharges. In contrast, the number of forensic pre-trial admissions decreased but exceeded the number pre-trial discharges for four consecutive years.*
- *In FY13, inter-unit transfers increased but emergency medical transfers significantly decreased.*

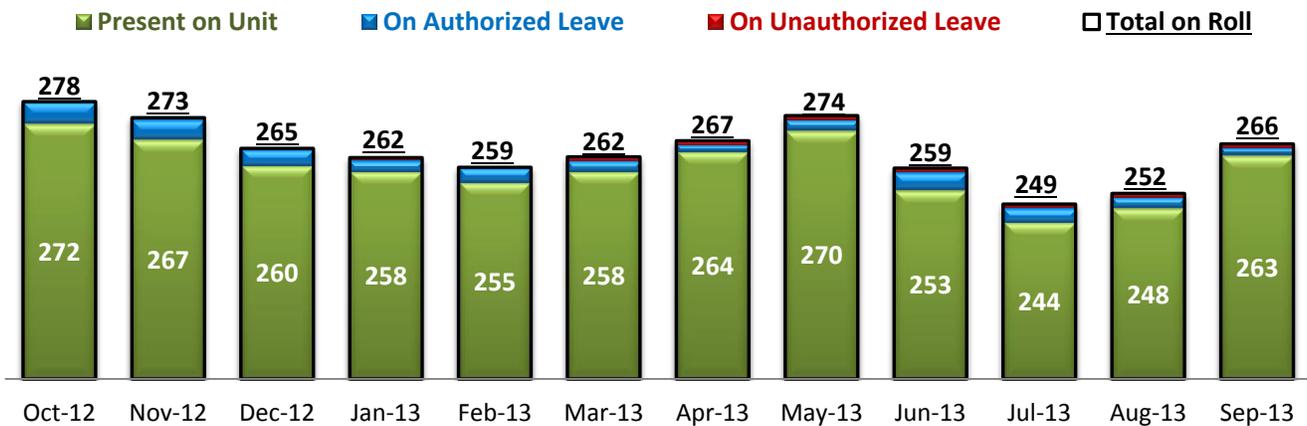
Figure 1. Trend of Daily Census (FY06 ~ FY13)



1. Census and Patient Days

- The number of individuals served by the Hospital continued to decline for the past several years. During the last month of FY13, September 2013, average of 266 individuals were in care per day. This represents a 3% reduction from September 2012 and a 39% reduction from September 2006².

Figure 2. Average Daily Number of Individuals in Care (FY13)



- While the average daily census (ADC) in September 2013 was lower than a year ago, ADC for each month experienced sinuous cycles throughout the year in FY13. The census declined steadily during the first half of FY13, dropping to 259 in the month of February 2013. Then, the trend reversed and ADC peaked at 274 in May 2013, after which another cycle of decline started. In July 2013, the census reached 249, its lowest point

² Data between FY07 and FY09 is the number of individuals in care on the last day of each fiscal year whereas FY06 and FY10~FY12 data is the daily average for the entire month. Also, data for FY06 and FY07 is from the previous information management system, STAR, while data from FY08 through FY13 comes from the current information management system, AVATAR.

ever since the Hospital started tracking ADC. However, this trend was not sustained as ADC quickly increased again, reaching 266 by the last month of FY13.

- During FY13, an average of five (5) individuals in care were away from the facility per night; four (4) on authorized leave, such as medical leave or home visit, and one (1) on unauthorized leave.
- Despite the fluctuating trend of ADC, overall the census in FY13 was lower than in FY12, meaning the total patient days³ also continued to fall. The total patient days in FY13 were 94,724, which can be translated into an average of 260 individuals staying at the facility every night of the year. This is a reduction of 3% from FY12, when the total patient days were 98,608, or an average of 269 individuals present at the Hospital per night, and a reduction of 18% from FY10.
- The total number of unique individuals served at least one day at the Hospital decreased by one, from 619 in FY12 to 618 in FY13. Considering the average number of individuals staying at the facility per night declined by nearly 10, this suggests that during FY13, the Hospital had more admissions but also even more discharges than FY12. Further analysis of admission and discharge data will be presented on page 10 below.
- During FY13, the total number of unique individuals served on a monthly basis ranged between 285 and 310.

Table 1. Total Patient Days and Number of Unique Individuals Served (FY10 ~ FY13)

FY	Total Patient Days	Average # of IICs per Night	Total Unique IICs Served**
FY10	115,676	317	697
FY11	102,002	279	652
FY12*	98,608	269	619
FY13	94,724	260	618

* February 2012 had a leap day and the total number of days for FY12 was 366.

** Some individuals may have been admitted to SEH more than once during the same fiscal year and data herein counts the number of unduplicated individuals served regardless of the number of times they were admitted.

Table 2. Total Patient Days and Number of Unique Individuals Served by Month (FY13)

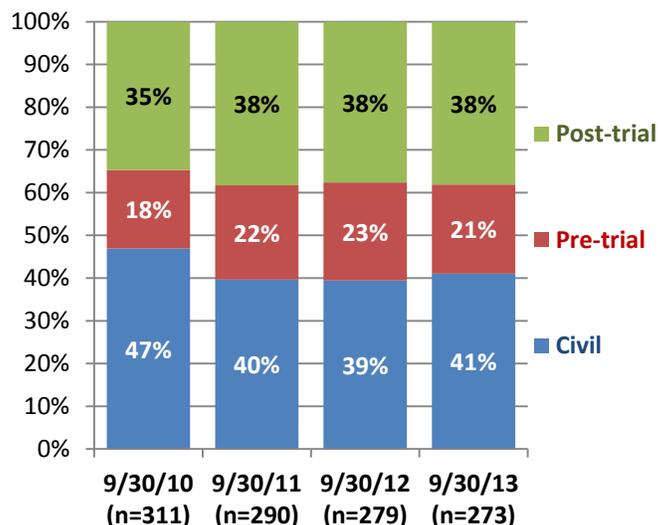
	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	FY13
Total Patient Days	8,430	8,024	8,059	8,010	7,152	8,011	7,918	8,370	7,597	7,569	7,693	7,891	94,724
Total Unique IICs*	310	306	297	298	298	294	310	310	299	286	285	299	618**

* This is not the sum of monthly numbers but the total number of unique individuals served at the hospital at least one day during FY13.

2. Census by Legal Status

- On the last day of FY13, the Hospital was serving a total of 273 individuals in care. Of those, 112 or 41% were in a voluntary or civil commitment legal status (*Civil*), 57 or 21% were those sent by the Court for competency evaluation prior to their trials (*Forensic Pre-trial*), and the remaining 104 or 38% were those adjudicated 'Not Guilty by Reason of Insanity' (*NGBRI*) by the court (*Forensic Post-trial*).
- The proportion of individuals in care by legal status has been consistent since FY11: *Civil* at around 40%, *Forensic Pre-trial* at around 22% and *Forensic Post-trial* at around 38%. It should be noted, however, this is a snap shot measured once at the end of each fiscal year. More frequent observations find that during

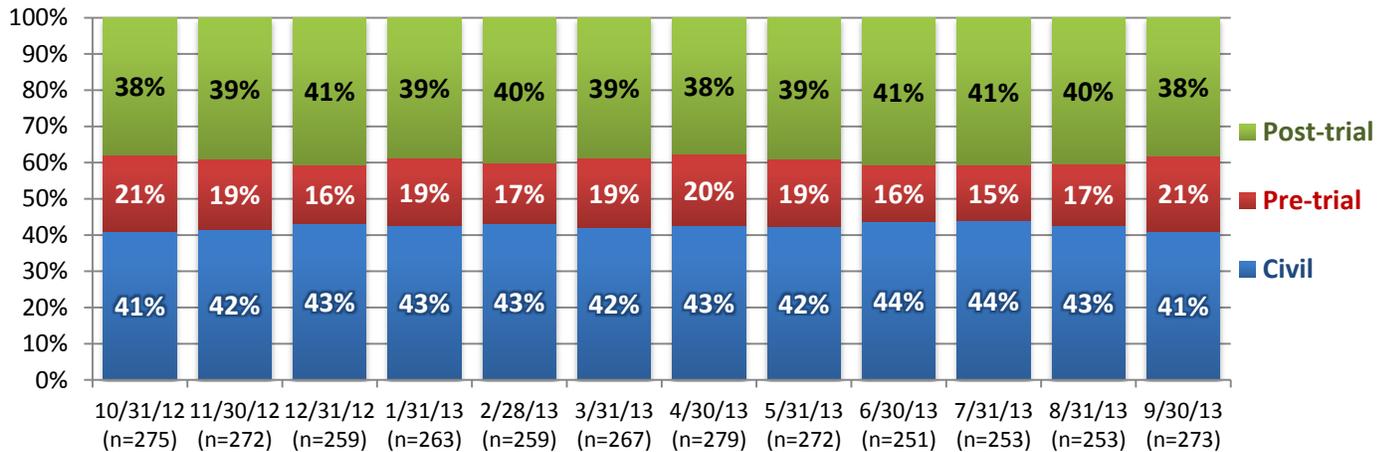
Figure 3. Trend of Legal Status for Individuals in Care (09/30/10 ~ 09/30/13)



³ Patient days are the sum of individuals who were present on the unit at 11:59 p.m. of each day. They do not include those on authorized or unauthorized leave at that time while those individuals on leaves are included in our ADC.

FY13, the percentage of the *Civil* population on a given day ranged between 41% and 44%, *Pre-trial* population ranged between 15% and 21%, and the *Post-trial* population ranged between 38% and 41%.

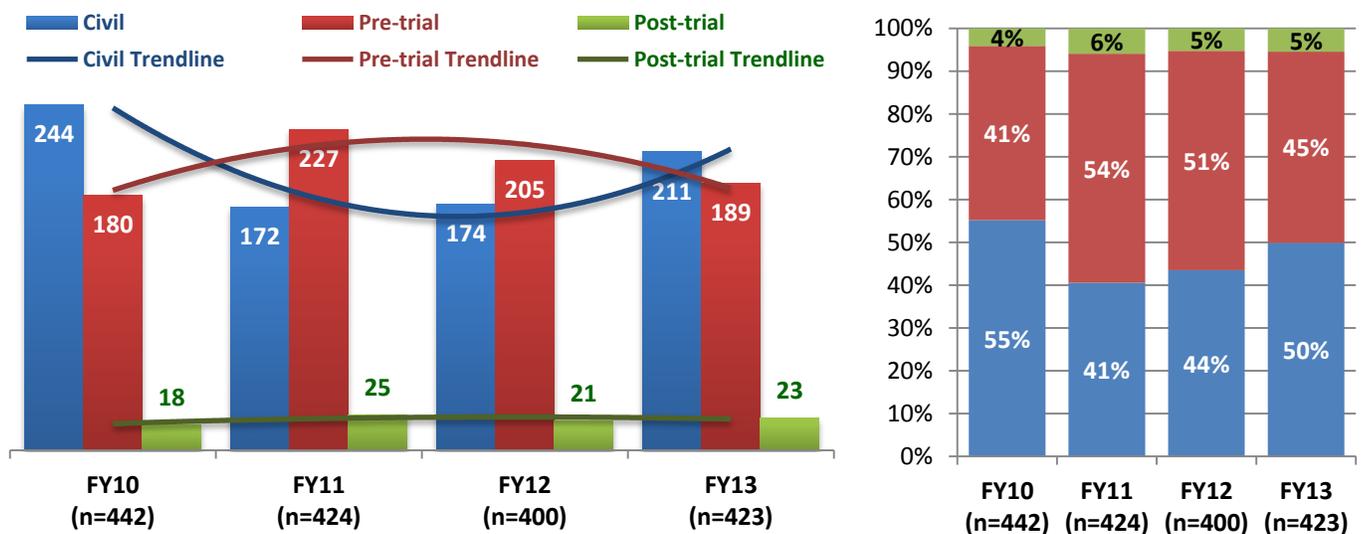
Figure 4. Trend of Month-End Census by Legal Status (FY13)



3. Admissions

- Like the average census trend, the number of admissions to the Hospital had consistently declined over the past several years through FY12, but that trend reversed in FY13: there were a total of 423 admissions for the year or 35 per month, which is a 6% increase from FY12.
- Nearly 40% of the individuals in care are *Forensic Post-trial* but most of them remain at the Hospital for long-term stays. Most of the admission and discharge activities occur around *Civil* and *Forensic Pre-trial* population: half (50%) of the admissions in FY13 were *Civil* and 45% were *Forensic Pre-trial*. Only 5% were *Post-trial* admissions who had been residing in the community as *Forensic Outpatients* but returned to the Hospital as they needed more intensive treatment or violated the court ordered conditions of their release.

Figure 5. Number and Percentage of Admissions by Legal Status (FY10 ~ FY13)

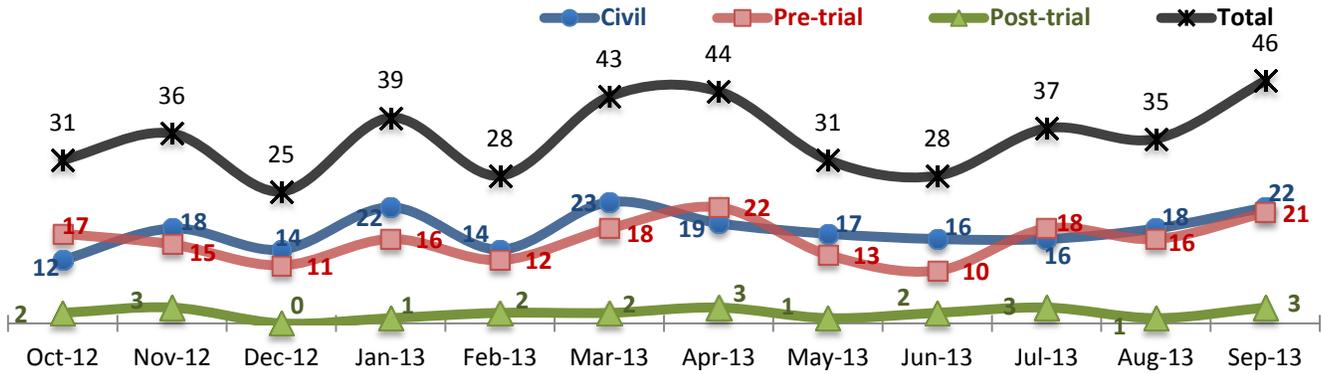


- The increase of admissions in FY13 is attributed to a 21% increase of *Civil* admissions while *Forensic Pre-trial* admissions decreased by 8%. The number and the proportion of *Civil* admissions continued to increase since FY11 but were still lower than the FY10 level, when 244 or 55% of all admissions were *Civil*. The trend of *Pre-*

trial admissions is exactly the opposite: the number and the proportion of *Pre-trial* admissions decreased for the past three consecutive years but their admissions in FY13 were still higher than the FY10 level. The number of *Post-trial admissions* has ranged between 18 and 25 per year since FY10.

- The total number of monthly admissions during FY13 ranged from 25 to 46. Particularly, March, April and September 2013 recorded an extremely large number of admissions, the highest level since September 2011 when there were 45 admissions.

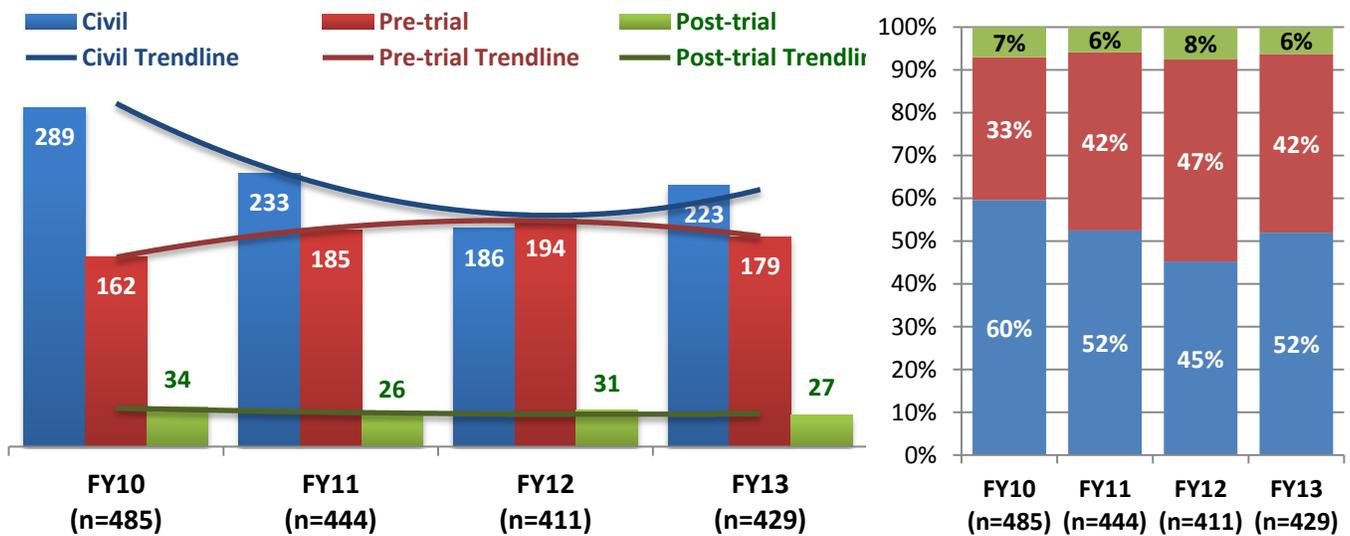
Figure 6. Number of Admissions by Month (FY13)



4. Discharges

- The trend of discharges for the past few years is very similar to that of admissions. Between FY10 and FY12, the number of *Civil* discharges noticeably decreased as the number of *Civil* admissions decreased. The number of *Civil* discharges, however, increased following an increase of *Civil* admissions in FY13. The trend of *Forensic Pre-trial* discharges is the opposite of the *Civil* discharge trend: the increasing trend of *Pre-trial* discharges between FY10 and FY12 reversed in FY13. The number of *Post-trial* discharges, those transferred to the community on conditional release, ranged between 26 and 34 per year.

Figure 7. Number and Proportion of Discharges by Legal Status (FY10 ~ FY13)

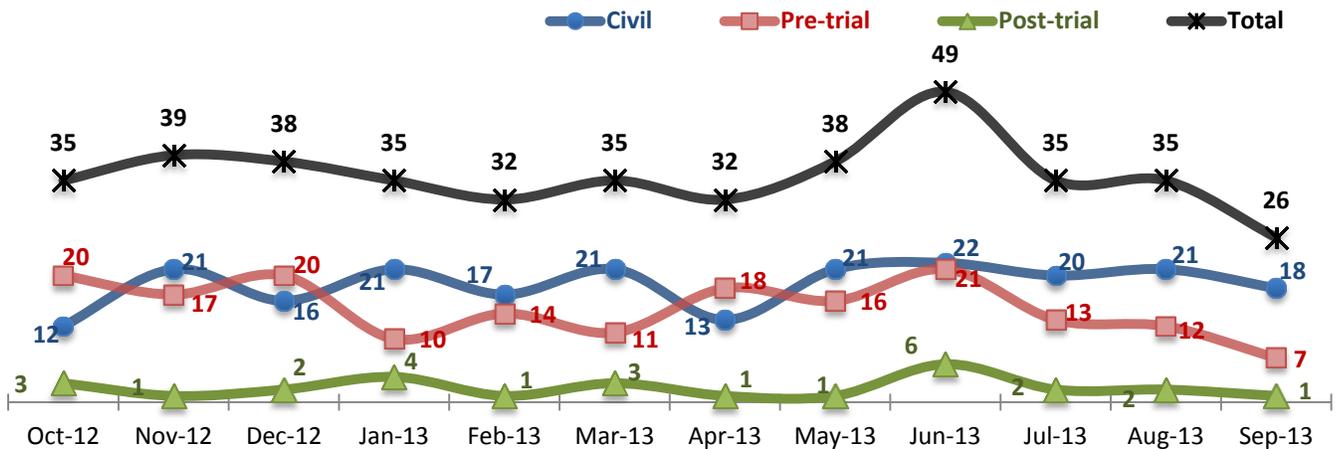


- Despite some fluctuations in admissions and discharges by each legal status, overall, the number of discharges continued to exceed the number of admissions over the past four years, contributing to the

census reduction presented above. More findings regarding the difference between admissions and discharges will be presented below (Section 1.5 Admissions and Discharges).

- The total number of discharges during FY13 was 429, including 223 with a *Civil* legal status, 179 with a *Pre-trial* legal status and 27 with a *Post-trial* legal status, an average of 36 discharges per month (19 *Civil*, 15 *Pre-trial*, and 2 *Post-trial*).

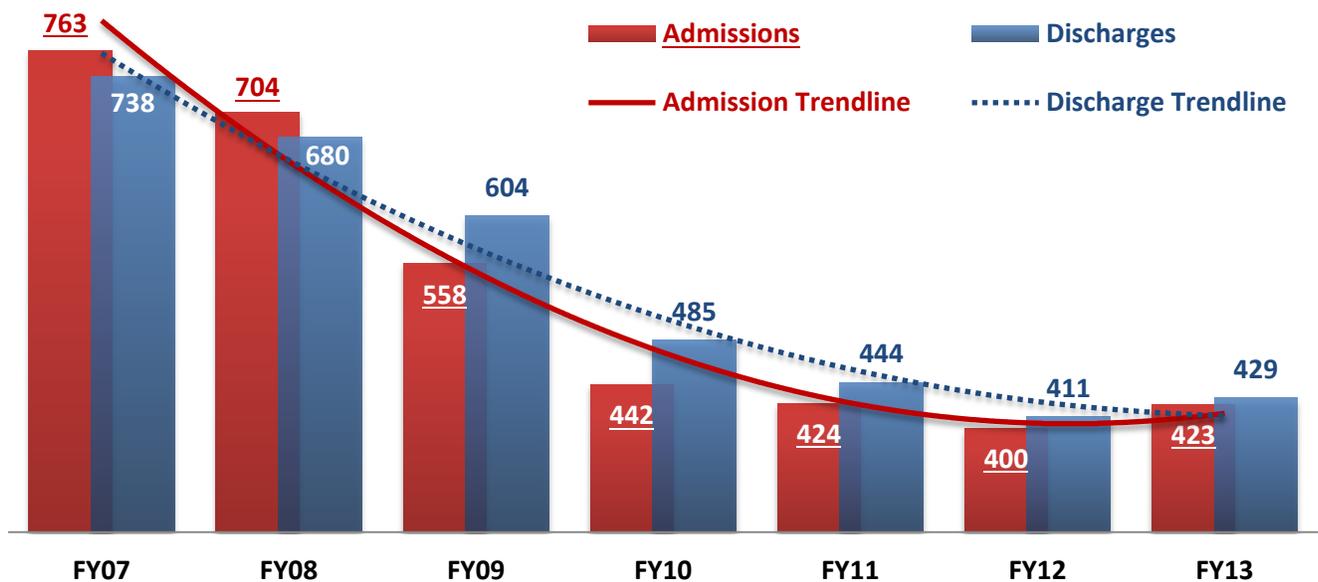
Figure 8. Number of Discharges by Month (FY13)



5. Admissions and Discharges

- Both admissions and discharges consistently showed a downward trend over the past several years through FY12 but an increase in FY13.

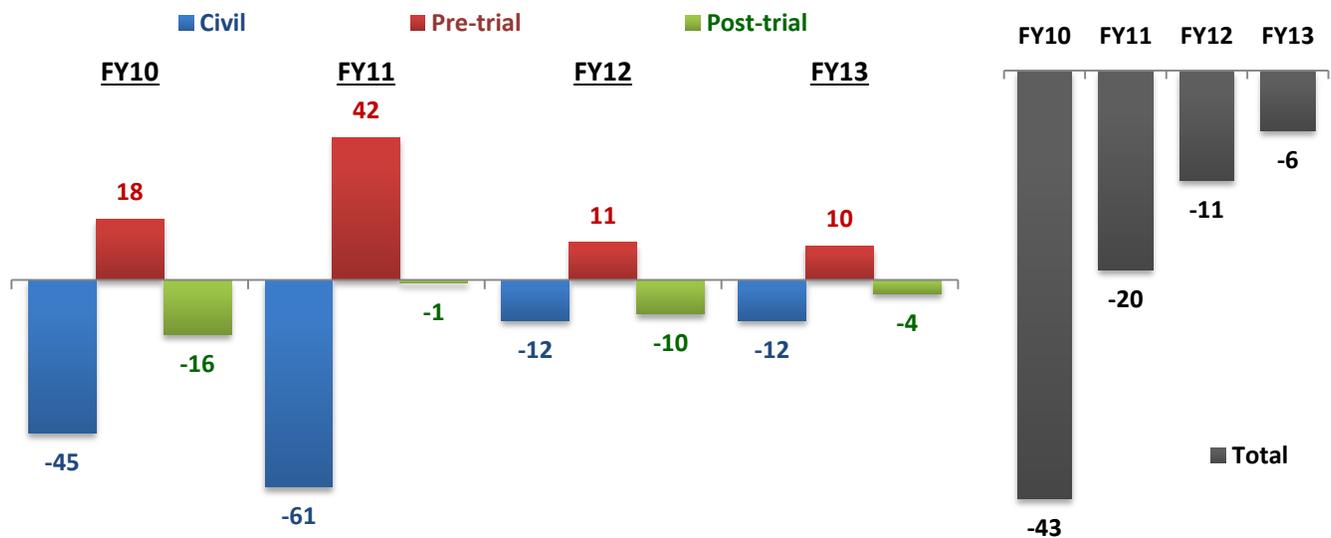
Figure 9. Admissions vs. Discharges (FY07 ~ FY13)



- Despite the increase of admissions in FY13, the number of discharges exceeded the number of admissions, which is the reason why the census in FY13 was still lower than the previous year's. The difference between discharges and admissions has been narrowing, though: the net census reduction totaled 43 in FY10, 20 in FY11, 11 in FY12, and just 6 in FY13.

- Although *Civil* admissions increased over the past three years, the number of discharges for *Civil* population exceeded the number of *Civil* admissions. In contrast, admissions consistently outpaced discharges for *Pre-trial* population⁴. Discharges of *Post-trial* population also consistently exceeded their admissions.

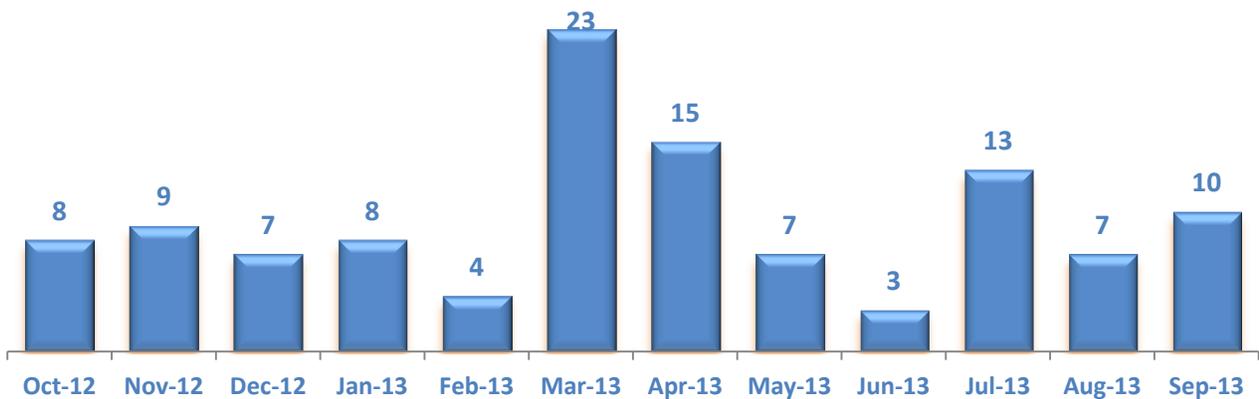
Figure 10. Difference between Admissions and Discharges by Legal Status (FY10 ~ FY13)



6. Inter-Unit Transfers

- During FY13, there were a total of 114 inter-unit transfers⁵, an average of 10 per month, which is a 63% increase from a total of 70 or an average of 8 per month in FY12. This increase is due in part to the Hospital-wide adjustment for certified beds that occurred in March and April 2013 in order to respond to the need for certified beds on all units.
- The 114 transfers involved a total of 90 unique individuals, which is about 15% of all 618 individuals served at least one day at the Hospital during FY13.

Figure 11. Inter-Unit Transfers (FY13)



⁴ It should be noted that some individuals admitted with a pre-trial legal status may have the legal status converted to a civil commitment status while in care, being discharged in a Civil legal status.

⁵ This counts only those transfers from one unit to another unit and does not include bed changes that may have occurred within the same unit.

- Of those 90 individuals, 73 or 81% experienced only one inter-unit transfer. The other 17 individuals were transferred more than once over the 12 month period, including one (1) individual who was transferred five times. This is a noticeable change from FY12 when there were only 3 individuals with multiple inter-unit transfers.

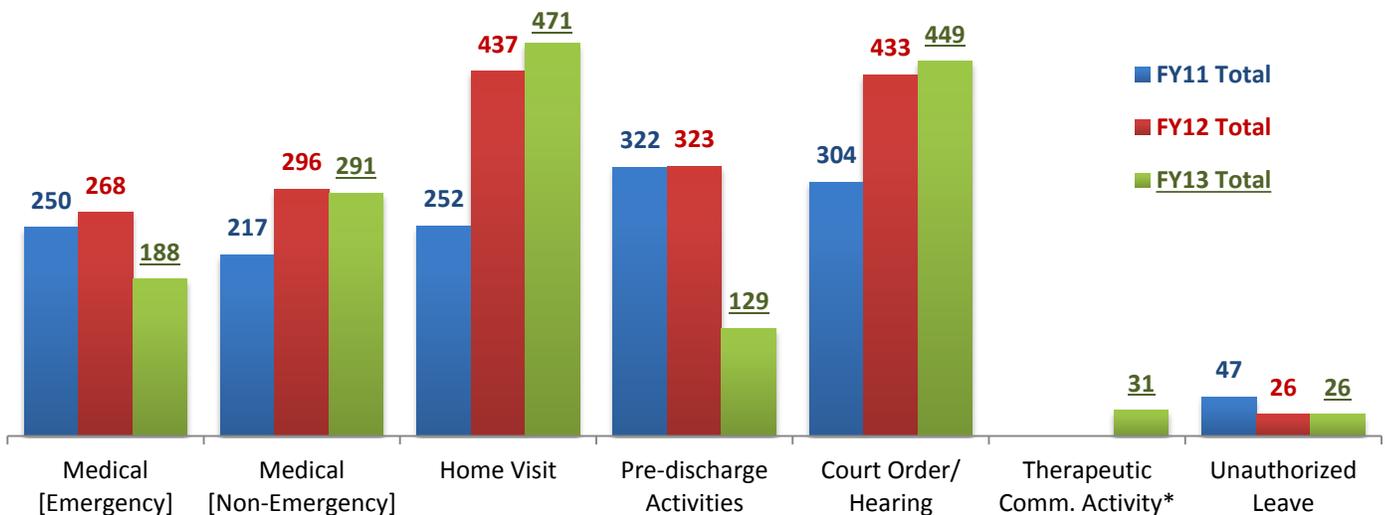
Table 3. Unique Individuals in Care Transferred between Units (FY12 vs. FY13)

Total Inter-Unit Transfers during 12-Month Period	FY12		FY13	
	# of Individuals	Percent	# of Individuals	Percent
Once	63	91%	73	81%
Twice	2	8%	12	13%
Three (3) Times	1	1%	4	4%
Four (4) Times or More	0	0%	1	1%
Total individuals who experienced >=1 transfer in fiscal year	66	100%	90	100%
<i>Total number of inter-unit transfers (Average)</i>	<i>70 (6 per month)</i>		<i>114 (10 per month)</i>	

7. Leaves

- The total number of documented leave episodes in FY13 was 1,585, which represent about four (4) leave episodes on a given day. Of the 1,585 leaves, 479 or 30% were medical leaves, including 188 emergency medical leaves (EML, likely medical transfers to external medical facilities) and 291 non-emergency medical leaves, 471 or 30% were those authorized for home visits, 449 or 28% were those authorized for a court hearing activities, and 129 or 8% were those for pre-discharge activities. There were 31 leaves placed for therapeutic community activities but these began to be tracked only in June 2013. Finally, there was a total of 26 unauthorized leaves (elopements) documented during FY13.

Figure 12. Leave Episodes by Type and Reason (FY11 ~ FY13)



- The total number of leave episodes (1585) in FY13 is an 11% decrease from a total of 1,783 or five per day in FY12. This decrease is mainly due to a 30% decrease of EMLs and a 60% reduction of pre-discharge activity related leaves. The frequency of leaves for home visits and court hearing attendance increased marginally. Unauthorized leaves remained at the same level as FY12, averaging two (2) per month.
- The monthly average number of EMLs declined from 22 in FY12 to 15 in FY13 but that of non-emergency medical leaves remained similar to the FY12 level, at about 24 to 25 per month.

Table 4. Leave Episodes by Type and Reason (FY13)

Leave Type & Reason	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	FY13 Total	Monthly Average
Medical/Emergency	29	17	9	24	23	12	10	17	15	12	10	10	188	16
Medical/Non-Emergency	16	24	30	23	16	22	32	23	24	35	24	22	291	24
Home Visit	32	46	61	49	37	39	27	39	39	28	40	34	471	39
Pre-discharge Activities	7	21	3	7	13	4	8	5	12	10	20	19	129	11
Court Order/ Hearing	56	38	32	29	35	28	54	36	40	44	26	31	449	37
Therapeutic Comm. Activity	n/a	1	7	10	13	31	8							
Unauthorized Leave	4	2	3	1	2	4	2	2	2	1	0	3	26	2
Total	144	148	138	133	126	109	133	122	133	137	130	132	1585	132

* The category of 'Therapeutic Community Activity' was added to the list of leave reasons in the system as of June 2013.

- As the frequency of EMLs significantly dropped, the total number of unique individuals experiencing an EML also declined from 132 in FY12 to 103 in FY13. However, the percentage of those who had more than one EML slightly increased from 40% to 42% (43 individuals). Of the 43 individuals with multiple EMLs, 19 had at least three (3) EMLs, including four (4) individuals with six (6) or more EMLs within the 12 month period.
- In 60% of EMLs (112), the individual returned to the Hospital either on the same day or on the next day while about 11% returned after 10 days.
- More than one-third (72 or 38%) of EMLs occurred in the geriatric units (1A & 1B).

Figure 13. Return from Emergency Medical Leaves (FY13)

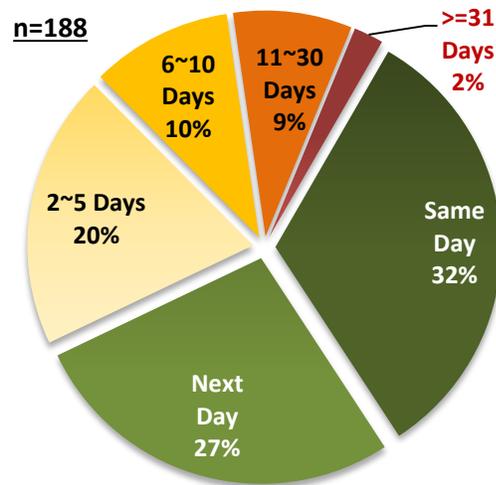


Table 5. Emergency Medical Leaves: Likely Medical Transfers (FY11 ~ FY13)

Category		FY11	FY12	FY13
Emergency Medical Leave (EML) Episodes during Fiscal Year	Total # of EMLs	250	268	188
	Monthly Average	21	22	15
# of Unique Individuals with >=1 Emergency Medical Leave(s) by Frequency of Leave Episodes	One EML	75	79	60
	Two EMLs	22	21	24
	Three EMLs	14	12	9
	More than Three EMLs	13	20	10
	Total	124	132	103

II. Demographic Characteristics of Individuals in Care

- **The percentage of elderly in care continued to increase: those 60 years or older comprised 35% of total in care as of September 2013. The proportion of this age group among admission and discharge population increased until FY12 but in FY13, it slightly declined.**
- **The proportion of individuals under 40 years also increased steadily over the past four years.**
- **Half of individuals in our care completed at least 10 years of education but only 4% received a bachelor's degree.**

1. Age Distribution

- The elderly population in care continued to increase: individuals of 60 years or older constituted about 23% in November 2007. The percentage of the same age group comprised 30% in September 2011 and 35% as of September 2013.
- While the elderly population steadily increased for several years, the proportion of individuals under 40 years old also increased, keeping the median age between 55 and 56 years of age since FY10.
- As the elderly population above 60 years old increased, the age group of between 50 and 59 years shrank over the past several years but still constitutes 31% of the total population.

Figure 14. Change in Age Distribution (11/07/07 ~ 09/30/13)

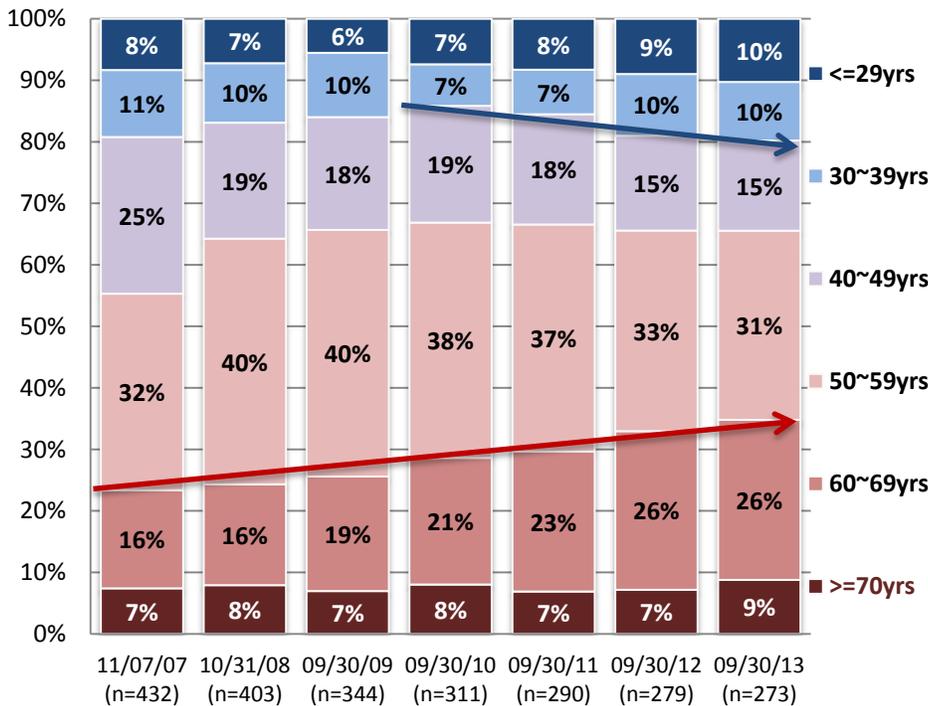
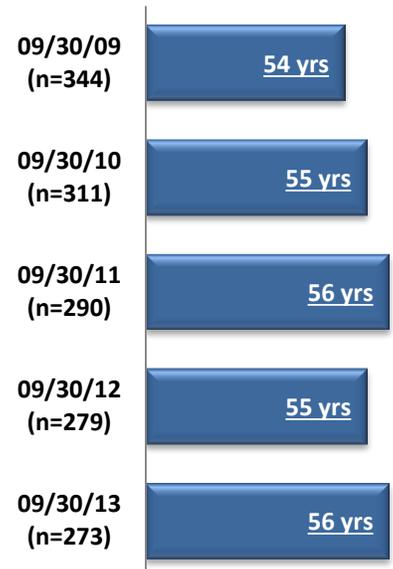


Figure 15. Change in Median Age of Individual in Care (09/30/09 ~ 09/30/13)



- The admission and discharge populations are much younger than the age of individuals currently remaining in care. In FY13, the median age for both admission population and discharge population was 47 years old while the median age of those remaining in care at the last day of FY13 was 56 years old.
- The overall pattern of age distribution among admission and discharge population over the past few years resembled each other: admissions and discharges of those 60 years or older continued to increase until FY12

but both decreased slightly in FY13; and the proportion of those younger than 30 years old consistently declined among both admission and discharge population in the past few years.

Figure 16. Trend of Age Distribution among Admission Population (FY10 ~ FY13)

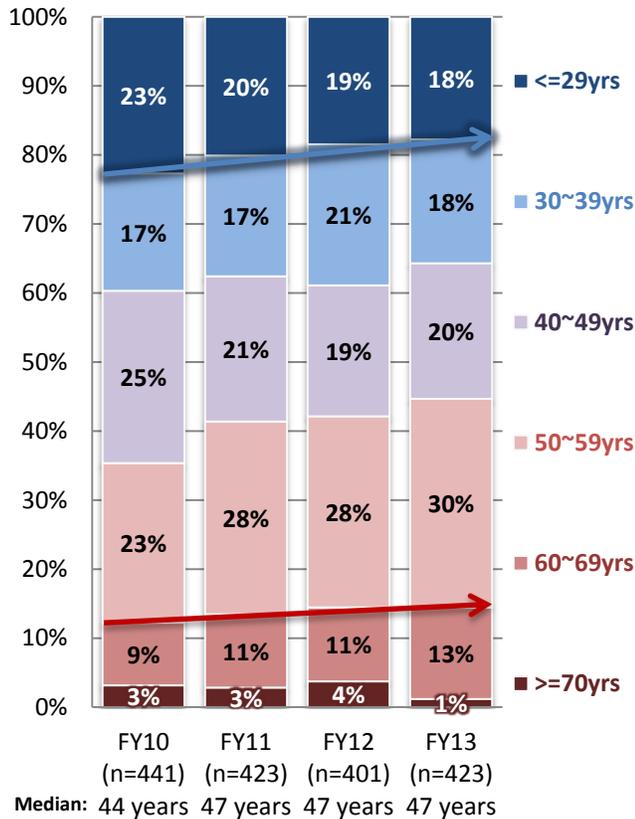
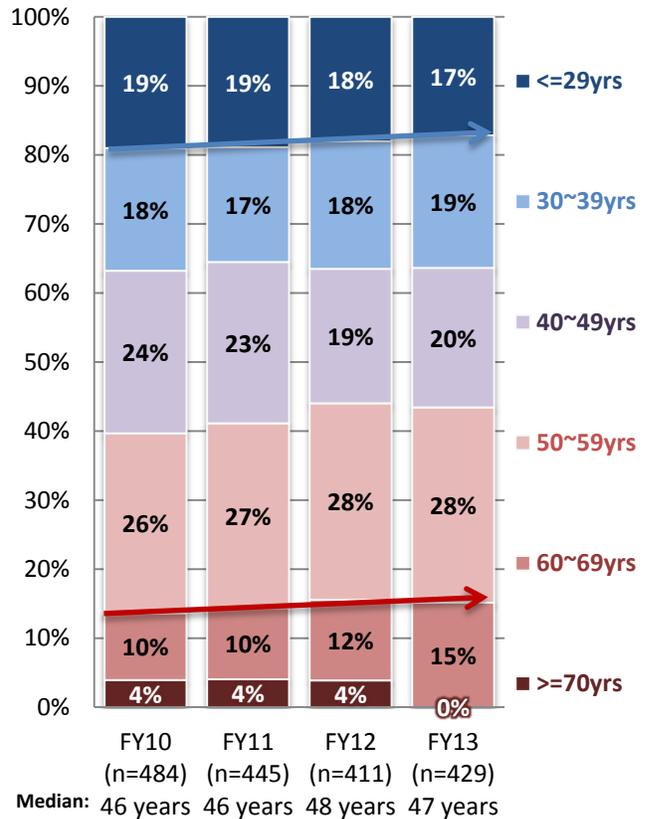


Figure 17. Trend of Age Distribution among Discharge Population (FY10 ~ FY13)



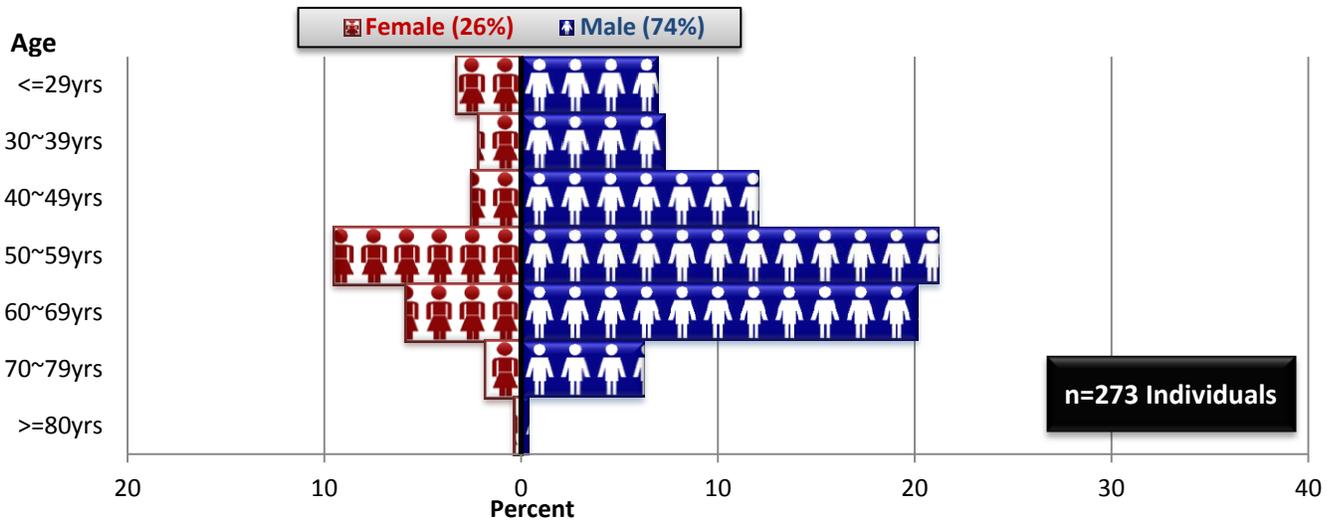
2. Gender Distribution

- One out of four individuals in our care is female and this gender ratio has been nearly unchanged for the past few years.
- The proportion of females among both admission and discharge population in FY13 marginally fell by 2% and 1%, respectively, from FY12. There was almost no change in the gender distribution of those remaining in care at the end of FY13.
- A majority of individuals in care fall in the range of age between 50 years old and 69 years old for both the female and male population. However, male individuals are more spread across the different age groups whereas the female population is concentrated more in the range of age between 50 and 59 years old.

Table 6. Gender Ratio by Group (FY12 vs. FY13)

Group	FY12			FY13		
	Total	Female	Male	Total	Female	Male
Admissions	401	38%	62%	423	36%	64%
Discharges	411	36%	64%	429	35%	65%
Remaining	279	25%	75%	273	26%	74%

Figure 18. Age & Gender Distribution (09/30/13)



3. Race/Ethnicity and Primary Language

- Of the 273 individuals remaining in care on September 30, 2013, 233 had their race and ethnicity information identified in Avatar. Of those, 196 or 84% were *Non-Hispanic Black or African-American*, 26 or 11% were *Non-Hispanic White or Caucasian*, four (4) or 2% were *Asian or Pacific Islander*, and another four (4) or 2% were *Hispanic*. Race and ethnicity information for 40 individuals was not available.
- Of the 228 individuals whose primary language was

Table 8. Race and Ethnicity (09/30/13)

Race and Ethnicity	Number	Percent
Asian/Pacific Islander	4	2%
Black/African-American (Non-Hispanic)	196	84%
White/Caucasian (Non-Hispanic)	26	11%
Hispanic	4	2%
Other	3	1%
Total Identified	233	100%
<i>No Data Available</i>	40	

Table 7. Primary Language (09/30/13)

Primary Language	Number	Percent
English	218	96%
Spanish	4	2%
Other	6	3%
Total Identified	228	100%
<i>No Data Available</i>	45	

identified in Avatar, 218 or 96% indicated English as their primary language. The other 10 individuals were identified as speaking a language other than English as their primary language. There were 45 individuals with no primary language information documented in Avatar.

4. Marital Status

- There were 189 individuals whose marital status was identified. Of those, 81% were single, 7% were married, and the other 11% divorced, separated or widowed. Marital status information for 84 individuals was not available in Avatar.

Table 9. Marital Status (09/30/13)

Marital Status	Number	Percent
Single	154	81%
Married	14	7%
Divorced/Separated	19	10%
Widowed	2	1%
Total Identified	189	100%
<i>No Data Available</i>	84	

5. Religion & Education

- Of the 152 individuals whose religion information was identified in Avatar, 43% or 65 individuals were *Protestant*, 26% or 40 individuals were *Catholic*, and 3% or 2 individuals were *Baptists*. Eleven percent (11%) indicated that they did not have any religion.

- Of the 141 individuals in care whose education information was available, about half completed at least 10 years of education, including 11% who graduated from high school and about 6% who received some type of college education or a bachelor's degree.

Table 10. Religion (09/30/13)

Religion	Number	Percent
Baptist	3	2%
Catholic	40	26%
Christian	3	2%
Jewish	3	2%
Muslim	2	1%
Protestant	65	43%
Other	19	13%
No religion	17	11%
Total Identified	152	100%
<i>No Data Available</i>	<i>121</i>	

Table 11. Education (09/30/13)

Education Level	Number	Percent
None	1	0.7%
01-03 Years	1	0.7%
04-06 Years	12	9%
07-09 Years	57	40%
10-11 Years	47	33%
High School Graduate	15	11%
Some College/Technical Training	2	1%
Associate's Degree	0	0%
Bachelor's Degree	6	4%
Total Identified	141	100%
<i>No Data Available</i>	<i>132</i>	

III. Length of Stay

- **Length of stay (LOS) for individuals remaining in care, while it had increased between FY07 and FY12, declined in FY13. Particularly, the percentage of those with 1 to 2 years of LOS and those with 10 year or longer LOS noticeably decreased due in part to the Hospital’s efforts to discharge long-term residents as well as an increase of admissions in FY13, which increased the percentage of individuals with shorter LOS.**
- **The median LOS for individuals in care on September 30, 2013 was 857 days (28 months). The median LOS declined for all types of legal status: Civil, Forensic Pre-trial, and Post-trial.**
- **Over the past four years, on average, four out of five admissions were discharged within 4 months and one out of two admissions was discharged within 60 days.**
- **Those discharged within 60 days from civil admissions consistently increased whereas length of stay for Forensic Pre-trial admissions fluctuated for the past four years.**

1. Length of Stay of Current Population

- Both the median and average length of stay (LOS) for individuals remaining in care consistently increased over the past several years through FY12 but started declining in FY13.
- The median length of stay (LOS) for individuals remaining in care on September 30, 2013 was 857 days (approximately 28 months), which means that 50% of the individuals in our care have been residing at the Hospital for more than 28 months. The average LOS is much longer than the median LOS⁶ because the few individuals who have been at the Hospital for an extremely long period of time disproportionately affect the average LOS. The average LOS as of September 30, 2013 was 2963 days, slightly above eight years.

Figure 19. Trend in Median LOS of Individuals Remaining in Care (11/07/07 ~ 09/30/13)

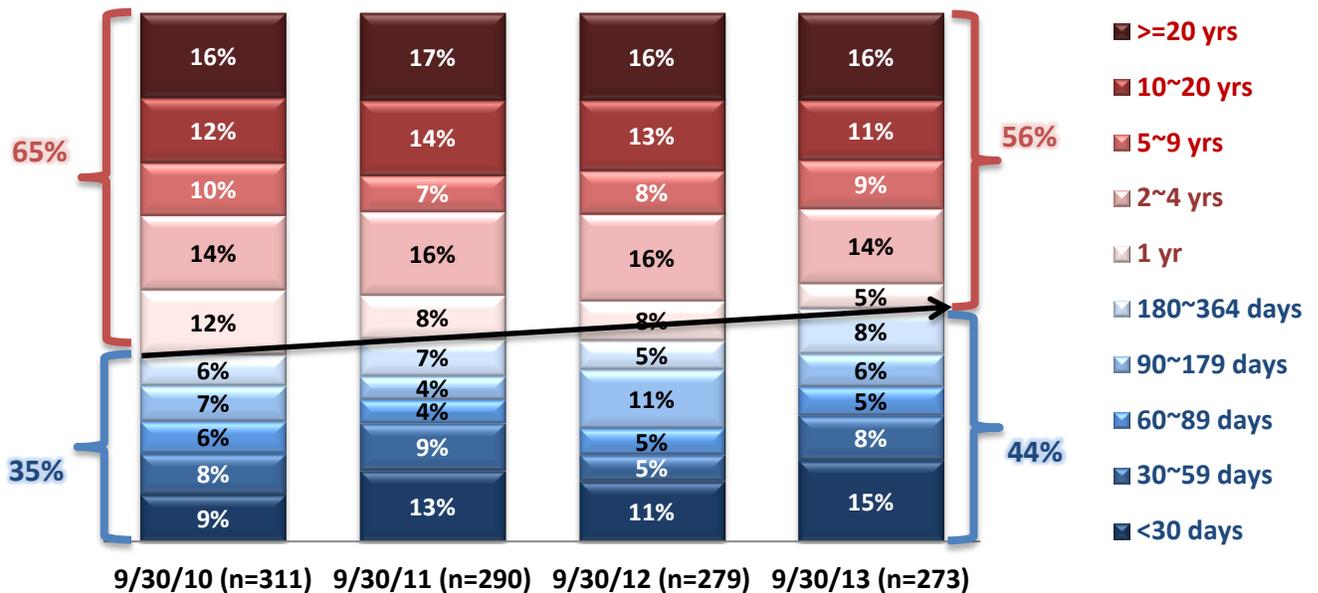


- The recent declining trend of LOS can be better explained from the break-down by cohorts with different ranges of LOS. The percentage of individuals hospitalized for shorter than one year considerably increased

⁶ The median is the middle value of the set when they are ordered by rank, separating the higher half of a sample from the lower half, whereas the average is the arithmetic mean that is computed by dividing the sum of a set of terms by the number of terms. The average is not appropriate for describing skewed distributions as it is greatly influenced by outliers. For example, a few cases with extremely high LOS can skew the average LOS higher. The median is often used as a better measure of central tendency as it is influenced less than the average by outlier observations.

over the last few years, from 35% in FY10 to 44% by the end of FY13, as those staying longer than one year decreased. Particularly, those with LOS of between 1 year and less than 2 years decreased from 12% in September 2010 to 5% in September 2013 and those staying 10 years or longer also decreased from 31% in September 2011 to 27% in September 2013. This is due in part to the Hospital’s concerted efforts to discharge long-term residents to the community as well as the increase in admissions in FY13, which increased the proportion of individuals with shorter LOS.

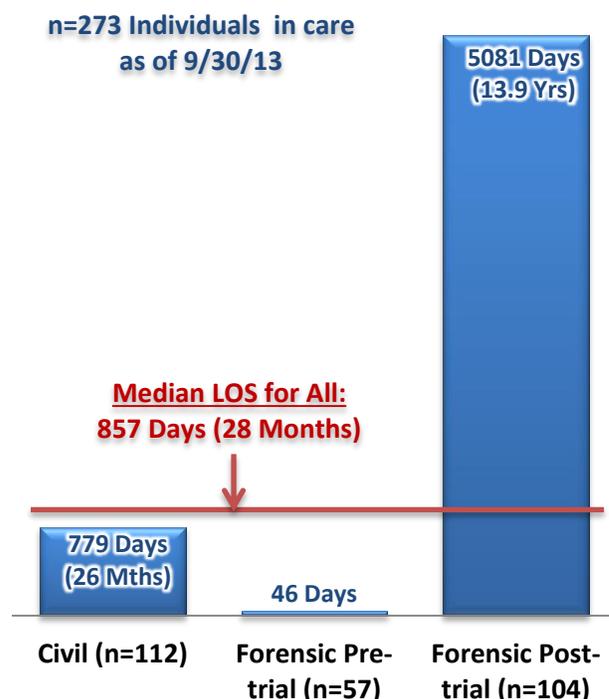
Figure 20. Percentage of Individuals in Care by Length of Stay (09/30/10 ~ 09/30/13)



2. Length of Stay by Legal Status

- The shortened length of stay for individuals remaining in care in FY2013 was driven by both the *Civil* and *Forensic Pre-trial* populations. As of September 30, 2013, the median LOS of *Civil* population (112) and *Pre-trial* population (57) was 779 days (26 months) and 46 days, respectively. The median LOS for 104 individuals in *Post-trial* legal status was nearly 14 years.
- Among the *Civil* population, those in a voluntary legal status tend to stay much longer than those in a committed legal status and their length of stay in FY13 increased: the median LOS for individuals in a voluntary legal status on September 30, 2013 was 2562 days (7 years) while for those with a committed inpatient legal status and a committed outpatient legal status, it was 645 days (21 months) and 997 days (2 years and 9 months), respectively. Those with an emergency legal status had a median LOS of 21 days.

Figure 21. Median LOS by Legal Status (09/30/13)



- As of September 2013, the median LOS of 10 individuals with a *US NGBRI* legal status was 7727 days (21 years) and that of the 89 individuals with a *DC NGBRI* legal status was 4735 days (13 years).

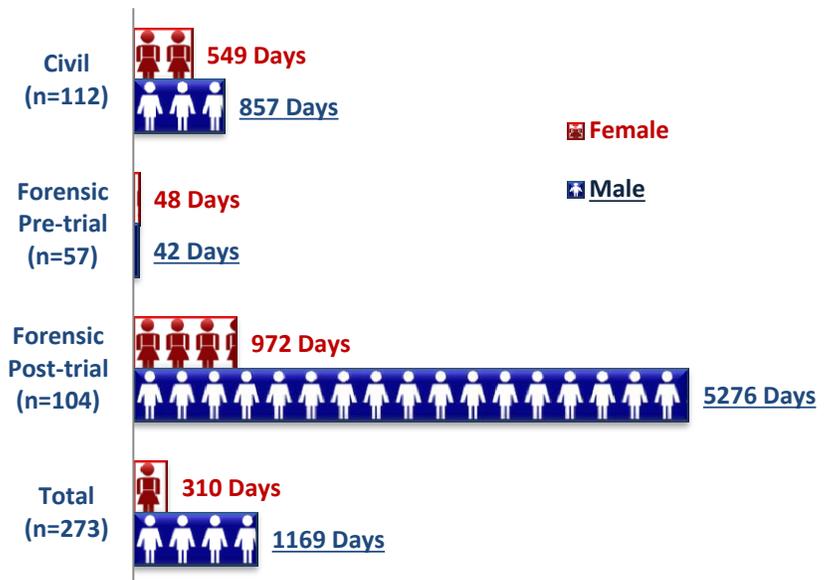
Table 12. Length of Stay of Individuals Remaining in Care by Legal Status (09/30/12 vs. 09/30/13)

Legal Status		# of Individuals		Median (Days)		Average (Days)	
		09/30/12	09/30/13	09/30/12	09/30/13	09/30/12	09/30/13
Civil	Committed Inpatient	24	22	1093 Days	645 Days	1235 Days	1004 Days
	Committed Outpatient	21	21	645 Days	997 Days	940 Days	1024 Days
	Emergency	22	27	19 Days	21 Days	67 Days	45 Days
	Voluntary	43	42	2206 Days	2562 Days	4497 Days	4448 Days
	Civil Sub-total	110	112	974 Days	779 Days	2220 Days	2068 Days
Forensic Pre-trial	DC Examination	59	55	69 Days	42 Days	107 Days	81 Days
	DC Mentally Incompetent	5	2	110 Days	770 Days	321 Days	779 Days
	Forensic Pre-trial Sub-total	64	57	92 Days	46 Days	124 Days	105 Days
Forensic Post-trial	Dual (NGBRI/Criminal Convict.)	1	2	1504 Days	1011 Days	1504 Days	1011 Days
	NGBRI - DC	92	89	4533 Days	4735 Days	5174 Days	5316 Days
	NGBRI - US	9	10	10401 Days	7727 Days	9872 Days	6819 Days
	NGBRI - USVI	1	1	8977 Days	9342 Days	8977 Days	9342 Days
	Sexual Psychopath (Miller Act)	2	2	8929 Days	9294 Days	8929 Days	9294 Days
	Forensic Post-trial Sub-total	105	104	4911 Days	5081 Days	5650 Days	5493 Days
Forensic Sub-total (Pre-trial & Post-trial)		169	161	934 Days	916 Days	3557 Days	3585 Days
Grand Total		279	273	946 Days	857 Days	3030 Days	2963 Days

3. Length of Stay by Gender

- Overall, males are likely to stay at the Hospital much longer than females. The median LOS of males in care on September 30, 2013 was 1169 days (3.2 years) whereas that of females was 310 days (10 months). The large gap between females and males regarding LOS comes primarily from the *Forensic Post-trial* population, which has a much longer LOS and 95% of them are male. However, even among the *Civil* population, where the gender distribution is fairly even (as females constitute 47%), males tend to have been in care significantly longer than females; the median LOS for females and males of the *Civil* population was 18 months and 28 months, respectively.

Figure 22. LOS by Gender and Legal Status (09/30/13)



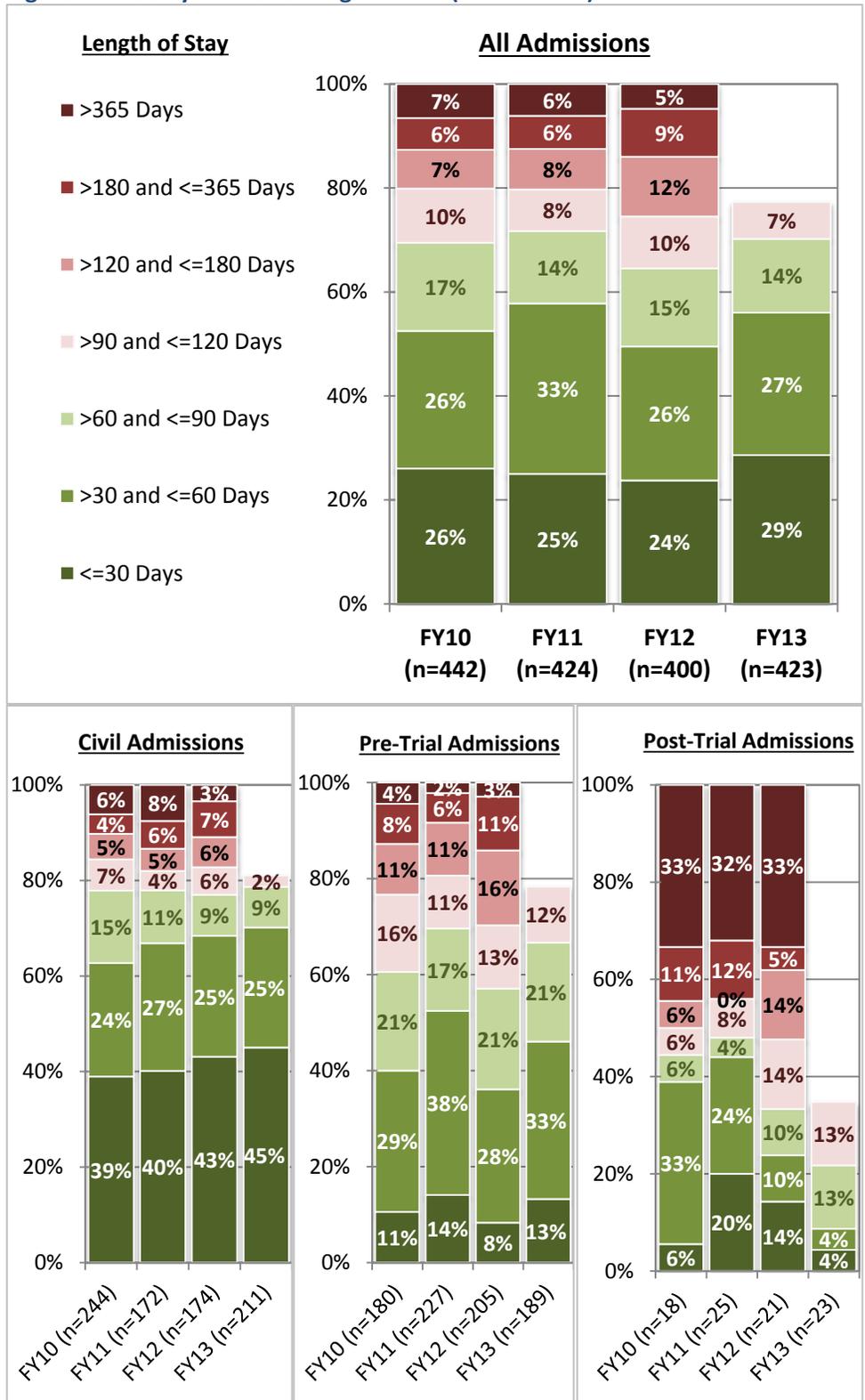
4. Length of Stay by Admission Cohort

- The length of stay data for individuals remaining in care provides a snap shot of the current population in care but it is largely influenced by the volume of recent admissions and discharges and it is limited in illustrating the trend of LOS changes. In order to assess the trend (reduction or increase of LOS) more

accurately, we reviewed the LOS data by admission cohort that tracks LOS of each individual from admission to discharge.

- The admission cohort data demonstrates that nearly four out of five individuals (80%) admitted to the Hospital over the past four years were discharged within 120 days (4 months) from admission and more than half of admissions were discharged within 60 days from admission.
- More than 70% of *Civil* admissions were discharged within 90 days in the past four years. In particular, the percentage of those discharged within 60 days steadily increased each year: from 63% in FY10 to 67% in FY11, 68% in FY12, and 70% in FY13. Those discharged within 30 days from *Civil* admissions also gradually increased: from 39% in FY10 to 40% in FY11, 43% in FY12, and 45% in FY13.
- The length of stay for *Pre-trial* admissions seesawed in the past four years: the percentage of individuals discharged within 90 days from *Pre-trial* admission significantly dropped from 70% in FY11 to 57% in FY12 but increased to 67% among the FY13 *Pre-trial* admission population.
- Individuals with a *Post-trial* legal status, once they are admitted, tend to stay hospitalized much longer than those with a *Civil* or *Pre-*

Figure 23. LOS by Admission Legal Status (FY09 ~ FY13)



* For FY13 admissions, data above includes only those discharged within 120 days of admission because the rest of them require enough observation time period for us to compare their length of stay with those admitted in previous fiscal years.

trial legal status. During FY13, only 35% of *Post-trial* admissions were discharged within 4 months. It should be noted, however, the number of the post-trial admissions is very small so it is difficult to conclude any pattern as a few outliers can easily skew the trend.

5. Length of Stay of Discharged Population

- The LOS measured for the discharged population is significantly shorter than the LOS measured for those remaining in care at the Hospital as it excludes many of the long-term residents remaining in care. The median LOS of the individuals remaining in care at the end of FY13 was 857 days but the median LOS of the 429 individuals who were discharged during FY13 was only 55 days.
- While the median LOS of individuals discharged with a *Civil* legal status decreased in FY13, their average LOS increased due to an increase of discharges of long-term residents; the number of discharges of individuals who had stayed 2 years or longer almost doubled from FY12 (10) to FY13 (19).

Table 13. LOS at Discharge by Legal Status (FY11 ~ FY13)

	# of Discharges			Median LOS (Days)			Average LOS (Days)			# Discharged >=2 Years		
	FY11	FY12	FY13	FY11	FY12	FY13	FY11	FY12	FY13	FY11	FY12	FY13
Civil	233	186	223	60 days	40 days	38 days	315 days	189 days	254 days	25	10	19
Pre-Trial	185	194	179	51 days	69 days	61 days	65 days	83 days	84 days	0	0	0
Post-Trial	26	31	27	325 days	315 days	432days	2985 days	2159 days	2255 days	10	11	10
Combined	444	411	429	56 days	63 days	55 days	367 days	287 days	309 days	35 (7.9%)	21 (5.1%)	29 (6.8%)

IV. Readmissions

- *The 30-day readmission rate in FY13 (5.6%) increased slightly but remains lower than the national trend (NPR 7.0%).*
- *The 90-day readmission rate continued to increase since FY11.*
- *In the past three years, one out of five discharges returned to the Hospital within 180 days.*
- *The trend of repeated readmissions by the same individuals remained at a level similar to the previous years.*
- *Those in a Forensic Post-trial legal status are the most likely to return to the Hospital and those in a pre-trial legal status are the least likely to do so.*
- *Females, those carrying a mood disorder, and those who are older at discharge are more likely to return to the Hospital.*
- *Readmissions are more likely to occur among individuals discharged with a shorter LOS.*

1. Readmission Rate⁷

- Of the 429 discharges that occurred in FY13, 24 individuals or 5.6% were readmitted to the Saint Elizabeths Hospital within 30 days from discharge. This is a slight increase from FY11 and FY12, when the 30-day readmission rate was 5.2% and 5.4%, respectively, but it is still lower than the national trend. According to the most recent NPR⁸, the average 30-day admission rate of state psychiatric hospitals is 7.0%.
- Of the 24 individuals readmitted within 30-days, seven (7) were readmitted within one week (7 days) of their discharges.
- The 90-day readmission rate gradually increased over the past few years: it was 11.7% in FY11, 12.9% in FY12 and 13.8% in FY13. The 180-day readmission rate showed only marginal change in the last three years, hovering at around 20%, indicating one out of five discharges returned to the Hospital within 180 days.

Figure 24. Trend of Readmission Rate (FY10 ~ FY13)

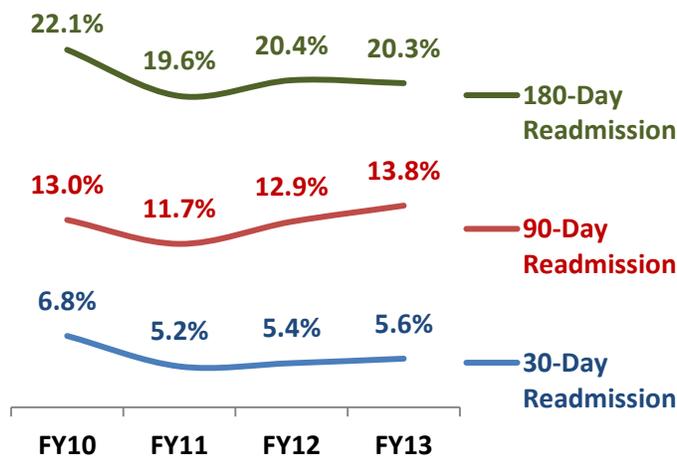
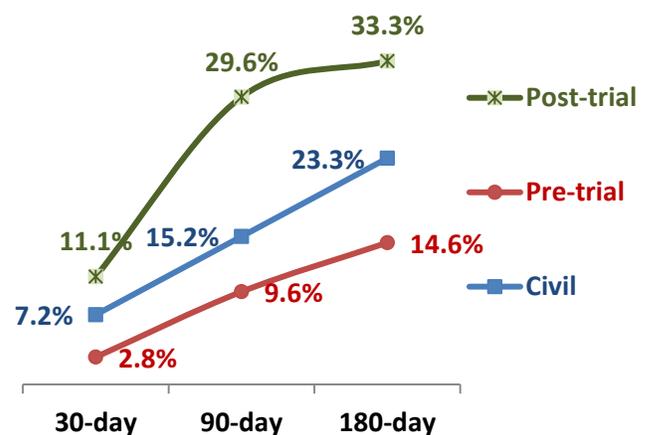


Figure 25. Readmission by Legal Status (FY13)



⁷ 30-day readmission rate is calculated by dividing the total number of individuals readmitted to SEH within 30 days of discharge by the total number of discharges. This is commonly used as a quality indicator that measures the pattern of returns of discharged individuals. Additionally, it should be noted that this counts readmissions to SEH only and does not include any readmissions to other hospitals within the District of Columbia.

⁸ NPR: National Public Rate as of June 2013 was published in November 2013 by National Association of State Mental Health Program Directors Research Institute (NRI), based on data collected from a number of state psychiatric hospitals nationwide.

- Individuals discharged in a *Pre-trial* legal status are least likely to return to the Hospital, partly because many of them enter the DC jail or another correctional facility by Court order following discharges from the Hospital, whereas those discharged in a *Post-trial* legal status are most likely to get readmitted. It should be noted, however, it is not infrequent that an individual with a *Post-trial* individual returns to the Hospital because of failure to comply with the conditions of the court-ordered conditional release while in the community. In addition, the number of *Post-trial* discharges from the Hospital is relatively low and the number of *Post-trial* readmissions is insignificant despite the fact that its readmission rate is high. During FY13, the 30-day readmission rate for *Civil*, *Pre-trial*, and *Post-trial* population was 2.8%, 7.2%, and 11.1%, respectively. The rate increased to 9.6%, 15.2%, and 29.6% for 90-day readmission and 14.6%, 23.3%, and 33.3% for 180-day readmissions for each respective group. The higher percentage of *Post-trial* readmissions also reflects the relatively low number of post-trial discharges from the Hospital in any given month.
- The trend of repeated readmissions by the same individuals remained at a level similar to the previous years, but the number of unduplicated individuals involved in at least one readmission increased; there were 41 unique individuals who were readmitted within 90 days of FY12 discharges and that number increased to 50 in FY13.

Table 14. Re-admissions (FY10 ~ FY13)

Category		FY10	FY11	FY12	FY13
Discharges	Total	485	444	411	429
	Monthly Average Discharge	40	37	34	36
30-Day Readmission	Total	33	23	22	24
	Monthly Average	2.8	1.9	1.8	2.0
	Rate	6.8%	5.2%	5.4%	5.6%
	Unique IICs of >=1 readmission	32	22	20	21
	Unique IICs of >=2 readmissions	1	1	2	2
90-Day Readmission	Total	63	52	53	59
	Monthly Average	5.3	4.3	4.4	4.9
	Rate	13.0%	11.7%	12.9%	13.8%
	Unique IICs of >=1 readmission	58	42	41	50
	Unique IICs of >=2 readmissions	5	7	8	7
180-Day Readmission	Total	107	87	84	87
	Monthly Average	8.9	7.3	7.0	7.3
	Rate	22.1%	19.6%	20.4%	20.3%
	Unique IICs of >=1 readmission	95	66	61	67
	Unique IICs of >=2 readmissions	10	15	15	15

2. Characteristics of Individuals Readmitted to Care

- Females were slightly more likely to be readmitted; about one out of three individuals discharged in FY13 were female but half of those readmitted within 30-days were female.
- Those who were readmitted to the Hospital tended to be older than those who were not readmitted. The median age of all individuals discharged during FY13 was 47 years but more than half of those readmitted were 50 years or older at discharge from their prior episodes. This trend resembled the previous year’s trend.

- The likelihood of readmissions may be associated with the individual’s length of stay in their previous hospitalization. Individuals who are readmitted tend to have a history of a shorter length of stay in their immediate previous hospitalization than those who were not readmitted. The median length of stay for those discharged in FY13 was 55 days, meaning half of them were those who had stayed in care for longer than 55 days. The median LOS of readmission population in their previous hospitalization was much shorter: 39 days for 30-day readmission group, 42 days for 90-day readmission group and 40 days for 180-day readmission group. The previous year’s data also presented a similar trend. This suggests that readmissions are more likely to occur among individuals who were discharged with a shorter LOS although a short LOS may not be a direct trigger of readmission.
- In the previous year, diagnosis at discharge seemed to be an indicator of a likelihood of readmission: those discharged with a mood disorder were more likely to return within a short time period. However, this year’s data do not show any correlation between diagnosis and the likelihood of readmission except that those discharged with a substance use related disorder as their principal diagnosis rarely returned to the Hospital.

Figure 26. Percentage of Females among Readmission Population (FY13)

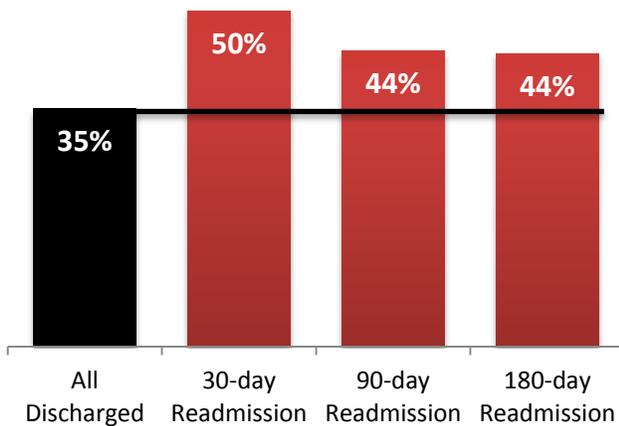


Figure 27. Median Age of Readmission Population (FY13)

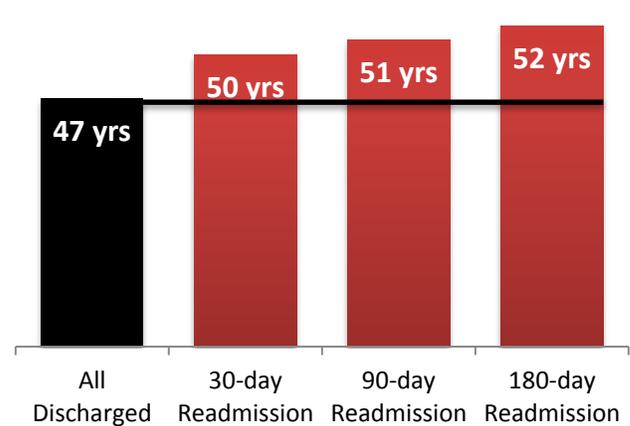


Figure 28. Median LOS during Previous Hospitalization prior to Readmission (FY13)

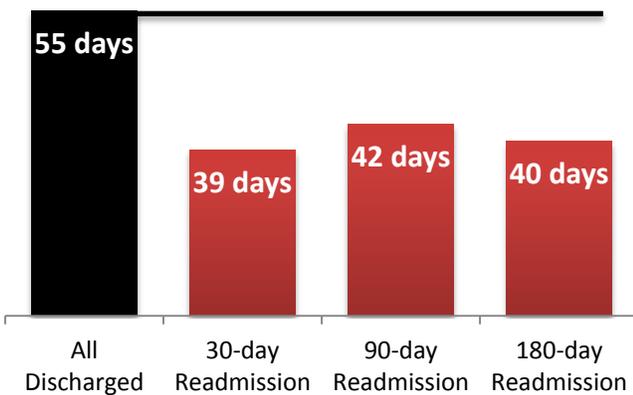
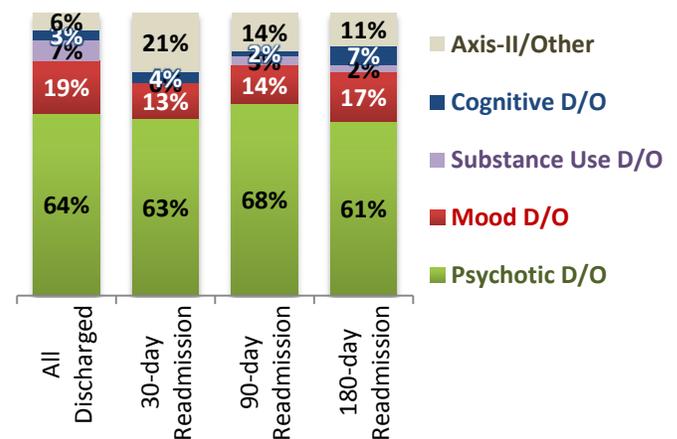


Figure 29. Principal Disorder at Discharge from Previous Hospitalization (FY13)



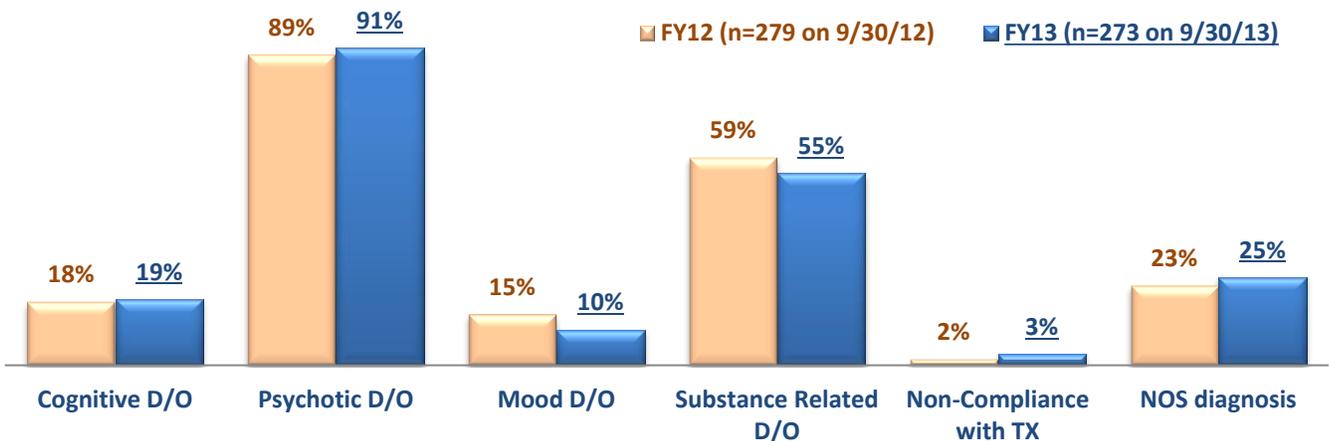
V. Clinical Profile of Individuals in Care

- *The percentage of individuals with a mood disorder or a substance use related disorder decreased while those with a psychotic disorder increased slightly.*
- *Nicotine is the most frequently identified substance for addiction and the percentage of those with a nicotine use related disorder increased over the past three years.*
- *84% had an identified medical condition or physical disorder.*
- *42% were obese as their BMI was 30 or above and additionally 31% were overweight as their BMI was between 25 and 29.9. Although the percentage of obesity remained the same as a year ago, the 5 year trend shows that the obese and overweight population in our care is increasing.*
- *A majority of individuals admitted to our care consistently gained weight and the likelihood of becoming obese increased throughout their first year of hospitalization.*
- *The percentage of individuals presenting risks, particularly for violence, at admission increased over the past few years, and more noticeably in FY13: nearly half (48%) of admissions in FY13 were assessed to have a moderate or severe level of risk for aggression. It was just 30% in FY12.*

1. Clinical Disorders (Axis I)

- All of the 273 individuals served on September 30, 2013 had at least one clinical disorder diagnosed on Axis I and many of them (77%) had more than one clinical disorder identified on Axis I.

Figure 30. Individuals in Care with Diagnosis on Axis I (FY12 ~ FY13)⁹



- A total of 248 individuals (91%) were diagnosed with a psychotic disorder – schizophrenia, schizophreniform disorder, schizoaffective disorder, delusional disorder or any other psychotic disorders.
- The number of individuals who had a cognitive disorder, which includes delirium, dementia, and amnesic and other cognitive disorders, was 52 (19%), which is a slight increase from the previous year (18%).

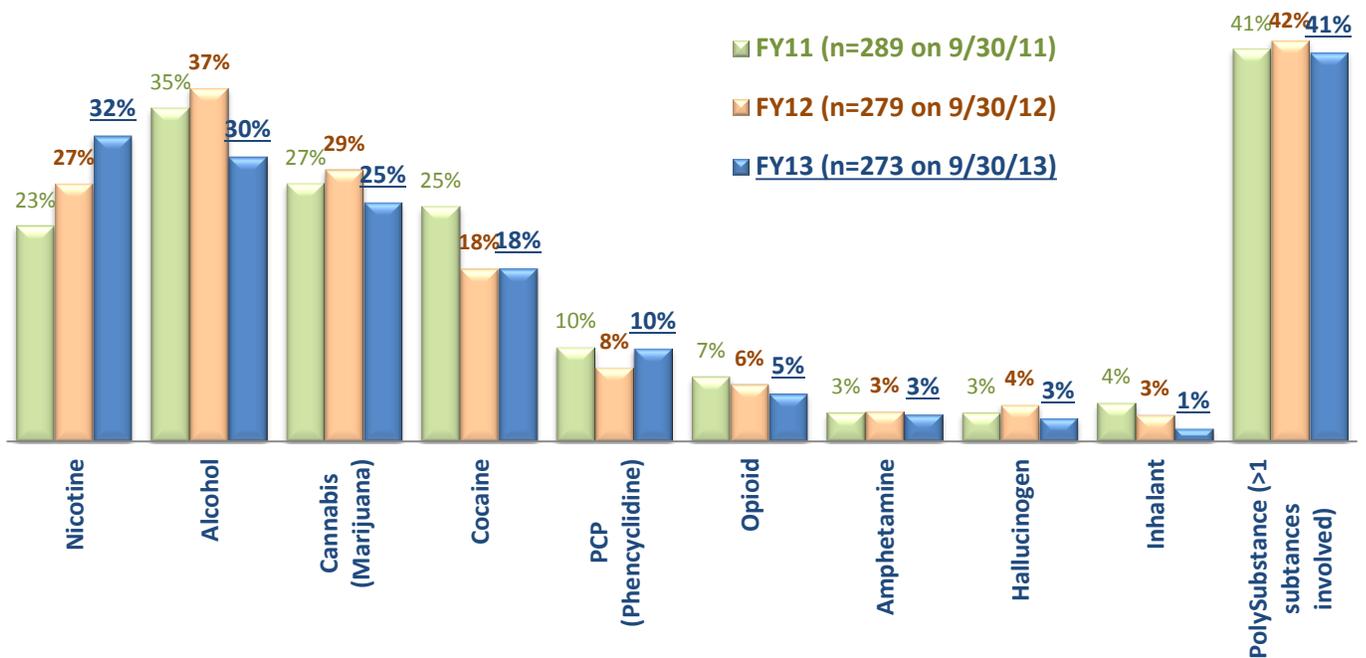
⁹ Axis I diagnoses were grouped as guided by the DSM-IV-TR Classification of the American Psychiatric Association. Data for each classification herein includes all of those diagnosed with each type of disorder in their Axis I regardless of whether it is identified as their principal diagnosis. Also, APA published the fifth edition of DSM (DSM-5) in May 2013, which is currently in the process of implementation nation-wide and SEH is scheduled to update its diagnosis coding system by FY15.

- Ten percent (10%) or 28 individuals had a mood disorder, which includes depressive disorders and bipolar disorders. This is a noticeable decrease from 15% in the previous year.
- A total of 150 individuals or 55% were diagnosed as having a substance use disorder. This is a decrease from a year ago, when 59% were carrying a substance use disorder.
- One out of four individuals (25%) had a *Not Otherwise Specified (NOS)* diagnosis¹⁰ on at least one of their Axis I diagnoses. Additionally, nine (9) individuals (3%) were identified as *Noncompliance with Treatment* (DSM-IV code V15.81)¹¹.

2. Substance Use Disorders

- The four most frequently identified substances were nicotine (32%), alcohol (30%), cannabis (25%), and cocaine (18%).
- The percentage of individuals with nicotine dependence or abuse continued to increase, to 32% in FY13 following an increase to 27% in FY12 from 23% in FY11.
- Those with alcohol dependence or abuse decreased to 30% in FY13 from 37% in the previous year.
- Of the 150 individuals who had at least one substance related disorder, 112 individuals (41% of all individuals in care) were identified as using more than one substance.

Figure 31. Individuals in Care with Substance Use Related Diagnosis by Substance Type (FY11 ~ FY13)



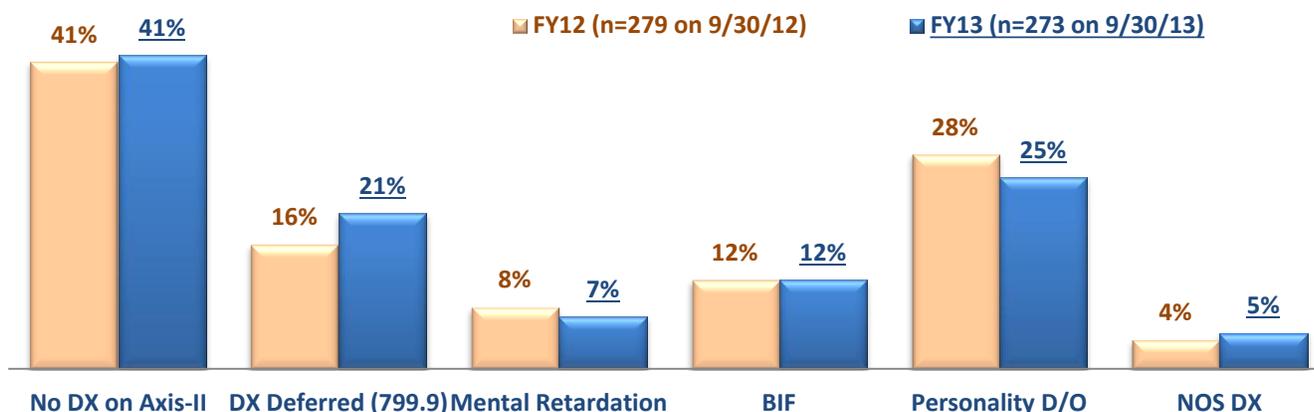
¹⁰ An NOS diagnosis reflects that there is enough information available to indicate the class of disorder that is present, but further specification is not possible, either because there is no sufficient information to make a more specific diagnosis or because the clinical feature of the disorder does not meet the criteria for any of the specific categories in that class. (DSM-IV-TR, American Psychiatric Association.) The most frequent NOS diagnoses among SEH patients include ‘298.9 Psychotic Disorder NOS’, ‘294.8 Dementia NOS’ and ‘294.9 Cognitive Disorder NOS.’

¹¹ “This category can be used when the focus of clinical attention is noncompliance with an important aspect of the treatment for a mental disorder or a general medical condition. The reasons for noncompliance may include discomfort resulting from treatment, expense of treatment, decisions based on personal value judgments or religious or cultural beliefs about the advantages and disadvantages of the proposed treatment, maladaptive personality traits or coping styles, or the presence of a mental disorder. This category should be used only when the problem is sufficiently severe to warrant independent clinical attention.” DSM-IV-TR, American Psychiatric Association.

3. Personality Disorders and/or Mental Retardation (Axis II)

- The percentage of individuals with one or more diagnoses on Axis II decreased in FY13 from a year ago. As of September 30, 2013, 113 (41%) had *No Diagnosis or Condition on Axis II* (DSM-VI Code V71.09), 56 (16%) had *Diagnosis Deferred on Axis II* (DSM-VI Code 799.9), and the remaining 104 or 38% of individuals in care had one or more diagnoses identified on Axis II. On September 30, 2012, 43% of individuals in care had one or more diagnoses on Axis II.
- A total of 69 individuals (25%) had a personality disorder and this is a slight decrease from 28% in FY12.
- A total of 51 individuals (19%) were diagnosed with either *Mental Retardation* (DSM-VI Code 317~319) or *Borderline Intellectual Functioning* (DSM-VI Code V62.89)¹².
- A total of 13 individuals (5%) had a NOS diagnosis on Axis II.

Figure 32. Individuals in Care with Diagnosis on Axis II (FY12 ~ FY13)



4. General Medical Conditions (Axis III)

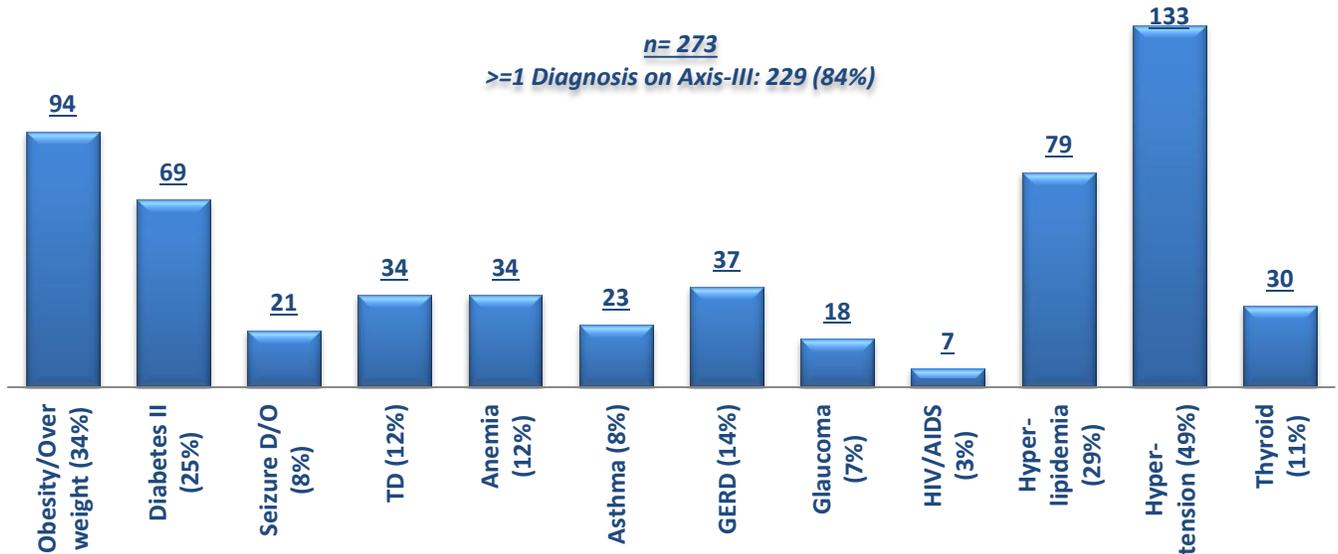
- The percentage of individuals with one or more medical conditions identified on Axis III decreased slightly from the previous year: 229 or 84% of individuals in care on September 30, 2013 had at least one identified medical condition or physical disorder whereas 89% of individuals in care on September 30, 2012 did so.
- The overall pattern of medical conditions prevalent among individuals in our care on September 30, 2013 was very similar to that of the previous year. The most common medical condition was *Hypertension*; 133 individuals or 49%. Sixty-nine (69) or 25% were diagnosed as having *Type II Diabetes*, 21 or 8% were diagnosed as having a seizure disorder, and 34 or 12% were diagnosed with *Tardive Dyskinesia (TD)*¹³. Those with thyroid disorders (11%) slightly decreased from 14% in the previous year.
- A total of 94 individuals (34%) were diagnosed on Axis III with *Obesity* or *Overweight*: 73 (27%) had an obesity diagnosis and additionally 21 had an overweight diagnosis on Axis III. This was a slight decrease from 38% last year. However, it should be noted that there remained a considerable discrepancy between Axis-III diagnoses on obesity/overweight and *Body Mass Index (BMI)* results: the actual number of individuals with

¹² "This category can be used when the focus of clinical attention is associated with borderline intellectual functioning, that is, an IQ in the 71–84 range." DSM-IV-TR, American Psychiatric Association.

¹³ "Tardive Dyskinesia is a neurological disorder caused by the long-term use of neuroleptic drugs, or anti-psychotic medications. Neuroleptic drugs are generally prescribed for psychiatric disorders, as well as for some gastrointestinal and neurological disorders. The prevalence of Tardive Dyskinesia is estimated to be 10 to 20 percent of individuals treated with anti-psychotic medications. The elderly are more susceptible to persistent and irreversible TD than younger people." National Mental Health Association.

obesity projected from the BMI calculation¹⁴ was 110 (40%) and additionally 81 individuals (30%) were overweight (25=<BMI<30). A further analysis of the findings on obesity is presented on page 33 below.

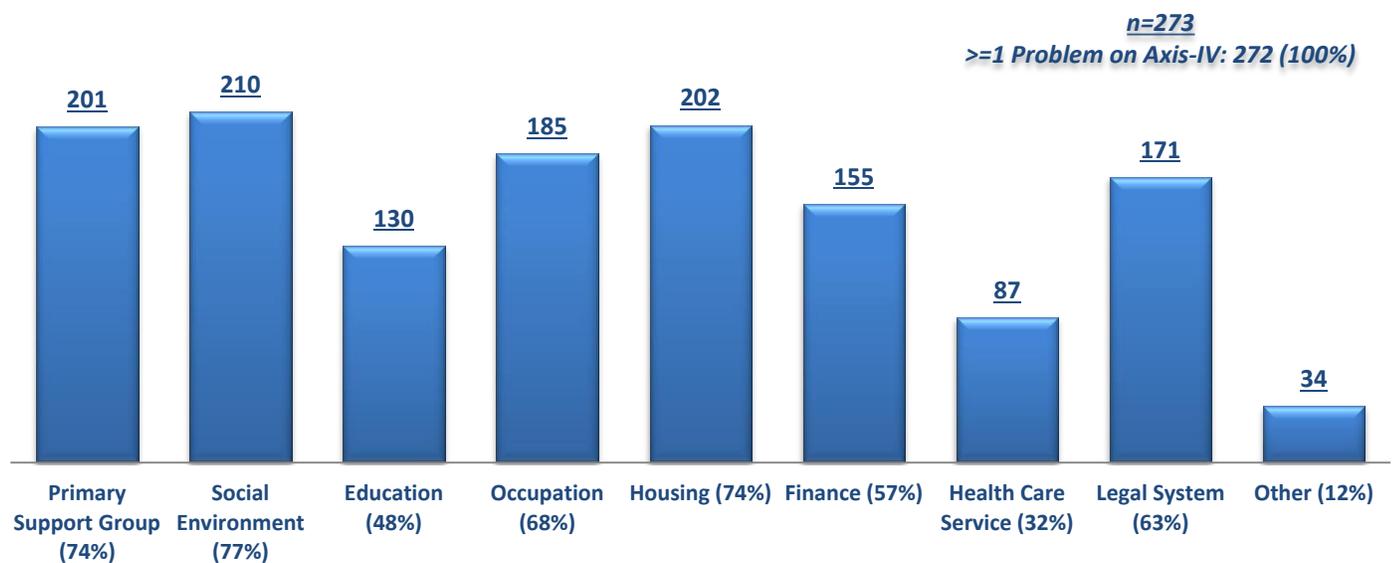
Figure 33. Individuals in Care with Major Medical Conditions (09/30/13)



5. Psychosocial and Environmental Factors Contributing to the Disorder (Axis IV)

- Of the 273 individuals, 99% or 272 had at least one identified psychosocial and environmental problem and 97% or 264 had more than one problem identified.
- Problems with ‘social environment’ (77%), ‘housing’(74%), and ‘primary support group’ (74%) were identified as major contributing psychosocial and environmental factors. Also, 63% were identified as having problems related to ‘interaction with the legal system or crime’, and 68% for ‘occupational problems’.

Figure 34. Individuals in Care with Psychosocial/Environmental Problems (Axis IV) Identified (09/30/13)

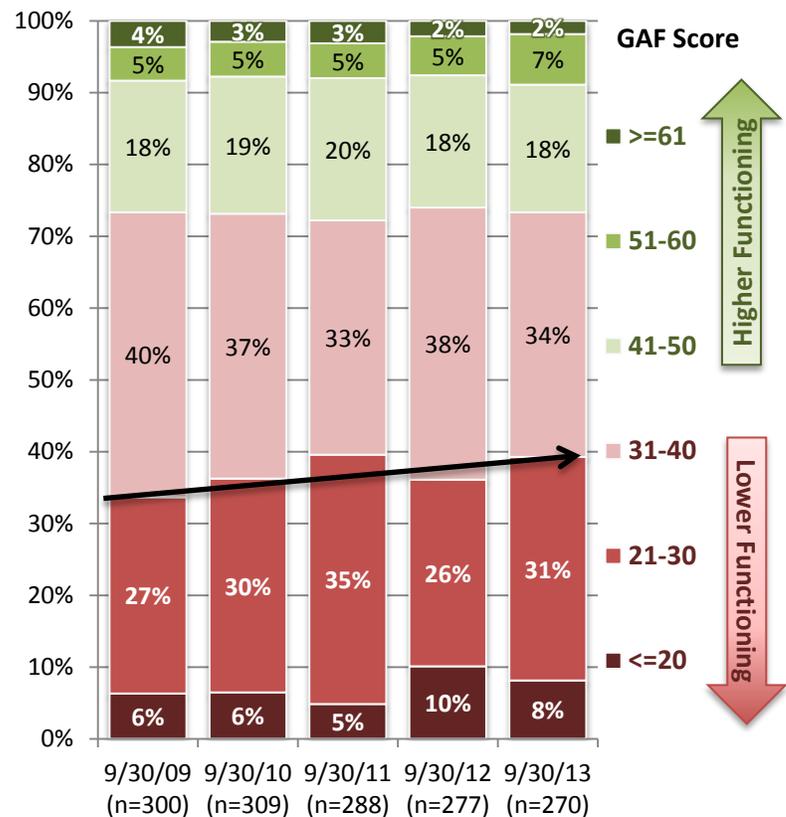


¹⁴ According to the Centers for Disease Control and Prevention (CDC), an adult who has a BMI of 30 or higher is considered obese and an adult who has a BMI between 25 and 29.9 is considered overweight.

6. Global Assessment of Functioning [GAF] (Axis V)¹⁵

- Over the past five years, the proportion of individuals with their GAF score assessed to be 30 or below (*Major Impairment in Several Areas or Unable to Function in Almost All Areas*) steadily increased: 5 years ago, this group comprised about 33% of the then patient population with a GAF score available and the percentage for the same group increased to 39% as of September 2013.
- Those identified as having a GAF score between 31 and 40 overall decreased for the same time period.
- Despite the increase of those in the lower functioning range, those with a GAF score above 50 also increased and the FY13 average GAF score (35.3) is slightly higher than the FY12 average (35.2).

Figure 35. Trend of GAF Score (09/30/09 ~ 09/30/13)



Reference: **GAF scale chart**, Dr. Ray Wintker of the Murfreesboro VAMC

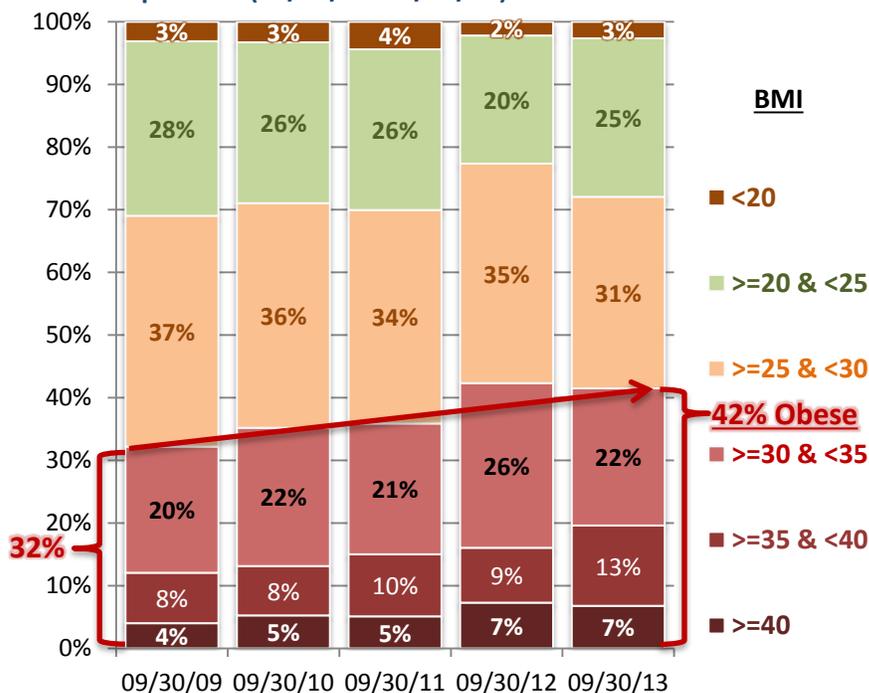
Domain	Symptom Severity	Level of Functioning
1 ~ 10	Persistent danger of severely hurting self or others or serious suicidal act with clear expectation of death	Persistent inability to maintain minimal personal hygiene
11 ~ 20	Some danger of hurting self or others or gross impairment in communication	Occasionally fails to maintain minimal personal hygiene
21 - 30	Behavior is considerably influenced by delusions or serious impairment in communication or judgment	Inability to function in almost all areas
31 - 40	Some impairment in reality testing or communication	Major impairment in several areas, such as work or school, family relations, judgment, thinking, or mood
41 - 50	Serious symptoms	Any serious impairment in social, occupational, or school functioning
51 - 60	Moderate symptoms	Moderate difficulty in social, occupational, or school functioning
61 - 70	Some mild symptoms	Some difficulty in social or occupational functioning, but generally functioning pretty well, has some meaningful interpersonal relationships.
71 - 80	If symptoms are present, they are transient and expectable reactions to psychosocial stressors	No more than slight impairment in social, occupational, or school functioning
81 - 90	Absent or minimal symptoms, Generally satisfied with life. No more than everyday problems or concerns.	Good functioning in all areas, interested and involved in a wide range of activities, socially effective,
91 - 100	No symptoms	Superior functioning

¹⁵ GAF is a numeric scale (0 through 100) used by mental health clinicians and doctors to rate the social, occupational and psychological functioning of adults. Higher scores indicate higher functioning. It should be noted, however, the GAF scale is a subjective scale and it could vary from one physician to another and over time. In fact, it is no longer included in the DSM V.

7. Weight Gain and Obesity

- Out of 273 individuals remaining in care as of September 30, 2013, 265 or 97% had their weight and height information available from the vital sign records and the most recent *History and/or Physical Assessment* in AVATAR.
- Of those 265 individuals, 110 or 42% were obese as their BMI was 30 or above. This is the same as the previous year but the percentage of individuals with 35 or higher BMI increased from 16% to 20%. In fact, the overall percentage of individuals with obesity and higher BMIs consistently increased over the past several years: BMI data showed the percentage of individuals in care with obesity was 32% in September 2009, 35% in 2010, 36% in 2011, and 42% in 2012.

Figure 36. Distribution of Individuals in Care by BMI and Obesity Population (09/03/09 ~ 9/30/13)



- There are a number of studies addressing metabolic side effects of psychotropic medications, including a research article published by *Mens Sana Monographs*¹⁶, which suggests that when exposed to psychotropic medications, many patients suffering from mental disorders gain a significant amount of weight, particularly during their acute treatment timeframe. Our data tracing weight changes during the first year of hospitalization for FY13 admissions demonstrates that a majority of individuals admitted to our care consistently gain weight throughout their first year of hospitalization or until discharged if the length of stay is shorter than a year: among 64% of individuals admitted in FY13, the weight gain occurred within 30 days from admission. The percentage of individuals with weight gain peaked at 79% by 120 days from admission and remained above or around 70% throughout the year¹⁷ while about one out of four to five admissions lost their weight during the first year of hospitalization.

¹⁶ Weight-Gain in Psychiatric Treatment: Risks, Implications, and Strategies for Prevention and Management, Amresh Shrivastava and Megan E. Johnston, *Mens Sana Monographs* (Vol.8), US National Library of Medicine, National Institutes of Health, December 2010.

¹⁷ This analysis includes only 129 individuals who had been admitted during FY13 (10/01/12~09/30/13) and stayed in care at least 90 days from admission. All of the weight and height records available for those 129 admissions were extracted from the *History & Physical Assessment* (H&P) and *Vital Sign* records in Avatar as of February 6, 2014. Weight and height data from H&P completed at admission was used as baseline data and all of the weight records available from the vital sign table were re-organized by 10 to 30 day increments from admission. If the weight data was not available for a particular time period for an individual or the individual had been already discharged, that case was excluded from the denominator for the respective time period so the result herein is based on available data only and the denominator (n) for each respective time period is indicated in each figure. Any noticeable outliers (i.e. extremely low or high numbers) caused by apparent data entry error were removed from analysis to increase the data reliability. It should be noted that not all the applicable 129 admissions had weight data available for each time period and not every admission: not everybody had their vital signs measured and recorded by the same increment. Also, not all of them had opportunities to be observed throughout their entire hospitalization if they were admitted less than a year ago from the data extraction point while they are still in care at the time of data extraction. Accordingly, the total number of cases with available weight data for 150 days of admissions or thereafter may be considered to be too small and the margin of error would be larger.

- The level of weight gain gradually increased with longer hospital stay: the percentage of average weight gain for FY13 admissions was about 2% by 30 days from admission and it increased to 5% by 60 days, 9% by 120 days and 12% by a year from admission.

Figure 37. Weight Gain or Loss by Length of Stay from Admission (FY13)

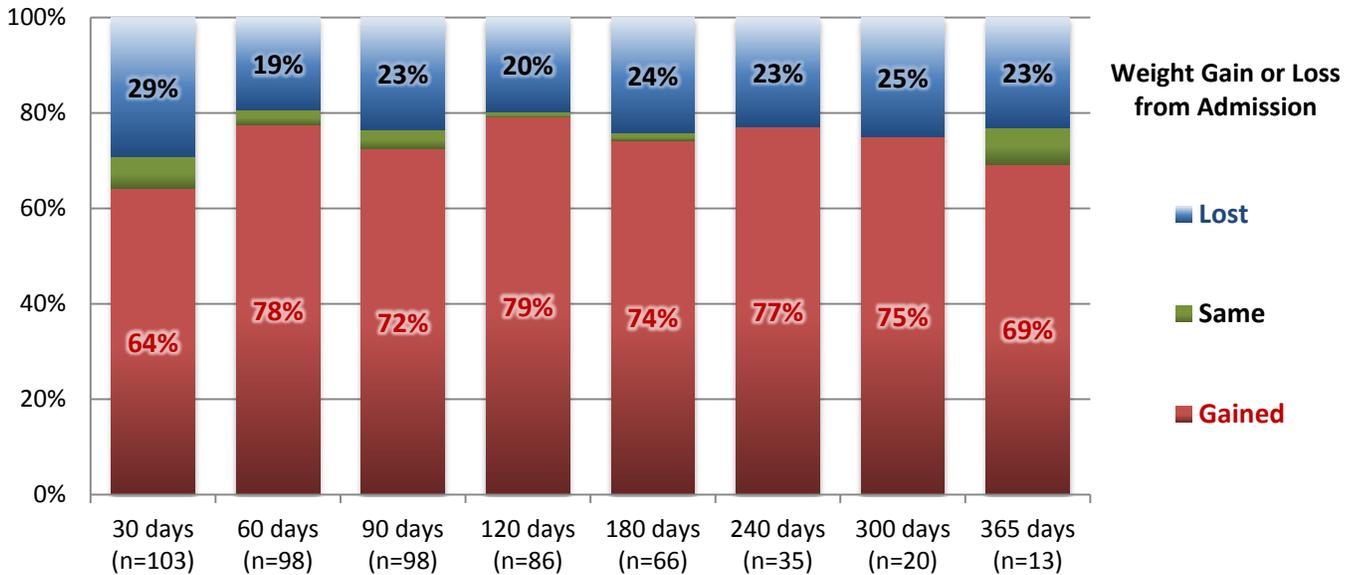
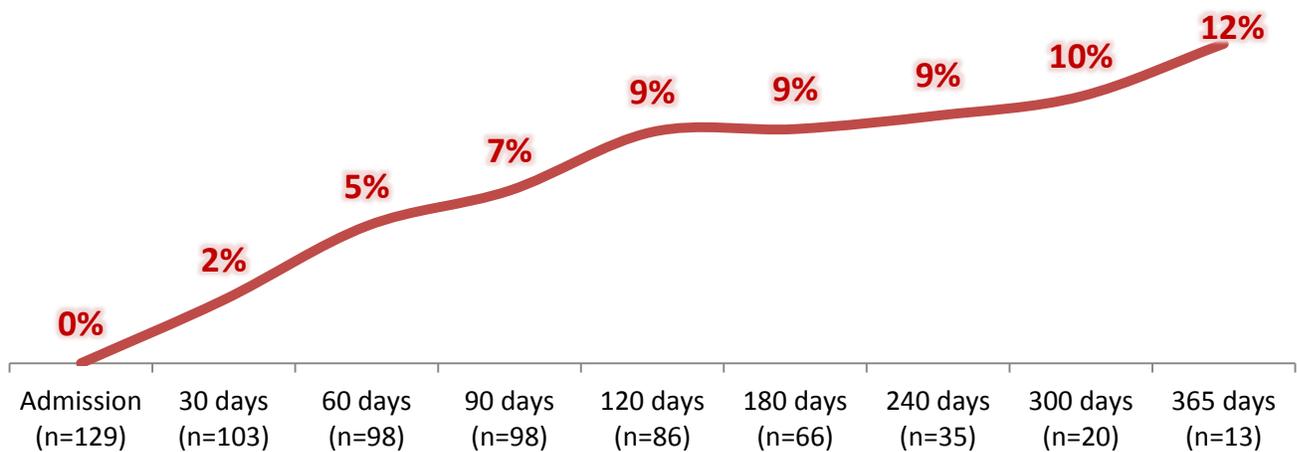
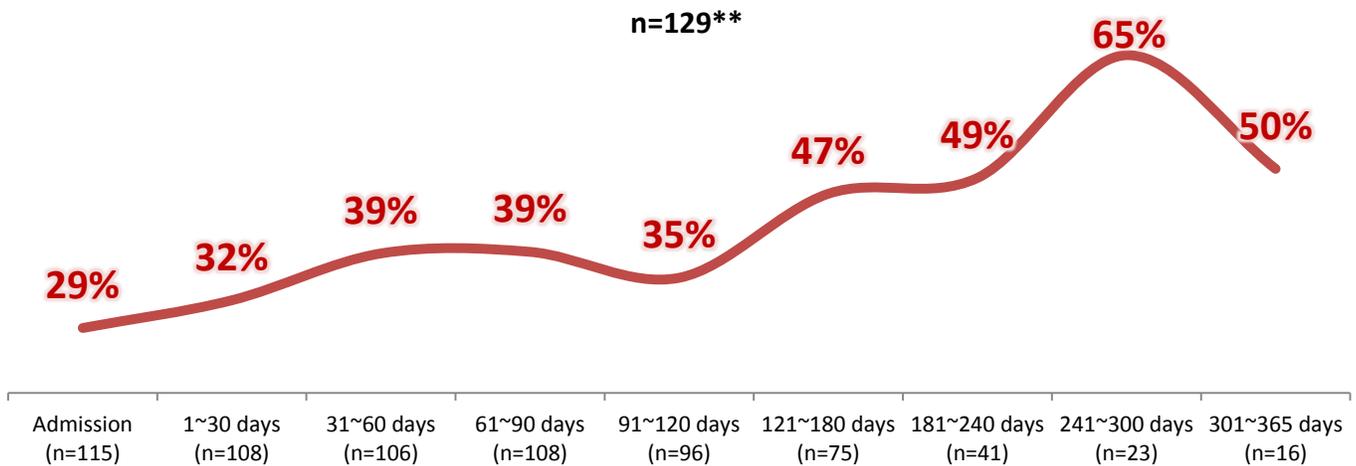


Figure 38. Percentage of Average Weight Gain from Admission (FY13)



- The increase in the level of weight gain consequently triggered an increase of the obesity population in our care: during FY13, less than 30% of individuals had their BMI at 30 or above at admission. The percentage of those obese increased to 32% by 30 days and 39% by 60 days. Overall, the percentage of obesity population continued to increase with minor fluctuation: 47% by 180 days and 50% by 365 days.

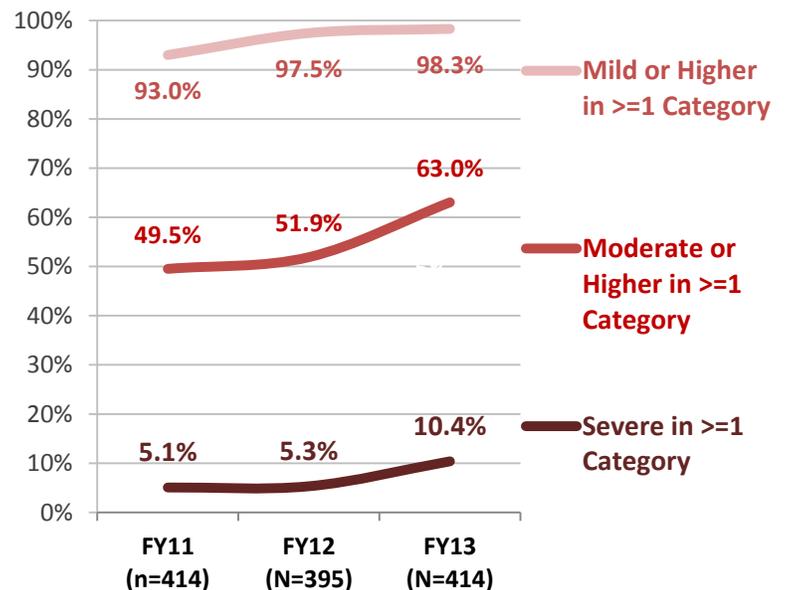
Figure 39. Percentage of Individuals Obese (BMI>=30) by Length of Stay from Admission (FY13)



8. Risk Identified at Admission

- The *Comprehensive Initial Psychiatric Assessment (CIPA)* conducted for every individual admitted to the Hospital includes risk assessment in eight (8) categories. Of the 423 admissions made during FY13, a total of 414 CIPAs were available for analysis. Findings indicate that the percentage of individuals presenting risks has increased over the past few years, and more noticeably in FY13. Of the 414 admissions with CIPA risk assessment findings available, 63% were identified to have a moderate or severe level of risk¹⁸ in one or more areas, an increase of 11% from FY12 level. The percentage of individuals assessed to have severe risk also increased to above 10% from 5% in FY12.

Figure 40. Risk Level of Admission Population (FY11 ~ FY13)



- Of the eight (8) risk categories assessed in the CIPA, physical aggression was the most frequently identified risk: 89% of admissions presented some level of physical aggression risk and this is a significant increase from 74% in FY12. The percentage of admissions presenting a moderate or severe level of physical aggression risk also considerably increased from 30% in FY12 to 48% in FY13. The percentage of individuals who presented any level of sexual aggression risk almost doubled: from 22% in FY12 to 41% in FY13 although only 7% were identified to be moderate or severe.
- The percentage of individuals posing risk of property destruction at any level increased from 34% in FY12 to 57% in FY13 and those at a moderate or higher level of risk increased from 13% to 17%.
- The overall percentage of those at risk of self-injury and suicide also significantly increased from 55% in FY12 to 76% in FY13 and from 41% to 57%, respectively. However, a majority of them were indicated to have such risk at mild level and only 17% and 9% were indicated to be at a moderate or severe risk level.

¹⁸ Scales of the CIPA risk assessment include none, mild, moderate and severe.

- Individuals presenting the risk of accidental injury and medical emergency at admission increased from 35% to 52% and from 44% to 57%, respectively.
- In FY13, more than half of admissions (56%) were identified to have elopement risk at least at mild level and those at a moderate level or severe level also noticeably increased.

Figure 41. Percent of Admissions with Moderate or Severe Level of Risk Identified (FY11 ~ FY13)

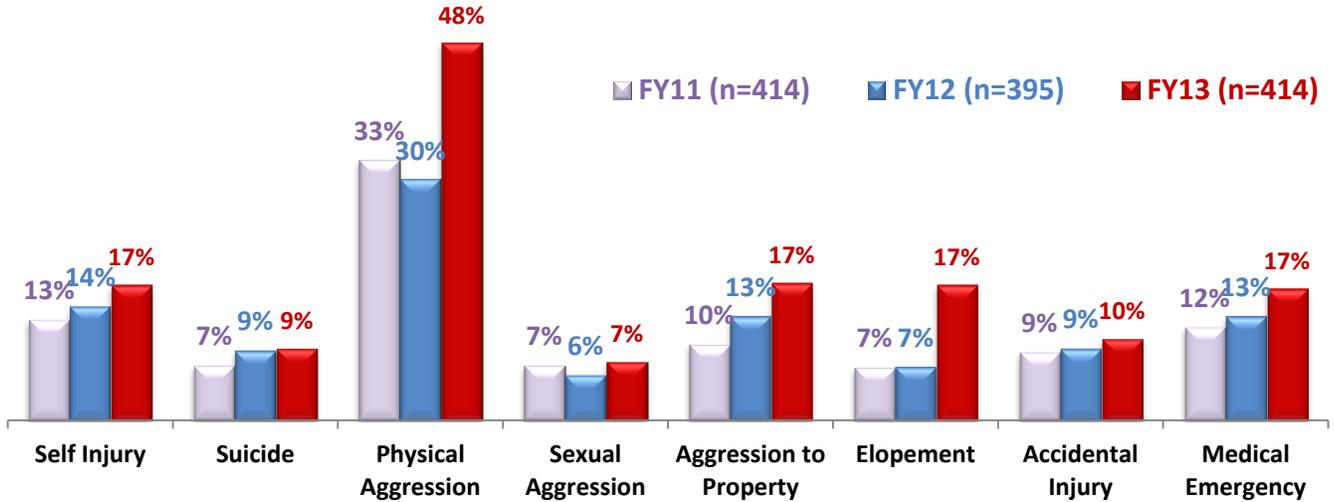
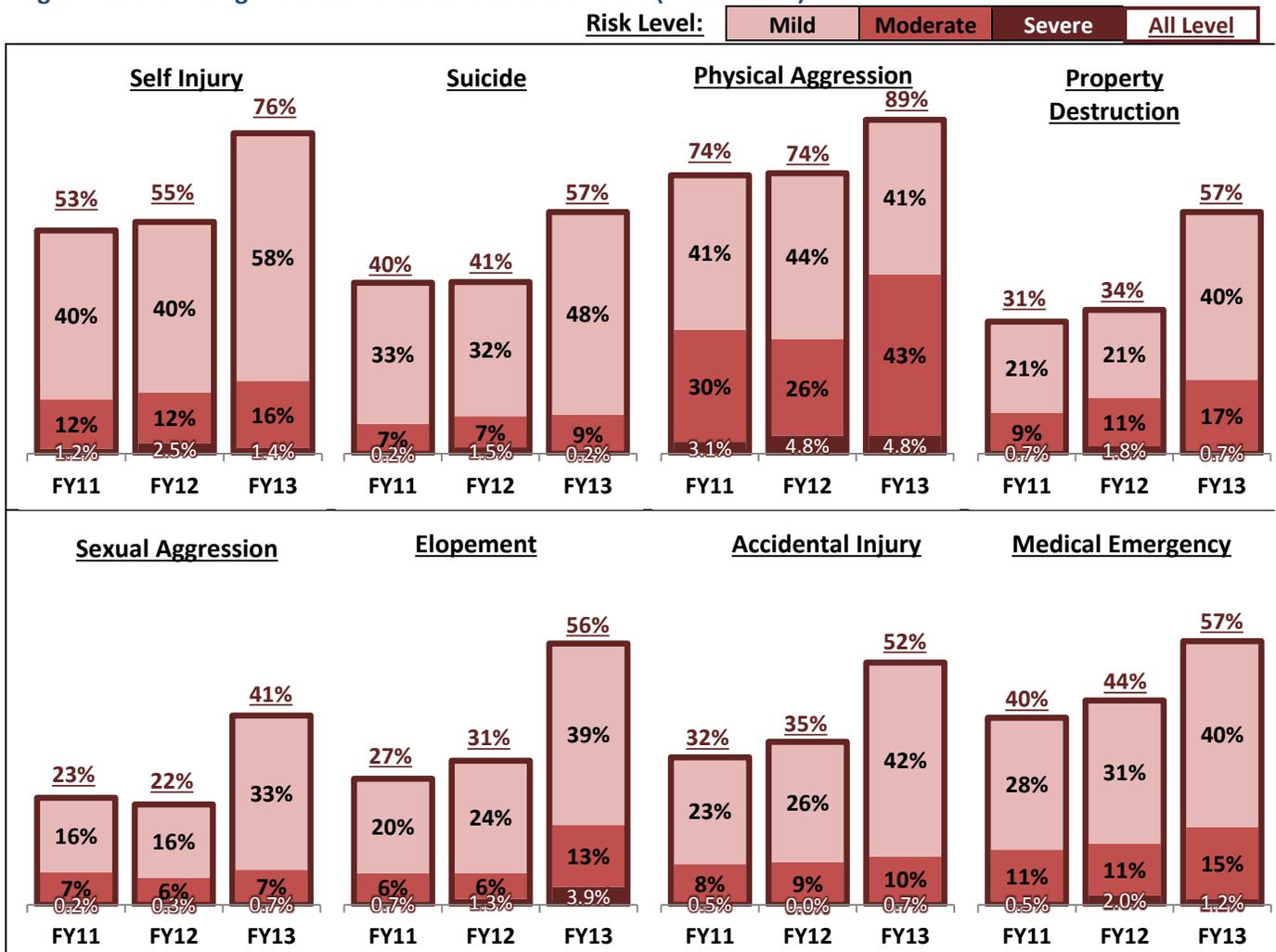


Figure 42. Percentage of Admissions with Risk Identified (FY11 ~ FY13)



VI. Unusual Incidents

- *On average, 202 unusual incidents (UI) were reported each month during FY13. This is an increase of 6% from FY12. This increase is attributed to a significant increase of medication variance reports and non-patient UIs. When they are excluded, the patient UI rate declined since FY11.*
- *The trend of UIs, particularly violence related incidents, is largely influenced by the volume of recent admissions and census: in FY13, the number of UIs increased following an increase of admissions and census, and decreased once the census declined. A majority of violence related incidents, particularly severe ones, were often triggered by recent admissions with a pre-trial legal status.*
- *One out of three individuals served was involved in one or more UIs and 14% of all served became an aggressor in one or more physical assaults. Only 2% of all individuals served during FY13 were responsible for 46% of all physical assaults reported for the year.*
- *Medical emergency incidents and falls declined in FY13.*
- *Physical Injury incidents declined for two consecutive years: both patient and staff injury declined and the patient injury rate as of FY13 is lower than NPR.*

1. Volume of Unusual Incident Reports (UI)

- During FY13, a total of 2,421, or an average of 202 unusual incidents (UIs) per month, was reported to the Risk Manager. This represents an increase of 6% from FY12, when there were a total of 2,280 or 190 UIs reported per month. This increase is primarily triggered by a significant increase of medication variance (MV) reports¹⁹ (from 7 per month in FY12 to 26 per month in FY13) and an increase of non-patient involved incidents (from 12 per month in FY12 to 20 per month in FY13).

Figure 43. Average Monthly Number of UIs & Medication Variances (FY11 ~ FY13)

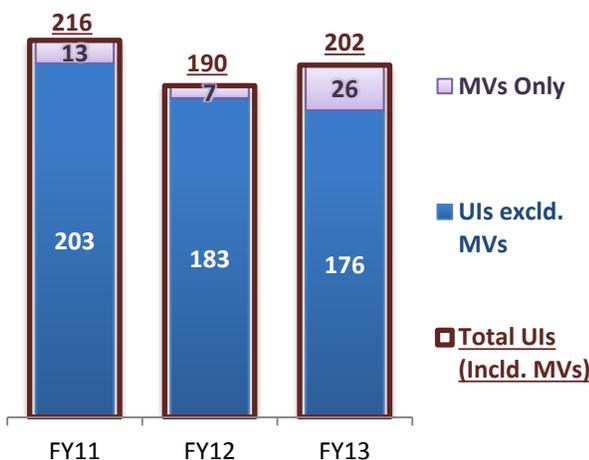
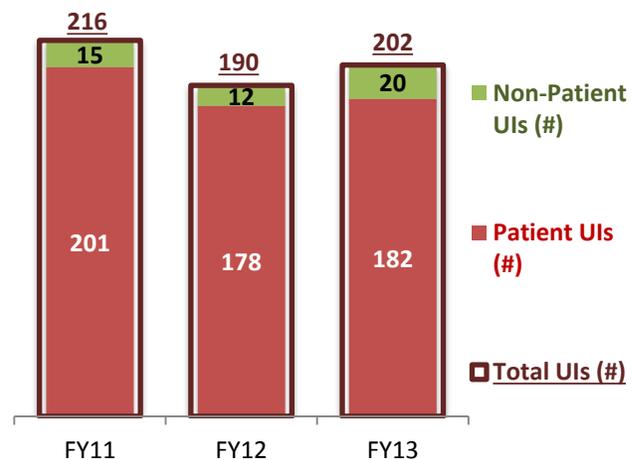
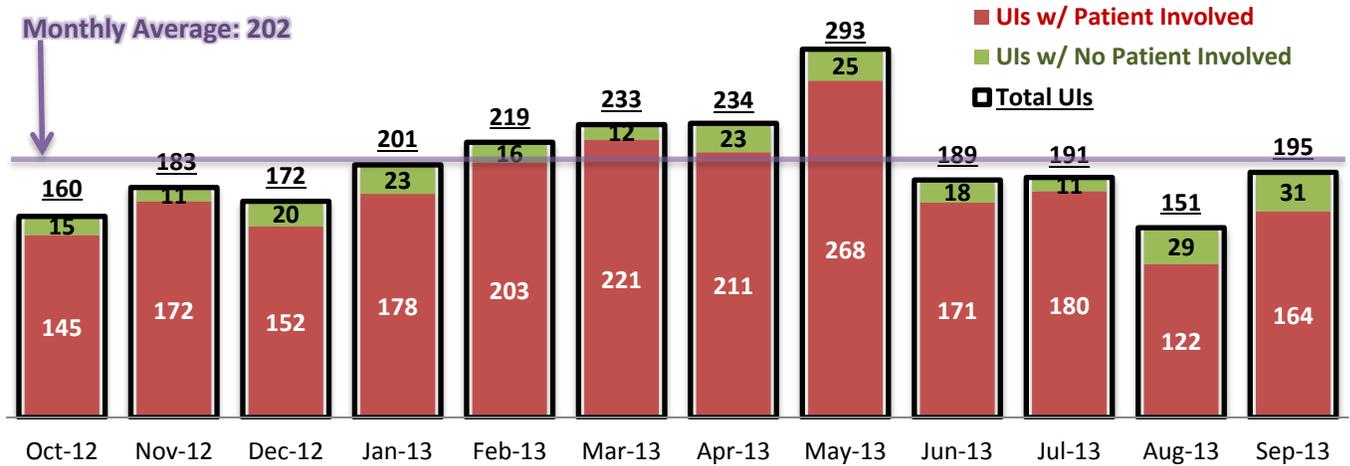


Figure 44. Average Monthly Number of Patient involved UIs vs. Non-Patient UIs (FY11 ~ FY13)



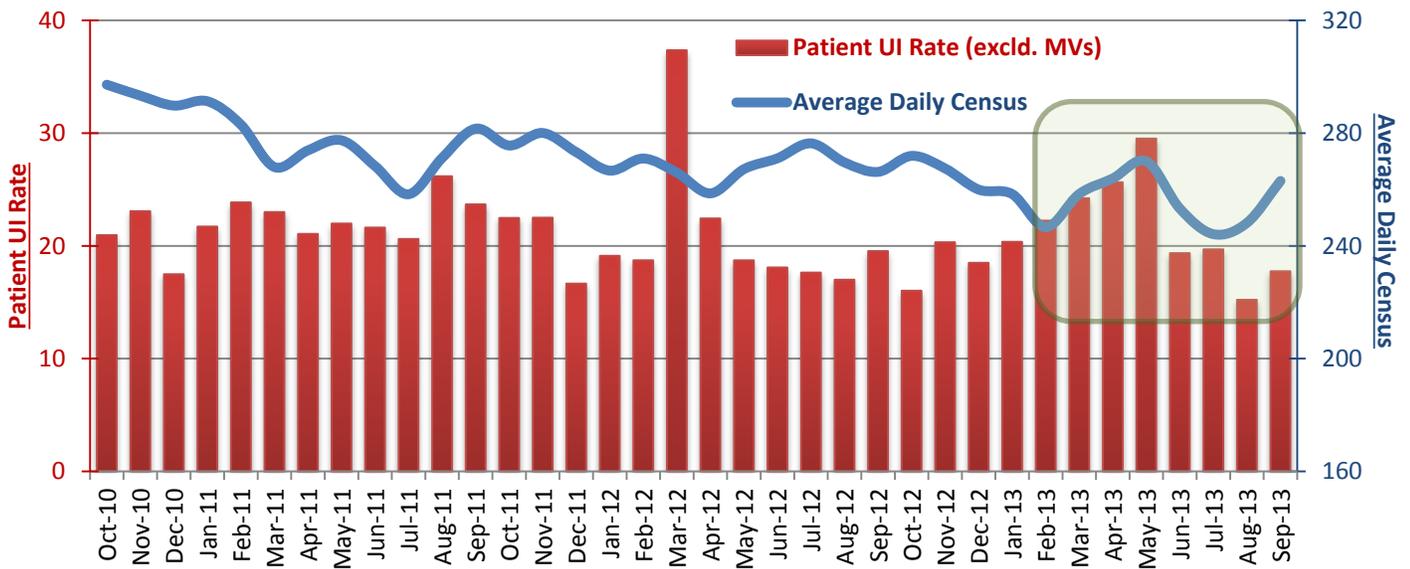
¹⁹ The trend of medication variance (MV) events often reflects more the reporting pattern than actual frequencies of MV events. Additionally, in March 2013, the Hospital implemented an automated medication distribution system, Pyxis, which triggered a significant increase of MV reports related to Pyxis during the early stage of implementation. As of November 2013, an MV event is no longer reported as a UI but it was still part of UI reports during FY13.

Figure 45. Trend in the Number of UIs by Month (FY13)



- During FY13, the number of UIs in eight (8) out of 12 months was lower than the monthly average (202). It went above the average from February through May 2013, when the Hospital’s patient days and the average daily census considerably increased.
- The frequency and trend of UIs, particularly violence related incidents, are often influenced by census and recent admissions. This pattern was manifested particularly in the patient UI trend during FY13: a steady increase in the number of patient UIs was observed from February through May of 2013 as the average daily census also increased during this period. As the census dropped during the 2013 summer, the number and rate of patient UIs declined. A further analysis is presented in *Figure 51. Trend of Violence related UIs vs. Trend of Admissions and Census (FY13)* on page 42.

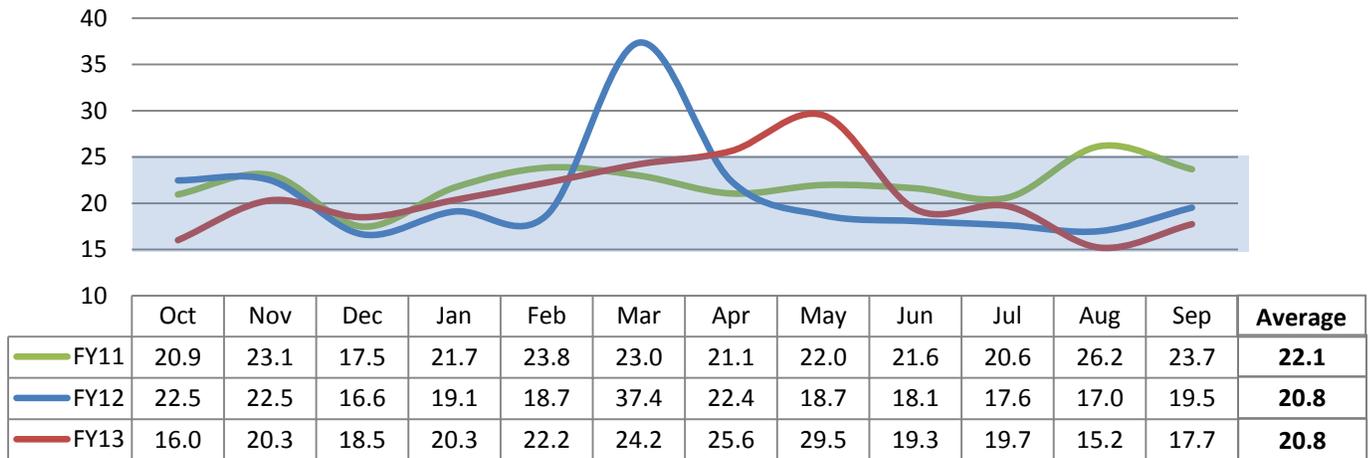
Figure 46. Trend in the Number of UIs vs. Trend of Average Daily Census (FY11 ~ FY13)



- The patient UI rate measures the number of patient-involved incidents that occurred per 1,000 patient days and factors in the number of patients served each month, allowing us to assess the UI trend more objectively than the monthly total number of days. Over the past three (3) years, the patient UI rate, when the number of MV events was excluded, ranged between 15 and 25 per 1,000 patient days except for a couple of months. This can be translated into an average of 4 to 6 patient related UIs on a given day if one assumes SEH serves a

total of 250 individuals in care daily²⁰. The average patient UI rate for the year 2013 remained at 20.8 same as FY12 while it declined from 22.1 in FY11.

Figure 47. Patient UI Rate (excluding MVs) by Month (FY11 ~ FY13)



2. Individuals Involved in UIs

- On average, one out of three individuals served at the Hospital is involved in one or more UIs during a month time period. In FY13, the Hospital served an average of 299 unique individuals per month. Of those, 109 or 36% were involved in at least one UI each month. However, 61 out of 109 experienced only one incident whereas the other 48 were involved in more than one incident within a month. Those 48 individuals constitute about 16% of the total population (299) served but account for 66% of the monthly UIs. Of the 48 individuals, 14 (5% of the total population) were involved in four (4) or more UIs within a month time period and they all together were involved in 23% of UIs. *Section VI.5 Aggressors of Physical Assault and Aggressive Behavior Incidents* on page 43 below will present further data on frequent aggressors of violent UIs.

Table 15. Unique Individuals in Care Involved in UIs (FY13)

# of Incidents Involved	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Mean	Percent
1 Incident	66	58	52	70	56	74	55	60	58	57	54	71	61	20%
2 Incidents	18	21	19	15	35	20	26	28	17	24	20	30	23	8%
3 Incidents	17	9	13	11	12	8	7	15	7	13	7	10	11	4%
4~5 Incidents	4	10	5	10	9	6	10	9	10	10	6	6	8	3%
6~10 Incidents	2	8	6	3	3	6	7	8	7	5	2	4	5	2%
>=11 Incidents	1	0	0	1	1	2	2	6	1	0	0	0	1	0.4%
<i>Pts involved >=4UIs (#)</i>	7	18	11	14	13	14	19	23	18	15	8	10	14	5%
Total Pts involved in UI	108	107	96	111	117	117	107	126	100	109	89	121	109	36%
Total served during month	310	306	297	298	298	294	310	310	299	286	285	299	299	100%

* One unique individual may be involved in multiple UIs in different roles throughout the year.

3. UI by Type and Severity

- A major incident implies an incident which poses a significant danger, or is likely to result or has resulted in serious consequences to the health and safety of individuals in care, staff or visitors²¹. During FY13, the overall percentage of major UIs for the year was 56%, ranging between 43% and 74% each month.

²⁰ The number 250 is slightly lower than the actual average daily census for FY13.

Table 16. Major UIs vs. Non-Major UIs (FY13)

Major vs. Non-major	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total	Mean	Percent
Major Incidents (#)	96	120	127	133	116	101	115	175	87	94	71	112	1347	112	56%
(%)	60%	66%	74%	66%	53%	43%	49%	60%	46%	49%	47%	57%	56%		
Non-Major Incidents (#)	64	63	45	68	103	132	119	118	102	97	80	83	1074	90	44%

- The proportion of major UIs showed a steady decline since FY10, when at least two out of three UIs (66%) were considered to be major UIs. The percentage of major UIs decreased to 59% in FY12 and to 56% in FY13.
- All incidents are coded for their severity level when reviewed by the Risk Manager based on the Hospital’s *Unusual Incident Reporting and Documentation Policy*. A majority of UIs reported during FY13 were coded as low (53%) or medium (38%) in severity and only 9% were considered high severity.
- Both the number and the percentage of medium or high severity incidents consistently declined since FY11. Particularly, in FY13, the average number of high severity incidents per month was 19, a decreased by 14 or 42% from the average in FY12 (33) despite that the total number of UIs increased in FY13. The increase of UIs in FY13 was primarily from low severity incidents: low severity incidents comprised 41% in FY12 but increased to 53% in FY13. It should be noted that there was no UI considered to be catastrophic²² in FY13.

Figure 48. Major UIs vs Non-Major UIs (FY11 ~ FY13)

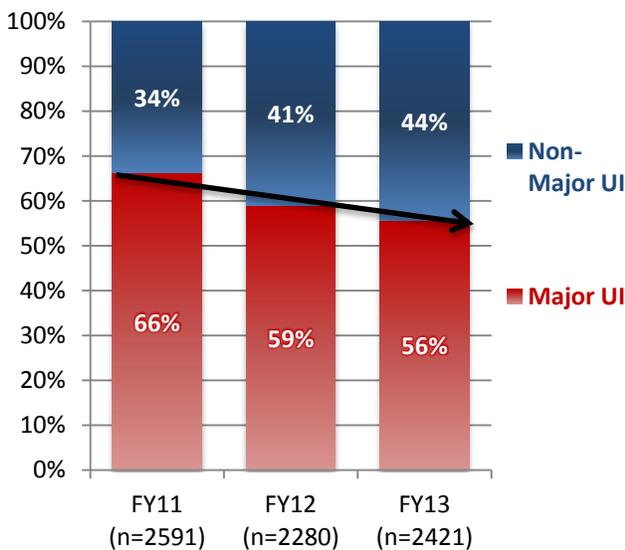
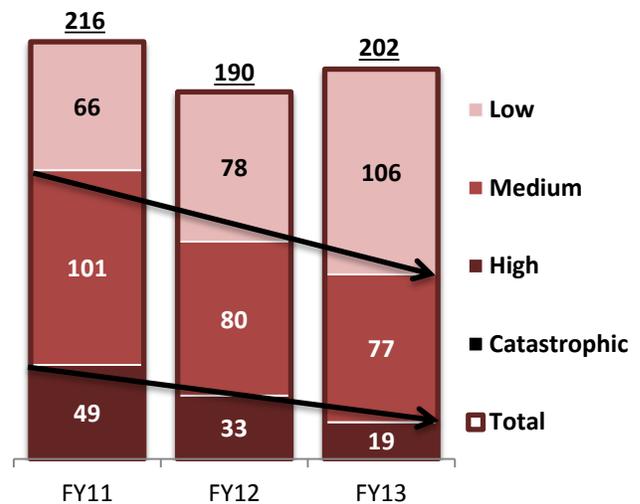


Figure 49. Monthly Average Number of UIs by Severity (FY11 ~ FY13)



4. Physical Assaults and Violence Related UIs

- UIs related to some type of violence, including aggressive behavior, physical/sexual assault, property destruction, psychiatric emergency, seclusion/restraint event, self-injurious behavior, or suicide attempt/gesture, composed 44% of all patient UIs reported during FY13.
- Nearly half of violence related UIs were physical assaults, in which an individual in care uses unwarranted physical force against peers or staff members. The number of physical assaults, however, declined over the past three years: from the average of 45 per month in FY11 to 38 in FY12 and 36 in FY13.
- In contrast, the frequency of aggressive behaviors, where an individual exhibited intimidating or threatening behavior towards a peer or staff without any physical contact, increased in the past three (3) years. During

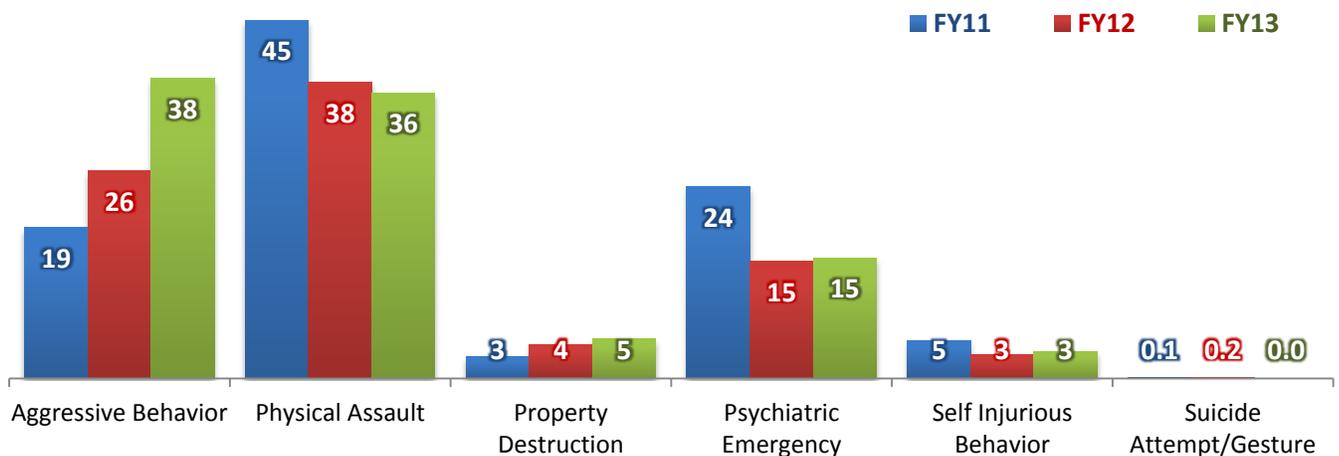
²¹ Unusual Incident Reporting and Documentation Policy, Saint Elizabeths Hospital, Effective 1/22/2003 and Revised 10/31/2013.

²² A catastrophic UI is an incident where there is a death or major permanent loss of function.

FY11, an ‘aggressive behavior’ was added as a new UI reporting category and only 19 incidents were reported per month for this category. The monthly average number increased to 26 in FY12 and 38 in FY13, which was higher than the number of physical assault incidents and made up 21% of all patient UIs. This increase of aggressive behaviors may be due in part to an increase of reporting as it is a recently added category. At the same time, this trend can be further explained in the context of the declining trend of physical assaults over the same span. Improved responses and interventions by the treatment team, when an individual exhibits an aggressive behavior, may have contributed to a decrease in physical assaults as they successfully prevented many aggressive behaviors from turning into assaults. In addition, the decrease in physical assaults is noteworthy since more individuals admitted recently presented a higher level of risk for violence at admission (see *Chapter V.8 above* on page 35).

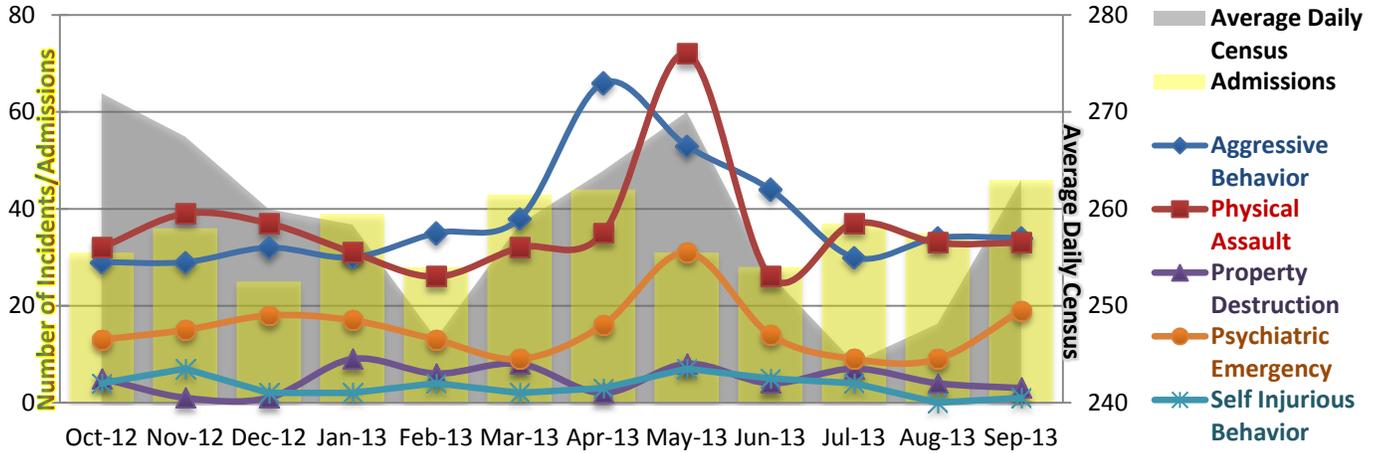
- In FY13, property destruction incidents occurred about five times per month, which is a steady increase for consecutive years: 3 incidents per month in FY11 and 4 incidents per month in FY12.
- The number of incidents involving psychiatric emergency significantly dropped from an average of 24 per month in FY11 to 15 per month in FY12 and FY13. Many of the psychiatric emergency incidents accompanied aggressive behaviors or physical assaults. Also, one out four psychiatric emergency incidents involved seclusion events to prevent harm or injury to individuals and or staff.
- Self-injurious behavior or suicide attempt/gesture is another form of violence being monitored and reported as a UI. The frequency of self-injurious behavior incidents remained at three per month for both FY12 and FY13. There were no incidents of suicide attempt/gesture in FY13.

Figure 50. Monthly Average Number of Violence Related UIs (FY11 ~ FY13)



- A series of our previous studies on violence suggest that individuals who have been recently admitted are more likely to engage in aggressive acts while they are adjusting to a new environment and their medication regimens. The FY13 trend of violence related incidents overlaid on the trend of admissions and census illustrated that the frequency of violence, particularly physical assaults and aggressive behaviors, increased when recent admissions and average daily census increased. Likewise, the frequency of such incidents decreased after a decline in admissions and census. The extremely high number of aggressive behaviors and physical assaults reported during April and May 2013 followed a steep increase of admissions between March and April 2013 that contributed to a significant increase of census in April and May. This trend, however, reversed as the number of admissions and the average daily census dropped in the following months.

Figure 51. Trend of Violence related UIs vs. Trend of Admissions and Census (FY13)



- The fact that a majority of violence incidents took place in the admission units (1D, 1E, 1F & 1G) further demonstrates that individuals who have been recently admitted are more likely to present high risk of violence: 54% of aggressive behaviors, 49% of physical assaults and 87% of psychiatric emergency incidents reported in FY13 occurred in those four admission units.
- Among admission units, 1E and 1F had most incidents of aggressive behaviors and psychiatric emergencies whereas the frequency of physical assaults was noticeably higher on 1D compared with other admission units.

Figure 52. Violence Related UIs by Location of Incidents (FY13)

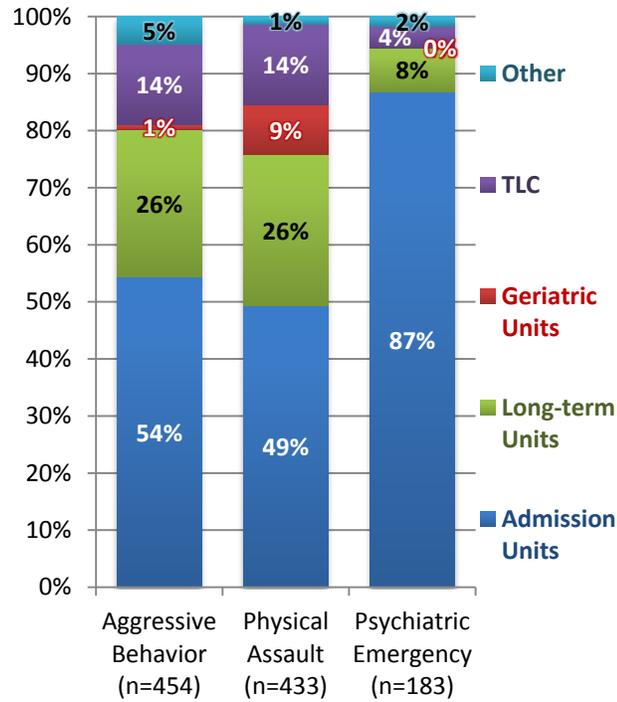
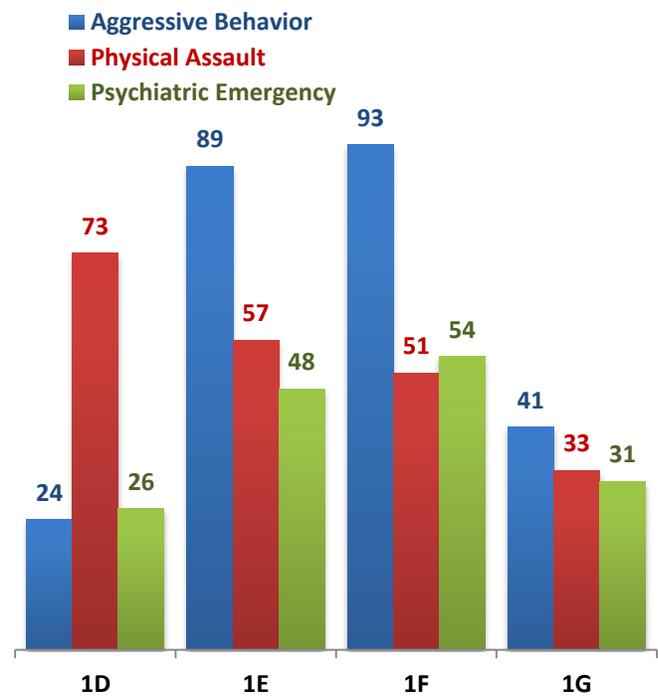


Figure 53. Total Number of Violence Related UIs among Admission Units (FY13)



- In FY13, the number and the proportion of high severity physical assaults significantly dropped: In FY12, there were a total of 104 physical assault incidents (23%) considered to be in high severity. The number of high severity UIs dropped to 56, which represent only 13% of all physical assault incidents in FY13.

- Although a majority of physical assault incidents (53%) occur primarily during the day shift, between 7:00 a.m. and 3:00 p.m., such incidents occur as early as 5:00 a.m. and continue until late night.
- The time pattern of physical assault incidents in FY13 is very similar to the FY12 trend. The frequency of assaults starts rising from 5:00 a.m. and peaks at between 8:00 a.m. and 9:00 a.m., right after breakfast, morning medication administration and shift changes while individuals are getting ready for routine activities. Once a majority of individuals start treatment groups and activities at 9:00 a.m., it noticeably declines until lunch break between 11:00 a.m. and 1:00 p.m. This pattern continues until the evening hours: the frequency rises again between 6:00 p.m. and 7:00 p.m., during and right after dinner time and evening medication administration. Afterwards, it drops every hour with a slight rise between 11:00 p.m. and midnight.

Figure 54. Physical Assaults by Severity (FY11 ~ FY13)

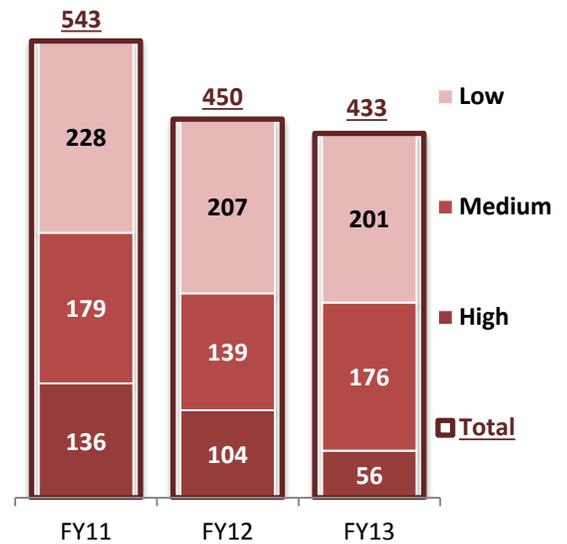
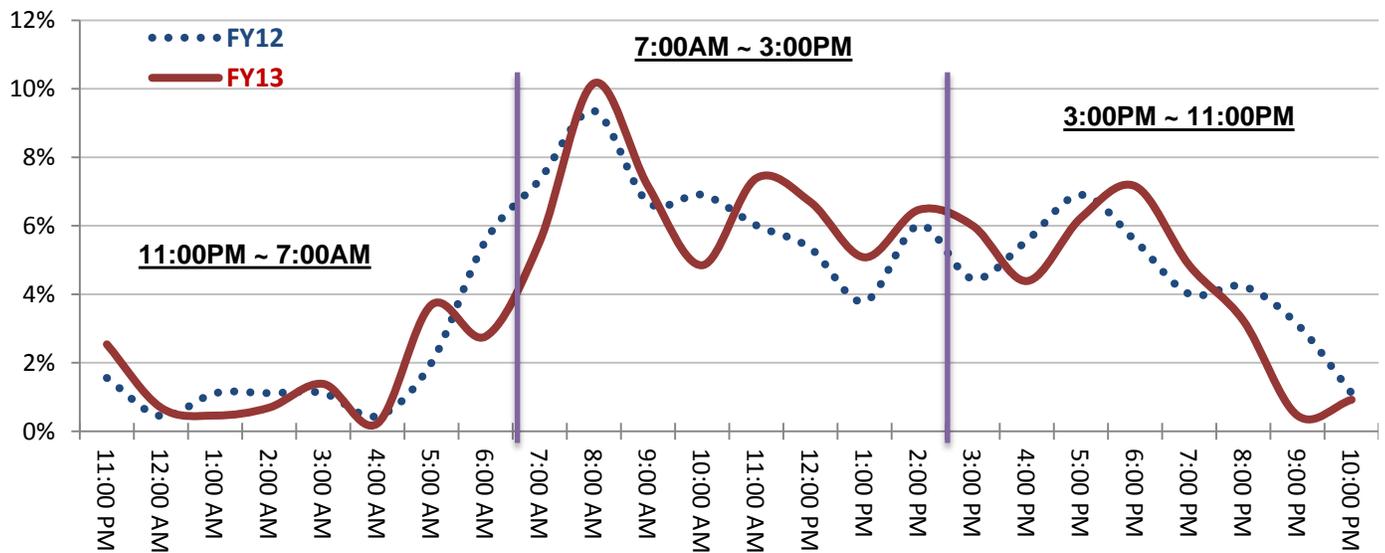


Figure 55. Time Trend of Physical Assault Incidents (FY12 ~ FY13)



5. Aggressors of Physical Assault and Aggressive Behavior Incidents

- Like the pattern found for overall unusual incidents, a relatively small number of individuals trigger violence related incidents. During FY13, on average, the Hospital served a total of 299 unique individuals who stayed for at least one day in care during month. Of those, only 38 or 13% were aggressors for one or more physical assaults and/or aggressive behavior incidents.
- A majority of those 38 individuals engaged in only one incident and an average of fewer than seven (7) individuals became frequent aggressors responsible for at least three assaults or aggressive behaviors per month. Those 7 compose about 2% of all individuals served each month.
- In FY13, a total of 208 unique individuals, or 34% of all individuals served for at least one day, were aggressors for at least one aggressive behavior or physical assault incident during the 12 month time period. There were 21 individuals (2% of all served), each of whom triggered more than 10 violence incidents during

the year. All together they were responsible for a total of 370 physical assaults and aggressive behaviors, 42% of all physical assaults and aggressive behaviors.

Table 17. Monthly Average Number of Unique Individuals Responsible for Violence Related UIs (FY13)

Category	Count	Percent
Unique IICs Served per Month in FY13	299	100%
Unique Aggressors on >=1 Violence Incident(s)* per month	38	13%
Aggressors on 1 Violence UI	24	8%
Aggressors on 2 Violence UIs	8	3%
Aggressors on >=3 Violence UIs	7	2%

* Unduplicated individuals identified as aggressors for >=1 physical assaults or aggressive behaviors during month.

Figure 57. Median LOS for Aggressors vs. All Individuals in Care (FY13)

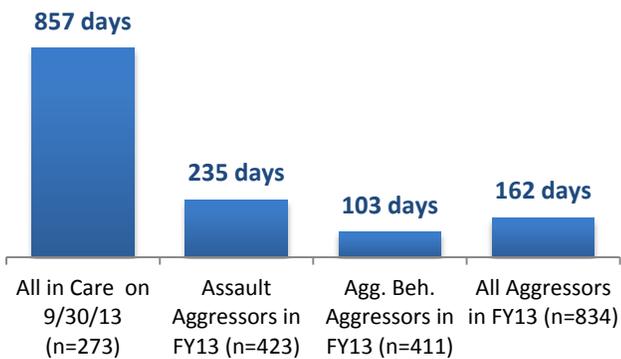
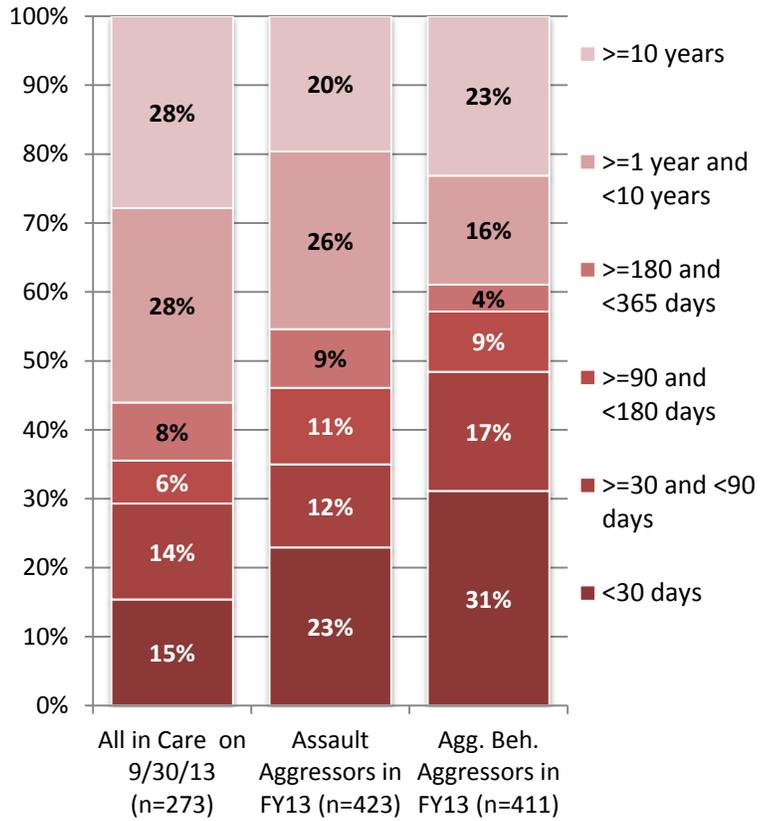
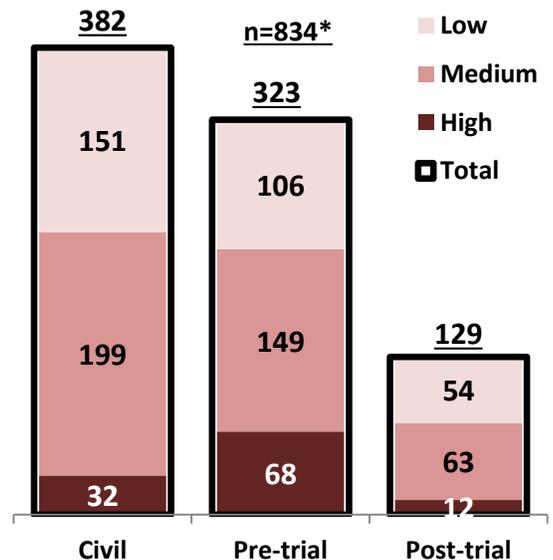


Figure 56. LOS of Aggressors vs. All in Care (FY13)



- As addressed on page 41, recent admissions are more likely to engage in aggressive behaviors and/or physical assaults than those in care for longer period. On a given day, about 12% to 15% of individuals in our care have been hospitalized for less than 30 days. During FY13, however, 23% of aggressors in physical assaults and 31% of aggressors in aggressive behaviors initiated such incidents when they had been in care only for less than 30 days. In addition, nearly half of the aggressive behaviors broke out among those who had been in care for less than 90 days.
- The median LOS data for aggressors vs. all individuals in care also demonstrates the same pattern: the median LOS for all individuals in care on September 30, 2013 was 857 days whereas the median LOS of aggressors for assaults or aggressive behaviors at the time of incidents was 162 days. Individuals who engage in aggressive behaviors tend to have shorter length than aggressors of physical assault incidents.

Figure 58. Severity of Incidents by Legal Status of Aggressors (FY13)

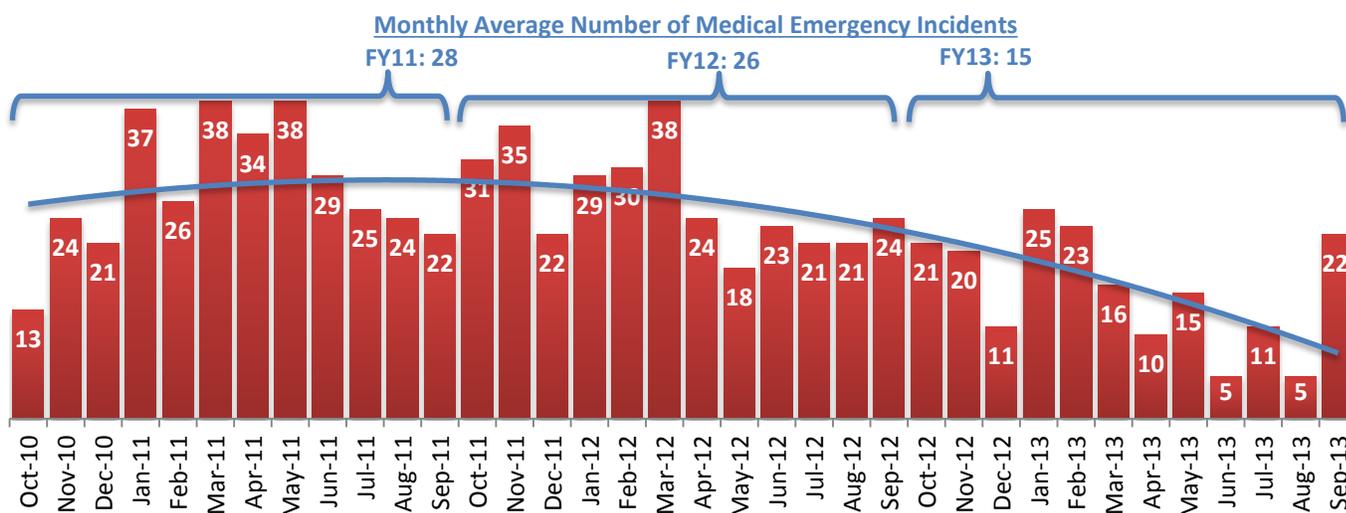


- Aggressors' admission legal status and its relationship to the severity of incidents are also noteworthy. About 46% of aggressors in FY13 assaults and aggressive behaviors were admitted with a *Civil* legal status while 39% were admitted with a *Pre-trial* legal status. However, more than three out of five aggressors (61%) who were responsible for high severity violence incidents were those admitted with a *Pre-trial* legal status whereas only 29% of aggressors initiating high severity violence incidents had been admitted with a *Civil* legal status.

6. Medical Emergency related Incidents

- The number of incidents of medical emergency situations, most of which required emergency medical transfers of individuals or staff members to outside medical facilities, decreased to a total of 184 or 15 per month in FY13 from a total of 316 or 26 per month in FY12. This represents a 42% decline. This trend is consistent with the trend of actual emergency medical leaves (medical transfers of individuals in care) that significantly declined in FY13 (see Chapter I.7 above on page 14).
- Over one third (35%) of medical emergency incidents occurred for individuals residing in the geriatric units (1A and 1B). About another one third (31%) of medical emergency incidents took place among admission units (1D, 1E, 1F & 1G).

Figure 59. Medial Emergency related UIs (FY11 ~ FY13)



7. Falls

- A total of 224 fall incidents or 19 per month were reported in FY13. Of those, 19 incidents (8%) involved staff only and the other 205 incidents involved individuals in care, including one incident that involved both an individual in care and a staff member. The resulting average of 17 patient falls per month was a slight decrease from FY12. However, the patient fall rate, which factors in the census reduction in FY13, indicates a marginal increase from FY12.
- The number of individuals in care who fell repeatedly decreased noticeably for consecutive years. In FY12, on average, about 14 unique individuals fell per month and of the 14, about three individuals had more than one fall incident. In FY13, about 13 unique individuals fell a month and less than two individuals fell more than once during a month time period.

Figure 60. Patient Falls vs. Staff Falls (FY11 ~ FY13)

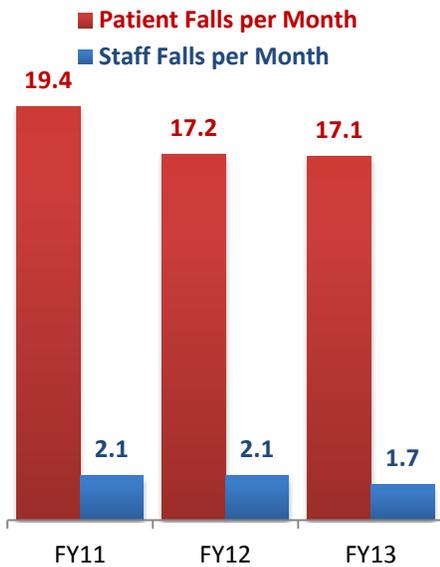
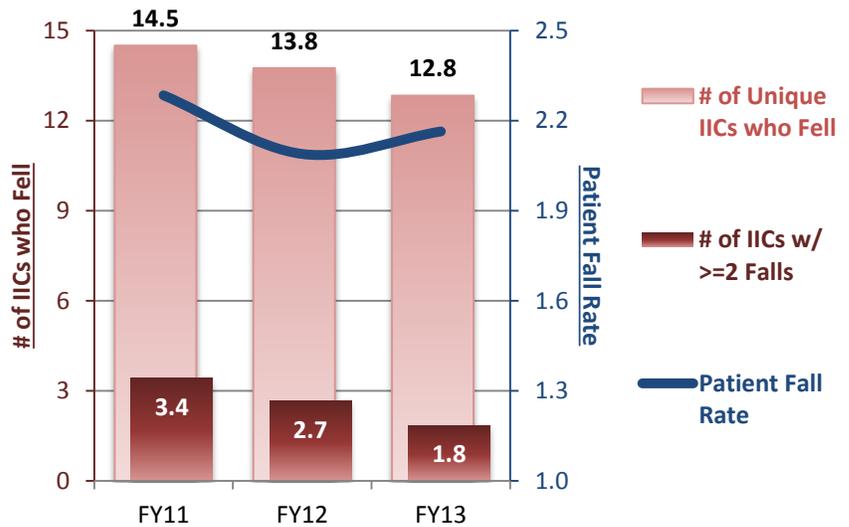


Figure 61. Average Number of Unique Individuals who Fell per Month and Patient Fall Rate (FY11 ~ FY13)



- Although a majority of fall incidents are patient falls, a fall incident by a staff member is more likely to involve an injury: of the 205 falls by individuals in care reported in FY13, 55 or 27% triggered patient injuries whereas 70% of 14 falls by staff were reported to have resulted in injuries. It is suspected, however, that staff falls may not have been always reported unless the fall incident resulted in an injury, contributing to a higher percentage in the likelihood of injury when staff falls.
- Most fall incidents (81%) occurred within units but one out of five fall incidents took place outside the units, including the Therapeutic Learning Center (TLC). Of the 205 patient falls, 45% involved individuals from the geriatric units (1A and 1B). Among non-geriatric units, 1C and 2D recorded a relatively large number of patient falls. Falls by individuals from admission units (1D, 1E, 1F & 1G) made up about 19% of the fall incidents. However, considering that admission units generally serve more individuals in care in a given month, their fall incident rates were much lower than the fall rates of long-term units'.

Figure 62. Injury Rate from Reported Fall Incidents (FY13)

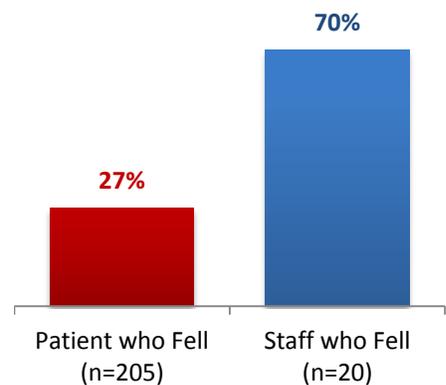
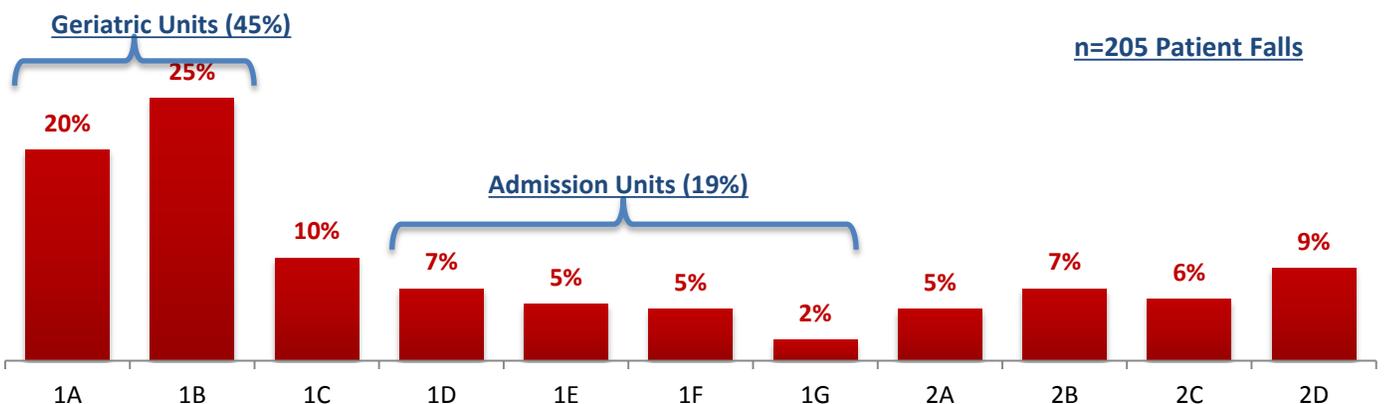


Figure 63. Individuals in Care who Fell by their Unit (FY13)



8. Physical Injury

- During FY13, there were a total of 320 incidents or 27 a month reported for physical injuries. This is a decline of about 13% from 367 (31 per month) in FY12 and 409 (34 per month) in FY13.
- Of the 320 injury incidents, 205 or 64% involved one or more patient injuries and 118 or 37% involved one or more staff injuries. Four (4) of those incidents involved both patient and staff injuries. Only one injury incident was reported for a visitor.
- Some incidents results in an injury to more than one individual: the 205 injury incidents involved injury of a total of 219 individuals in care. A majority of those 219 injuries, however, were minor and were treated at the unit or medical clinic at the Hospital. Any injury that requires a transfer to an external medical facility is considered to be a major injury and of the 219 patient injuries, 22 were coded major injuries.
- Incidents resulting in patient and staff injury declined in the past three years. During FY13, on average, 18 individuals in care were reported for physical injury per month. There were 22 per month in FY12 and 24 per month in FY11. The number of staff reported for injury decreased from 15 per month in FY11 to 13 in FY12 and to 11 in FY13.
- The patient injury rate is calculated based on the number of major injuries per 1,000 patient days and it shows a noticeable decline from FY12 to FY13. The Hospital’s patient injury rate in FY13 (0.23) is lower than the nation public rate (NPR, 0.34).

Figure 64. Physical Injury Associated with Assault and Falls (FY11 ~ FY13)

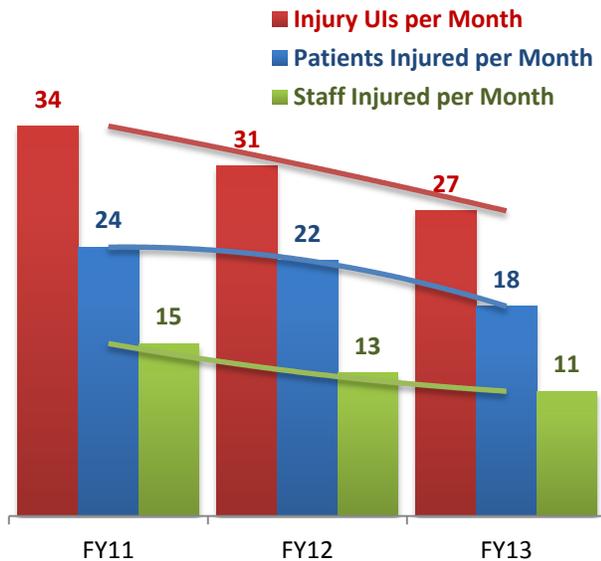
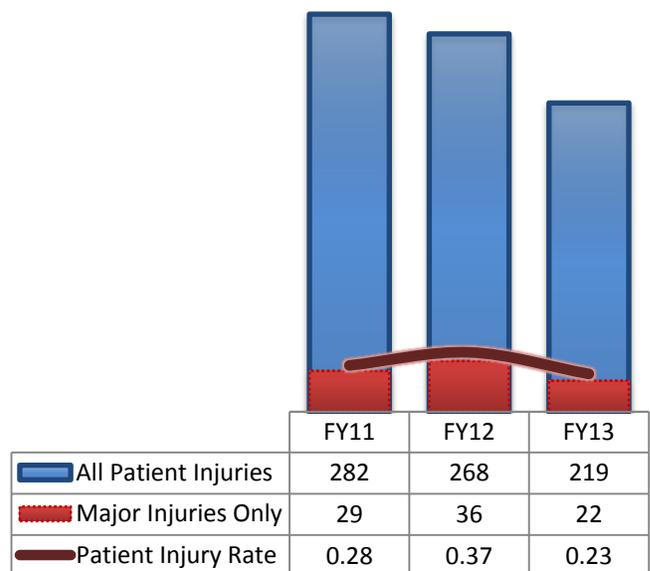


Figure 65. Percentage of Injuries from Fall Incidents (FY11 ~ FY13)



- Most of the physical injury incidents are the result of physical assaults and/or fall incidents. Of the 219 individuals in care who were injured in FY13, 115 or 53% were involved in physical assaults and 55 or 25% were injured from fall incidents. Eleven (11) patient injuries sustained from falls that occurred in conjunction with physical assaults. The other 60 or 27% were caused by other types of incidents, such as accidental hits, or the cause of injury was not identified or unknown.
- The primary cause of staff injury is also a physical assault. Of the 131 staff injuries reported in FY13, 95 or 73% were related to physical assault incidents while 14 or 11% were related to fall incidents.

Figure 66. Percent of Patient Injury Associated with Assault and/or Fall (FY13)

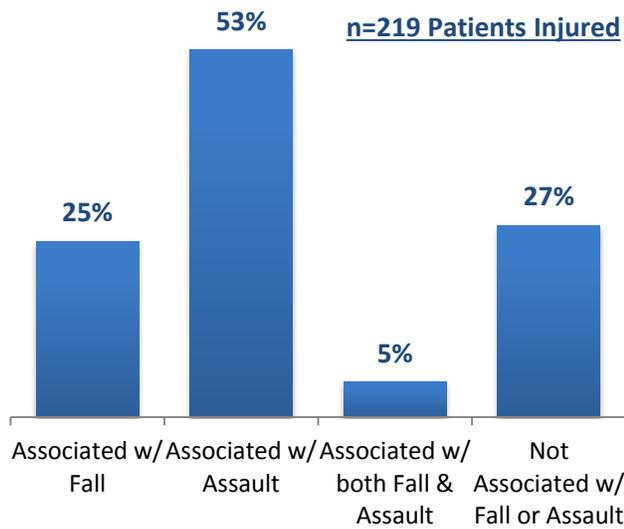
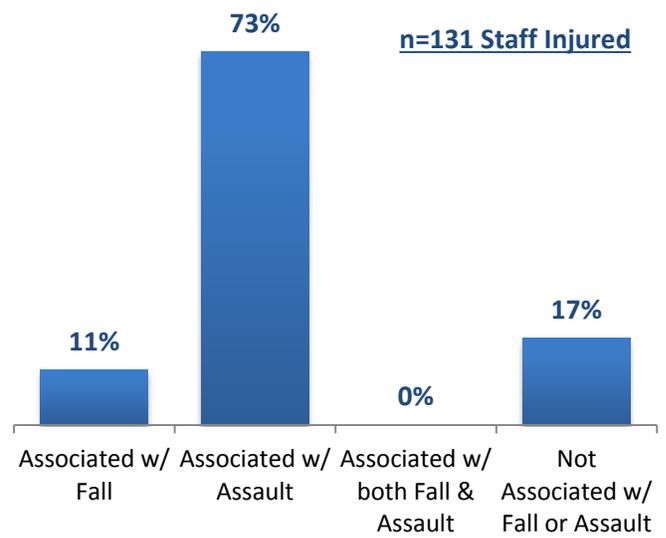


Figure 67. Percent of Staff Injury Associated with Assault and/or Fall (FY13)



- A majority of patient injuries are one time incidents but there are a fair number of individuals who are repeated victims of injuries. The 219 patient injuries reported in FY13 involved a total of 125 unique individuals in care and of those, 45 had more than one injury. In particular, there were four (4) individuals, each of whom was reported for more than six injuries during the year. Of those, one (1) individual was injured all from physical assaults, two (2) were injured mostly from fall incidents, and the other one was injured mostly from self-injurious behaviors.