



Government of the District of Columbia
Department of Mental Health (DMH)



SAINT ELIZABETHS HOSPITAL



FY12

TREND ANALYSIS

Hospital Statistics

March 11, 2013

Published by Office of Statistics and Reporting, Saint Elizabeths Hospital
1100 Alabama Ave., SE, Washington, DC 20032

☎ (202) 299 - 5430

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Data Disclaimer

The primary source of data extracted and analyzed herein is Avatar, the Hospital’s client information management system. Additional data sources include the Hospital’s Unusual Incident database, Adverse Drug Reaction database, High Risk Monitoring database, and the Nursing Office’s Restraint/Seclusion Log. 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 1852, 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. As of September 30, 2012, SEH was serving a total of 279 individuals in care.

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 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 routinely and proactively use data at all levels in assessing our service delivery and developing evidence based strategies. We believe that this will continue to improve the quality of services to individuals in our care.

Areas covered in this 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; medication related data; and findings from unusual incident data including use of seclusion and restraint. 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 interesting trends that may prompt your greater attention.

While the Hospital census is continuing to decline, the proportion of the population who are elderly consistently increased over the past four years. As of September 30, 2012, the median age of all individuals in care was 55 years old and one third of individuals in care were 60 years or older while this age group comprised only 22% in November 2007. Additional analysis suggests that the increasing proportion of older adults in the Hospital

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.

population is not driven by new admissions but by individuals who have been hospitalized for a long period of time and continue to remain in care. The increase of elderly population also contributed to an increase of those with a major medical condition or physical disorder, including obesity and diabetes. At end of FY12, 42% of individuals in care were obese as their BMI was 30 or above; and one out of four individuals in care was diagnosed as having *Type II Diabetes*.

The length of stay (LOS) data further explains the aging trend among individuals in care. The median LOS for individuals remaining in care consistently increased in the past five years, reaching 946 days (31 months) as of September 30, 2012. The median LOS in FY12 increased for all types of legal status but particularly among those entering with a forensic pre-trial legal status and those who had been residing at the Hospital for one year or longer regardless of their legal status. Those who have been in care long term continue to remain at the Hospital and their lengths of stay as well as ages continue to increase.

The Hospital's readmission rate in FY12 increased slightly but is still significantly lower than the national trend. However, repeated readmissions of the same individuals continued to increase. Individuals admitted with a mood disorder are likely to be discharged more quickly but are more likely to return to the Hospital as well. Also, those who are older at discharge are more likely to be readmitted. Finally, readmissions tend to occur more frequently among individuals who were discharged with a shorter LOS during their previous hospitalization than those discharged with a longer LOS.

Since the Hospital moved to the current building in FY10, the number of unusual incidents increased despite the decline of census but it finally declined in FY12, when the Hospital had an average of 190 incidents reported per month. The major areas of significant reduction include physical assaults and psychiatric emergencies. However, contraband and aggressive behavior reports increased.

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

I. Census, Admissions, Discharges, and Transfers

- *The Hospital's daily census continued to decline: 273 in September 2012.*
- *Both admissions and discharges decreased in FY12, but discharges exceeded admissions.*
- *Medical leaves increased due to aging population and/or better documentation.*

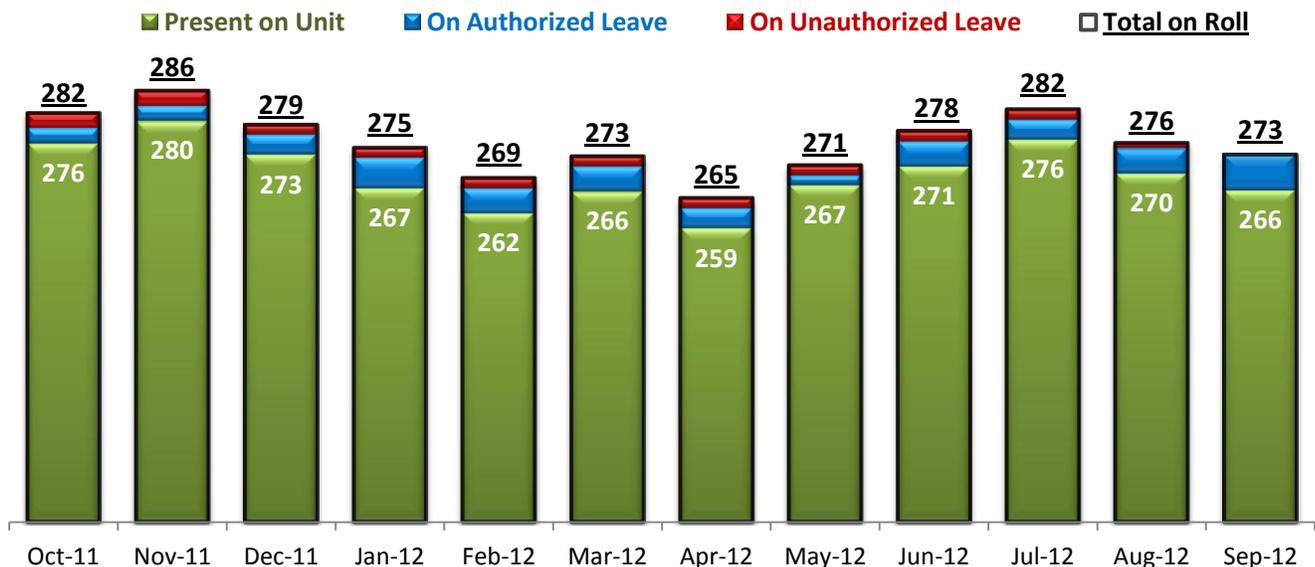
1. SEH Daily Census

- The number of individuals served by the Hospital continued to decline for the 4th consecutive year, falling 32% from September 2008 to September 2012². During the last month of FY12, September 2012, on average, a total of 273 individuals were in care per day, which is a 6% reduction from September 2011.
- The average daily census declined steadily during the first half of FY12 and reached its lowest point at 265 in the month of April 2012. Since then, however, it went up to 282 in July and declined, ending with 273 as the average daily census for the month of September.

Figure 1. Trend of Daily Census (FY06 ~ FY12)



Figure 2. Daily Average Number of Individuals in Care (FY12)



- During FY12, on a given day, an average of six (6) individuals in care were away from the facility; four (4) on authorized leave and two (2) on unauthorized leave.

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 FY12 comes from the current information management system, AVATAR.

Table 1. Individuals in Care on Leave on a Given Day (FY12)

	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	FY12 Average
Authorized	3	3	4	6	5	5	4	2	5	4	5	7	4
Unauthorized	3	3	2	2	2	2	2	2	2	2	1	0	2

- As the census decreased, patient days³ also continued to decline. In FY10, the patient days totaled 115,676, falling by 12% to 102,002 in FY11. The total patient days in FY12 fell again to 98,608 days, which is a 3% reduction. It also corresponds to an average of 269 individuals in care present at the Hospital each day.
- The total number of unique individuals served at the Hospital during FY12 also decreased from 652 in FY11 to 619 in FY12, representing a 5% decline.

Table 2. Total Patient Days and Unique Individuals Served (FY12)

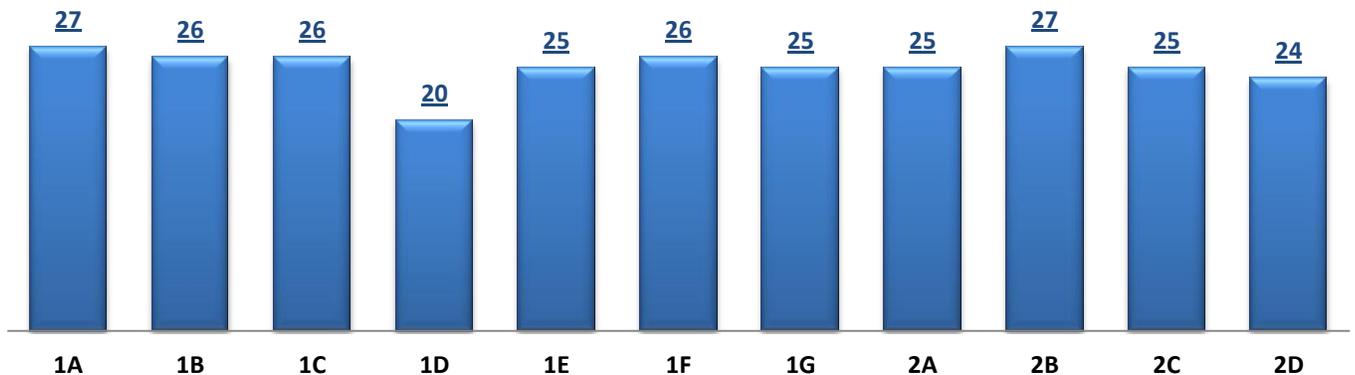
	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	FY12
Total Patient Days	8544	8402	8471	8268	7588	8246	7759	8284	8132	8568	8358	7988	98608
Total Unique* individuals Served	324	315	313	311	296	306	300	298	306	315	308	302	619**

* Some individuals may have been admitted to SEH more than once during FY12 and data herein counts the number of 'unique' individuals served regardless of the number of times they were admitted.
 **This is not the sum of monthly numbers but the total number of unique individuals served at the hospital at least one day during FY12.

2. Individuals in Care by Unit

- As of September 30, 2012, the Hospital’s 11 units were serving a total of 276 individuals present or on a short-term leave⁴. Each unit was serving on average about 25 individuals, with a range between 20 and 27, which is the maximum number of beds available in most of units. A year ago, 6 units were at their full capacity, serving 27 individuals. As of September 30, 2012, only two (2) units had all of their beds occupied.

Figure 3. Number of Individuals Served by Unit (9/30/12)



3. Admissions

- The total number of admissions during FY12 was 400, which is an average of 35 admissions per month.

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.

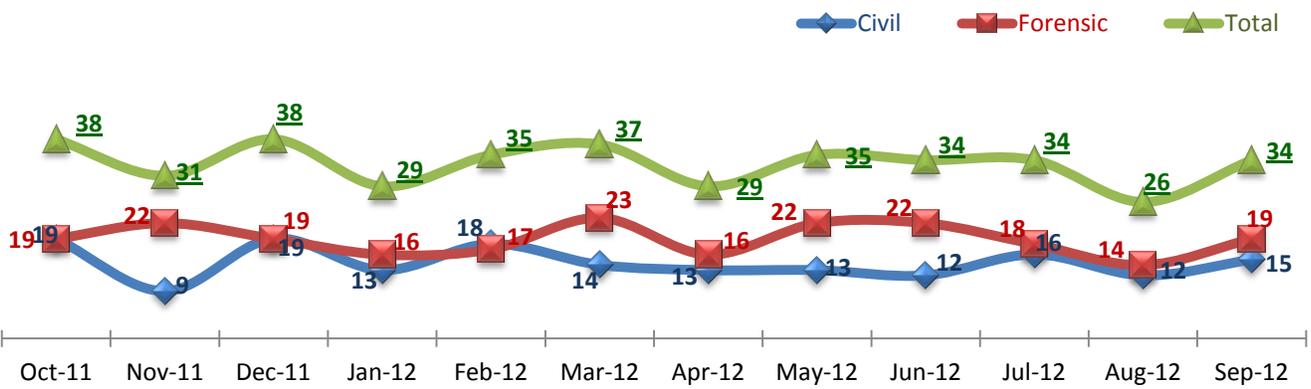
⁴ There were three (3) individuals who were on unauthorized leave and remaining in the Hospital’s roll as of September 30, 2012, but they are not included in this analysis.

- Of the 400 total admissions, 43.5% or 174 admissions (14 per month) were admitted with a civil legal status (*Civil*) and 56.5% or 226 (19 per month) were admitted with a forensic legal status⁵ (*Forensic*).
- The total number of admissions decreased 5% from 423 in FY11 to 400 in FY12. However, this decline is attributed to a 10% decrease of forensic admissions as civil admissions increased slightly in FY12.
- The number of monthly admissions during FY12 presents a cyclical pattern, increasing then decreasing almost every other month. The number of monthly admissions ranged between 26 and 38: civil admissions ranged between 9 and 19 while forensic admissions ranged between 14 and 23.

Table 3. Admissions by Legal Status (FY11 vs. FY12)

Year	Civil	Forensic	Total
FY11	171	252	423
FY12	174	226	400
Change	↑3 (2%)	↓26 (10%)	↓23 (5%)

Figure 4. Number of Admissions by Month (FY12)



- Consistent with the pattern in FY11, transfers to the Saint Elizabeths Hospital from community hospitals (psychiatric units) and admissions ordered by the court were the major sources of SEH admissions in FY12. Together they represented 88% of all admissions, exactly the same percentage as last year.

Table 4. Admissions by Source (FY10 - FY12)

Admission Source	FY10		FY11		FY12	
	Number	Percent	Number	Percent	Number	Percent
CPEP	67	15%	18	4%	22	6%
Community Hospital - Medical Unit	19	4%	6	1%	2	1%
Community Hospital - Psychiatric Unit	151	34%	149	35%	149	37%
Court/Law Enforcement	189	43%	226	53%	204	51%
Transfer from Forensic Outpatient (CL) to Inpatient	10	2%	16	4%	15	4%
Other or Not Identified*	6	1%	8	2%	8	2%
Total	442	100%	423	100%	400	100%

* This includes those whose admission source information is missing, unverifiable or categorized in inactive values in Avatar.

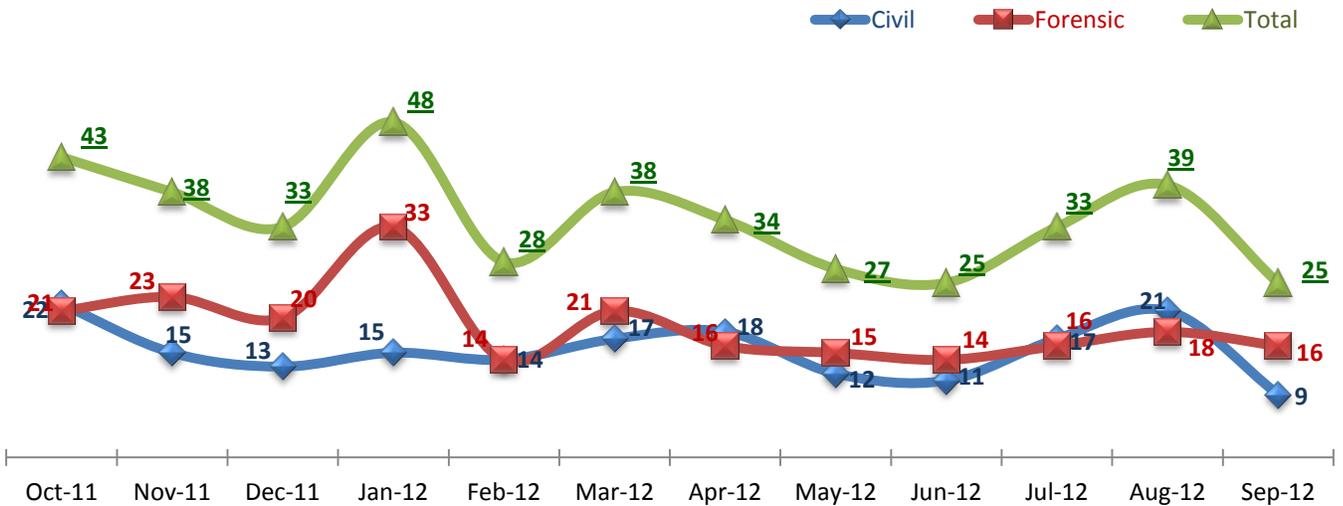
4. Discharges

- The total number of discharges during FY12 was 411 (186 in *Civil* and 225 in *Forensic*), an average of 34 discharges per month (15 in *Civil* and 19 in *Forensic*).

⁵ The number of admissions of individuals in a forensic legal status includes returns from convalescent leave of post-trial outpatients. However, the overwhelming majority of admissions in Forensic were in pre-trial status.

- Although this is a reduction of 15% from the FY11 total discharges, the total discharges in FY12 exceeded the total admissions by 11, contributing to the census reduction.
- The number of monthly discharges in FY12 peaked at 48 in January and was at its lowest at 25 in June and September.

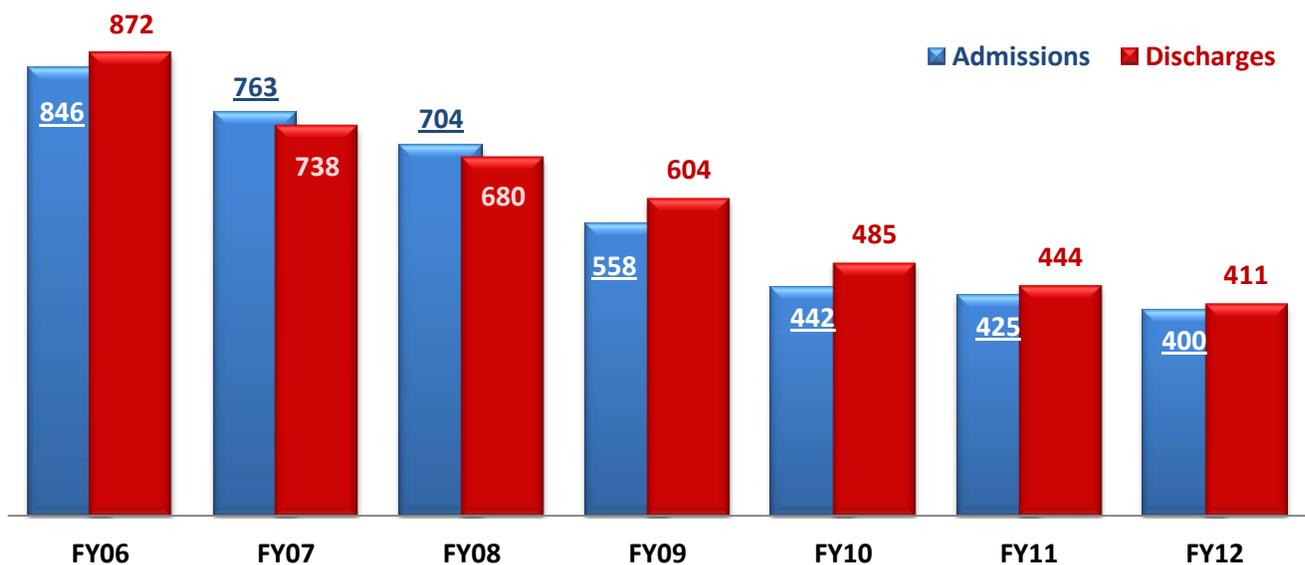
Figure 5. Number of Discharges by Month (FY12)



5. Admissions vs. Discharges

- Both admissions and discharges have decreased steadily since FY06, when there were 846 admissions and 872 discharges. Admissions (400) and discharges (411) in FY12 represent only 47% of the FY06 level.
- The number of discharges has exceeded the number of admissions every year since FY09, contributing to the steady reduction of census. The gap between discharges and admissions is narrowing, though. The net census reduction totaled 46 in FY09, 43 in FY10, 19 in FY11, and 11 in FY12.

Figure 6. Admissions vs. Discharges (FY06 ~ FY12)



6. Inter-Unit Transfers

- In FY12 the number of inter-unit transfers decreased by 20%, falling from 88 in FY11 to 70 in FY12.
- The number of monthly transfers in FY12 ranged anywhere from three (3) to 10 per month, but most months had fewer than 7 transfers.

Figure 7. Inter-Unit Transfers (FY12)



- During FY12, a total of 66 unique individuals experienced at least one inter-unit transfer. This downward trend has continued in each of the last three fiscal years, from 139 in FY10 to 74 in FY11 and 66 in FY12.
- Of those 66 individuals, three (3) individuals (5%) were transferred more than once over the 12 month period. In the previous year, 12 individuals or 16% were transferred more than once within the fiscal year.

Table 5. Unique Individuals in Care Transferred between Units (FY11 vs. FY12)

Total Inter-Unit Transfers during 12-Month Period	FY11		FY12	
	# of Individuals	Percent	# of Individuals	Percent
Once	62	84%	63	91%
Twice	10	13%	2	8%
Three (3) Times	2	3%	1	1%
Four (4) Times or More	0	0%	0	0%
Total individuals who experienced >=1 transfer in fiscal year	74	100%	66	100%
Total number of inter-unit transfers (Average)	88 (7 per month)		70 (6 per month)	

7. Leaves

- The total number of documented leave episodes in FY12 was 1783, which represents about five (5) leave episodes on a given day. This is an increase of 28% over FY11 even though the number of all individuals served and their patient days decreased about 3% from FY11 to FY12.
- During FY12, a total of 564 medical leave episodes, including 268 emergency medical leaves (EML, likely medical transfers to external medical facilities) and 296 non-emergency leaves, were recorded. This is an increase of 21% from 467 in FY11.
- The monthly average number of EMLs was 22 and that of non-emergency medical leaves was 25.
- While EMLs for the fiscal year increased by 18, non-emergency medical leaves increased by 79. It should be noted that a majority of non-emergency medical leaves (82%) were same day leaves and returns for

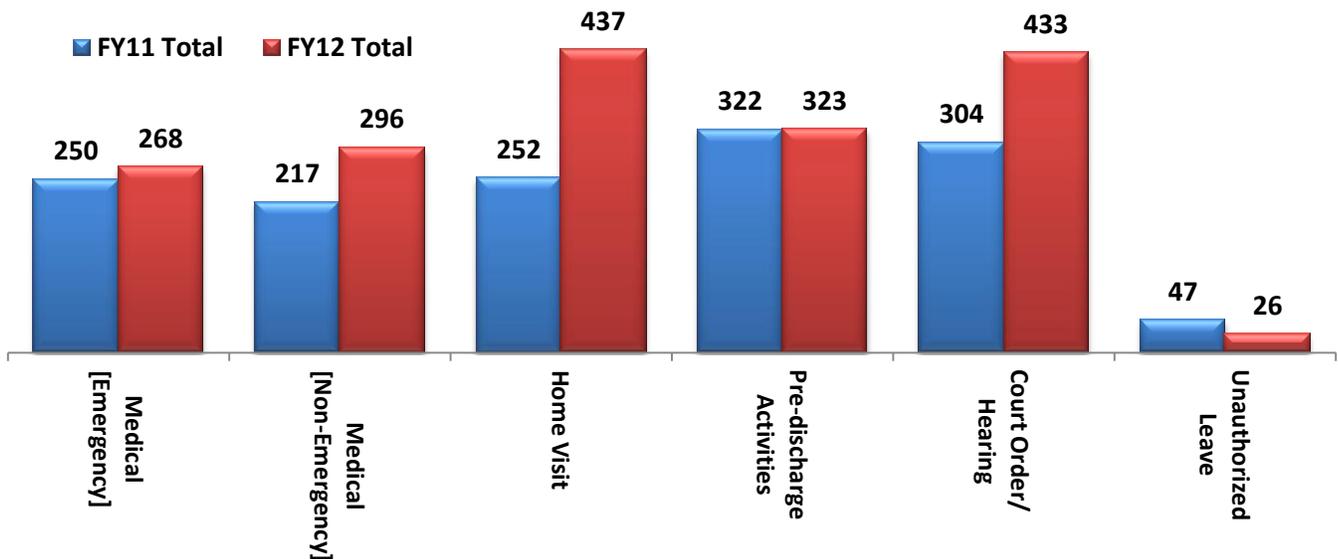
scheduled doctor’s appointments. This increase in medical leaves could be a reflection of the increased need for medical treatment among individuals in our care due to our aging population and/or better documentation of their same day medical appointments.

- Home visits and court hearing activities were the major reasons for non-medical related authorized leaves in FY12 and the frequency of such visits increased significantly from FY11.
- Unauthorized leaves (elopements) declined 53% from 47 or four (4) per month in FY11 to 26 or two (2) per month in FY12.

Table 6. Leave Episodes by Type and Reason (FY12)

Leave Type & Reason	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12	Sep-12	FY12 Total	Monthly Average
Medical/Emergency	31	25	14	19	19	28	23	18	29	17	21	24	268	22
Medical/Non-Emergency	14	12	13	10	17	29	29	34	46	43	16	33	296	25
Home Visit	33	30	39	34	23	38	47	48	44	38	24	39	437	36
Pre-discharge Activities	6	7	4	8	12	23	34	62	60	46	32	29	323	27
Court Order/ Hearing	25	29	39	50	39	38	24	35	38	42	39	35	433	36
Unauthorized Leave	1	1	3	2	4	4	2	2	2	3	1	1	26	2
Total	110	104	112	123	114	160	159	199	219	189	133	161	1783	149

Figure 8. Leave Episodes by Type and Reason (FY11 vs. FY12)



- A number of individuals experienced medical emergencies that required them to be transferred to outside medical facilities. The total number of EMLs in FY12 was 268 involving a total of 132 unique individuals as many individuals had multiple medical emergency episodes during the year.
- Of those 132 individuals, 79 or 60% had only one EML but the other 53 or 40% experienced multiple EMLs during FY12. Of those, 32 had at least three (3) EMLs, including four (4) individuals who had eight (8) or more EMLs within the 12 month period. This pattern has been consistent for the past 3 years.

Table 7. Emergency Medical Leaves: Likely Medical Transfers (FY11 vs. FY12)

Category		FY10	FY11	FY12
Emergency Medical Leave (EML) Episodes during Fiscal Year	Total # of EMLs	211	250	268
	Monthly Average	18	21	22
# of Unique Individuals with >=1 Emergency Medical Leave(s) by Frequency of Leave Episodes	One EML	62	75	79
	Two EMLs	32	22	21
	Three EMLs	7	14	12
	More than Three EMLs	12	13	20
	Total	113	124	132

- While most of the non-emergency medical leaves (82%) are same day leaves, many of EMLs result in multi-day leaves. Of the 268 EMLs recorded during FY12, 97 or 36% returned on the same day and 61 or 23% returned next day. Fifty-three (53) or 20% returned within two (2) to five (5) days and the remaining 57 or 20% stayed in outside medical facilities longer than five (5) days, including 4 instances that lasted longer than 30 days. This data closely resembled the previous year’s pattern.
- In FY11, EMLs occurred most frequently for individuals served on unit 1E, one of the admission units. In FY12, however, EMLs occurred most frequently on 1B, one of the geriatric units: individuals served on 1B accounted for 43 EMLs. 1E recorded the 2nd largest number of EMLs at 41 and the other geriatric unit 1A had a total of 35 EMLs. Not surprisingly, a transitional unit 2B, where most individuals have relatively high GAF scores, meaning they are high functioning and in need of lower level of care, had the fewest episodes of EMLs (5) during FY12.

Figure 9. Return from Emergency Medical Leaves (FY12)

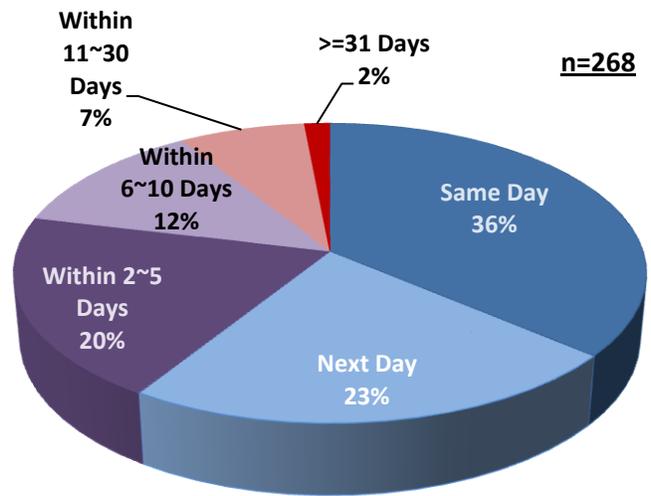
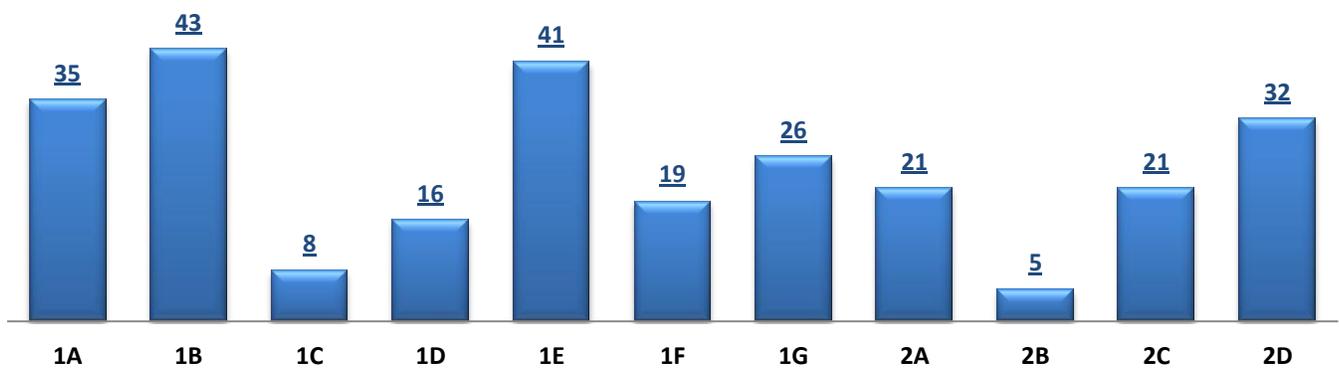


Figure 10. Emergency Medical Leaves by Sending Unit (Oct 2011 ~ Sep 2012)



II. Demographic Characteristics of Individuals in Care

- *The Hospital's population is aging: those 60 years or older comprise 33% of total in care.*
- *The aging trend is not driven by admissions but by those who have been hospitalized for a long period time and continued to remain in care.*
- *Both admissions and discharges of females increased but admissions exceeded discharges, slightly increase the proportion of females remaining in care*
- *Those with a civil legal status marginally decreased while those with a forensic pre-trial legal status increased.*

1. Age Distribution

- The Hospital's population continues to age. The proportion of individuals aged 60 years or older has consistently increased over the past 5 years. As of November 2007, individuals of 60 years or older constituted about 23% of the then total population in care. The percentage of the same age group was 30% as of September 2011 and 33% as of September 2012.
- Until FY11, the increase of elderly population triggered an increase in the median age of individuals in care. As of September 30, 2012, the median age slightly declined from 56 years a year ago to 55 years, meaning half of the individuals in care are older than 55 years. This change is due in part to an increase of those under 40 years old from 15% in September 2011 to 18% in September 2012.

Figure 11. Change in Age Distribution (2007~2012)

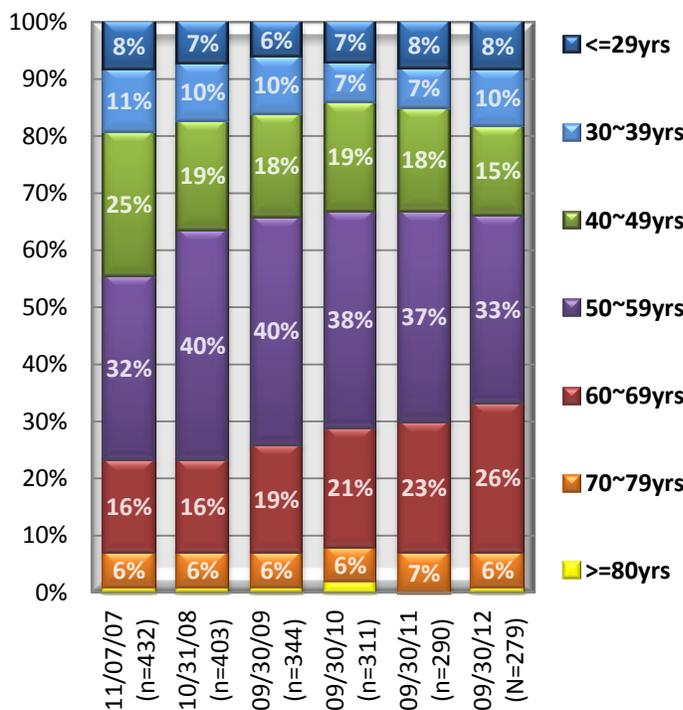
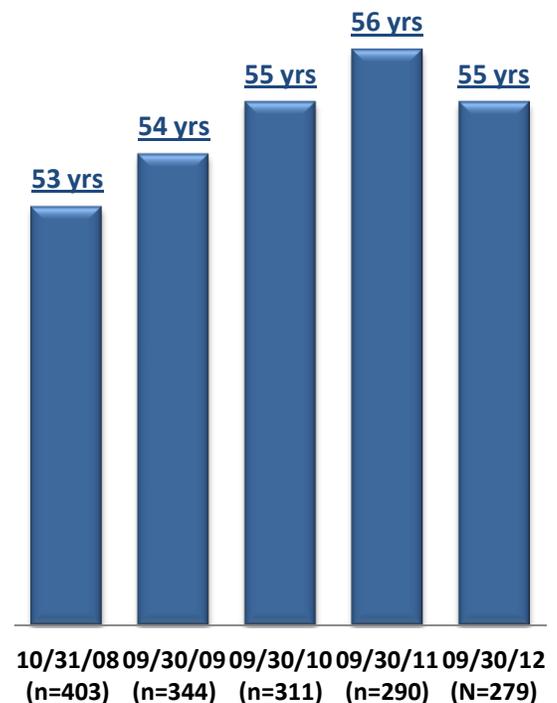


Figure 12. Change in Median Age (2008~2012)



- Among the various age groups, the most noticeable change occurred in the 30-39 year old age group, which increased 4% from September 2011 to September 2012. However, because those under 30 years old and

those between 40 and 49 years old declined slightly and other age groups showed no noticeable changes, the median age of the total admission population in FY12 was the same as the previous year at 47.

- The age distribution of the discharged population is almost identical to that of the admission population, but both groups are much younger than those remaining in care.
- Unlike those remaining in care, the admission group shows no trend of any noticeable increase in the number of elderly adults. This suggests that the increasing proportion of older adults in the hospital population is not driven by new admissions but by individuals who have been hospitalized for a long period of time and continue to remain in care.
- The age trend of discharged population, particularly for those under 50 years old, is similar to that of admission population: an increase in discharges of individuals in the 30-39 year old age group with a decrease in discharges of individuals under 30 years old and those between 40 and 49 years old. The percentage of those 50 years or older in the discharged population slightly increased in FY12, increasing the median age of discharges from 46 in FY11 to 48 in F12. All other age groups discharges showed a marginal increase.

Table 8. Trend of Age Distribution at Admission (FY11 vs. FY12)

Age at Admission	FY10	FY11	FY12	Trend
Total Admissions	442	425	400	
<=29 years	20%	20%	18%	↓
30~39 years	17%	17%	21%	↑
40~49 years	21%	21%	19%	↓
50~59 years	28%	28%	28%	
60~69 year	11%	11%	11%	
70~79 years	3%	3%	3%	
>=80 years	0%	0%	1%	↑
Median Age	47 years	47 years	47 years	
Average Age	44 years	44 years	45 years	↑

Table 9. Trend of Age Distribution at Discharge (FY11 vs. FY12)

Age at Admission	FY10	FY11	FY12	Trend
Total Discharges	485	444	411	
<=29 years	19%	19%	18%	↓
30~39 years	18%	17%	20%	↑
40~49 years	24%	23%	19%	↓
50~59 years	26%	27%	28%	↑
60~69 year	10%	10%	11%	↑
70~79 years	3%	3%	4%	↑
>=80 years	1%	1%	0%	↓
Median Age	47 years	46 years	48 years	↑
Average Age	46 years	45 years	45 years	

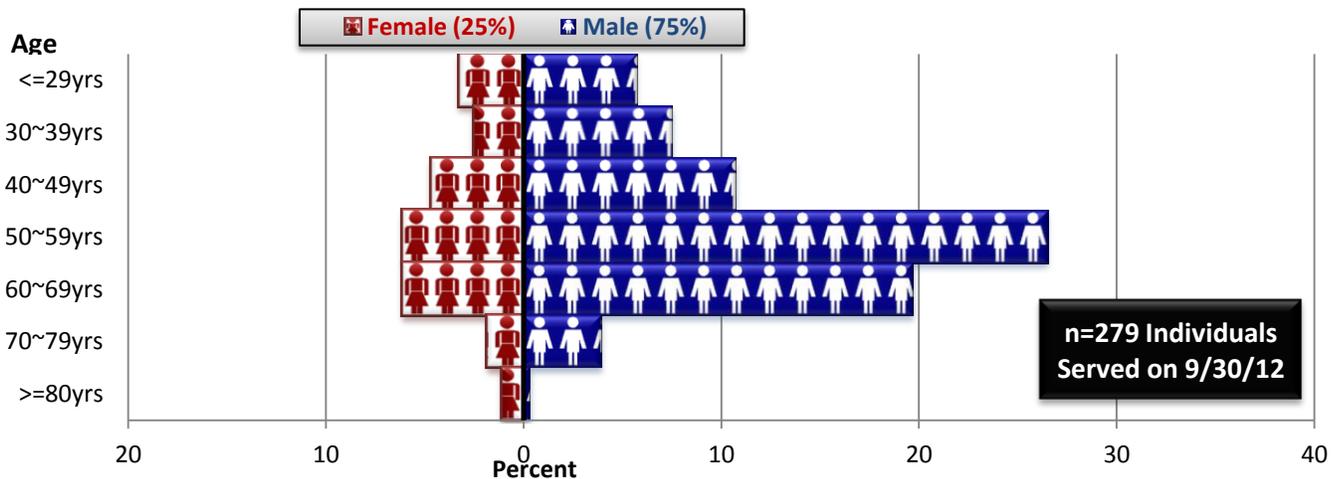
2. Gender Distribution

- The proportion of female admissions and discharges both increased in FY12. Despite the fact that the percentage of females in the discharged population significantly increased to 36% in FY12 from 22% in FY11, the total number of female discharges (148) is still lower than the number of female admissions (151), resulting in a slight increase in females among those remaining in care at the end of FY12.
- Two out of three male individuals in care (68%) are 50 years or older while the age distribution of the female population covers a broader range of age groups.
- Both males and females in care are aging; the number of those between 50 and 70 years old increased among both the male and female population.

Table 10. Gender Ratio by Group (FY11 vs. FY12)

Group	FY11			FY12		
	Total	F	M	Total	F	M
Admissions	423	36%	64%	400	38%	62%
Discharges	444	22%	78%	411	36%	64%
Remaining	290	24%	76%	279	25%	75%

Figure 13. Age & Gender Distribution (9/30/12)



3. Race/Ethnicity and Primary Language

- Of the 279 individuals remaining in care on September 30, 2012, 241 had their race and ethnicity information identified in Avatar. Of those, 203 or 84% were Non-Hispanic Black or African-American, 30 or 12% were Non-Hispanic White or Caucasian, two (2) or 0.8% were Asian or Pacific Islander, and one (1) or 0.4% was

Table 11. Race and Ethnicity (9/30/12)

Race and Ethnicity	Number	Percent
Asian/Pacific Islander	2	0.8%
Black/African-American (Non-Hispanic)	203	84%
White/Caucasian (Non-Hispanic)	30	12%
Hispanic	1	0.4%
Other	5	2%
Total Identified	241	100%
<i>No Data Available</i>	38	

Hispanic. Race and ethnicity information for 38 individuals was not available.

Table 12. Primary Language (9/30/12)

Primary Language	Number	Percent
English	236	(98%)
Spanish	4	(2%)
Other	2	(0.8%)
Total Identified	242	100%
<i>No Data Available</i>	37	

- Ninety-eight percent (98%) of the 242 individuals whose primary languages were identified indicated that English was their primary language. Six (6) individuals were identified as speaking a language other than English as their primary language. There were 37 individuals with no primary language information documented in Avatar.

4. Marital Status

- Of the 203 individuals whose marital status was identified, 84% were single, 5% were married, and the other 11% divorced, separated or widowed. The percentage of individuals married slightly decreased: they constituted 7% a year ago in September 2011.

Table 13. Marital Status (9/30/12)

Marital Status	Number	Percent
Single	171	84%
Married	11	5%
Divorced	18	9%
Separated	1	0.5%
Widowed	2	1%
Total Identified	203	100%
<i>No Data Available</i>	76	

5. Legal Status

- As of September 30, 2012, 110 (39%) individuals in care had a civil legal status. Those with a forensic pre-trial legal status constituted 23% (64) and the remaining 105 or 38% carried a forensic post-trial legal status.

- The number and proportion of individuals with a civil legal status has continued to decrease for the past few years although the level of decline in FY12 was not significant.

6. Religion & Education

- Of the 157 whose religion information was identified in Avatar, 42% or 66 individuals were *Protestant*, 25% or 39 individuals were *Catholic*, and 6% or 9 individuals were *Baptists*. Eleven percent (11%) indicated that they did not have any religion.
- Of the 152 individuals in care whose education information was available, 37% completed 7 to 9 years of

education and 38% completed between 10 and 11 years of education. Nine percent (9%) graduated from high school and about 5% received some type of college education or a bachelor’s degree.

Table 14. Legal Status (9/30/10, 9/30/11, and 9/30/12)

	Legal Status	9/30/10	9/30/11	9/30/12
Civil	Committed Inpatient	35	31	24
	Committed Outpatient	31	28	21
	Emergency	36	15	22
	Voluntary	43	41	43
	Non Protesting	1	0	0
	Civil Sub-total		146 (47%)	115 (40%)
Forensic Pre-trial	DC Examination	52	61	59
	DC Mentally Incompetent	5	3	5
	Forensic Pre-trial Sub-total	57 (18%)	64 (22%)	64 (23%)
Forensic Post-trial	Dual (NGBRI/Criminal Convict.)	1	1	1
	NGBRI - DC	91	94	92
	NGBRI - US	10	12	9
	NGBRI - USVI	2	1	1
	Sexual Psychopath (Miller Act)	4	3	2
	Forensic Post-trial Sub-total	108 (35%)	111 (38%)	105 (38%)
Grand Total		311	290	279

Table 15. Religion (9/30/12)

Religion	Number	Percent
Baptist	9	6%
Catholic	39	25%
Christian	3	2%
Jewish	5	3%
Muslim	3	3%
Protestant	66	42%
Other	15	10%
No religion	17	11%
Total Identified	157	100%
<i>No Data Available</i>	122	

Table 16. Education (9/30/12)

Education Level	Number	Percent
None	1	0.7%
01-03 Years	1	0.7%
04-06 Years	14	9%
07-09 Years	56	37%
10-11 Years	58	38%
High School Graduate	14	9%
Some College/Technical Training	2	1%
Associate's Degree	2	1%
Bachelor's Degree	4	3%
Total Identified	152	100%
<i>No Data Available</i>	127	

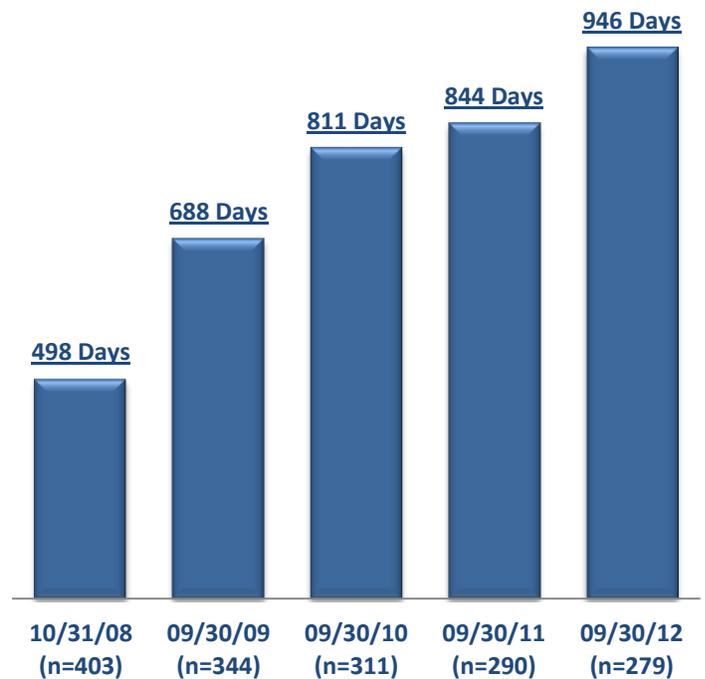
III. Length of Stay

- **Length of stay (LOS) for individuals remaining in care increased in each of the past five years.**
- **The median LOS for individuals in care on September 30, 2012 was 946 days (31 months), which is 102 days longer than was the median LOS a year ago (844 days).**
- **The proportion of those remaining in care for a year or longer continued to increase.**
- **The number of those staying for fewer than 90 days decreased primarily due to an increase of LOS among forensic pre-trial population.**
- **LOS in FY12 increased for all types of legal status.**
- **Those discharged within 60 days from civil admissions consistently increased for the past four years, from 62% in FY09 to 63% in FY10, 67% in FY11, and 68% in FY12.**

1. Length of Stay of Current Population

- The median length of stay (LOS) for those served by the Hospital on September 30, 2012 was 946 days (approximately 31 months), which means that 50% of the individuals in our care have been residing at the Hospital for more than 31 months.
- The median LOS of those remaining in care has consistently increased over the past few years. The median LOS of the 279 individuals in care on September 30, 2012 is 102 days longer than was the median LOS a year ago (844 days). Also, it is 448 days longer than the median LOS measured on October 31, 2008.
- The average LOS of those remaining in care was 3030 days, which is slightly over eight (8) years. 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 percentage of those hospitalized for fewer than 90 days declined whereas those staying between 90 days and 180 days increased. Of the 279 individuals in care on September 30, 2012, 22% were served at the Hospital for fewer than 90 days and 11% were served for between 90 days and 179 days. By contrast, at end of FY11, those served for fewer than 90 days composed 27% and those served for between 90 days and 179 days were only 4%. This shift is primarily triggered by the increased length of stay among

Figure 14. Trend in Median Length of Stay (2007~2012)



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.

the individuals admitted with a forensic pre-trial legal status in FY12, which is further illustrated on page 21 (Length of Stay by Admission Cohort).

2. Length of Stay by Gender

- Males are likely to stay at the Hospital much longer than females. The median LOS of males in care on September 30, 2012 was 1211 days (3.3 years) whereas that of females was 535 days (1.5 year). The large gap between female and male is primarily because a majority of individuals with a forensic legal status, 89% of 169 individuals, are male and they are hospitalized longer than those with a civil legal status. Even among those with a civil legal status, however, males tend to stay longer than females.

Figure 15. Individuals in Care by Length of Stay (9/30/10 ~ 9/30/12)

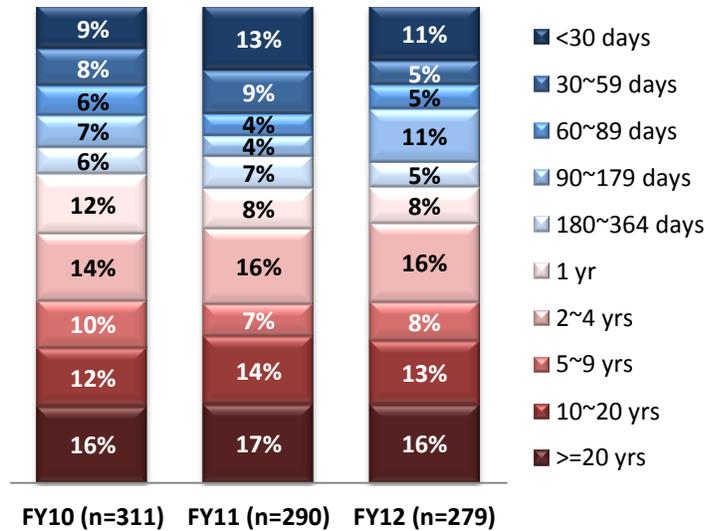


Figure 16. Length of Stay by Gender (9/30/12)

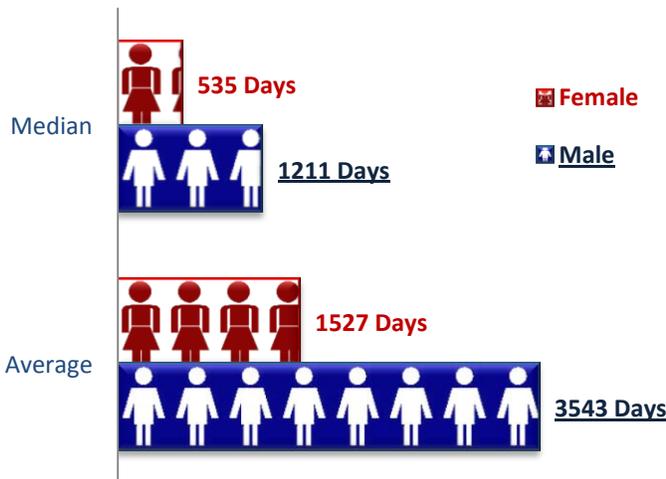


Table 17. Median Length of Stay by Gender: Civil vs. Forensic (9/30/12)

Category		Female	Male	Total
Median LOS	Civil	886 Days	1096 Days	974 Days
	Forensic	62 Days	1504 Days	934 Days
	Combined	535 Days	1211 Days	946 Days
Average LOS	Civil	1954 Days	2468 Days	2220 Days
	Forensic	272 Days	3949 Days	3557 Days
	Combined	1527 Days	3543 Days	3030 Days
Number of Individuals In Care	Civil	53	57	110
	Forensic	18	151	169
	Combined	71	208	279

3. Length of Stay by Legal Status

- Length of stay in FY12 increased for all types of legal status. The median LOS of the 110 individuals in a civil legal status as of September 30, 2012 increased to 32 months (974 days) from 27 months (829 days) a year ago. The median LOS for those with a forensic pre-trial legal status increased to 3 months (92 days) from one (1) month (32 days) and the median LOS for those with a forensic post-trial legal status increased to 13.5 years (4911 days) from 13.1 years (4790 days).

- Among the individuals with a civil legal status, those in a voluntary legal status tend to stay much longer than those in a committed legal status. The median LOS for voluntary individuals was 2206 days (6 years) while the median LOS for those with a committed inpatient legal status and a committed outpatient legal status were 1093 days (3 years) and 645 days (2 years and 9 months), respectively. Those in an emergency legal status had the shortest median LOS at 19 days.
- The median LOS of 9 individuals with a US NGBRI legal status is 10401 days (28 years) and that of the 92 individuals with a DC NGBRI legal status was 4533 days (12 years).

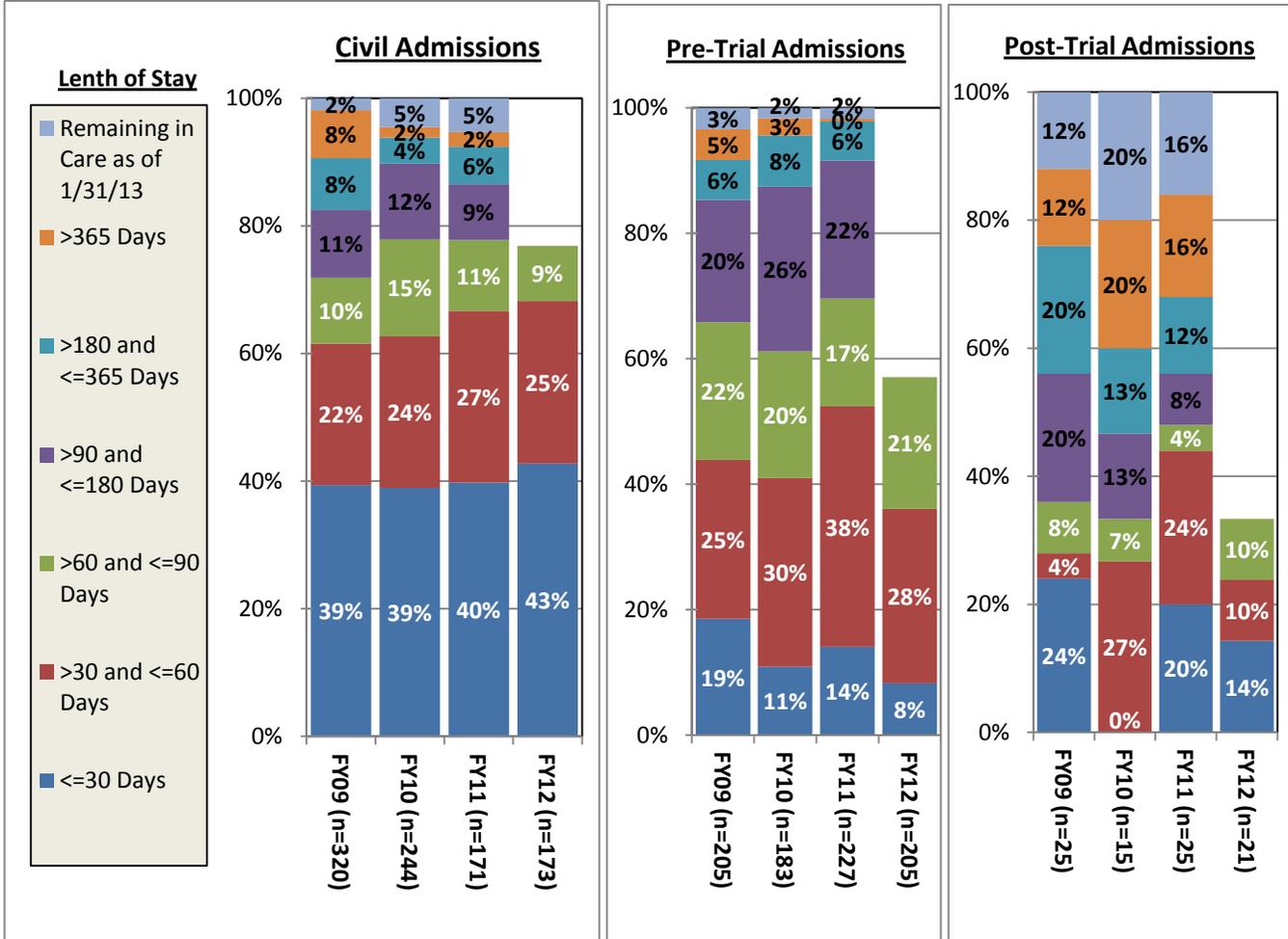
Table 18. Length of Stay of Individuals Remaining in Care by Legal Status (9/30/11 vs. 9/30/12)

Legal Status		# of Individuals		Median (Days)		Average (Days)	
		9/30/11	9/30/12	9/30/11	9/30/12	9/30/11	9/30/12
Civil	Committed Inpatient	31	24	829 Days	1093 Days	1021 Days	1235 Days
	Committed Outpatient	28	21	531 Days	645 Days	889 Days	940 Days
	Emergency	15	22	23 Days	19 Days	80 Days	67 Days
	Voluntary	41	43	1840 Days	2206 Days	4397 Days	4497 Days
	Civil Sub-total	115	110	829 Days	974 Days	2070 Days	2220 Days
Forensic Pre-trial	DC Examination	61	59	32 Days	69 Days	76 Days	107 Days
	DC Mentally Incompetent	3	5	156 Days	110 Days	317 Days	321 Days
	Forensic Pre-trial Sub-total	64	64	32 Days	92 Days	87 Days	124 Days
Forensic Post-trial	Dual (NGBRI/Criminal Convict.)	1	1	1138 Days	1504 Days	1138 Days	1504 Days
	NGBRI - DC	94	92	4350 Days	4533 Days	5092 Days	5174 Days
	NGBRI - US	12	9	9821 Days	10401 Days	8848 Days	9872 Days
	NGBRI - USVI	1	1	8611 Days	8977 Days	8611 Days	8977 Days
	Sexual Psychopath (Miller Act)	3	2	8333 Days	8929 Days	8486 Days	8929 Days
	Forensic Post-trial Sub-total	111	105	4790 Days	4911 Days	5586 Days	5650 Days
Forensic Sub-total (Pre-trial & Post-trial)		175	169	1138 Days	934 Days	3575 Days	3557 Days
Grand Total		290	279	844 Days	946 Days	2978 Days	3030 Days

4. Length of Stay by Admission Cohort

- The length of stay data by admission cohort presents a noticeable trend in the length of stay by legal status for recent admissions. Consistently over the past four years, more than 70% of admissions with a civil legal status were discharged within 90 days. And, those discharged within 60 days from civil admissions gradually increased from 62% in FY09 to 63% in FY10, 67% in FY11, and 68% in FY12.
- For those admitted with a pre-trial legal status, the length of stay increased as the percentage of those discharged within 90 days significantly dropped: 57% of individuals with a forensic pre-trial legal status were discharged within 90 days from admission in FY12 compared to 70% in FY11. This finding is consistent with the increased median length of stay for those remaining in care with a pre-trial forensic legal status in FY12.
- The number of those with a legal status of NGBRI who were transferred back to the Hospital from community is very small compared to the number of civil or pre-trial admissions and it is difficult to conclude any pattern as a few outliers can easily skew the trend. It is evident, though, that individuals in this group, once they are admitted, tend to stay at the Hospital much longer than those with a civil or pre-trial legal status.
- Of the 400 individuals admitted during FY12, 293 or 73% were discharged by the end of FY12. This is a marginal decline from FY11, when 74% of admissions were discharged within the same fiscal year.

Figure 17. Length of Stay by Legal Status at Admission (FY09~FY12)

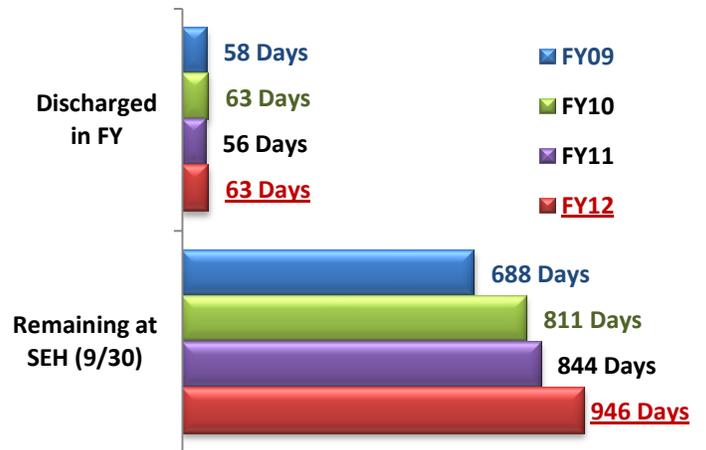


* For FY12 admissions, data above includes only those discharged within 90 days of admission because the rest of them require enough observation time period for us to compare their length of stay with those admitted in previous fiscal years.

5. Length of Stay of Discharged Population

- The length of stay measured for the discharge population is significantly shorter than the LOS measured for those remaining in care at the Hospital. The median LOS of the individuals remaining in care at the end of FY12 was 946 days but the median LOS of the 411 individuals who were discharged during FY12 was only 63 days. The median LOS of the discharged population consistently hovered at around 60 days for the past four years while the median LOS of those remaining in care increased every year.
- While individuals discharged with a civil legal status decreased in FY12, their LOS also noticeably declined. The median LOS of those discharged with a civil legal status in FY12 was 42 days, which is 18

Figure 18. Length of Stay: Discharged vs. Remaining (FY09~FY12)



days shorter than the median LOS for FY11 discharges (60 days). The average LOS also dropped significantly. In contrast, LOS for those discharged with a forensic pre-trial legal status considerably increased: the median LOS for them in FY11 was 52 days and that in FY12 was 69 days and the average LOS also increased from 65 days to 83 days. LOS for those discharged with a forensic post-trial legal status shows a marginal decline.

Table 19. Length of Stay of Discharged Population (FY12)

	# of Discharges		Median		Average		Maximum	
	FY11	FY12	FY11	FY12	FY11	FY12	FY11	FY12
Civil	230	186	60 days	42 days	318 days	190 days	8770 days (24mths)	11149 days (31yrs)
Forensic Pre-Trial	188	194	52 days	69 days	65 days	83 days	337 days (11mths)	336 days (11mths)
Forensic Post-Trial	26	31	325 days	315 days	2985 days	2159 days	18380 days (50yrs)	13752 days (37yrs)
Total (Combined)	444	411	56 days	63 days	367 days	288 days	18380 days (50yrs)	13752 days (37yrs)

- The length of stay data indicates that those who were newly admitted to the Hospital were more likely to be discharged quickly whereas those who had been hospitalized for a long period of time were more likely to remain in care. The increase of median LOS for those remaining in care, the increase of short-term stay from recent civil admissions, and a consistently short LOS of discharged population all support this trend.

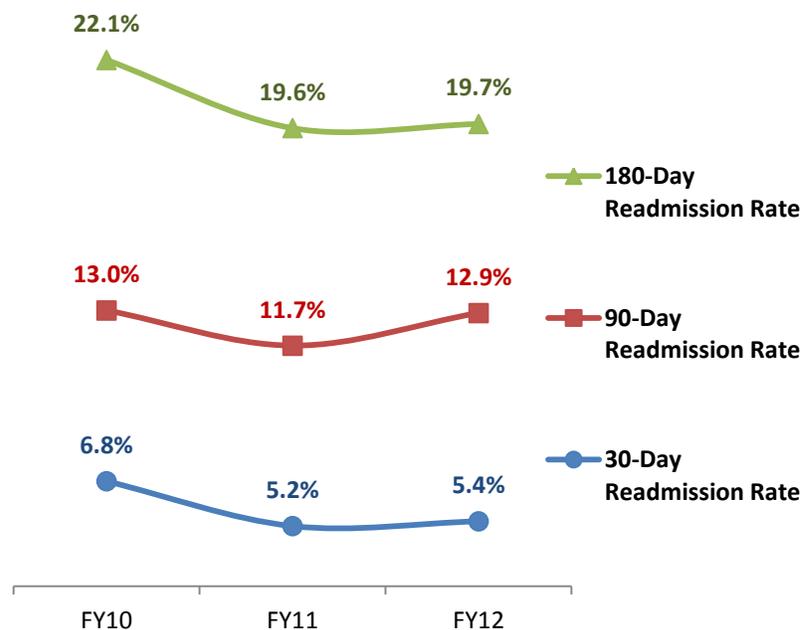
IV. Readmissions

- **Readmission rate in FY12 increased slightly but remains lower than the national trend.**
- **The trend of repeated readmissions by the same individuals continued to grow.**
- **Those in a civil legal status, 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 who were discharged with a shorter LOS at their previous hospitalization than those discharged with a longer LOS.**

1. Readmission Rate⁷

- Of the 411 discharges in FY12, 5.4% or 22 were readmitted to SEH within 30 days following discharge. This is a slight increase from FY11, when the 30-day readmission rate was 5.2%.
- The 30-day re-admission rate of the Hospital is significantly lower than the national trend. According to the most recent NPR, the average 30-day admission rate of state psychiatric hospitals is 7.5%
- Of the 22 30-day readmissions, nine (9) or 41% were readmitted within one week (7 days) from their discharges.
- The 90-day readmission rate in FY12 (12.9%) is slightly higher than the FY11 rate (11.7%) and the 180-day readmission rate in FY12 (19.7%) is at a similar level to that in FY11 (19.6%).
- While the overall readmission rate slightly increased in FY12, the trend of repeated readmissions by the same individuals also continued to grow. Of the 41 unique individuals readmitted within 90-days in FY12, eight (8) or 20% were readmitted within the 90 day window twice or more during the same fiscal year whereas only 16% and 9% were involved in multiple 90-day readmissions in FY11 and FY10, respectively. The percentage of repeated 180-day readmissions also increased from 11% in FY10 to 23% in FY11 and 29% in FY12.

Figure 19. Trend of Readmission Rate (FY10~FY12)



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.

Figure 20. 30-Day Readmission Rate (FY12)

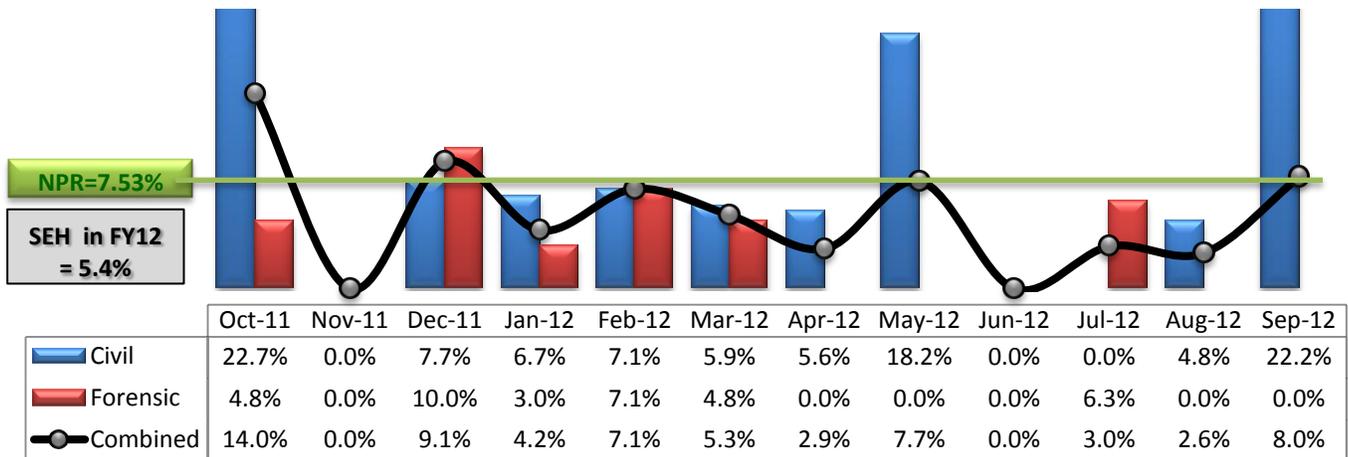


Table 20. Re-admissions (FY10 ~FY12)

Category		FY10	FY11	FY12
Total Discharges		485 (40 per month)	444 (37 per month)	411 (34 per month)
30-Day Readmissions	Number of readmissions	33 (2.8 per month)	23 (1.9 per month)	22 (1.8 per month)
	30-Day Readmission rate	6.8%	5.2%	5.4%
	Unique individuals	32	22	20
	IICs of >=2 readmissions within 30-day	1	1	2
90-Day Readmissions	Number of readmissions	63 for 12 months (5.3 per month)	52 for 12 months (4.3 per month)	53 for 12 months (4.4 per month)
	90-Day Readmission rate	13.0%	11.7%	12.9%
	Unique individuals	58	42	41
	IICs of >=2 readmissions within 90-day	5	7	8
180-Day Readmissions	Number readmissions	107 for 12 months (9 per month)	87 for 12 months (7.3 per month)	62 for 9 months* (6.9 per month)
	180-Day Readmission rate	22.1%	19.6%	19.7% (out of 314)*
	Unique Individuals	95	66	45*
	IICs of >=2 readmissions within 180-day	10	15	13*

* In order to determine the 180-day readmission rate, we use data only for those who were discharged longer than 180 days ago. Thus, for this report, we observed only those who were discharged for the first nine months of FY12, between October 2011 and June 2012.

2. Characteristics of Individuals Readmitted to Care

- There is no significant difference in gender distribution between those individuals readmitted and those discharged although females were slightly more likely to be readmitted.
- Those who were readmitted to the Hospital tend to be older than those who are not. Of all of the individuals who were discharged during FY12, 44% were 50 years or older at discharge. In contrast, of the 22 individuals who have been readmitted within 30-days from discharge, 77% were 50 years or older when they discharged from their previous episode. On the other hand, the younger population is less likely to be readmitted particularly within a short time period: none (0%) of 30-day readmissions were younger than 30 years old when they were discharged in their previous episodes while 18% out of all individuals discharged in FY12 were younger than 30 years old. The same age group constituted 13% of the 90-day readmission and 8% of the 180-day readmission population.
- There is evidence that 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 do not return to the Hospital. Forty-five percent (45%) of 30-day readmissions in FY12 stayed 30 days or less in their previous hospitalization whereas only 23% of all discharges in FY12 had a LOS of 30 days or less. This trend continues with longer term readmissions: 45% of 90-day readmissions and 42% of 180-day readmissions had a LOS of 30 days or less in their previous hospitalization. This suggests that readmissions are more likely to occur among individuals who were discharged with a shorter LOS during their previous hospitalization than those discharged with a longer LOS. It should be noted that, however, further study needs to be conducted to determine if a short LOS is any direct trigger of readmission.

- Those in a civil legal status at discharge are more likely to return to the Hospital. Forty-five percent (45%) of the discharged population in FY12 were in a civil legal status. However, 59% of 30-day readmissions, 64% of 90-day readmissions, and 61% of 180-day readmissions were those discharged with a civil legal status.
- Diagnosis at discharge also seemed to be an indicator of a likelihood of readmission. Those with a mood disorder were more likely to return within a short time period: those who had a mood disorder indicated as their principal diagnosis at discharge composed only 15% from the entire discharge population but they made up more than one third (36%) of 30-day readmissions, 28% of 90-day readmissions, and 21% of 180-day readmissions. Those with a psychotic disorder were less likely to return within a short time period but returned more at a later time.

Table 21. Characteristics of All Individuals Discharged vs. Those Readmitted within 180-Days (FY12)

		All Discharged in FY12	Readmitted within 30-days	Readmitted within 90-days	Readmitted within 180-days
# of episodes*		411	22	53	62 (9 months)
# of unique individuals		365	20	41	45
Gender	Female	128 (35%)	7 (35%)	14 (34%)	18 (40%)
	Male	237 (65%)	13 (65%)	27 (66%)	27 (60%)
Age at Discharge	Age <=29 years	74 (18%)	0 (0%)	7 (13%)	5 (8%)
	Age >=50 years	181 (44%)	17 (77%)	30 (57%)	35 (56%)
	Median Age	46 years	52 years	50 years	50 years
	Average Age	45 years	54 years	48 years	49 years
Length of Stay in previous episode	Los <=30 Days	97 (23%)	10 (45%)	24 (45%)	26 (42%)
	Median LOS	63 days	47 days	46 days	46 days
	Average LOS	290 days	1227 days	594 days	489 days
Legal Status at Discharge	Civil	186 (45%)	13 (59%)	34 (64%)	38 (61%)
	Forensic	225 (55%)	9 (41%)	19 (36%)	24 (39%)
Principal Diagnosis at Discharge	Cognitive Disorder	11 (3%)	1 (5%)	1 (2%)	1 (2%)
	Psychotic Disorder	288 (70%)	12 (54%)	34 (64%)	44 (71%)
	Mood Disorder	63 (15%)	8 (36%)	15 (28%)	13 (21%)
	Other in Axis-I	35 (9%)	1 (5%)	2 (4%)	3 (5%)
	Axis-II	14 (3%)	0 (0%)	1 (2%)	1 (2%)

* This is not the number of unique individuals but the total number of episodes and some individuals may be counted more than once if they had multiple episodes during FY12.

V. Clinical Profile of Individuals in Care

- **Admissions with a mood disorder are more likely to be discharged quickly.**
- **The percentage of individuals with a substance use disorder continued to increase (59%).**
- **89% had an identified medical condition or physical disorder.**
- **42% were obese as their BMI was 30 or above. This is an increase from 34% in FY11.**
- **40% were identified to be at high risk in one or more behavioral or medical indicator.**

1. Principal Diagnosis

- Seventy percent (70%) of individuals admitted during FY12 had a psychotic disorder as their principal admission diagnosis. Comparatively, 70% of those discharged during FY12 and 79% of the individuals remaining in care on September 30, 2012 had this diagnosis.
- Those admitted with a mood disorder were more likely to be discharged quickly than those with other types of disorders. A total of 87 individuals or 22% of those admitted in FY12 were diagnosed with a mood disorder as the principal admitting diagnosis while only 10% of the individuals remaining in care at the end of FY12 and 15% of those discharged during FY12 had a mood disorder as their principal diagnosis.

Table 22. Principal Diagnosis: Admissions (FY12), Discharges (FY12), and Remaining (9/30/12)

Principal Diagnosis	Admissions in FY12		Discharged in FY12		Remaining on 9/30/12*	
	Number	Percent	Number	Percent	Number	Percent
Cognitive Disorder	7	2%	11	3%	8	3%
Psychotic Disorder	281	70%	288	70%	220	79%
Mood Disorder	87	22%	63	15%	28	10%
Substance Related Disorder	9	2%	13	3%	11	4%
Axis-II (MR or Personality D/O)	2	1%	14	3%	3	1%
Other or unspecified	14	4%	22	5%	9	3%
Total	400	100%	411	100%	279	100%

* Data presented hereinafter is based on diagnosis information from AVATAR for the 279 Individuals remaining in care as of 9/30/12.

2. Clinical Disorders (Axis I)

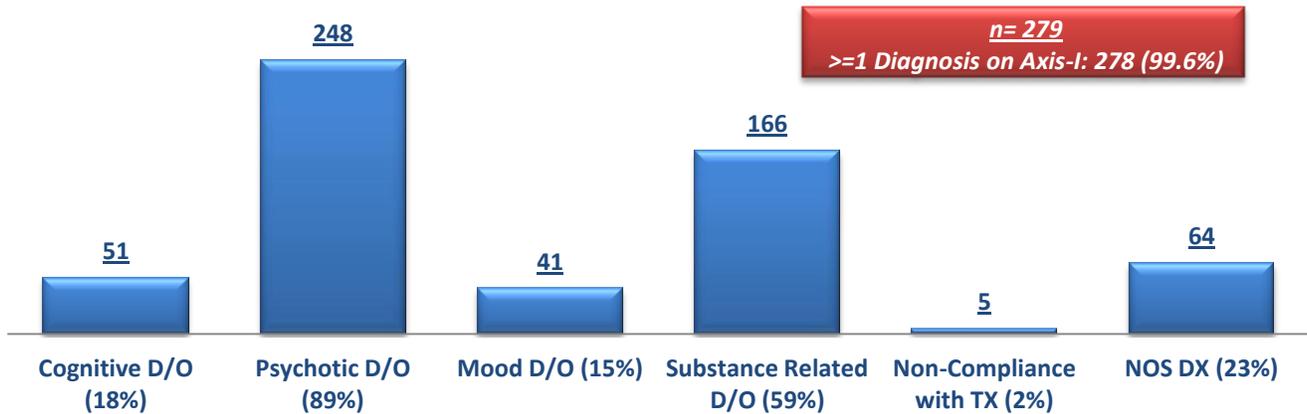
- Of the 279 individuals served on September 30, 2012, all but one had at least one clinical disorder on Axis I identified and many of them had more than one clinical disorder identified. One individual was indicated to have *No Diagnosis or Condition on Axis I* (DSM-VI Code V71.09).
- A total of 248 individuals (89%) were diagnosed with a psychotic disorder – schizophrenia, schizophreniform disorder, schizoaffective disorder, delusional disorder or any other psychotic disorders⁸.
- The number of individuals who had a cognitive disorder, which includes delirium, dementia, and amnesic and other cognitive disorders, was 51 (18%), which is a slight decrease from the previous year (21%)
- Fifteen percent (15%) or 41 individuals had a mood disorder⁹, which includes depressive disorders and bipolar disorders. This is an increase from 11% in the previous year.

⁸ Axis I diagnoses were grouped as guided by the DSM-IV-TR Classification of the American Psychiatric Association.

⁹ This includes all of those diagnosed with a mood disorder whether it is identified as their principal diagnosis or not.

- A total of 166 individuals or 59% were diagnosed as having a substance use disorder. This is a slight increase from a year ago, when 58% were carrying a substance use disorder.
- A total of 64 individuals (23%) were diagnosed with a *Not Otherwise Specified (NOS)* diagnosis¹⁰ on at least one of their Axis I diagnoses. In September 2011, 70 or 24% of the then population had a NOS diagnosis. Additionally, five (5) individuals were identified as *Noncompliance with Treatment* (DSM-IV code V15.81)¹¹.

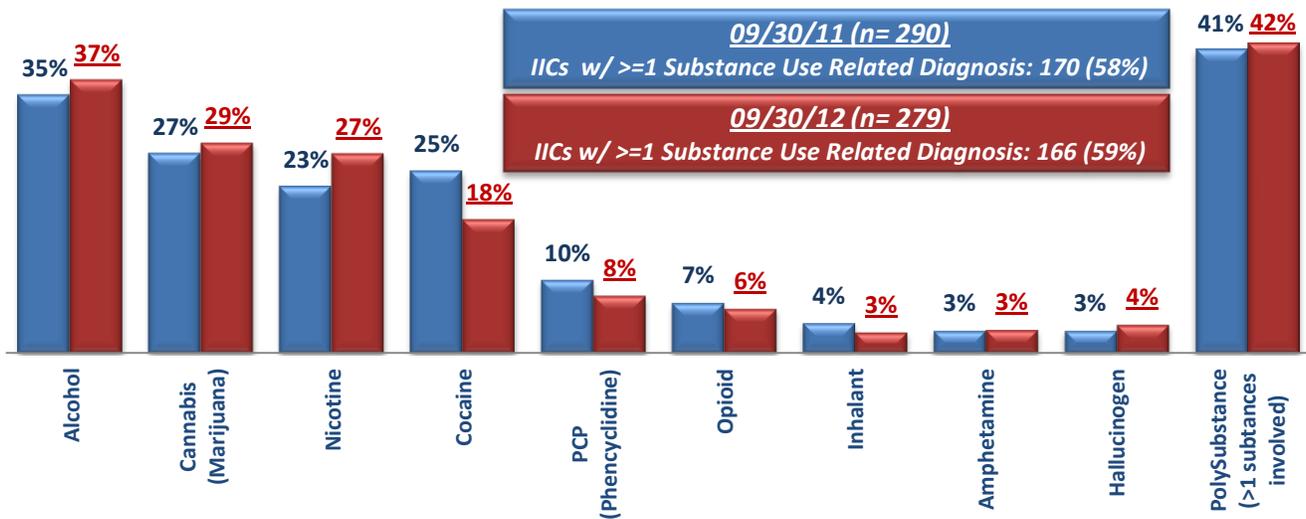
Figure 21. Individuals in Care with Diagnosis on Axis I (9/30/12)



3. Substance Use Disorders

- Of the 166 individuals who had at least one substance related disorder, 118 individuals (42% of all individuals in care) were identified as using more than one substance.

Figure 22. Individuals in Care with Substance Use and Related Diagnosis by Substance Type (9/30/12)



¹⁰ 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.'

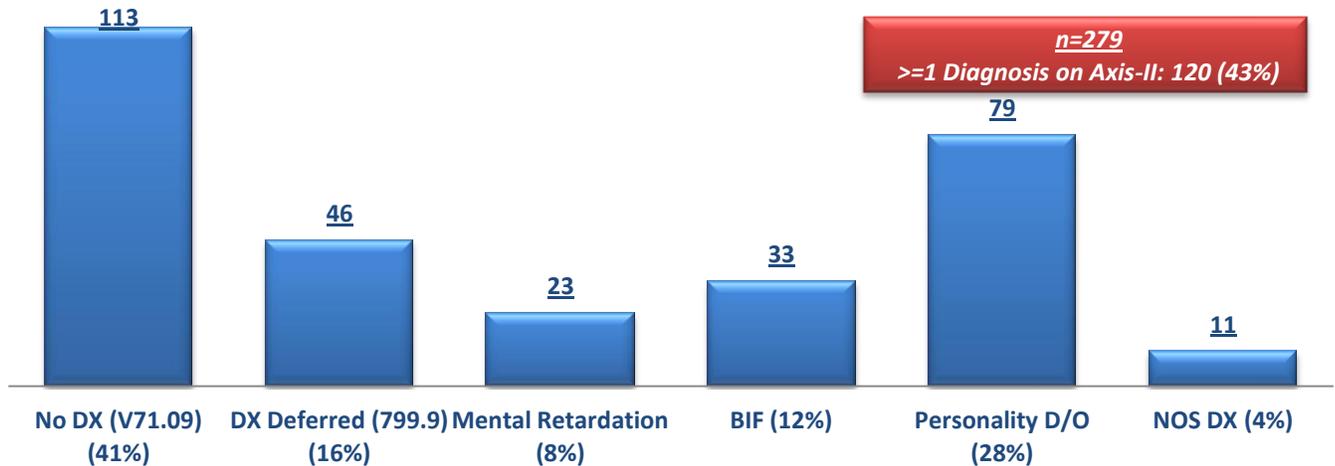
¹¹ "This category can be used when the focus of clinical attention is noncompliance with an important aspect of the treatment for a mental disorder or a general medical condition. The reasons for noncompliance may include discomfort resulting from treatment, expense of treatment, decisions based on personal 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.

- The four most frequently identified substances were alcohol (37%), cannabis (29%), nicotine (27%), and cocaine (18%). The percentage of individuals with nicotine dependence or abuse increased to 27% compared with 23% in September 30, 2011 whereas those with cocaine use decreased from 25% to 18%.

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

- Forty-three percent (43%) or 120 individuals in care on September 30, 2011 had one or more diagnoses identified on Axis II, 113 (41%) had *No Diagnosis or Condition on Axis II* (DSM-VI Code V71.09), and the remaining 46 (16%) had *Diagnosis Deferred on Axis II* (DSM-VI Code 799.9).
- A total of 79 individuals (28%) had a personality disorder diagnosed.
- A total of 56 individuals (20%) were diagnosed with either *Mental Retardation* (DSM-VI Code 317~319) or *Borderline Intellectual Functioning* (DSM-VI Code V62.89)¹².
- A total of 11 individuals (4%) had a NOS diagnosis on Axis II.

Figure 23. Individuals in Care with Diagnosis on Axis II (9/30/12)



5. General Medical Conditions (Axis III)

- Almost nine out of ten individuals in care (89%) had at least one identified medical condition or physical disorder.
- The most prevalent medical condition was *Hypertension*; 135 individuals or 48%.
- Sixty-nine (69) individuals (25%) were diagnosed as having *Type II Diabetes*. This is a slight increase from 21% a year ago.
- One hundred-five (105) individuals (38%) were diagnosed on Axis-III with *Obesity*. This was a noticeable increase from 31% last year. However, this is slightly smaller than the number of obesity diagnoses projected from the *Body Mass Index (BMI)* calculation, which revealed that 116 Individuals (42%) were obese as their BMI was 30 or above. It should be noted that the weight and height information to calculate BMI was not collected at the same point in time, which is likely contributing to the discrepancy between Axis-III diagnosis and BMI results.
- Twenty (20) individuals were diagnosed as having a seizure disorder.

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.*

- Thirty-five (35) individuals or 13% were identified with *Tardive Dyskinesia (TD)*¹³.
- The number and the percentage of individuals diagnosed as having an anemia or blood disease, asthma, glaucoma, and HIV/AIDS, respectively, decreased from the previous year. There was an increase in diagnoses of gastro-esophageal reflux disease (GERD), hyper-lipidemia, and thyroid disorders.

Figure 24. Individuals in Care with Major Medical Conditions (9/30/12)

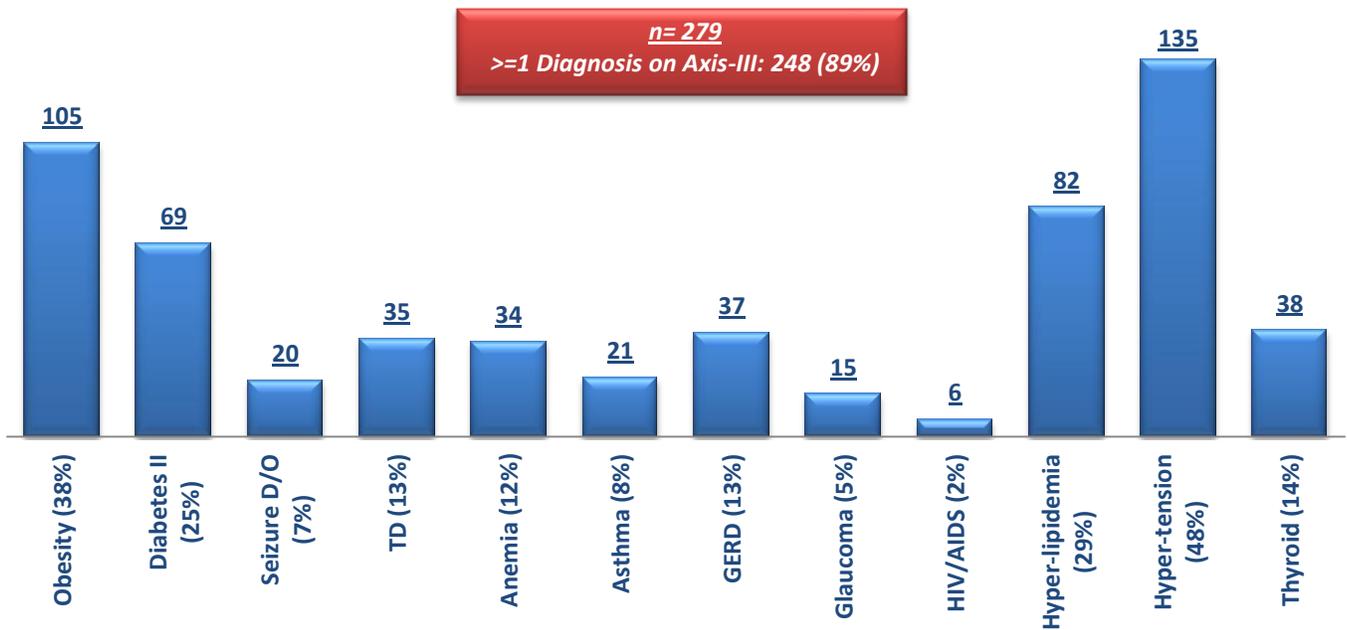
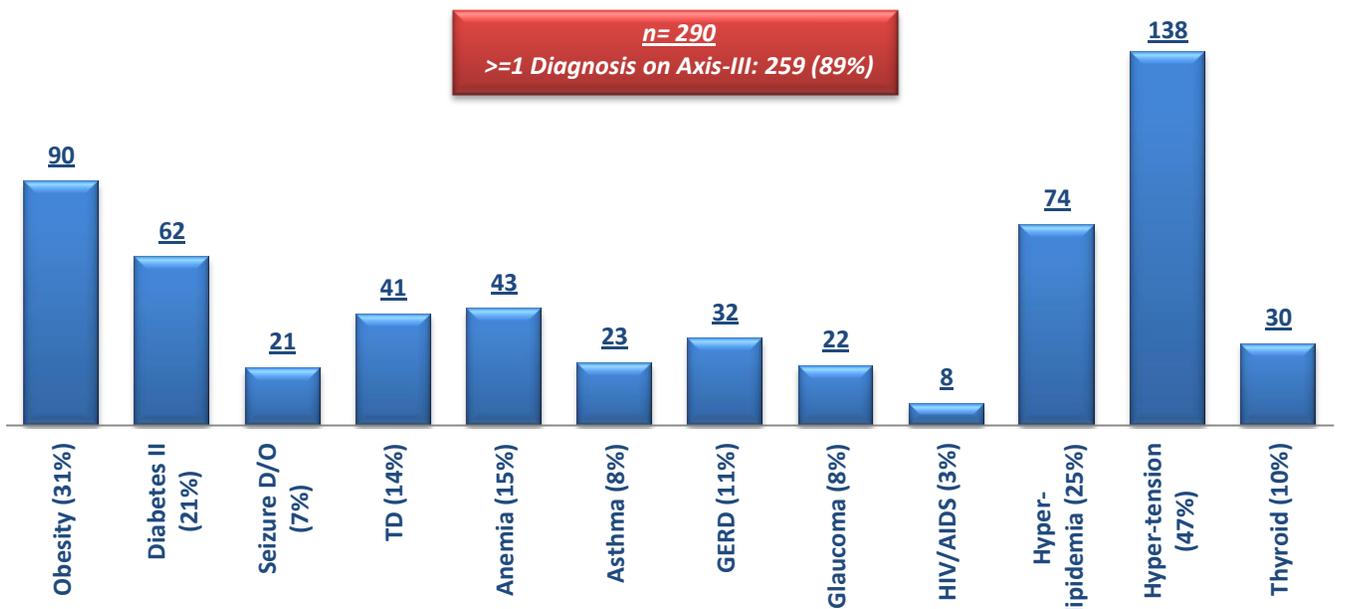


Figure 25. Individuals in Care with Major Medical Conditions (9/30/11)

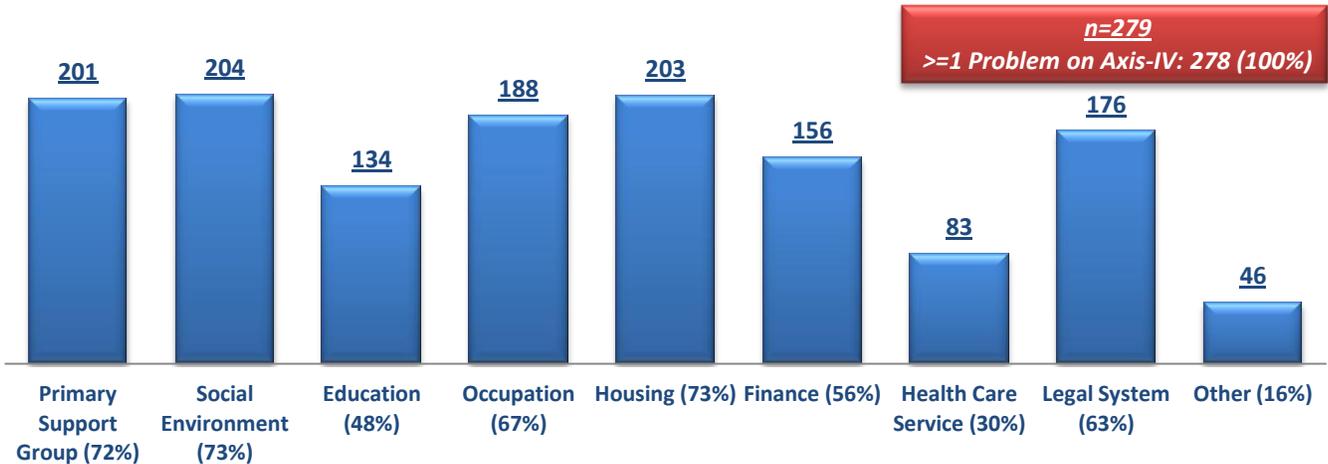


¹³ "Tardive Dyskinesia is a neurological disorder caused by the long-term use of neuroleptic drugs, or anti-psychotic medications. Neuroleptic drugs are generally prescribed for psychiatric disorders, as well as for some gastrointestinal and neurological disorders. The prevalence of Tardive Dyskinesia 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*.

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

- Of the 279 individuals, 99% or 278 had at least one identified psychosocial and environmental problem and 96% or 269 had more than one problem identified.
- Problems with 'social environment' (73%), 'housing' (73%), and 'primary support group' (72%) 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 67% for 'occupational problems'.

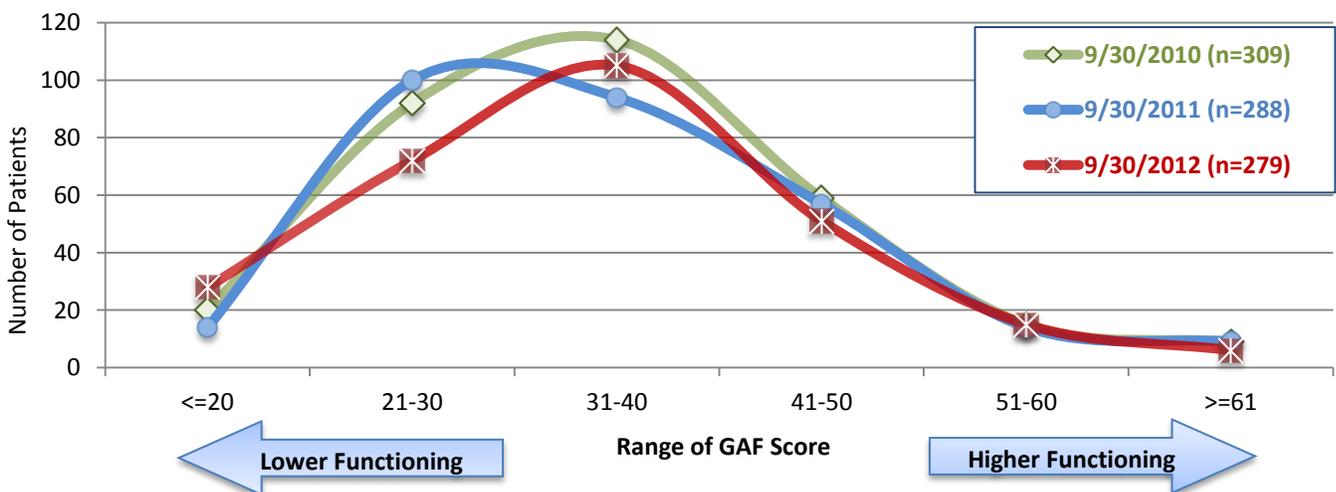
Figure 26. Individuals in Care with Psychosocial/Environmental Problems (Axis IV) Identified (9/30/12)



7. Global Assessment of Functioning [GAF] (Axis V)¹⁴

- Those who were identified as being *Unable to Function in Almost All Areas* (21~30) decreased to 26% from 34% in the previous year while those in *Major Impairment in Several Areas* (31~40) increased from 32% to 38%. However, those who were at the lowest level of functioning with a GAF score of 20 or below increased from 5% to 10%, and the FY12 average GAF score (35.2) is slightly lower than the FY11 average (35.6).
- Individuals served in 2B had the highest GAF score at 46.0 followed by those served in 2A (41.2) and 1C (40.0) while those in two admission units, 1E (23.1) and 1G (29.2), had the lowest scores.

Figure 27. Distribution of GAF Score (9/30/10 vs. 9/30/11 vs. 9/30/12)

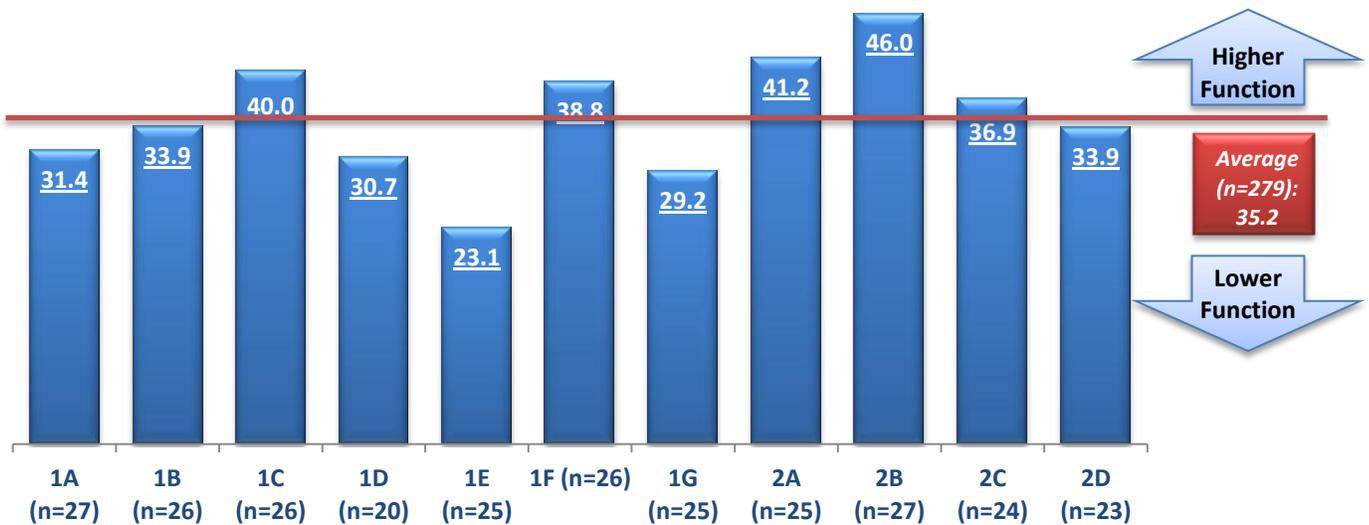


¹⁴ GAF is a numeric scale (0 through 100) used by mental health clinicians and doctors to rate the social, occupational and psychological functioning of adults. Higher scores indicate better functioning.

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

Figure 28. Average GAF Score by Unit (9/30/12)



8. Body Mass Index (BMI) and Obesity

- Weight and height information necessary to calculate BMI was obtained from the vital sign records and the most recent *History and Physical Assessment* in AVATAR for 98% or 274 individuals.
- According to BMI measure findings, as of 9/30/12, a total of 116 individuals (42%) were obese as their BMI was 30 or above. This is a noticeable increase from a year ago, when on 9/30/11 34% (98 of 290) were obese. The number of individuals who were formally diagnosed with obesity on Axis-III as of 9/30/12 was 105 (38%), slightly lower than those identified to be obese by BMI.

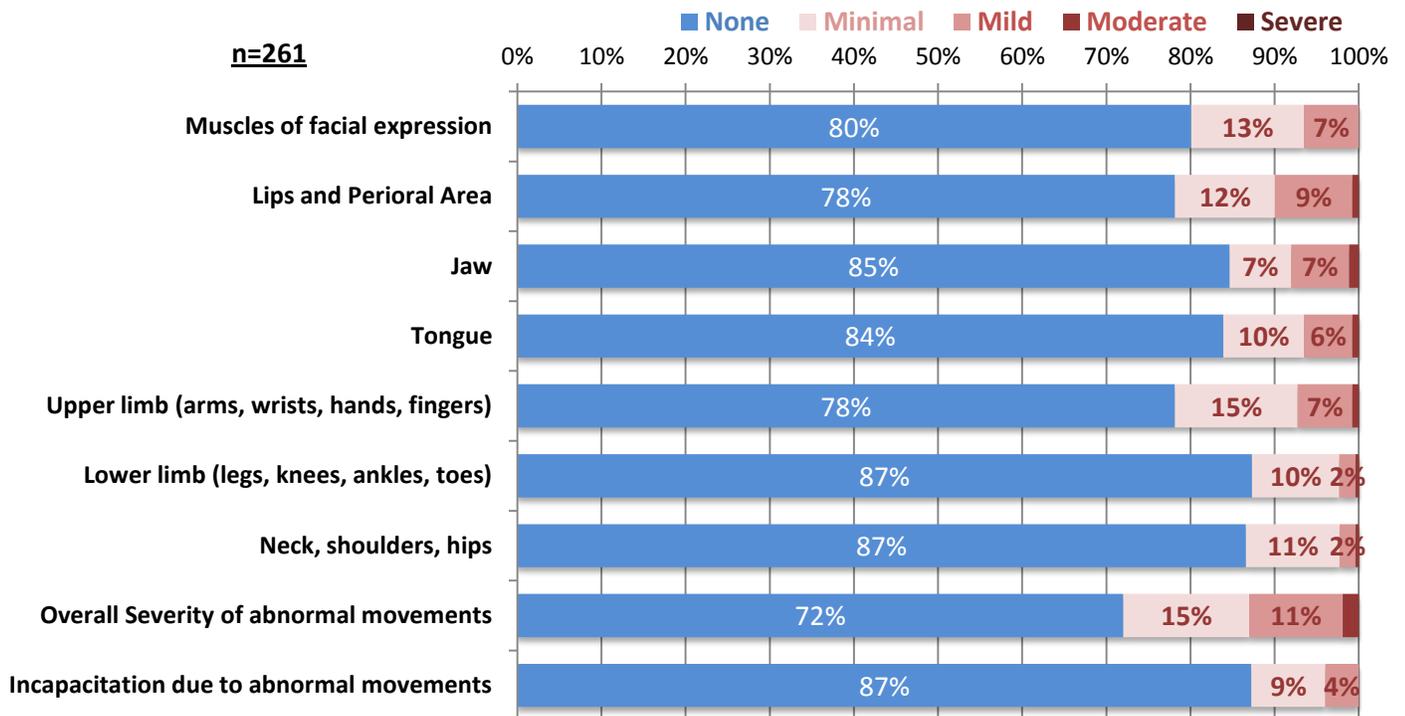
9. Abnormal Involuntary Movement Scale (AIMS) Test Results

- Results of the most recent *Abnormal Involuntary Movement Scale (AIMS)* tests conducted for a total of 261 unique individuals indicate that about 28% of individuals in care on September 30, 2012 had some kind of

abnormal involuntary movement observed, but only 26 individuals or 10% were assessed to be clinically positive based on scoring results¹⁵. However, it should be noted that doctors assessed 34 individuals or 13% as having overall mild or more severe level of abnormal movements in a separate question of AIMS test.

- Presence of abnormal involuntary movements was observed more frequently in muscles of upper limb, and lips and perioral area than other parts of the body.

Figure 29. Abnormal Involuntary Movements by Severity (FY12)

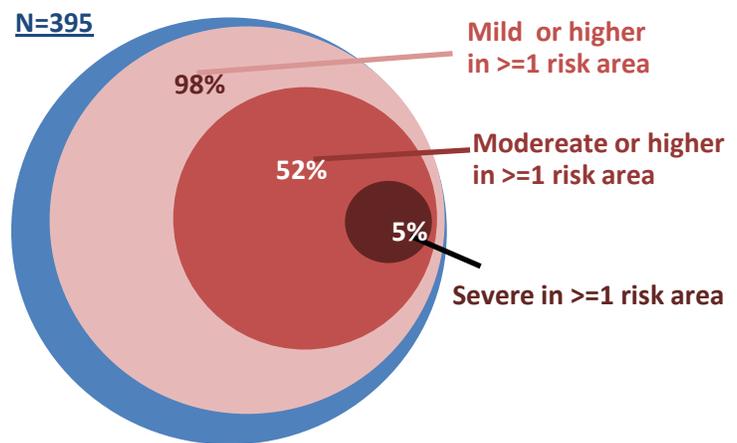


- AIMS test also included assessment on dental status, which showed that 43% of the individuals in care tested were identified to have a problem with teeth or dentures.

10.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 400 admissions made during FY12, a total of 395 CIPAs were available for analysis. Findings indicate that 98% of individuals entering care present with at least a mild level of risk in one or more areas, an increase of 5% from FY11 levels. Those assessed to have a moderate or higher level of risk in one or more areas at admission also slightly

Figure 30. Overall Risk Level of Individuals Entering Care (FY12)



¹⁵ A positive AIMS is a score of 2 (mild) in two or more movements or a score of 3 (moderate) or 4 (severe) in a single movement. It has been calculated based on the scoring result of each question.

increased to 52% in FY12 from 50% in FY11. The percentage of individuals assessed to have severe risk remained unchanged from the previous year at 5% in FY12.

- Of the eight (8) risk categories assessed in CIPA, physical aggression was the most frequently identified risk: three out of four admissions (74%) presented some level of physical aggression risk; 30% of admissions presented a moderate or severe level of physical aggression risk.
- Fifty-five percent (55%) and 41% of admissions were identified to have risk of self-injury and suicide, respectively, but only 14% and 9% were indicated to have risk of self-injury and suicide at a moderate or severe level.
- Thirteen percent (13%) were identified to pose a moderate or severe level of risk of aggression to property and 6% for risk of sexual aggression.
- No major changes have been observed in identified risks upon admission for individuals with moderate or severe level of risk between FY11 and FY12.

Figure 31. Number of Admissions with Risk Identified through CIPA (FY12)

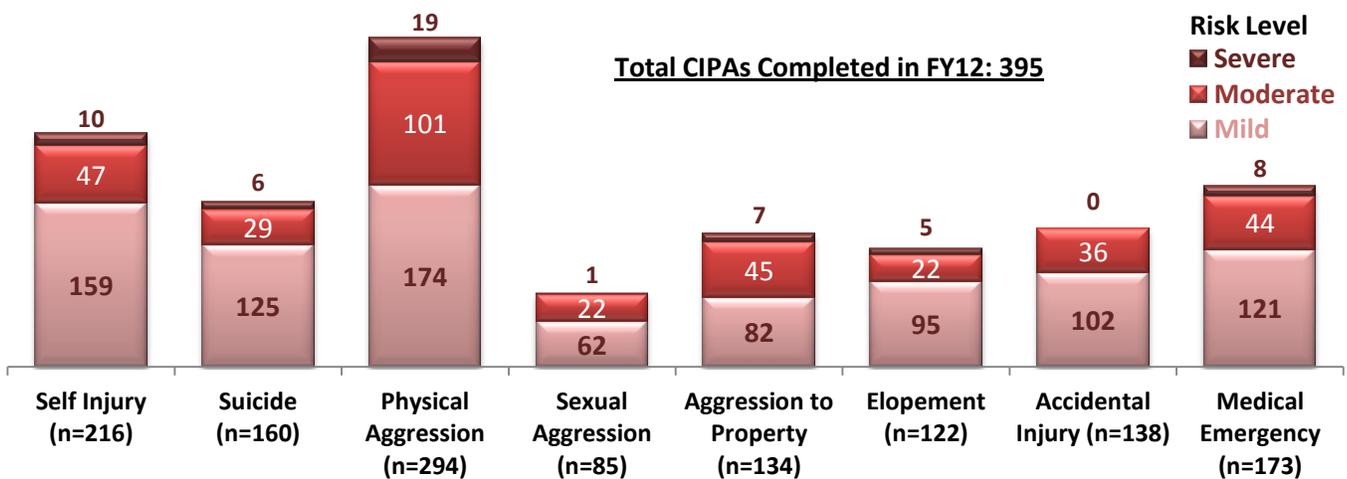
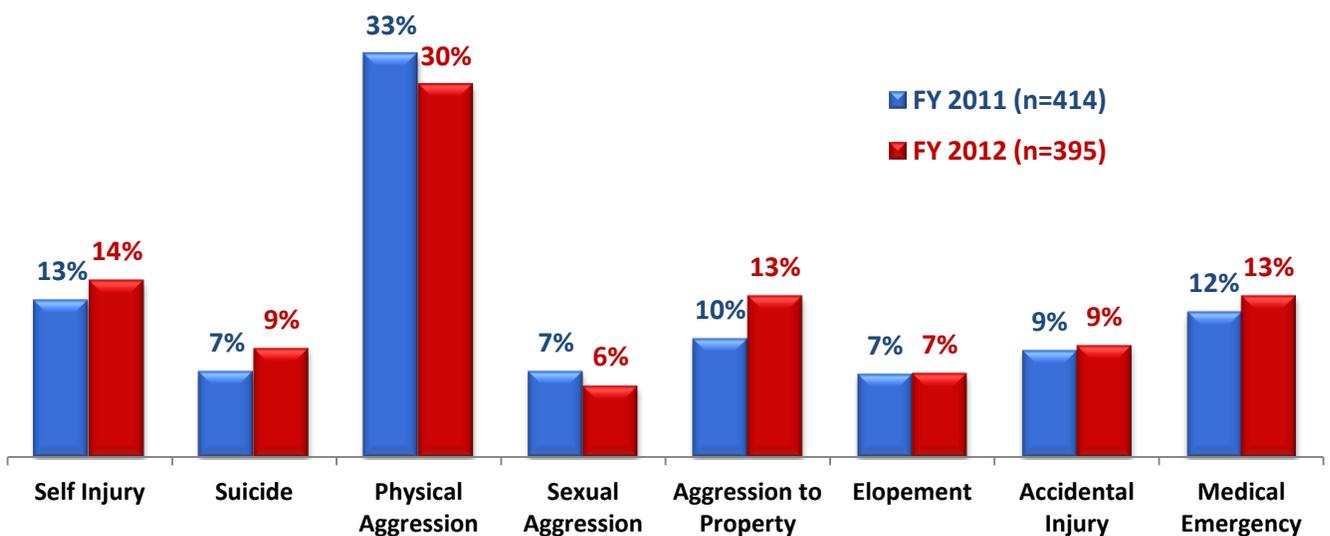


Figure 32. Percent of Admissions with Moderate or Severe Level of Risk Identified (FY11 & FY12)

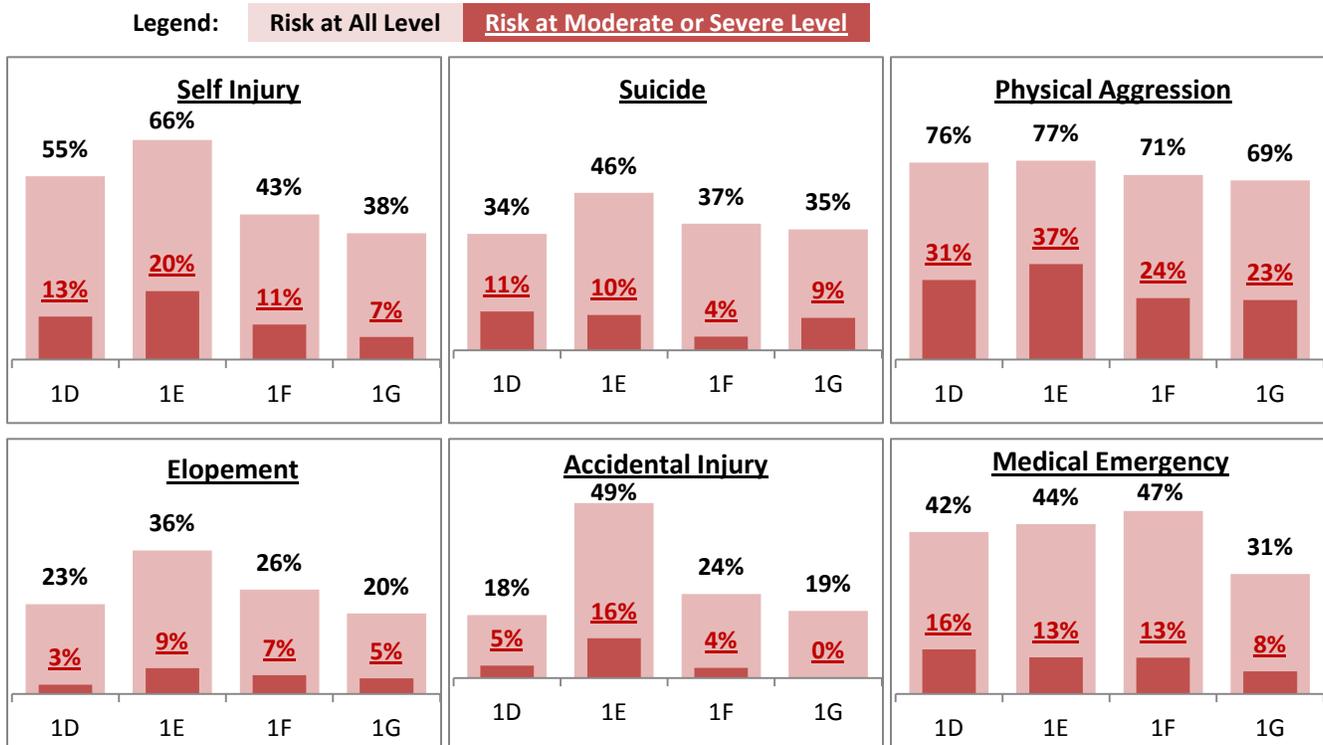


- The Hospital has primarily four (4) admission units and clinical characteristics and key areas of risks identified for individuals at admission often showed different patterns by unit. For example, individuals admitted to 1E

presented distinctively higher risk of self-injury, elopement, and accidental injury at all levels compared with those entering other admission units. Admissions to 1D or 1E were more frequently identified to be at the moderate or severe risk level of physical aggression than admissions to 1F or 1G.

- 1E had the highest percentage of admissions with suicide risk¹⁶ identified but most of them were at mild level; 1D had the highest percentage of suicide risk at moderate or severe level.
- 1F had the highest percentage of admissions with medical emergency risk (47%) but 1D had the highest percentage of admissions with moderate or severe level of medical emergency risk.

Figure 33. Percent of Admissions with Risk Identified by Unit (FY12)



11. Individuals Identified at High Risk

- Not every type of risk is assessed at admission. Also, some individuals who were not assessed for high risks at admission may present risks later or vice versa. The Performance Improvement Department (PID) tracks and monitors those at high risk in 16 behavioral and medical risk indicators based on ongoing clinical assessment results, unusual incident records, and routine communication with unit clinicians, updating high risk list. According to the high risk tracking database, as of September 30, 2012, 111 individuals or 40% of the total population were identified at high risk in at least one area.
- During the last 7 months of FY12, between March 2012 and September 2012, a total of 103 individuals (15 per month) were newly added to the high risk list but only 69 individuals (10 per month) were removed from the high risk list during the same period, making a net gain of 34 individuals to the list.

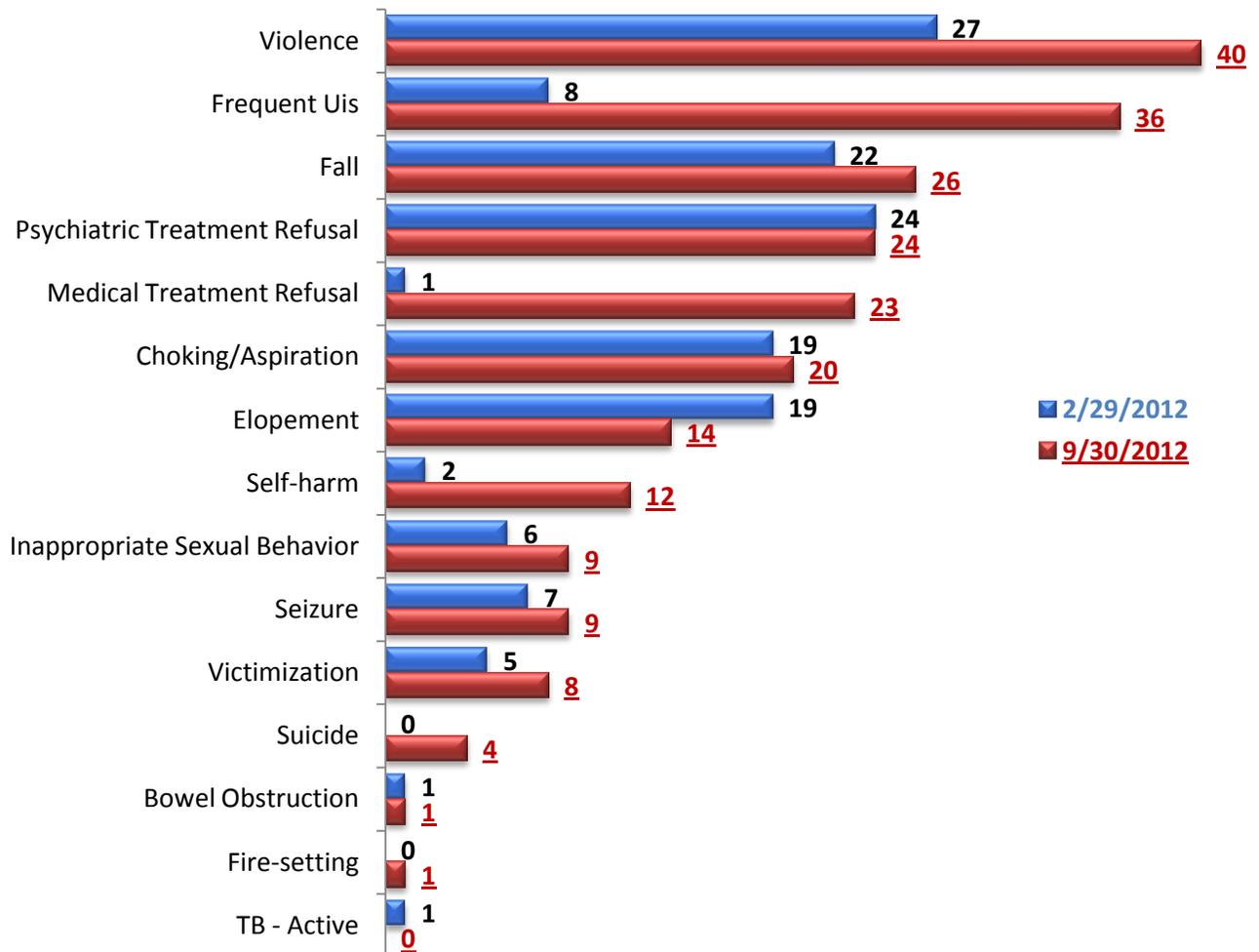
¹⁶ Suicide risk is assessed as a separate indicator from self-injury risk in CIPA.

Table 23. Change of High Risk List between 3/1/12 and 9/30/12

Criteria	Total (7 Months)	Monthly Average	Note
# of Individuals Identified on High Risk List on <u>2/29/12</u>	77	N/A	28% of 271 all individuals in care
>=1 Risk Newly Identified between 3/1/12 and 9/30/12	124	18	
# of Unique Individuals Newly Added to High Risk List	103	15	
>=1 Risk Removed between 3/1/12 and 9/30/12	98	14	
# of Unique Individuals Completely Removed from Any High Risk List	69	10	
# of Individuals Identified on High Risk List on <u>9/30/12</u>	111	N/A	40% of 279 all individuals in care

- As of September 30, 2012, 40 individuals were identified to be at high risk of violence and 36 were identified to have been frequently involved in major unusual incidents.
- Individuals identified to be at high risk of violence, frequent UIs, self-harm and suicide considerably increased between March and September 2012. It should be noted that medical treatment refusal is a new indicator that was separated from psychiatric treatment refusal in late February 2012 and thus the change in this indicator during this time period does not reflect the actual change.

Figure 34. Number of Individuals on High Risk List by Risk Indicator (2/29/12 vs. 9/30/12)



- Individuals are placed in different units primarily based on their treatment needs and acuity level. Consequently, the number of individuals included in the high risk list varies by unit and risk category and **Table 24** presents distribution by unit. It should be noted that this data does not represent the entire year but is a snapshot as of September 30, 2012. Despite that, it still helps us to understand clinical characteristics and major types of potential risk identified by unit.
- As of September 30, 2012, a majority of individuals served in geriatric units, 1A and 1B, were identified to be at high risk in one or more categories. Respectively, 23 out of 27 and 16 out of 26 served from 1A and 1B were included in the high risk list. It is not surprising to see that major types of high risk identified from these units are falls and choking.
- Two (2) other units with the next largest number of individuals on the high risk list are 2C and 2D. They were serving respectively 14 and 11 individuals at high risk in one or more categories.
- Units 1E, 2C, and 2D were serving the most individuals identified at high risk of violence and most of other units except 2A and 2B were also serving at least a couple of individuals assessed to be at high risk of violence.
- Elopement risk was present most frequently among individuals being served at 2C, 1B, and 1C.
- 2A had only two (2) individuals identified to be at high risk in any category as of September 30, 2012.

Table 24. Number of Individuals on High Risk List by Risk Category and Unit (9/30/12)

High Risk Category	Total IIC	1A	1B	1C	1D	1E	1F	1G	2A	2B	2C	2D	2TR
Total IIC on >= 1 Risk Category	111	23	16	9	7	9	6	5	2	7	14	11	2
Violence	40	2	5	3	5	7	2	2		1	7	6	
Frequent Uis	36	5	3	5	3	2	4	5		1	6	2	
Fall	26	10	7		2			1	1	1	2	1	1
Psychiatric Treatment Refusal	24	1	4	1	4	1	2			1	4	6	
Medical Treatment Refusal	23	8	3		2	2	1			1		6	
Choking/Aspiration	20	8	7	2						1	2		
Elopement	14		3	3						1	6	1	
Self-harm	12				1	3	1		1	1	3	1	1
Seizure	9	3	2		1		1			2			
Inappropriate Sexual Behaviour	9	2	1							1	4	1	
Victimization	8	3	2		2		1						
Suicide	4				1	2						1	
Fire-setting	1					1							
Bowel Obstruction	1										1		

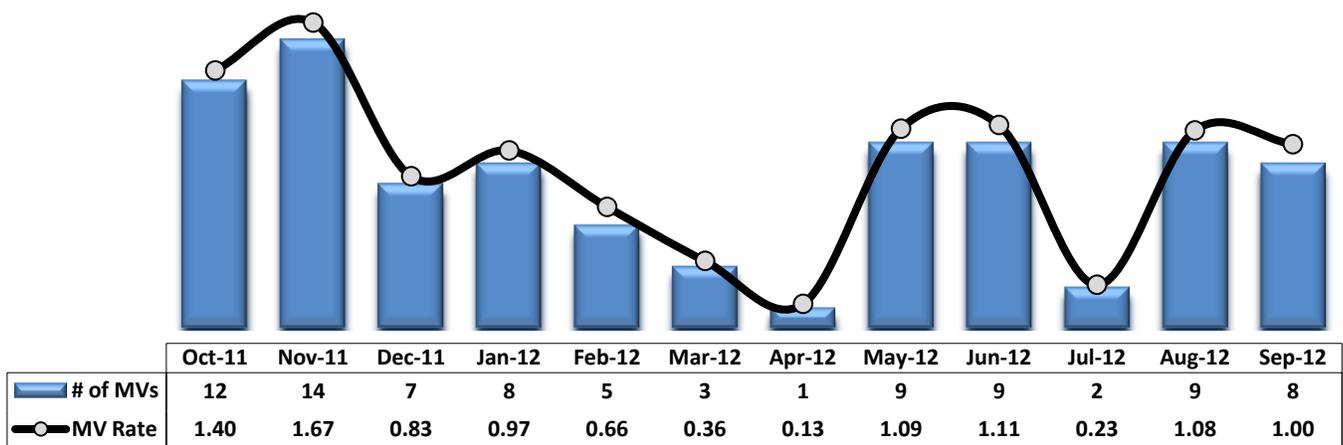
VI. Medication and Pharmacy

- **Reported Medication Variance incidents significantly dropped in FY12.**
- **44% of MV reports were actual and 56% were potential.**
- **Reported Adverse Drug Reactions also declined in FY12.**
- **Number of reported MVs and ADRs significantly varies by unit.**

1. Medication Variances (MV)¹⁷

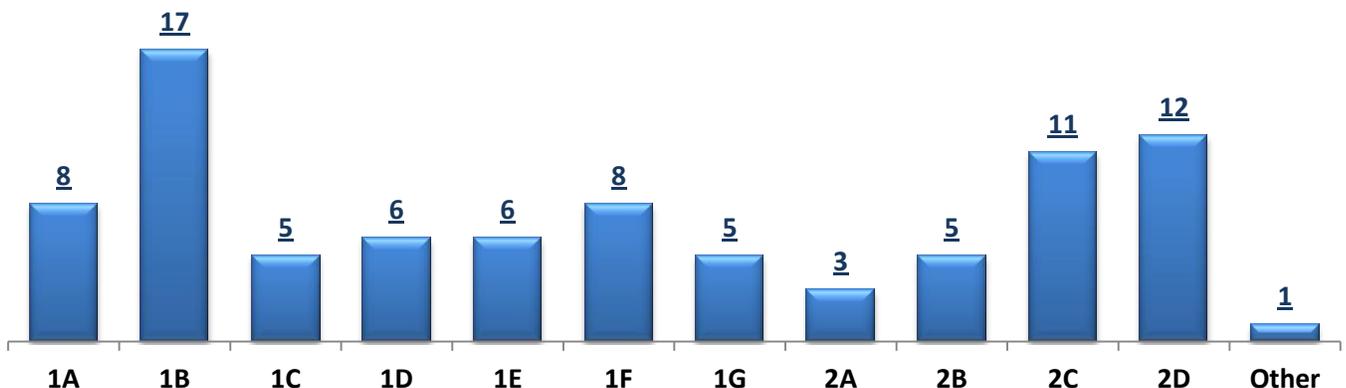
- During FY12, a total of 87 medication variance incidents (7 per month on average) were reported. This is a significant drop from last year when 159 variance incidents (13 per month) were reported.
- The number of reported MV incidents varied month by month, ranging from one (1) to 14.

Figure 35. Volume of Reported Medication Variances (FY12)



- 1B reported the most MV incidents (17) followed by 2C and 2D at 11 and 12, respectively. The remainder of the units reported fewer than 10 for FY12. It should be noted that 1A and 1B are geriatric units and serve many individuals with more medications ordered than other units.

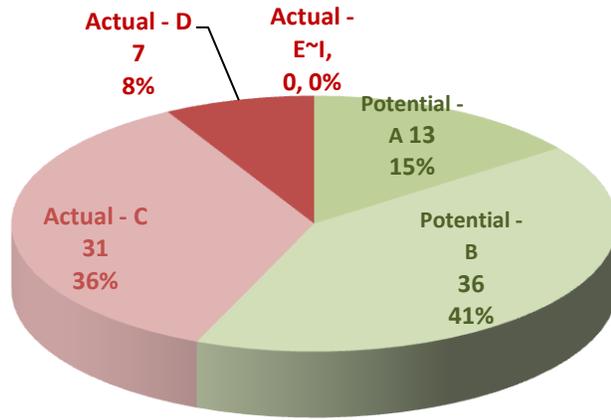
Figure 36. Medication Variance Reports by Unit (FY12)



¹⁷ It is an equivalent term of ‘medication error’, which is defined as “any preventable event that may cause or lead to inappropriate medication use or patient harm while the medication is in the control of the health care professional, patient, or consumer.” –National Coordinating Council for Medication Error Reporting and Prevention (NCC MERP).

- Of the 87 incidents reported, 13 (15%) were those where no actual variances occurred but it had the capacity to cause an actual error (Category A), 36 (41%) cases did not reach patients (Category B), and the remaining 38 were MVs that actually occurred.
- Of the 38 actual MV incidents, 31 cases reached the patient but did not cause the patient harm (Category C) and the other seven (7) required monitoring and intervention to preclude harm (Category D).

Figure 37. Outcomes (Category) of MVs (FY12)

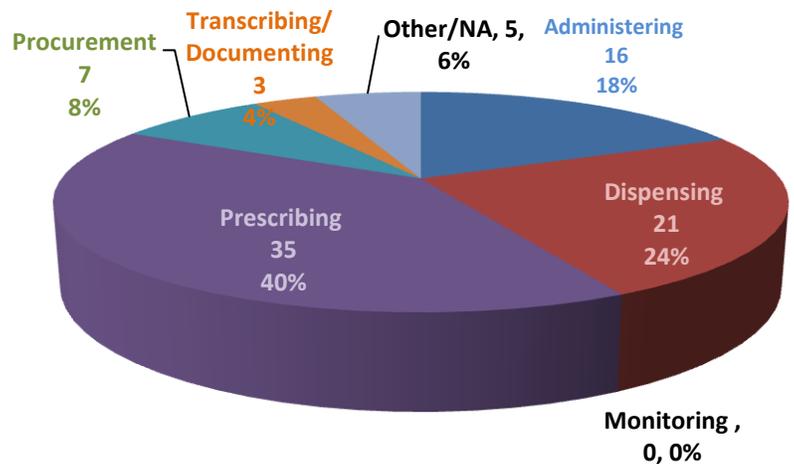


Category Descriptions

- A** Circumstances or events that have the capacity to cause error.
- B** An error occurred, but the error did not reach the patient.
- C** An error occurred that reached the patient, but did not cause patient harm.
- D** An error occurred that reached the patient and required monitoring to confirm that it resulted in no harm to the patient, and/or required intervention to preclude harm.
- E** An error occurred that may have contributed to or resulted in temporary harm to the patient and required intervention.
- F** An error occurred that may have contributed to or resulted in temporary harm to the patient and required initial or prolonged hospitalization.

- Of the MV incidents with their critical break points identified, 35 (40%) incidents were triggered during the medication prescribing process, 21 (24%) in the dispensing process, 16 (18%) in the administering process, 7 (8%) in the procurement process, 3 (4%) in the transcribing and documenting process, and 5 (6%) in Other.

Figure 38. MV by Critical Break Point (FY12)



- A majority of MVs were discovered and reported by nursing staff (46 or 53% of the total 87 MVs reported). MVs reported by pharmacy personnel composed 29 or 33% and physicians reported 8 or 9%. Discoverers/reporters for the remaining four (4) were not identified.

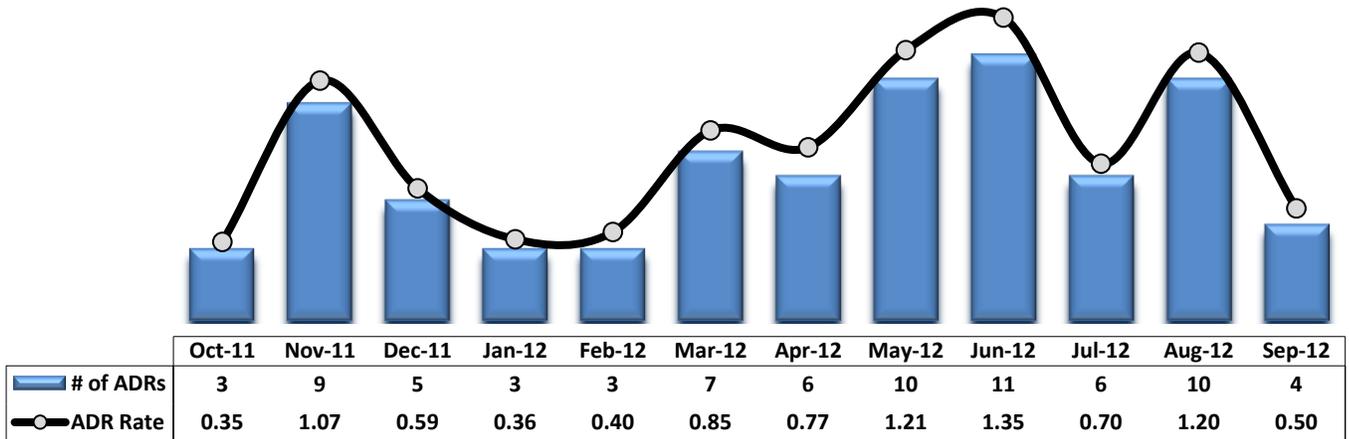
Table 25. MV by Reporter's Discipline (FY12)

Discipline	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total	Average	Percent
Physician	0	0	0	0	1	1	0	1	4	0	0	1	8	0.7	9.2%
Nursing Staff	2	3	2	3	4	1	1	7	5	2	9	7	46	3.8	52.9%
Pharmacy Personnel	8	10	4	5	0	1	0	1	0	0	0	0	29	2.4	33.3%
Not Identified	2	1	1	0	0	0	0	0	0	0	0	0	4	0.3	4.6%
Grand Total	12	14	7	8	5	3	1	9	9	2	9	8	87	7.3	100.0%

2. Adverse Drug Reaction (ADR)¹⁸

- During FY12, a total of 77 ADRs or an average of six (6) per month were reported. This is a decline of 9% from 86 ADR reports in FY11.
- The monthly number of reported ADRs ranged from three (3) to 11.

Figure 39. Number of Reported ADRs (FY12)



Data Source: UI DB for data since December 2009

- Data on the number of ADRs by unit suggests that ADRs may not be consistently reported throughout the Hospital.
- Of the 77 ADRs reported for FY12, 10 (13%) were doubtful ADRs, 30 (39%) were possible ADRs, 35 (45%) were probable ADRs, and two (3%) were definite ADRs.
- 1F and 1G had the most ADRs reported at 15 and 14, respectively. 1D had 10 ADRs. Most units had ADRs of less than 7 reported for the entire fiscal year.

Figure 40. Probability of ADR (FY12)

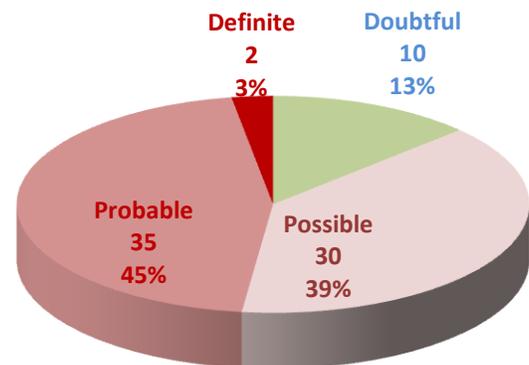
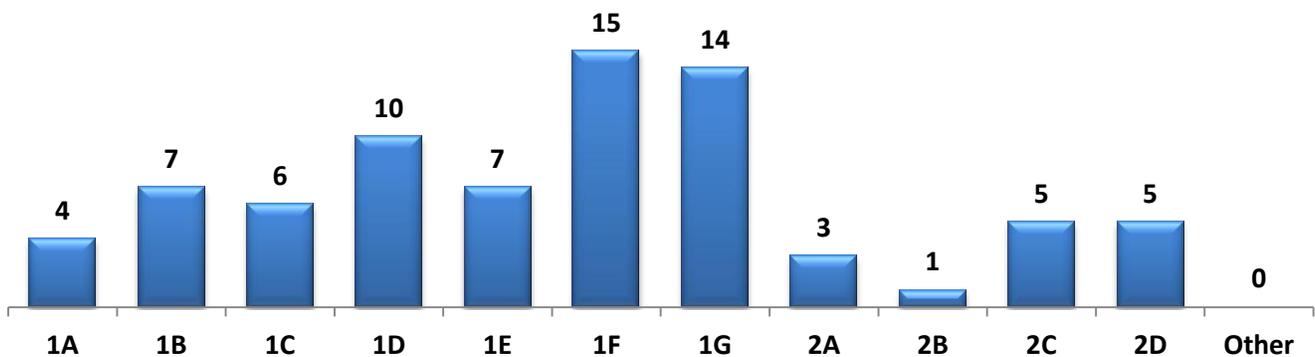


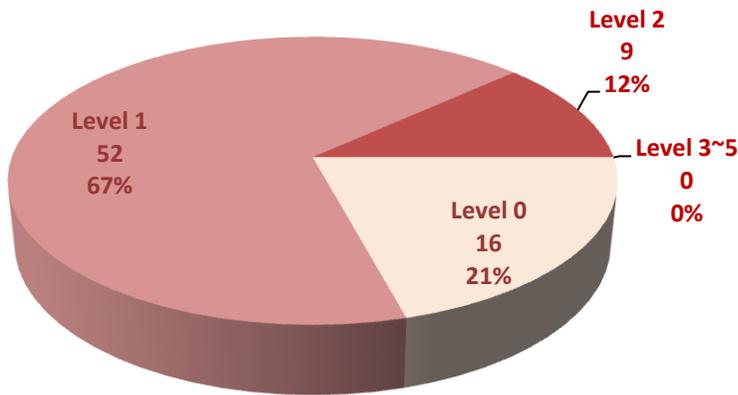
Figure 41. ADR Reports by Unit (FY12)



¹⁸ A Suspected Adverse Drug Reaction is a "noxious and unintended response to any dose of a drug (or biologic) product for which there is a reasonable possibility that the product caused the response. In this definition, the phrase 'a reasonable possibility' means that the relationship cannot be ruled out. – Food and Drug Administration proposed definition, Federal Register, 3/14/2003 (Volume 68, Number 50)

- Of the 77 ADRs reported for FY12, 52 or 67% required dosage change and required treatment or caused an extension of stay in the facility (Level 1) while nine (9) required initial or prolonged hospitalization (12%) (Level 2), 16 cases (or 21%) required little or no treatment (Level 0). There were none reported ADRs that fell in the severe category.

Figure 42. Severity Level of ADR (FY12)



Severity Level

- 0 (Mild)** Required little or no treatment, no change in therapy, and did not cause harm or extend the stay in the facility
- 1 (Moderate)** Caused no harm to the patient but required a significant reduction in dosage or discontinuation of the drug, and required treatment or caused an extension of stay in the facility
- 2 (Moderate)** Resulted in temporary harm to the patient and required initial or prolonged hospitalization
- 3 (Severe)** Resulted in permanent patient harm or disability
- 4 (Severe)** Required intervention necessary to sustain life
- 5 (Severe)** Resulted in the patient’s death

VII. Unusual Incidents

- **On average, 190 unusual incidents (UI) were reported per month during FY12. This is a reduction of 12%.**
- **One out of three individuals served is involved in one or more UI each month. About 16% were involved in multiple UIs (>=2) within a month period.**
- **Unusual incidents occur more frequently during the early stage of an individual's hospitalization.**
- **On average, 12% are alleged as aggressors of violence related incident, including 5% alleged for more than one incident during month.**
- **Physical assaults and psychiatric emergency incidents significantly declined in FY12 whereas contraband and aggressive behavior reports considerably increased.**
- **The Hospital's patient injury rate, which counts only major injuries, in FY12 was 0.34 per 1000 patient days, which is slightly lower than the NPR (0.39).**
- **Staff injuries, particularly those associated with physical assaults decreased.**

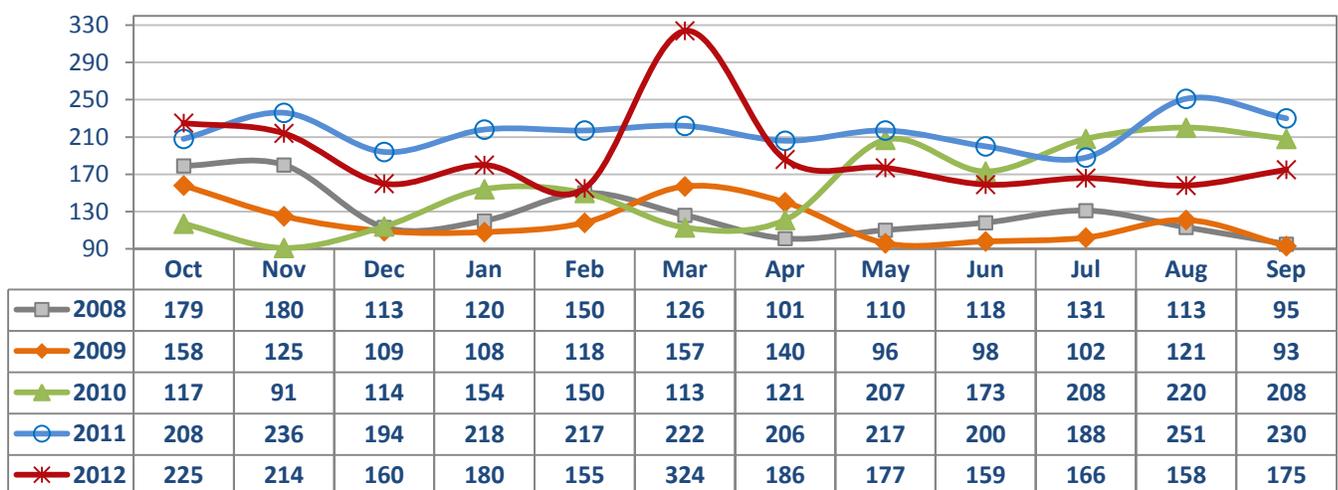
1. Volume of Unusual Incident Reports (UI)

- A total of 2279 unusual incidents or an average of 190 per month was reported during FY12. This represents a decline of 12% from FY11, when there were 216 UIs reported per month. Considering the daily average census dropped by only 1% from FY11 to FY12, 12% is a significant decline.
- The number of incidents was lower in most months during FY12 compared with the same month in FY11. The one month that marked an exceptionally high number of UI reports was March 2012, when a total of 324 incidents were reported. However, 24% of these 324 incidents were medication refusal incidents that were over-reported due to confusion on the medication refusal reporting policy: while the policy requires only those incidents in which a high alert medication is refused be reported as a UI, some clinicians reported almost every medication refusal incident as an UI during that month. Since the issue was addressed and the policy was clarified, the number of reported UIs declined immediately, staying below 200 per month.

Table 26. Monthly Average of UIs (FY07 ~ FY12)

Year	Monthly Average
FY07	115
FY08	128
FY09	119
FY10	156
FY11	216
FY 12	190

Figure 43. Reported Unusual Incidents by Month (FY08 ~ FY12)



2. Individuals Involved in UI

- Of the 2279 incidents reported in FY12, 94% or 2137 (178 per month on average) involved at least one individual in care. The other 6% were classified as non-patient related incidents.
- One out of three individuals in care was involved in at least one incident each month. During each month of FY12, on average, the Hospital served a total of 309 unique individuals 1 day or more, and of those, about 109 individuals (35%) were involved in at least one incident during the month.
- Of the 109 individuals, on average, 61 individuals were involved in just one incident and the other 48 individuals were involved in more than one incident within a month period. That is about 16% of the total population served during the month (309). Of those involved in multiple UIs, on average, 16 individuals (or 5% of the total population served) were involved in four (4) or more UIs each month. This number varied by month as the number of UIs varied by month.

Table 27. Unique Individuals in Care Involved in UIs (FY12)

# of Incidents Involved	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Mean	Percent
1 Incident	64	72	56	65	61	54	47	74	63	49	56	65	61	20%
2 Incidents	13	26	21	24	16	30	23	21	20	24	19	24	22	7%
3 Incidents	17	8	6	12	9	15	14	8	13	10	6	12	11	4%
4~5 Incidents	9	14	8	8	13	14	9	9	6	6	7	11	10	3%
6~10 Incidents	10	7	3	5	0	9	3	3	3	6	9	2	5	2%
>=11 Incidents	3	1	1	0	0	6	2	1	0	0	0	1	1	0.3%
<i>Pts involved >=4UIs (#)</i>	22	22	12	13	13	29	14	13	9	12	16	14	16	5%
Total unique Individuals in care involved in UI	116	128	95	114	99	128	98	116	105	95	97	115	109	35%
Total Individuals served >=1 day during month	330	315	314	311	298	306	300	298	306	316	309	302	309	100%
# of UIs with Patient Involved during month	205	203	149	166	145	311	174	163	156	153	151	161	178	N/A

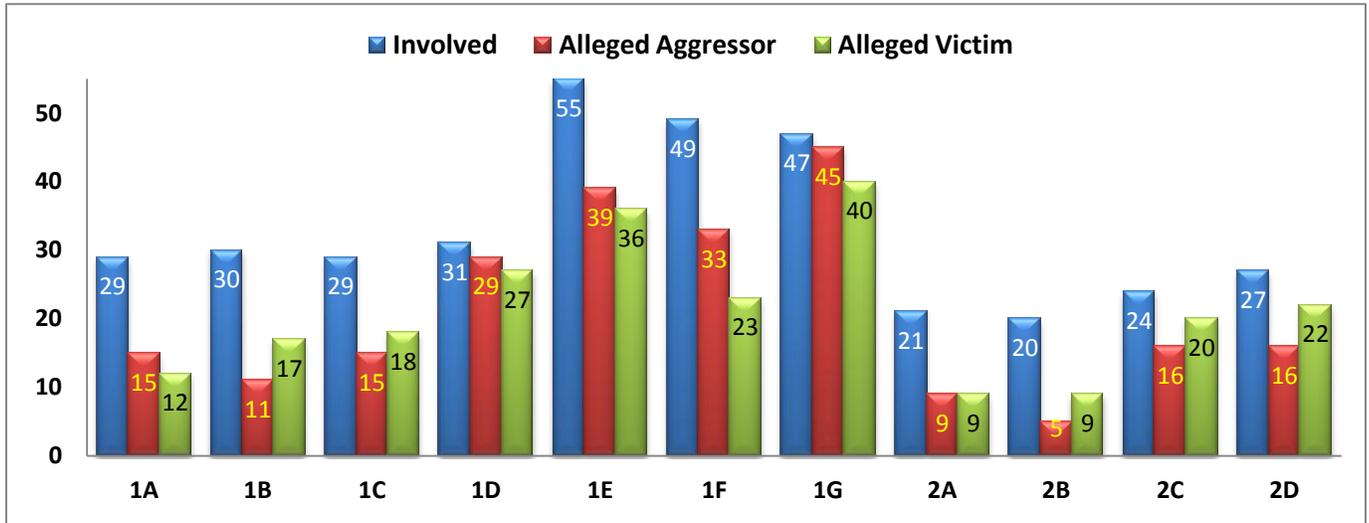
- Some individuals in care were also frequently alleged as aggressors. On average, about 38 individuals or 12% of the total population served were alleged as aggressors in violence related incidents each month. Of those, 15 individuals (5% of the total population) were alleged as aggressors in more than one incident within a month period.

Table 28. Unique Individuals in Care Alleged as Aggressors in Violence Related UIs (FY12)

# of Allegations	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Mean	Percent
1 Incident	19	27	22	14	17	26	19	24	23	21	29	29	23	7%
2 Incidents	8	7	4	6	2	11	9	9	10	11	7	9	8	3%
3 Incidents	9	3	2	5	7	5	4	2	2	4	1	2	4	1%
4~5 Incidents	5	3	3	0	1	1	1	5	1	1	2	3	2	1%
6~10 Incidents	3	2	0	2	0	3	1	0	1	3	1	0	1	0.3%
>=11 Incidents	1	0	0	0	0	0	0	1	0	0	0	0	0	0%
<i>Pts alleged in >=2UIs (#)</i>	26	15	9	13	10	20	15	17	14	19	11	14	15	5%
Total Alleged Aggressors	45	42	31	27	27	46	34	41	37	40	40	43	38	12%
Total Individuals served >=1 day during month	330	315	314	311	298	306	300	298	306	316	309	302	309	100%

- Many of the individuals who were repeatedly involved or alleged as aggressors or victims of incidents were being served by admission units (1D, 1E, 1F & 1G), suggesting that unusual incidents tend to occur more frequently among individuals in the early stage of hospitalization.

Figure 44. Unique Individuals in Care Involved in UIs by Roles and Units (FY12)



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

3. UI by Type and Severity

- Three out of five incidents (59%) reported in FY12 were considered to be major incidents. Major incidents constituted about 66% of all incidents reported in FY11.
- A majority of incidents had a severity level identified by the Risk Manager to be low (41%) or medium (42%). Only 17% were considered to be critically severe (high or catastrophic).

Table 29. Major UIs vs. Non-Major UIs (FY12)

Major vs. Non-major	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total	Mean	Percent
Major Incidents (#)	168	140	95	124	100	165	108	120	99	85	68	70	1342	112	59%
(%)	75%	65%	59%	69%	65%	51%	58%	68%	62%	51%	43%	40%	59%		
Non-Major Incidents (#)	57	74	65	56	55	159	78	57	60	81	90	105	937	78	41%

Table 30. UIs by Severity (FY12)

Severity	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total	Mean	Percent
Catastrophic	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0.04%
High	65	45	26	32	25	44	31	29	35	31	16	15	394	33	17.3%
Medium	97	103	82	85	81	163	101	67	53	28	40	54	954	80	41.9%
Low	62	66	52	63	49	117	54	81	71	107	102	106	930	78	40.8%

- Physical assaults (20%), physical injuries (16%), medical emergencies (14%), aggressive behavior (14%) and medication refusals (12%) were the most frequently reported incidents in FY12.
- The frequency of incidents by each incident type varied month by month. Despite that, all of the violence related incidents show a notable decline after the 1st quarter of FY12. The increased awareness and vigilance regarding violence and risk related incidents may have contributed to the decrease in violence.
- Overall, physical assaults and psychiatric emergency incidents significantly declined in FY12: physical assaults decreased by 17% (from 543 to 449) and psychiatric emergency incidents decreased by 39% (from 291 to 178). Falls and physical injuries slightly decreased.
- In contrast, contraband incidents increased by 51% (from 148 to 223) and aggressive behaviors increased by 41% (from 223 to 315). It should be noted that aggressive behaviors has been reported as a separate UI

category only since October 2010 and the increase may reflect an increased awareness and identification of aggressive behaviors as unusual incidents rather than an actual increase of such incidents. The most frequently reported type of contraband was smoking related materials.

- In FY12, the SEH Risk Manager received a total of 10 reports of fatalities, including five (5) deaths of forensic patients that occurred after discharge or outplacement in the community.

Table 31. Incidents by Type (FY12)

Incident Type	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total	Average	Percent
Abuse/Neglect/Exploitation	5	5	4	1	2	8	7	4	2	5	7	2	52	4	2.3%
Aggressive Behavior	36	25	22	19	24	41	23	27	21	30	23	24	315	26	13.8%
Attempted UL	4	2	1	1	0	4	1	1	3	0	1	2	20	2	0.9%
Contraband	18	21	19	19	13	33	26	22	15	12	11	14	223	19	9.8%
Crime	0	5	1	4	1	1	0	0	1	7	2	1	23	1.9	1.0%
Death	1	0	1	2	1	1	0	1	2	0	1	0	10	0.8	0.4%
Emergency Invol. Medication	6	4	0	1	6	11	2	6	5	12	4	8	65	5	2.9%
Environment	3	3	1	0	0	2	0	1	0	1	0	0	11	0.9	0.5%
Falls	14	13	9	22	14	24	23	20	21	25	20	24	229	19	10.1%
Fire	0	0	0	0	0	0	0	0	0	1	0	0	1	0.1	0.04%
Medical Emergency	31	35	22	29	30	38	24	18	23	21	21	24	316	26	13.9%
Medication Refusal	17	29	25	24	31	78	32	13	4	3	6	14	276	23	12.1%
Medication Variance	14	14	7	8	5	3	1	9	9	2	9	6	87	7	3.8%
Physical Assault	64	45	27	29	22	45	25	40	35	40	35	42	449	37	19.7%
Physical Injury	46	30	30	26	20	40	22	21	27	33	34	25	354	30	15.5%
Psychiatric Emergency	47	24	16	12	10	16	7	19	7	6	7	7	178	15	7.8%
Property Destruction	6	2	3	4	4	2	8	3	5	4	2	8	51	4	2.2%
Reportable Disease	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Restraint	0	1	0	0	0	0	0	0	1	1	1	0	4	0	0.2%
Seclusion	2	5	5	2	2	3	2	6	3	2	0	0	32	3	1.4%
Security Breach	5	3	2	8	3	5	3	3	2	1	3	7	45	4	2.0%
Self Injurious Behavior	6	1	0	0	1	1	4	2	5	7	6	0	33	3	1.4%
Sexual Assault	2	1	0	0	0	1	2	2	2	0	1	0	11	1	0.5%
Suicide Attempt/Gesture	1	0	0	0	0	0	0	0	0	0	0	1	2	0.2	0.1%
Unauthorized Leave	4	1	3	2	5	5	2	3	3	3	4	3	38	3	1.7%
Vehicle Accident	1	1	0	3	1	0	1	0	2	0	1	0	10	0.8	0.4%
Vital Sign/Finger Stick Refusal	4	9	9	7	6	35	16	4	5	6	10	2	113	9	5.0%
Other (None of above)	6	7	7	8	5	15	11	16	7	14	13	22	131	11	5.8%
Total*	225	214	160	180	155	324	186	177	159	166	158	175	2279	190	100.0%

* This is not the sum of each column but the total number of unique incident reports during each month. One incident may have been categorized under multiple incident types.

Figure 45. Monthly Trend of Violence Related UIs (FY12)

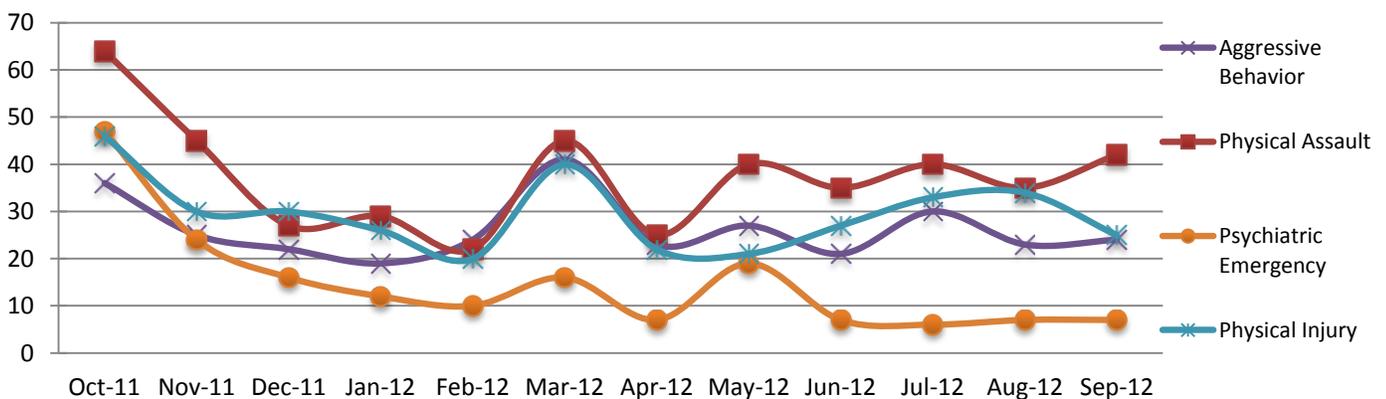
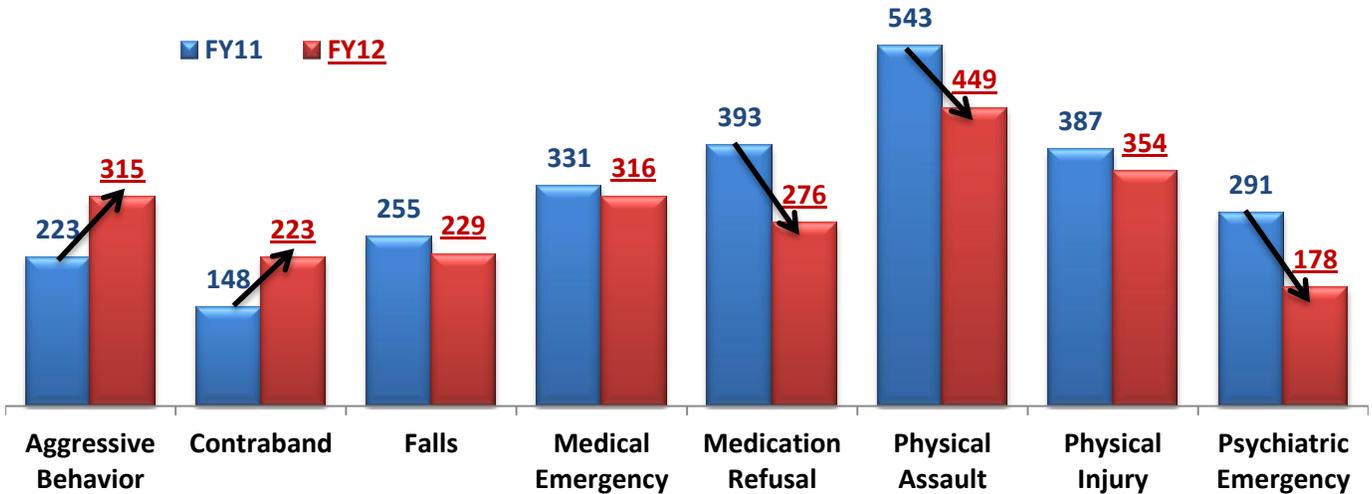


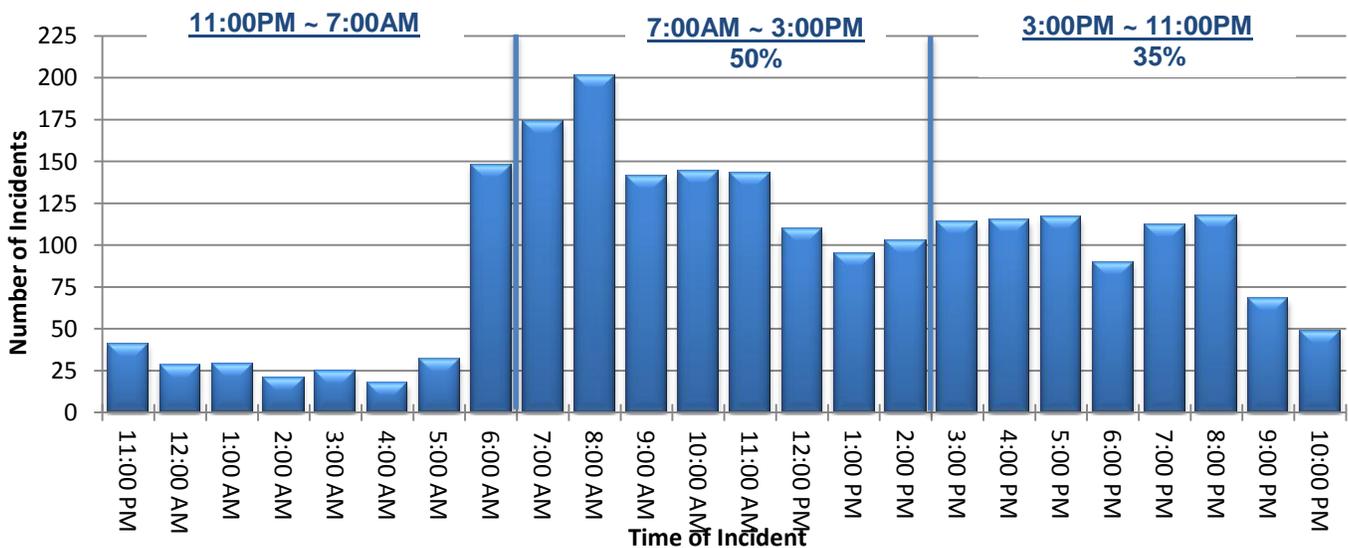
Figure 46. Trend of Selected UIs (FY11 vs. FY12)



4. UI by Time and Location

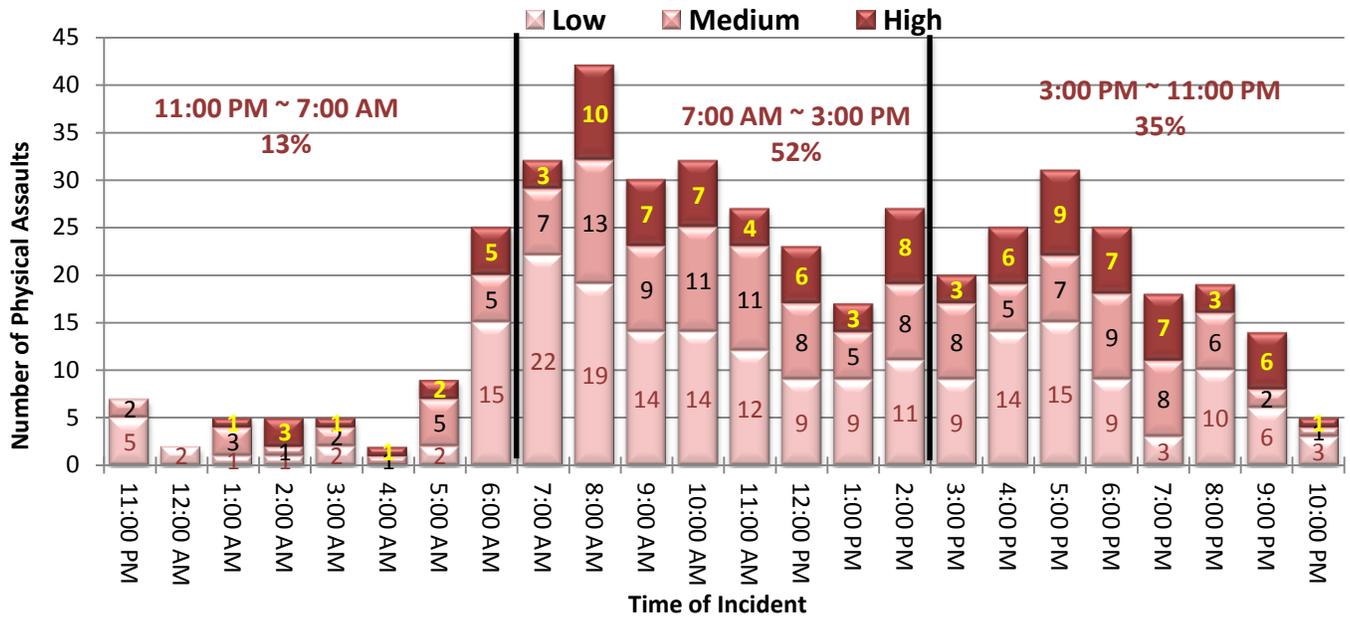
- Half (50%) of the UIs occurred during the day shift, between 7:00 a.m. and 3:00 p.m., and 35% occurred during the evening shift, between 3:00 p.m. and 11:00 p.m.
- The number of UIs starts climbing at 6:00am, reaching its peak between 8:00 a.m. and 9:00 a.m. The frequency of UIs slows down in the late morning and continues to stay at a similar level throughout evening until 9:00 p.m., when it significantly drops and stay low until 5:00 a.m. in the next morning.

Figure 47. Incidents by Time and Shift (FY12)



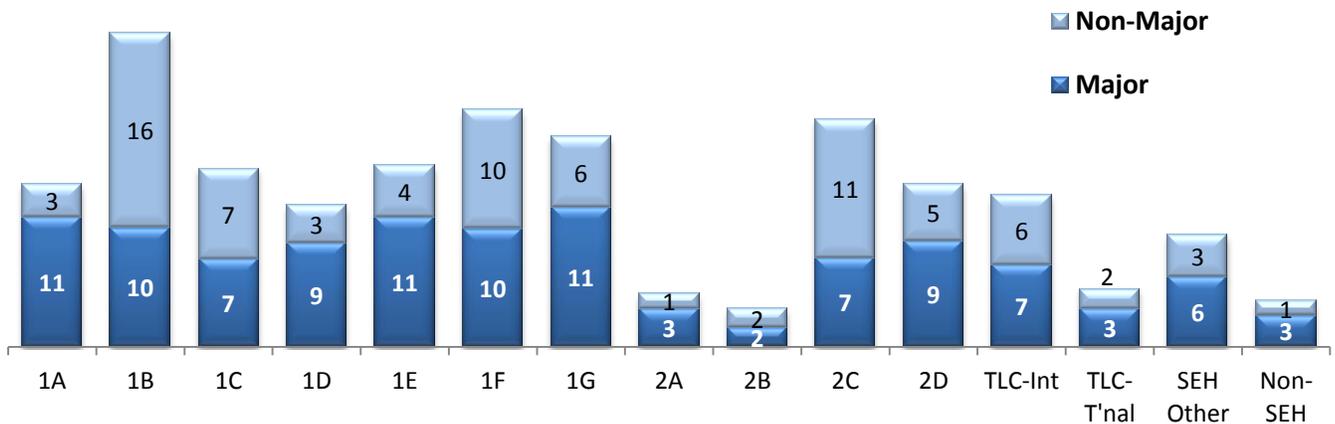
- While the overall time trend of physical assault incidents resembles the trend of all incidents, the pattern of when assault incidents increase and decrease is more distinct. FY12 data shows three blocks of time when physical assaults increased: between 7:00 a.m. and 11:00 a.m., between 2:00 p.m. and 3:00 p.m., and between 4:00 p.m. and 7:00 p.m.

Figure 48. Time Trend of Physical Assault Incidents by Severity (FY12)



- Certain units reported incidents more frequently than other units. During FY12, unit 1B reported an average of 26 incidents per month whereas 2A (4) and 2B (4) reported five or fewer incidents per month. More than half of the incidents reported from 1B, however, were non-major incidents and major UIs took place more frequently at 1A (11), 1E (11) and 1G (11).

Figure 49. Monthly Average Number of UIs by Incident Location (FY 12)



5. Time Lag between Incident and Reporting¹⁹

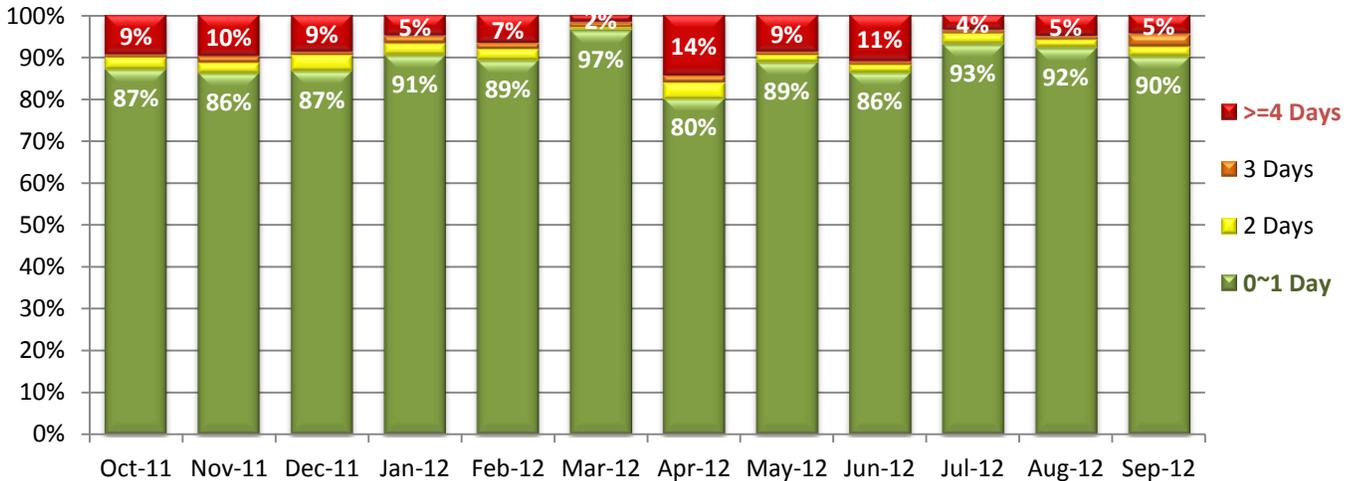
- During FY12, 89% of unusual incident reports were submitted to the Risk Manager within the required time -, 1 day of occurrence. Overall, timely reporting performance was consistently above 85% throughout the year except in April, when 20% of incident reports were not submitted within the required time. The timeliness in UI reporting in FY12 is better than the performance in FY11.

¹⁹ The time lag has been calculated by subtracting the time an incident actually occurred from the time the incident report was received by the Risk Manager.

Table 32. Delays in Incident Reporting (FY12)

UI Type	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Average Length (Days)	4.1	3.1	2.1	1.1	1.0	1.5	2.6	1.7	3.2	1.3	1.4	0.8
Median Length (Days)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Figure 50. Time Lag between Incident and Reporting (FY12)



6. Physical Injury

- Physical injuries are often associated with either physical assaults or falls. In FY12, a total of 354 injury incidents (30 per month) were reported²⁰ and of those, 51% (182) were associated with physical assaults and 23% (81) were a result of falls.
- There were a total of 449 physical assault incidents reported in FY12, and of those, 182 or 41% resulted in injuries to individuals in care or staff.

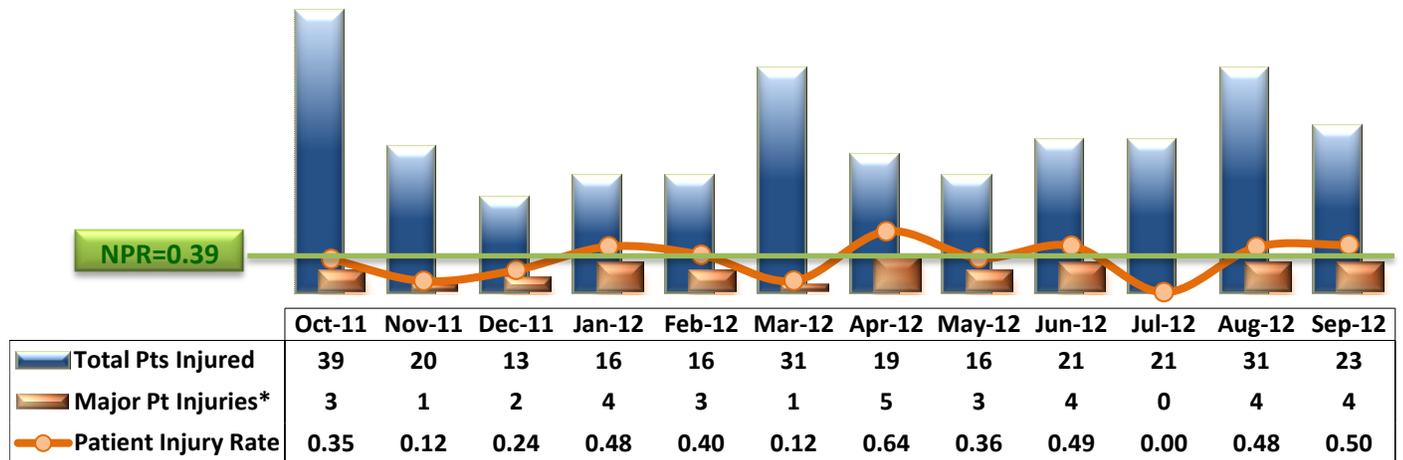
Table 33. Association between Physical Injuries and Physical Assaults/Falls (FY12)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total	Mean	%
Total Physical Injury UIs	46	30	30	26	20	40	22	21	27	33	34	25	354	30	100%
<i>Physical Assault</i>	30	21	14	10	10	22	8	12	14	12	15	14	182	15	51%
<i>Fall</i>	5	3	2	11	4	9	10	6	6	10	7	8	81	7	23%
<i>Neither Assault nor Fall</i>	11	6	14	5	6	9	4	3	7	11	12	3	91	8	26%
Total Physical Assault UIs	64	45	27	29	22	45	25	40	35	40	35	42	449	37	100%
<i>Resulted in Physical Injury</i>	30	21	15	10	10	22	8	12	13	12	15	14	182	15	41%
<i>No Physical Injury</i>	34	24	12	19	12	23	17	28	22	28	20	28	267	22	59%

- The 354 injury incidents reported in FY12 resulted in injuries to a total of 266 individuals in care (22 per month) and 146 employees (12 per month). Some incidents may have resulted in more than one injury.
- Of the 266 individuals in care who were reported to be injured, 232 had minor injuries that were handled at the unit level. The other 34 were determined to have major injuries that required treatment in the medical office at SEH or an external medical facility. The patient injury rate counts only such major injuries and the Hospital’s injury rate in FY12 was 0.34, which is slightly lower than the national public rate of 0.39.

²⁰ A physical injury incident may involve one or more individual(s) in care and/or staff. Occasionally, some of the alleged physical incident reports may not have any individuals identified to have been injured.

Figure 51. Patient Injury Rate (FY12)



- Of the 146 staff injured, 62% were associated with physical assaults.

Table 34. Staff Injury (FY12)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total	Mean	%
Staff Injured	13	16	25	12	8	16	7	10	9	19	7	4	146	12	100%
<i>Associated with Assault</i>	5	13	15	6	5	13	1	8	7	13	3	1	90	8	62%
<i>Not Associated with Assault</i>	8	3	10	6	3	3	6	2	2	6	4	3	56	5	38%

7. Restraint and Seclusion²¹

- The total number of restraint and seclusion episodes for FY12 was respectively 5 and 30, which is translated to one restraint every other month and two seclusion episodes every month on average. The number of restraint episodes declined significantly (76%) in FY12 while the number of seclusion episodes went down slightly from FY11.

- The total duration of the restraint episodes in FY12 was 3 hours 28 minutes for 5 episodes, which is on average about 42 minutes per restraint episode. The total duration of 30 seclusion episodes was 39 hours 50 minutes, which corresponds to an average of 1 hour and 30 minutes per seclusion episode.

Figure 52. Total Number of Restraint & Seclusion Episodes (FY07 ~ FY12)

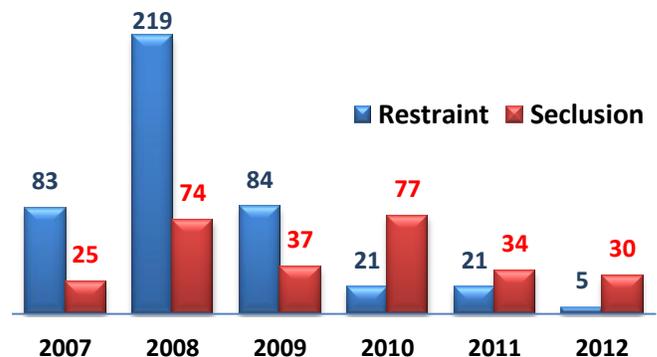


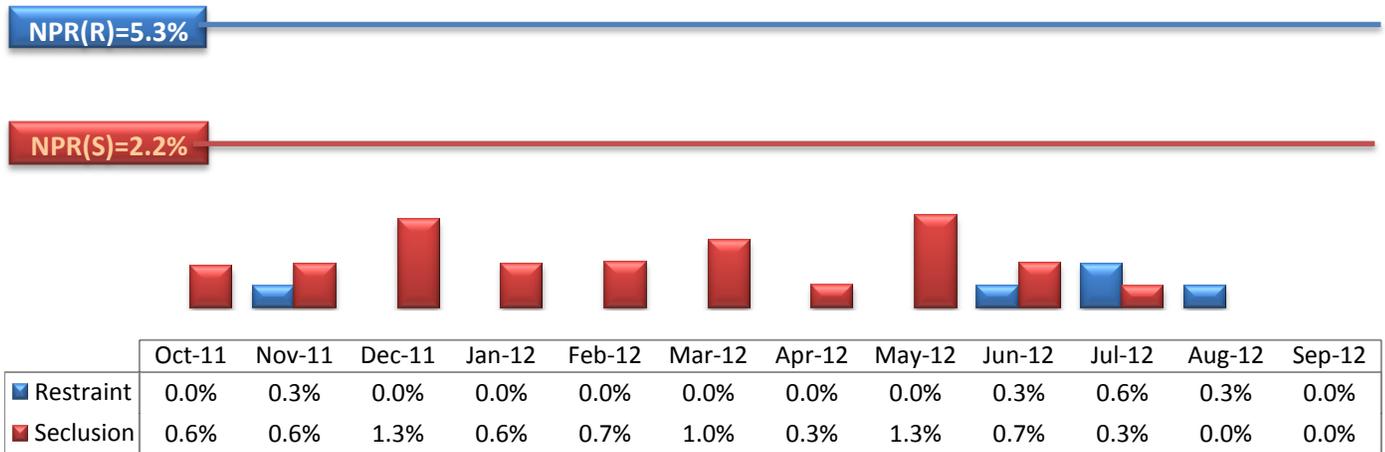
Table 35. Restraint and Seclusion Episodes (FY12)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total	Monthly Average
Total Restraint Episodes	0	1	0	0	0	0	0	0	1	2	1	0	5	0.4
<i>Unique Individuals Restrained</i>	0	1	0	0	0	0	0	0	1	2	1	0		0.4
<i>Total Duration (hh:mm)</i>	0:00	0:15	0:00	0:00	0:00	0:00	0:00	0:00	1:00	0:13	2:00	0:00	3:28	0:17
Total Seclusion Episodes	2	5	5	2	2	3	1	6	3	1	0	0	30	2.5
<i>Unique Individuals Secluded</i>	2	2	4	2	2	3	1	4	2	1	0	0		1.9
<i>Total Duration (hh:mm)</i>	0:35	6:04	4:10	3:13	3:00	3:50	0:45	6:08	11:10	1:00	0:00	0:00	39:50	3:19

²¹ Data source for this section is the seclusion/restraint log, which may or may not include those episodes reported as UI. While PID reconciles the log and UI data at the end of every month, numbers may not be the same between two data sources for some months if any episodes are not reported in one of them.

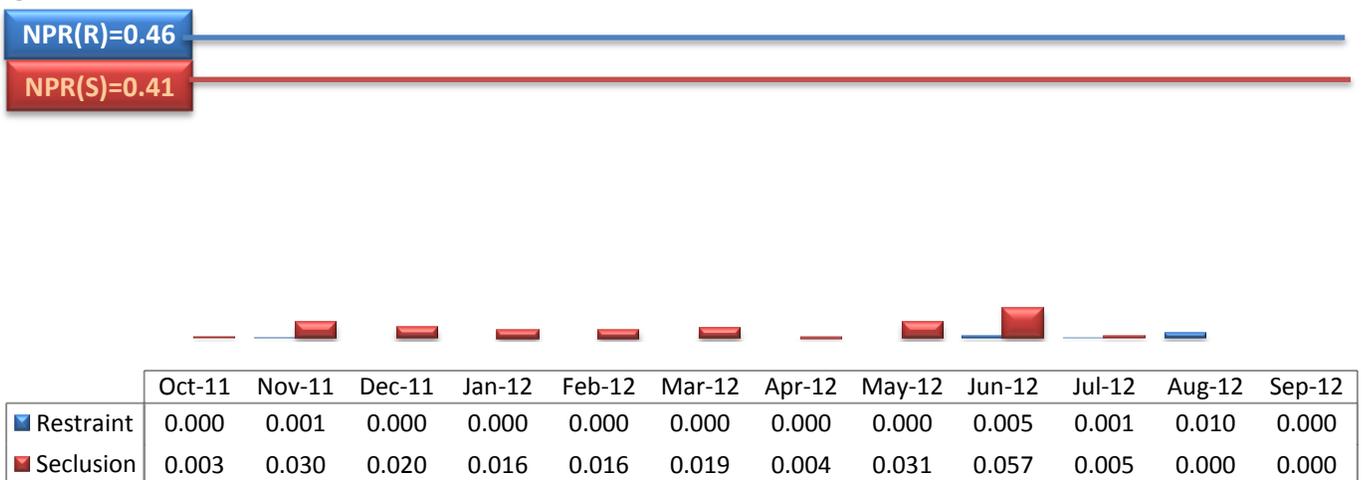
- Some individuals are involved in more than one restraint or seclusion episode. The percent of unique individuals in care restrained or secluded once or more was 0.1% and 0.6%, respectively, on average in a given month. This is much lower than the NPR, 5.3% and 2.2%, respectively.

Figure 53. Restraint Hours Rate & Seclusion Hour Rate (FY12)



- In FY12, the restraint hour rate²² was at 0.001 on average and the seclusion rate²³ was 0.0017. Both rates were far below the NPRs, which were 0.46 for restraint and 0.41 for seclusion, respectively.

Figure 54. Percent of Individuals in Care Restrained or Secluded (FY12)



²² Number of restraint hours per 1000 patient hours

²³ Number of seclusion hours per 1000 patient hours