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

SAINT ELIZABETHS HOSPITAL

FY11

TREND ANALYSIS

Hospital Statistics

February 13, 2012

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☎ (202) 299 - 5430

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Data Disclaimer

The primary source of data extracted and analyzed herein is Avatar unless otherwise indicated. Additional data sources include the Hospital's Unusual Incident database, Adverse Drug Reaction 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) does not guarantee the accuracy, timeliness, reliability, or completeness of data although the OSR 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 disclosure. The OSR is not liable for any misinterpretation or misuse of the data. However, notification of any errors or questions on data presented can be directed to 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 large-scale 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, 2011, SEH was serving a total of 290 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 PRIS*M (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 ultimately contribute to improving 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; length 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. Analysis results are presented visually in charts or tables, along with bullet points describing key findings and interpretations in every section. Selected highlights of key findings are summarized below.

Census, Admissions, Discharges and Transfers

- The Hospital continued to see a decline of census in FY11. As of September 2011, the number of individuals in care on a given day was 290, which is a 7% reduction from September 2010. In FY11, the total patient days, which count only those present at the Hospital, declined by 12% from the total patient days in FY10. Also, SEH served a total of 652 unique individuals for at least one day in FY11 while it served 697 in FY10.

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

- In FY11, admissions of individuals with a forensic legal status increased by 23% but the overall admissions declined due to a significant reduction (by 28%) of admissions of those with a civil legal status.
- In FY11, both admissions and discharges decreased, but discharges exceeded admissions, contributing to a reduction in the census: 444 discharges (37 per month) vs. 423 admissions (35 per month).
- A total of 74 individuals experienced at least one inter-unit transfer during FY11. This is a reduction of 47% from 139 in FY10.
- The number of emergency medical leaves, which are likely to be medical transfers to external medical facilities for temporary treatment, increased. In FY11, on average, 21 emergency medical leaves were reported per month compared to 18 per month in FY10.

Demographic Characteristics of Individuals in Care

- The Hospital's population is aging. As of September 2011, those 60 years or older comprised 30% of the total individuals in care whereas this age group made up 23% in November 2007. The median age also increased from 51 years in 2007 to 56 years in 2011.
- Females comprised 36% of admissions in FY11 whereas they made up 42% of admissions in FY10. Females constitute 24% of the total individuals remaining in care on September 30, 2011 while they made up 28% on September 20, 2010.
- Eighty-six percent (86%) on individuals in care on September 30, 2011 were Non-Hispanic Black or African-American and 12% were Non-Hispanic White or Caucasian.
- The overwhelming majority of individuals in care were single (82%) or divorced/separated (11%).
- A total of 64 or 22% of the total individuals in care on September 30, 2011 were those court-ordered for inpatient pre-trial examination and 111 or 38% were those adjudicated to be not guilty by reason of insanity (NGBRI) or sexual psychopath. The remaining 115 or 40% carried a civil legal status.
- Of the 184 individuals whose religion was identified, 46% were *Protestant*, 26% were *Catholic*, and 12% indicated that they did not have any religion.
- Of the 166 individuals whose education information was available, 42% completed 7 to 9 years of education, 32% completed between 10 and 11 years of education, 9% graduated from high schools, and 8% received some type of college level education or bachelor's degree.

Length of Stay

- Length of stay (LOS) for individuals remaining in care increased in each of the past four years; the median LOS for individuals in care on September 30, 2011 was 844 days (28 months), which is 33 days longer than LOS measured on September 30, 2010 and 357 days longer than that measured on November 7, 2007.
- Almost two out of three individuals (62%) have been in care at SEH for at least one year, including 31% (89 individuals) hospitalized for 10 years or longer.
- The percentage of individuals staying for less than 60 days increased to 22% on September 30, 2011 from 17% on September 30, 2010.
- The median LOS was 4790 days (13 years) for individuals carrying a forensic post-trial legal status and 829 days for those with a civil legal status.
- Individuals who have been recently admitted to SEH tend to be discharged more quickly than those who have been hospitalized for a longer period. Three out of four individuals (74%) admitted in FY11 have been

discharged by the end of FY11; and the median LOS of the individuals discharged in FY11 (56 days) was much shorter than that of those remaining in care at the end of FY11 (844 days).

Readmissions

- The thirty (30) day readmission rate continued to decrease to 5.2% in FY11 from 6.8% in FY10 and 9.3% in FY09. The Hospital's 30-day readmission rate (6.8%) is lower than the national public rate (NPR)[2] (7.8%).
- The 180 day readmission rate also decreased to 19% in FY11 (for 9 months) from 22% in FY10 and 30% in FY09.
- Some individuals were repeatedly readmitted. The frequency of multiple re-admissions in FY11 increased from FY10: Of the 51 individuals re-admitted at least once within 180-days in FY11, 21% were re-admitted more than once compared to 11% in FY10.
- Individuals readmitted tend to have a shorter LOS during their previous hospitalization (immediately prior to re-admission) at SEH than the general discharged population.
- Older individuals who are discharged are more likely to return to the Hospital than younger ones.

Clinical Profile Identified in each Axis

- Axis I: of the 290 individuals served on September 30, 2011, all but one had at least one Axis I disorder identified. There were 260 (89%) diagnosed with a psychotic disorder (d/o), 62 (21%) with a cognitive d/o and 33 (11%) with a mood d/o. Those diagnosed as having a substance use d/o increased from 50% on September 30, 2010 to 58% on September 30, 2011.
- Axis II: 128 individuals (44%) had at least one diagnosis indicated on Axis II. Thirty-eight (38) had their diagnosis deferred (799.9) and the remaining 124 were assessed to have no diagnosis on Axis II (V71.09). Eighty-six (86) individuals (30%) were diagnosed with a personality d/o, 24 with mental retardation and 34 with Borderline Intellectual Functioning.
- Axis III: 259 individuals (89%) had at least one medical condition identified. The most prevalent medical condition was *Hypertension* (138 or 47%) and 21% were diagnosed to have *Type II Diabetes*. Twenty-one (21) individuals had seizure d/o and 41 were diagnosed with *Tardive Dyskinesia (TD)*. Other frequent Axis III diagnoses include *Obesity* (31%), *Hyperlipidemia* (25%), *Anemia* (15%), *GERD* (11%), and *Thyroid* (10%).
- Axis IV: problems with social environment (79%), housing (71%), and primary support group (70%) were identified as major contributing psychosocial and environmental factors.
- Axis V: the average *GAF (Global Assessment of Functioning)* score of individuals in care on 9/30/11 was 35.6, which is same as the average *GAF* score measured in the previous year. Certain units were serving more individuals with higher needs: those served in 1E (admission unit) had the lowest average *GAF* score (least functioning) at 29.9 while those served in 2A (44.4) and 2B (43.9) had the highest average *GAF* scores.
- While 90 individuals (31%) were diagnosed to be obese on Axis III, *Body Mass Index (BMI)* measures revealed that 98 individuals (34%) were obese as their *BMI* was 30 or higher.
- *Abnormal Involuntary Movement Scale (AIMS)*: more than one third of individuals presented some kind of abnormal involuntary movement and 11% were assessed to be clinically positive (moderate or severe).

[2] National Association of State Mental Health Program Directors (NASMHPD) Research Institute, Inc. (NRI) makes aggregate reports based on measurement data collected from a number of state psychiatric hospitals nationwide, publishing 'National Public Rates (NPR)'. The most recent version available includes data measured for March 2009.

- Risk identified at admission: three out of four individuals admitted in FY11 presented the risk of physical aggression at all levels, including mild level, and one out of three admissions presented moderate or severe level of risk of physical aggression.

Medication and Pharmacy

- During FY11, a total of 159 medication variance (MV) incidents were reported. This is 13 per month, on average, or 1.56 per 1,000 patient days, and a reduction of 30% from 226 (19 per month) in FY10.
- Certain units report MV incidents more frequently than others; units 1A and 1F each reported a total of 22 MV incidents while 1C and 2B each reported below ten (10).
- Of the 157 reported MVs, 124 (72%) were potential MVs that had the capacity to cause errors or that did not reach the patient, and the other 45 reports (28%) were those that actually occurred. In FY10, 108 actual MVs and 118 potential MVs were reported.
- The most frequent critical break point of MVs is prescribing (66%).
- A majority of MVs were discovered and reported by pharmacy personnel (68%). Those discovered and reported by nursing staff were 29% and only 3% were reported by physicians.
- During FY11, a total of 85 Adverse Drug Reactions (ADR), which translates into five (5) per month, were reported. This is an increase of 31% from FY10.
- Some units reported ADRs more frequently than others: 1D and 1F reported 17 and 18, respectively, and 2A, 2B, and 2C each reported three (3) or below for the entire fiscal year.

Unusual Incidents

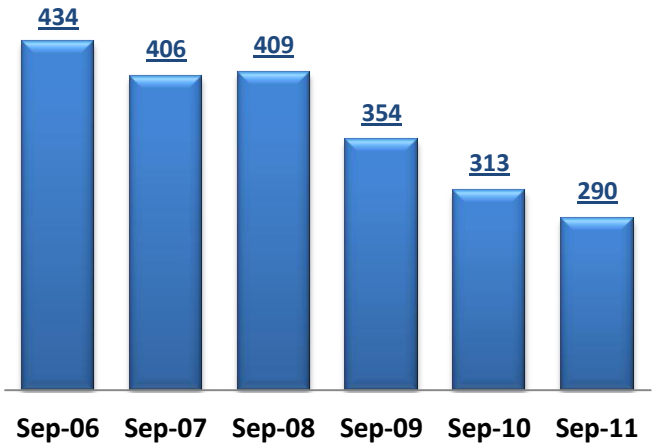
- The average number of reported unusual incidents (UI) during FY11 was 216 per month, an increase of 38% from FY10 (156 per month). Throughout FY11, the number of incidents stayed at around or above 200 each month, reaching the highest level at 251 in August 2011.
- One out of three individuals in care was involved in at least one UI each month. About 16% were involved in multiple UIs (>=2) within a month period.
- On average, 43 individuals or 13% of the total population served in care per month were alleged as aggressors for one or more physical assault incident. Of those, 15 individuals were alleged as aggressors more than once within a month period.
- Physical assault, physical injury, and medication refusal were the most frequently reported incidents in FY11. They were reported, on average, respectively, 45, 32, and 33 per month.
- Physical injuries were often the result of either physical assaults or falls. Of the total injury incidents, 55% and 18% were associated with physical assaults and falls, respectively.
- The Hospital's patient injury rate, which counts only major injuries, in FY11 was 0.20 per 1000 patient days, which is much lower than the NPR (0.39).
- Major UIs were reported most frequently by 1E (19 per month), 1D (15 per month), and 1B (14 per month).
- Timely reporting performance (reported to the Risk Manager within one day) dropped to below 80% in November and December 2010 but gradually improved throughout FY11, reaching 91% by September 2011.
- The number of seclusion episodes significantly declined to 34 in FY11 from 77 in FY10 while the number of restraint episodes remained same. The average restraint and seclusion hour rates and the percent of individuals restrained or secluded at SEH are much lower than the NPR.

I. Census, Admissions, Discharges, and Transfers

1. SEH Daily Census

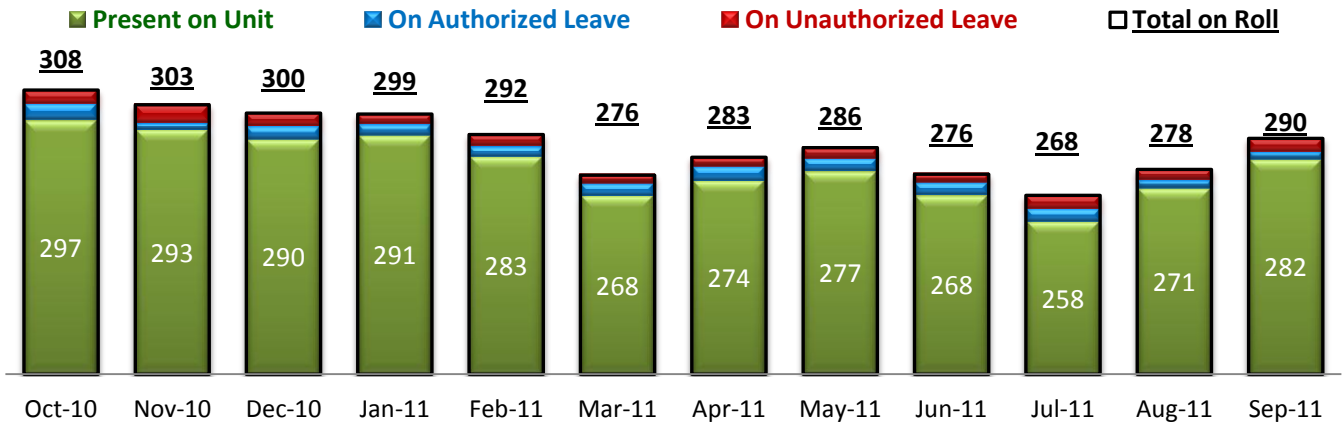
- The number of individuals served by the Hospital declined for the 3rd straight year, falling 29% from September 2008 to September 2011[3]. On the last day of FY08, the Hospital was serving a total of 409 individuals. During the last month of FY11, September 2011, on average, a total of 290 were in care per day, which is a 7% reduction from 313 in September 2010.

Figure 1. Trend of Year-End Census (FY06 ~ FY11)



- During FY11, the Hospital saw the census fluctuated over various months. There was a steady decline from October 2010 to March 2011, followed by a slight increase in April and May. The average daily census dropped to the lowest point in July 2011 at 268 but it rose back quickly during the last two months of FY11, reaching 290 by the end of FY11.

Figure 2. Daily Average Number of Individuals in Care (FY11)



- During FY11, the daily average number of individuals in care who were away from the facility – on authorized or unauthorized leave – was nine (9); five (5) on authorized leave and four (4) on unauthorized leave.

Table 1. Individuals in Care on Leave on a Given Day (FY11)

	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	FY11
Authorized	7	6	7	6	3	1	5	6	5	7	1	6	5
Unauthorized	5	5	5	3	4	3	3	4	5	4	5	4	4

- The total number of unique individuals served for at least one day in FY11 decreased by 6.3% from FY10. The Hospital served a total of 652 unique individuals in FY11 and 697 in FY10.

[3] Data between FY07~FY09 is the number of individuals in care on the last day of September whereas FY06 and FY10~FY11 data is the daily average for the entire month. Also, data between FY06 and FY07 is from the previous information management system, STAR, while data from FY08 through FY11 comes from the current information management system, AVATAR.

- Patient days[4] in FY11 declined 12% from FY10. The total patient days in FY11 were 102,002, which represents an average of 279 individuals present at the Hospital each day. The total patient days in FY10 were 115,676, which corresponds to an average of 317 individuals present per day.

Table 2. Total Patient Days and Unique Individuals Served (FY11)

	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Aor-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	FY11
Total Patient Days	9213	8799	8983	9031	7925	8307	8217	8601	8050	8008	8407	8448	102,002
Total Unique individuals Served*	343	343	334	334	325	308	311	324	308	305	319	330	652**

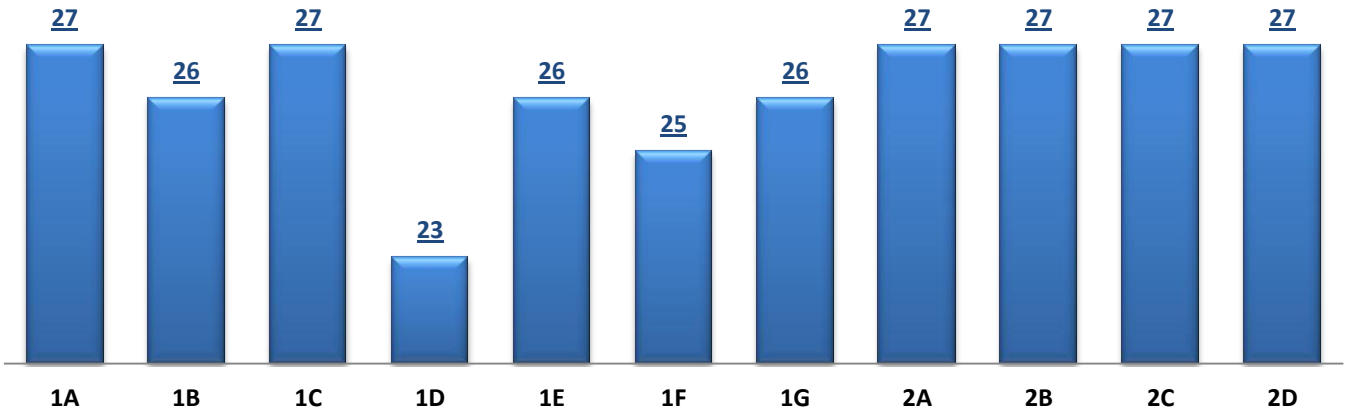
** Some individuals may have been admitted to SEH more than once during FY11 and data herein counts the number of 'unique' individuals served regardless of the number of times they were admitted.*

***This is not the sum of monthly numbers but the total number of unique individuals served at the hospital at least one day during FY11.*

2. Individuals in Care by Unit

- As of September 30, 2011, the Hospital was serving a total of 288 individuals present or on a short-term leave in 11 units. Each unit was serving on average about 26 individuals, with a range between 23 and 27.

Figure 3. Number of Individuals Served by Unit (9/30/11)



3. Admissions

- The total number of admissions during FY11 was 423, On average, there were 35 admissions per month, 14 admissions with a civil legal status (*Civil*) and 21 admissions with a forensic legal status (*Forensic*).
- Of the 423 total admissions, 252 or 60% were those with a forensic legal status[5] and 171 or 40% were those with a civil legal status.
- The total number of admissions decreased 4% from 442 in FY10 to 423 in FY11. However, in FY11, there were 47 more forensic admissions, an increase of 23% from FY10 whereas civil admissions declined by 28% or 66 fewer than in FY10.

Table 3. Admissions by Legal Status (FY10 vs. FY11)

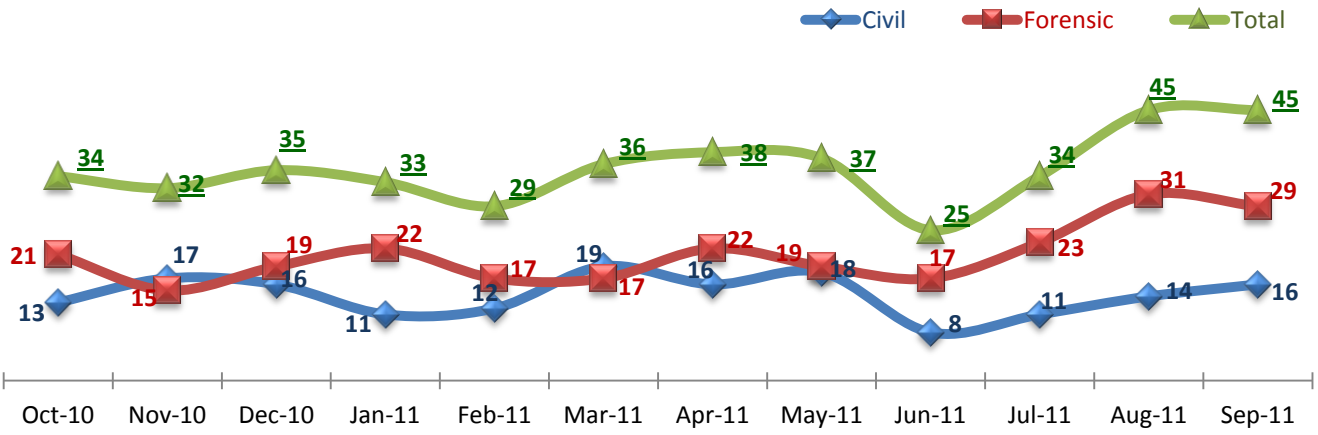
Year	Civil	Forensic	Total
FY10	237	205	442
FY11	171	252	423
Change	⬇66 (28%)	⬆47 (23%)	⬇19 (4%)

[4] Patient days are the sum of individuals who were present on the unit at 11:59pm of each day. They do not include those on authorized or unauthorized leave at that time.

[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.

- The number of monthly admissions hit the lowest level at 25 in June 2011, but it increased considerably between July and September 2011.

Figure 4. Number of Admissions by Month (FY11)



- The combination of transfers from community hospitals and admissions ordered by the court continued to be the major source of new admissions in FY11. Together they represented 88% of all admissions.
- CPEP admissions dropped substantially from 67 (15%) in FY10 to 18 (4%) in FY11.

Table 4. Admissions by Source (FY10 vs. FY11)

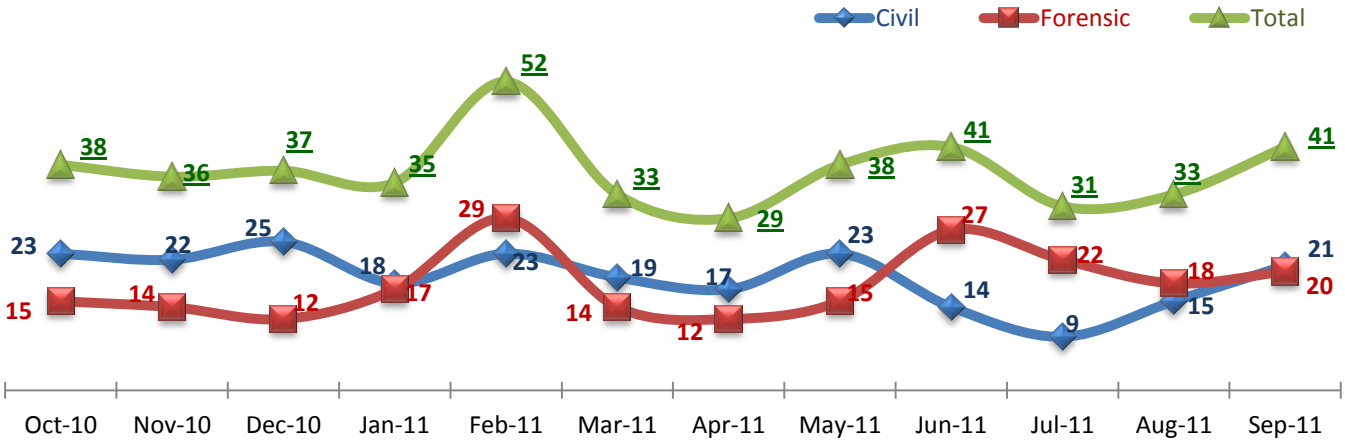
Admission Source	FY10		FY11	
	Number	Percent	Number	Percent
CPEP	67	15%	18	4%
Community Hospital - Medical Unit	19	4%	6	1%
Community Hospital - Psychiatric Unit	151	34%	149	35%
Court/Law Enforcement	189	43%	226	53%
Transfer from Forensic Outpatient (CL) to Inpatient	10	2%	16	4%
Other or Not Identified*	6	1%	8	2%
Total	**442**	**100%**	**423**	**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 FY11 was 444 (228 in *Civil* and 216 in *Forensic*), an average of 37 discharges per month (19 in *Civil* and 18 in *Forensic*). This represents an eight-percent (8%) decrease from FY10, when a total of 485 discharges or 40 discharges per month occurred. This is due in part to the reduced census and fewer admissions in FY11.
- The number of monthly discharges in FY11 ranged between 29 and 41 except in February 2011, when the number of discharges reached the highest at 52.

Figure 5. Number of Discharges by Month (FY11)



- In FY11, court-ordered discharges of individuals with a forensic legal status (43%) outweighed any other discharge reasons. This is likely to be a consequence of the significant increase in forensic admissions during FY11.
- In one out of three discharges (33%), hospitalization was no longer clinically needed.
- In FY11, five (5) individuals were discharged 'against medical/agency advice' while there were 16 in this category in FY10.
- Fifteen (15) or 3% were discharged to other health care service facilities, including nursing homes.

Table 5. Discharges by Reason (FY10 vs. FY11)

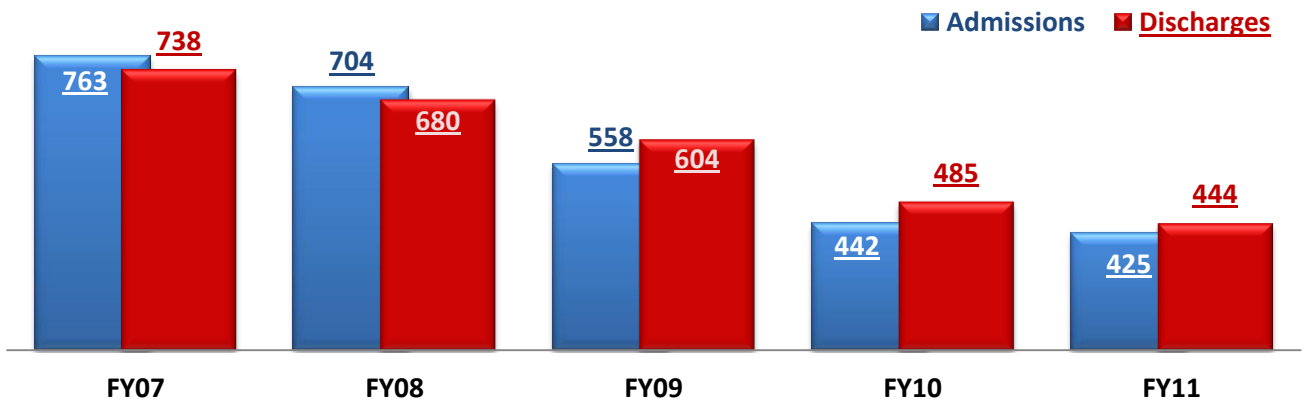
Discharge Reason	FY10		FY11	
	Number	Number	Number	Percent
Against Medical/Agency Advice	16	3%	5	1%
Court Ordered Discharge – Civil	64	13%	53	12%
Court Ordered Discharge – Forensic	169	35%	192	43%
Other Health Care Services Needed	6	1%	15	3%
Hospitalization No Longer Clinically Needed	178	37%	147	33%
Transfer from Forensic Inpatient to Outpatient	29	6%	21	5%
Discharge from Unauthorized Leave	9	2%	2	0.4%
Death	7	1%	4	1%
Other or Data Missing*	7	7	5	1%
Total	**485**	**100%**	**444**	**100%**

** This includes those whose discharge type information is missing, unverifiable or categorized in inactive values.*

5. Admissions vs. Discharges

- Both admissions and discharges decreased over the past four years. However, the number of discharges exceeded the number of admissions every year since FY09, contributing to the significant reduction of census. In FY10, a total of 485 discharges (40 per month) occurred whereas there were 442 admissions (37 per month), resulting in a net census reduction of 43 individuals in care. The trend continued in FY11 despite the notable increase of admissions in Forensic. In FY11, there were 444 discharges, about 4% more than admissions (425), which resulted in a net census reduction of 19.

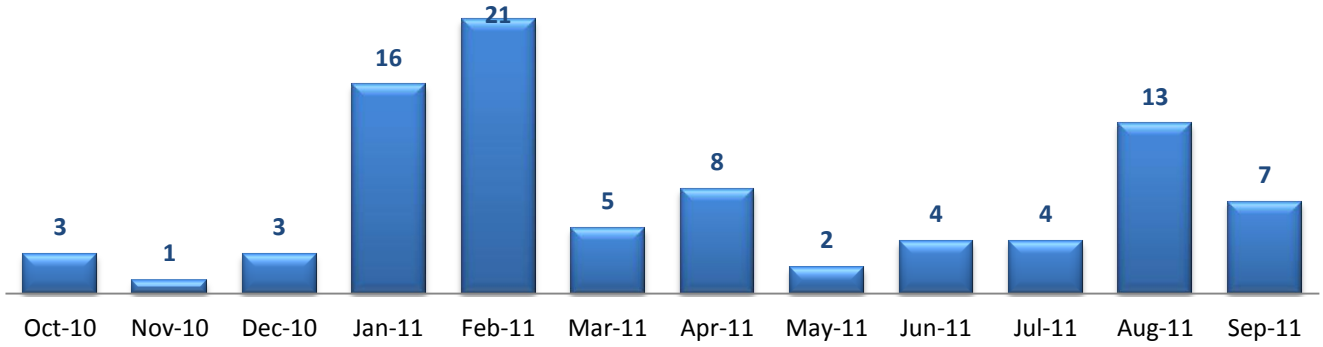
Figure 6. Admissions vs. Discharges (FY07 ~ FY11)



6. Inter-Unit Transfers

- In FY11, there were a total of 88 inter-unit transfers, which is a considerable reduction from 268 in FY10. This decrease is especially significant since the 88 transfers in FY11 include those that occurred in January and February 2011, when Annexes A/B were closed and all of the individuals served in those units moved to the new building.
- With the exception of January and February 2011, when the individuals served in Annexes A/B were transferred to the other units, there were 13 or fewer transfers a month.

Figure 7. Inter-Unit Transfers (FY11)



- During FY11, a total of 74 unique individuals in care experienced at least one inter-unit transfer. This is also a significant reduction from 139 in FY10.
- Of those 74 individuals, 12 or 16% were transferred more than once over the 12 month period. In FY10, 27 or 19% were transferred multiple times.

Table 6. Unique Individuals in Care Transferred between Units (FY10 vs. FY11)

Total Inter-Unit Transfers during 12-Month Period	FY10 # of Individuals	FY10 Percent	FY11 # of Individuals	FY11 Percent
Once	112	81%	62	84%
Twice	22	16%	10	13%
Three (3) Times	4	3%	2	3%
Four (4) Times or More	1	1%	0	0%
Total individuals who experienced >=1 transfer in fiscal year	**139**	**100%**	**74**	**100%**
Total number of inter-unit transfers (Average)	***268 (22 per month)***		***88 (7 per month)***	

7. Leaves

- The total number of documented leave episodes in FY11 was 1392, which represent about four (4) episodes on a given day. This is an increase of 27% from FY10 even though the number of individuals served and their patient days decreased about 5% from FY10 to FY11.
- During FY11, a total of 467 medical leave episodes were reported; emergency (250) and non-emergency (217). This is an increase of 35% from 345 in FY10. The monthly average number of emergency medical leaves (likely medical transfers to external medical facilities) was 21 and that of non-emergency medical leaves was 18.
- Pre-discharge activity was the major reason for non-medical related authorized leaves. They composed about 23% of the total leaves but the frequency of pre-discharge activity leaves significantly dropped during the 2nd half of the fiscal year.
- Unauthorized leaves declined from 55 in FY10 to 47 in FY11.

Table 7. Leave Episodes by Type and Reason (FY11)

Leave Type & Reason	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total	Average
Medical/Emergency	13	25	16	24	21	19	25	29	19	18	20	21	250	21
Medical/Non-Emergency	12	20	23	26	21	20	36	15	5	12	15	12	217	18
Home Visit	16	16	18	13	26	22	17	15	24	34	25	26	252	21
Pre-discharge Activities	61	35	49	59	46	12	23	11	0	10	11	5	322	27
Court Order/ Hearing	25	30	28	17	37	31	19	27	21	20	27	22	304	25
Unauthorized Leave	8	2	1	2	4	3	3	4	7	5	4	4	47	4
Total	**135**	**128**	**135**	**141**	**155**	**107**	**123**	**101**	**76**	**99**	**102**	**90**	**1392**	**116**

Table 8. Emergency Medical Leaves: Likely Medical Transfers (FY10 vs. FY11)

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

- While a total of 250 emergency medical leaves (EMLs) were reported during FY11, the number of unique individuals who had at least one (1) EML within a 12-month period was 124. This indicates that a number of individuals were repeatedly involved in EMLs.

- Of the 124 individuals, 75 or 60% experienced only one EML and the other 49 or 40% had multiple EMLs during FY11. Of those, 27 had at least three (3) EMLs, including two (2) individuals who had eight (8) or more EMLs.
- Of the 250 EMLs, 145 or 58% ended on the same day or next day but 50 or 20% lasted longer than five (5) days, including 3 instances that lasted longer than 30 days.
- EMLs occurred most frequently on unit 1E, one of the admission units, where a total of 53 EMLs were reported. The units with the second largest number of EMLs were 1A and 1B, which serve a greater number of individuals with significant medical conditions. Other units had a range between five (5) and 24.

Figure 8. Return from Emergency Medical Leaves (FY11)

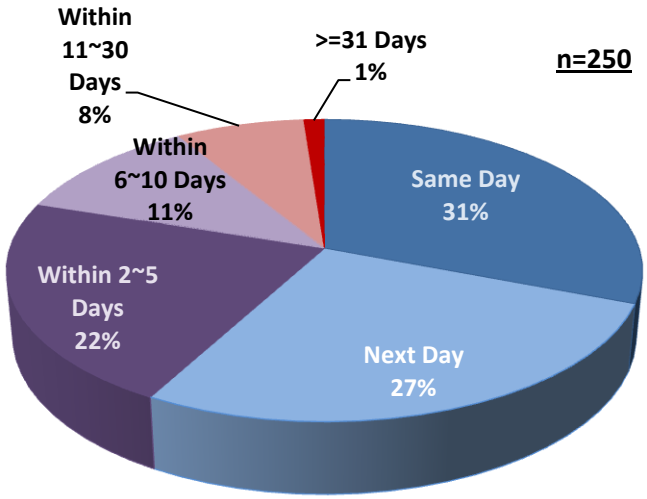
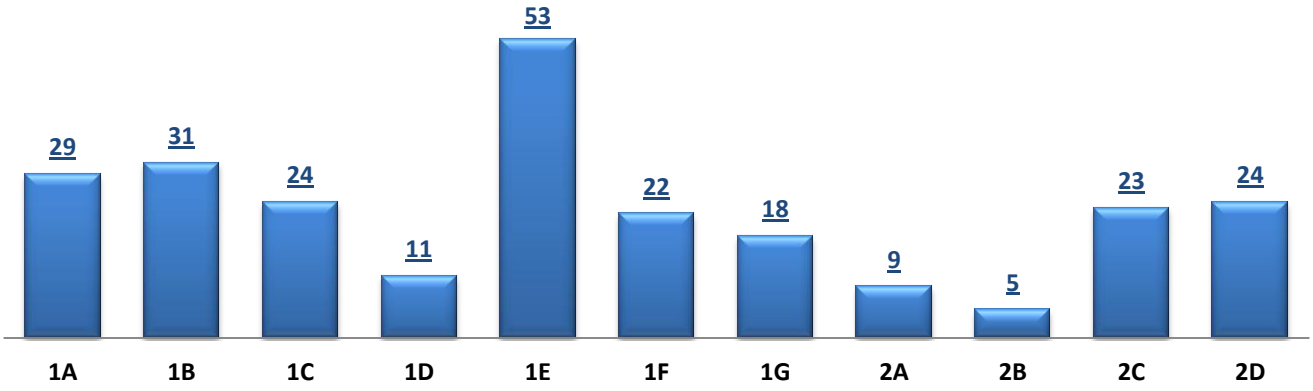


Figure 9. Emergency Medical Leaves by Sending Unit (Oct 2010 ~ Sep 2011)



II. Demographic Characteristics of Individuals in Care

1. Age Distribution

- Two thirds (67%) of individuals in care on September 30, 2011, were 50 years or older.
- The Hospital's population has been aging over the past few years. The number of individuals aged 60 years or older increased notably. This age group comprised 23% in November 2007 and made up 30% in September 2011. The median age also increased from 51 years in 2007 to 56 years old in 2011.

Figure 10. Change in Age Distribution (2007~2011)

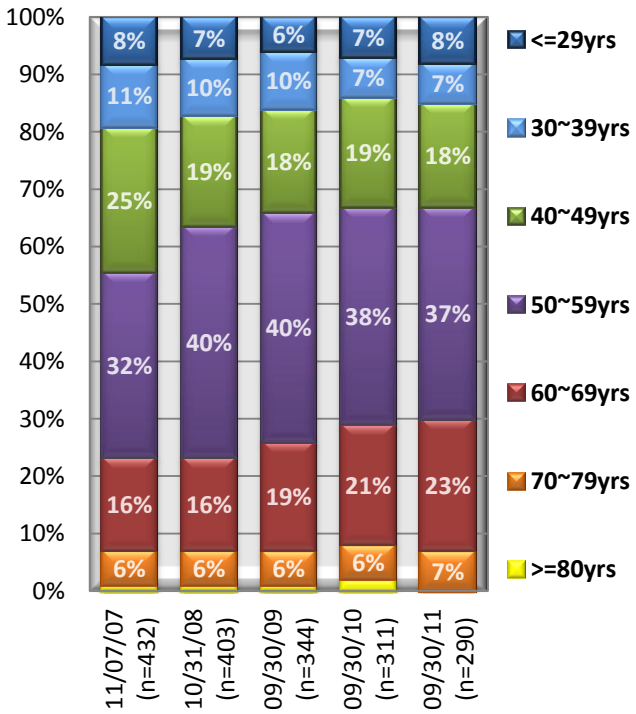
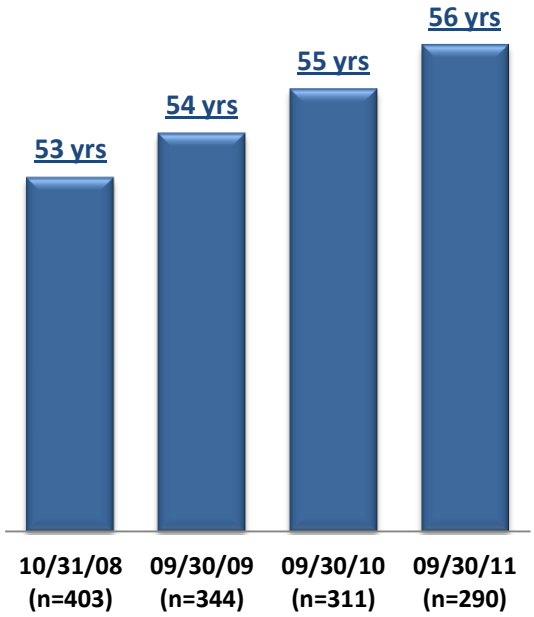


Figure 11. Change in Median Age (2008~2011)



- The age of the admission population in FY11 was older than the previous year. In FY10, individuals of 50 years or older comprised 35% of the total admissions. In FY11, the same age group made up 42% of the total admissions. Consequently, the median and the average age of individuals at the time of admission increased.

Table 9. Trend of Age Distribution in Admission (FY10 vs. FY11)

Age at Admission	FY10	FY11	Trend
<=29 years	23%	20%	↓
30~39 years	17%	17%	
40~49 years	25%	21%	↓
50~59 years	23%	28%	↑
60~69 year	9%	11%	↑
70~79 years	2%	3%	↑
>=80 years	1%	0%	↓
Median Age	***4 years***	***47 years***	↑
Average Age	***43 years***	***44 years***	↑

Table 10. Trend of Age Distribution in Discharge (FY10 vs. FY11)

Age at Discharge	FY10	FY11	Trend
<=29 years	19%	19%	
30~39 years	18%	17%	↓
40~49 years	24%	23%	↓
50~59 years	26%	27%	↑
60~69 years	10%	10%	
70~79 years	3	3%	
>=80 years	1%	1%	
Median Age	***47 years***	***46 years***	↓
Average Age	***46 year***	***45 years***	↓

- Age distribution of the discharge population is almost the same as the previous year and the median age is slightly lower than the previous year.

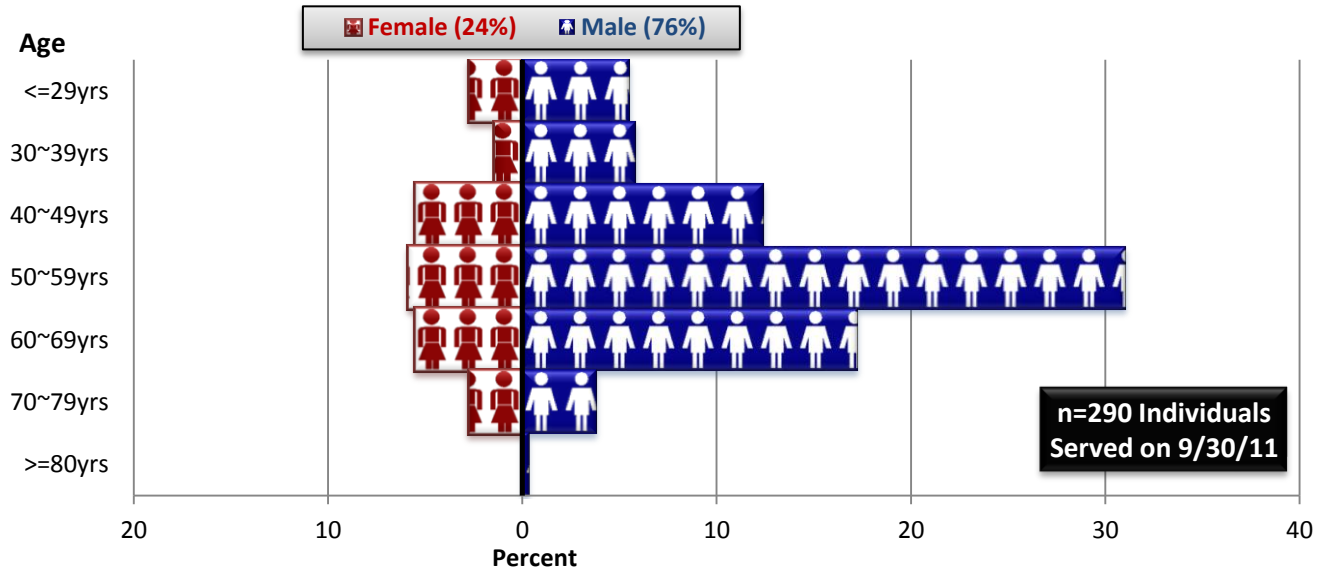
2. Gender Distribution

Table 11. Gender Ratio by Group (FY11)

Group	Female	Male
Admissions (n=423)	36%	64%
Discharges (n=444)	22%	78%
Remaining (n=290)	24%	76%

- Gender ratios shifted somewhat in FY11 from FY10. Male admissions rose by 6% in FY11, constituting 64% of the total admissions. In FY10, 58% of admissions were male. Also, male discharges were higher than female discharges. In FY10, 59% of discharges were male while 78% discharges in FY11 are male.
- Of the individuals remaining in care at the end of FY11, 76% were male and the other 24% were female. Males composed 72% of all individuals in care at the end of FY10.
- Almost one out of three male individuals in care fell within the 50-59 age-group while the majority of female population was distributed between ages of 40 and 69.

Figure 12. Age & Gender Distribution (9/30/11)



3. Race/Ethnicity and Primary Language

- Of the 267 individuals whose race and ethnicity was identified and remaining in care on September 30, 2011, 86% were Non-Hispanic Black or African-American, 12% were Non-Hispanic White or Caucasian, 1% were Hispanic and 0.7% were Asian or Pacific Islander.

Table 13. Race and Ethnicity (9/30/11)

Race and Ethnicity	Number	Percent
Asian/Pacific Islander	2	0.7%
Black/African-American (Non-Hispanic)	229	86%
White/Caucasian (Non-Hispanic)	31	12%
Hispanic	3	1%
Other	2	1%
Total Identified	267	100%
No Data Available	*23*	

- Of the 274 individuals whose primary languages were identified, the overwhelming majority (98%) indicated they considered English as their primary language. Five (5) individuals were identified as speaking a language other than English as their primary language.

Table 12. Primary Language (9/30/11)

Primary Language	Number	Percent
English	269	269 (98%)
Spanish	4	4 (1.4%)
Other	1	1 (0.3%)
Total Identified	274	100%
No Data Available	*16*	

4. Marital Status

- Of the 176 individuals whose marital status was identified, 82% were single, 7% were married, and the other 12% divorced, separated or widowed.

Table 14. Marital Status (9/30/11)

Marital Status	Number	Percent
Single	144	82%
Married	12	7%
Divorced	17	10%
Separated	1	0.6%
Widowed	2	1%
Total Identified	**176**	**100%**
No Data Available	114	

5. Legal Status

- The number and proportion of individuals with a civil legal status significantly decreased compared with the previous year. As of September 30, 2011, 117 or 40% were those with a civil legal status compared with 47% a year ago. Most notably, individuals with an emergency legal status decreased from 36 to 15.
- Of the 290 individuals in care on September 30, 2011, 60% were either in a forensic pre-trial or post-trial legal status, including 107 individuals (37%) adjudicated not guilty by reason of insanity (NGBRI).

Table 15. Legal Status (9/30/10 vs. 9/30/11)

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

6. Religion & Education

- Of the 184 individuals in care whose religion was identified, 46% were *Protestant*, 26% were *Catholic*, 5% were *Baptists*, and 7% indicated other types of religion. Twelve percent (12%) indicated that they did not have any religion.
- Of the 168 individuals in care whose education information was available, 42% completed 7 to 9 years of education and 32% completed between 10 and 11 years of education. Nine percent (9%) graduated from high school and about 8% received some type of college education or a bachelor's degree.

Table 16. Religion (9/30/11)

Religion	Number	Percent
Baptist	9	5%
Catholic	47	26%
Christian	4	2%
Jewish	2	1%
Muslim	3	2%
Protestant	84	46%
Other	13	7%
No religion	22	12%
Total Identified	**184**	**100%**
No Data Available	*106*	

Table 17. Education (9/30/11)

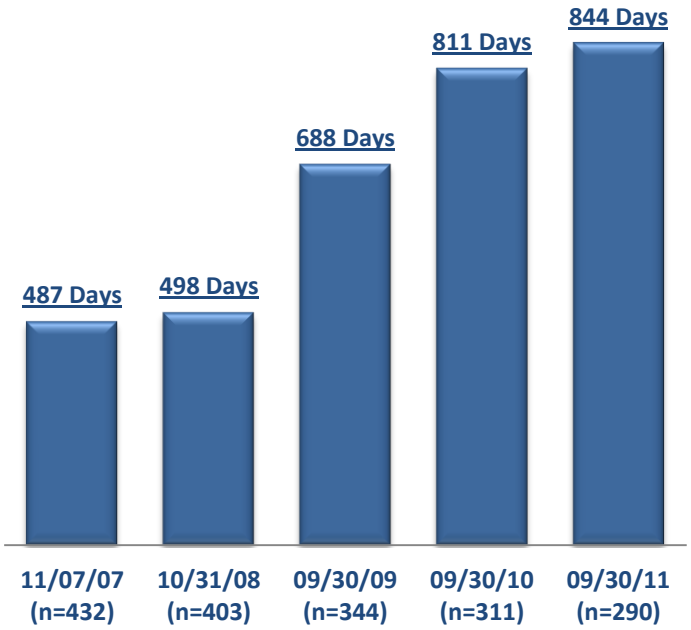
Education Level	Number	Percent
None	2	1%
01-03 Years	1	1%
04-06 Years	12	7%
07-09 Years	71	42%
10-11 Years	54	32%
High School Graduate	15	9%
Some College/Technical Training	2	1%
Associate's Degree	5	3%
Bachelor's Degree	6	4%
Total Identified	168	100%
No Data Available	*122*	

III. Length of Stay

1. Length of Stay of Current Population

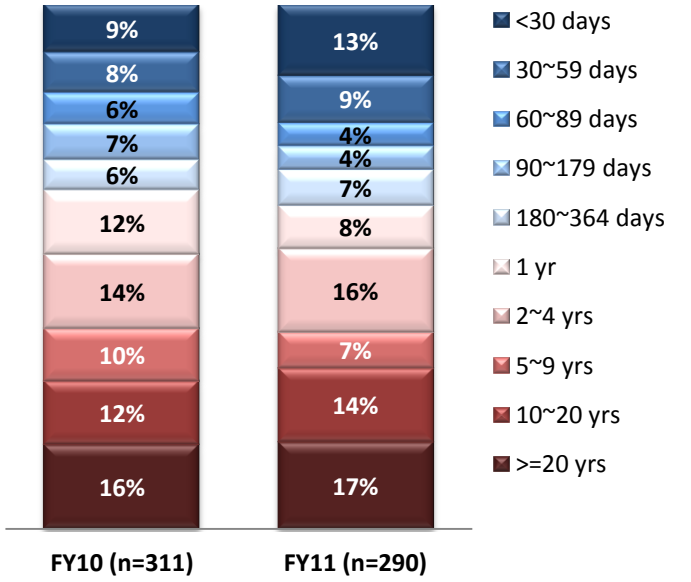
- The median length of stay (LOS) for those served by the Hospital on September 30, 2011 was 844 days (approximately 28 months), which means that 50% of the individuals in our care have been residing at the Hospital for more than 28 months.
- The median LOS of those remaining in care has consistently increased over the past few years. The median LOS of individuals in care on September 30, 2011 is 33 days longer than was the median LOS a year ago (811 days). Also, it is 357 days longer than the median LOS measured on November 7, 2007.
- The average LOS of the same group was 2978 days, which is slightly over eight (8) years. The average LOS is much longer than the median LOS[6] because the few individuals who have been at the Hospital for an extended period of time disproportionately affect the average LOS.

Figure 13. Trend in Median Length of Stay (2007~2011)



- The percentage of those hospitalized for less than 60 days and those who stayed for more than nine (9) years both increased whereas those residing between one year and nine (9) years declined. Of the 290 individuals in care on September 30, 2011, 22% were served at the Hospital for less than 60 days compared with 17% in the same group a year ago. Thirty-one percent (31%) have been residing between one year and nine years whereas the same group composed 36% of all individuals in care a year ago.

Figure 14. Individuals in Care by Length of Stay (9/30/10 ~ 9/30/11)



2. Length of Stay by Gender

- Male individuals are likely to stay at the Hospital for a much longer period of time than female individuals. The median LOS of male individuals in care on September 30, 2011 was 1137 days (3.1 years) whereas that of female individuals was 456 days (1.2 year). The large gap between female and male is primarily because a majority of

[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.

individuals with a forensic legal status (90%) 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.

- However, the gap in the length of stay between female and male individuals lessened compared with the previous year. LOS of female individuals in care increased while LOS of males in care decreased.

Figure 15. Length of Stay by Gender (9/30/11)

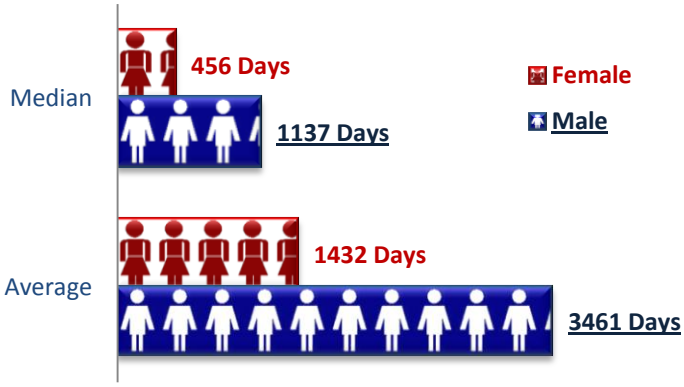


Table 18. Median Length of Stay by Gender: Civil vs. Forensic (9/30/11)

Category		Female	Male	Total
Median LOS	Civil	737 Days	857 Days	**829 Days**
	Forensic	34 Days	2011 Days	**1138 Days**
	Combined	456 Days	1137 Days	**844 Days**
Average LOS	Civil	1871 Days	2229 Days	**2070 Days**
	Forensic	187 Days	3963 Days	**3575 Days**
	Combined	1432 Days	3461 Days	**2978 Days**
Number of Individuals In Care	Civil	51	64	**115**
	Forensic	18	157	**175**
	Combined	69	221	**290**

3. Length of Stay by Legal Status

- Overall, individuals with a forensic post-trial legal status stay far much longer than those with a civil legal status. The median LOS was 829 days (27 months) for individuals remaining in care on September 30, 2011 with a civil legal status and 4790 days (13 years) for those with a forensic post-trial legal status.

Table 19. Length of Stay of Individuals Remaining in Care by Legal Status (9/30/10 vs. 9/30/11)

Legal Status		# of Individuals		Median (Days)		Average (Days)	
		9/30/10	9/30/11	9/30/10	9/30/11	9/30/10	9/30/11
Civil	Committed Inpatient	35	31	495 Days	829 Days	1019 Days	1021 Days
	Committed Outpatient	31	28	659 Days	531 Days	1238 Days	889 Days
	Emergency	36	15	42 Days	23 Days	239 Days	80 Days
	Voluntary	43	41	1528 Days	1840 Days	3851 Days	4397 Days
	Non-Protesting	1	0	10655 Days	N/A	10655 Days	N/A
	Civil Sub-total	***146***	***115***	**566 Days**	**829 Days**	**1773 Days**	**2070 Days**
Forensic Pre-trial	DC Examination	52	61	72 Days	32 Days	145 Days	76 Days
	DC Mentally Incompetent	5	3	149 Days	156 Days	410 Days	317 Days
	Forensic Pre-trial Sub-total	***57***	***64***	**78 Days**	**32 Days**	**168 Days**	**87 Days**
Forensic Post-trial	Dual (NGBRI/Criminal Convict.)	1	1	773 Days	1138 Days	773 Days	1138 Days
	NGBRI - DC	92	94	5109Days	4350 Days	5494 Days	5092 Days
	NGBRI - US	10	12	9999 Days	9821 Days	10868 Days	8848 Days
	NGBRI - USVI	2	1	8722 Days	8611 Days	8722 Days	8611 Days
	Sexual Psychopath (Miller Act)	4	3	6473 Days	8333 Days	6873 Days	8486 Days
	Forensic Post-trial Sub-total	***108***	***111***	**5685 Days**	**4790 Days**	**6059 Days**	**5586 Days**
Grand Total		***311***	***290***	***811 Days***	***844 Days***	***2967 Days***	***2978 Days***

- Length of stay of those with a forensic pre-trial legal status in FY11 decreased from FY10 level. The median LOS of 64 individuals in a forensic pre-trial legal status on September 30, 2011 was 32 days (one month) whereas that of the same group on September 30, 2010 was 78 days.

- On the other hand, the LOS of those with a civil legal status considerably increased. The median LOS of the individuals with a civil legal status on September 30, 2011 was 829 days whereas that of the same group was 566 days a year ago.
- Among the individuals with a civil legal status, those in a voluntary legal status tend to stay much longer than committed ones. Their median LOS was 1840 days (5 years). Those in emergency legal status showed the shortest length of stay: their median LOS was only 23 days. Also, their median LOS dropped by 19 days from FY10 to FY11.
- The median LOS of 12 individuals with a US NGBRI legal status is 9821 days (27 years) whereas that of the 94 individuals with a DC NGBRI legal status was 4350 days (12 years).

4. Length of Stay of Discharged Population

- The length of stay of the discharged population is significantly shorter than the LOS of those remaining in the Hospital. The median LOS of the individuals remaining in care at the end of FY11 was 844 days but the median LOS of those who have been discharged during FY11 was only 56 days, which is also shorter than the median LOS of those discharged in FY10 (63 days).

Figure 16. Length of Stay: Discharged vs. Remaining (FY09~FY11)

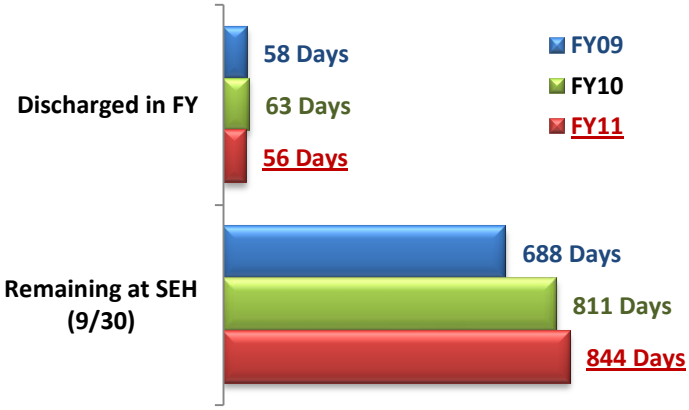


Table 20. Length of Stay of Discharged Population (FY11)

	Civil	Forensic	Combined
Median	59 days	56 days	56 days
Average	304 days	435 days	367 days
Maximum	8770 days (35 years)	18380 days (36 years)	18380 days (36 years)

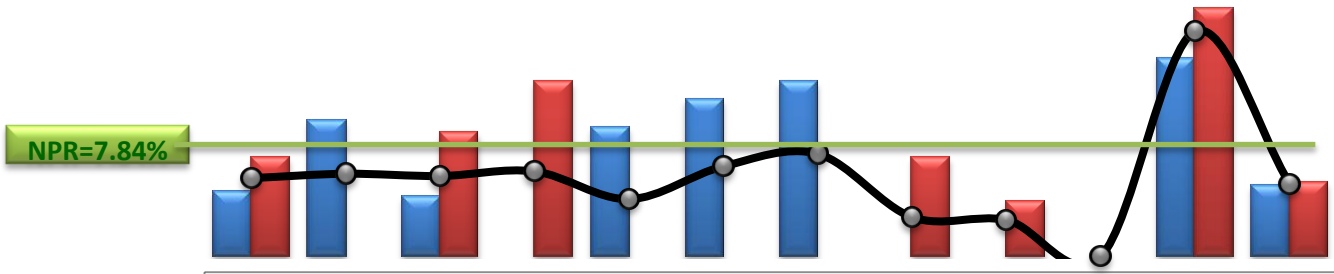
- The length of stay data indicates that those who were newly admitted to the Hospital were more likely to be discharged quickly whereas those who had been remaining at the Hospital for a long period continued to stay longer. In fact, of the 423 individuals admitted during FY11, 312 or 74% were discharged by the end of FY11. On the other hand, of the 290 remaining in care at the end of FY11, 62% had been admitted more than a year ago.

IV. Readmissions

1. Readmission Rate[7]

- Of the 444 individuals discharged in FY11, 5.2% or 23 were readmitted to SEH within 30 days following discharges. This is a reduction from FY10, when the 30-day readmission rate was 6.8%.
- The 30-day re-admission rate of the Hospital is much lower than the national trend. According to the most recent NPR, the average 30-day admission rate of state psychiatric hospitals is 7.8%

Figure 17. 30-Day Readmission Rate (FY11)



	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11
Civil	4.3%	9.1%	4.0%	0.0%	8.7%	10.5%	11.8%	0.0%	0.0%	0.0%	13.3%	4.8%
Forensic	6.7%	0.0%	8.3%	11.8%	0.0%	0.0%	0.0%	6.7%	3.7%	0.0%	16.7%	5.0%
Combined	5.3%	5.6%	5.4%	5.7%	3.8%	6.1%	6.9%	2.6%	2.4%	0.0%	15.2%	4.9%

- Of the 23 30-day readmissions, nine (9) or 39% were readmitted within one week (7 days) from their discharges, including two (2) who were readmitted on the next day following their discharges.
- In FY11, 19% of discharges or seven (7) per month returned to the Hospital within 180 days whereas 22% or nine (9) per month did so in FY10.

Table 21. Re-admissions (FY10 vs. FY11)

Category		FY10	FY11
Total Discharges		485 (40 per month)	444 (37 per month)
30-Day Readmissions	Number of readmissions	33 (3 per month)	23 (2 per month)
	30-Day Readmission rate	6.8%	5.2%
	Unique individuals	32	22
	Individuals of >=2 readmissions within 30-day	1	1
180-Day Readmissions	Number readmissions	107 for 12 months (9 per month)	66 for 9 months* (7 per month)
	180-Day Readmission rate	22.1%	19.5% (out of 339)*
	Unique Individuals	95	51
	Individuals of >=2 readmissions within 180-day	10 (11%)	11 (21%)

** It is the result of observing discharges that occurred during the first nine months of FY11 (Oct-2010 ~Jun-2011)[8].*

- Although the overall readmission rate declined, more individuals were readmitted to SEH repeatedly in FY11. Of the 51 unique individuals readmitted within 180-days in FY11, 21% were readmitted twice or more whereas only 11% were involved in multiple readmissions in FY10.

[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.

[8] Analyzing the readmission rate requires us to observe discharge cohort data retrospectively. For example, for the 180-day readmission rate, we have to observe those who have been discharged for 180 days from the discharge date. For this report, we could observe and analyze only those who were discharged for the first nine months of FY11, between October 2010 and June 2011.

2. Characteristics of Individuals Readmitted to Care

- There is no significant difference in gender between readmitted population and all discharged population 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 FY11, 41% were 50 years or older at discharge. Of those who have been readmitted within 30-days, 61% were 50 years or older at discharge of their previous episodes. The younger population is less likely to be readmitted within a short time period but the chance of readmission increases later: only 9% of 30-day readmissions were below 30 years old when they were discharged. However, the same age group constituted 23% of the 180-day readmission population.
- Individuals who are readmitted tend to have had a shorter length of stay in their previous episodes than those who do not return to the Hospital. Forty-three percent (43%) of those readmitted within 30 days stayed 30 days or less in their previous hospitalization whereas only 23% of all discharges had a LOS of 30 days or less. And, 42% of 90-day readmissions and 31% of 180-day readmissions had a LOS of 30 days or less in their previous hospitalization. This indicates that an individual with a short length of stay at discharge is more likely to return to the Hospital quickly.
- Those in a civil legal status at discharge are more likely to return to the Hospital. About a half of discharged population carried a civil legal status. More than 60% of readmissions were those discharged with a civil legal status.
- Those who were carrying a cognitive disorder as their principal diagnosis at discharge returned within a short time period. Those carrying an Axis-II disorder as their principal diagnosis had a higher readmission rate after 30-days.

Table 22. Characteristics of All Individuals Discharged vs. Those Readmitted within 180-Days (FY11)

		All Discharged in FY11	Readmitted within 30-days	Readmitted within 90-days	Readmitted within 180-days
*# of episodes**		*444*	*23*	*52*	*66 (9 months)*
Gender	Female	38%	39%	38%	45%
	Male	62%	61%	62%	55%
Age	Age <=29 years	19%	9%	17%	23%
	Age >=50 years	41%	61%	50%	36%
	Median Age	46 years	53 years	50 years	47 years
	Average Age	45 years	51 years	47 years	44 years
Length of Stay in previous episode	Los <=30 Days	23%	43%	42%	31%
	Median LOS	56 days	53 days	38 days	49 days
	Average LOS	367 days	101 days	81 days	110 days
Legal Status at Discharge	Civil	51%	61%	62%	65%
	Forensic	49%	39%	38%	35%
Principal Diagnosis at Discharge	Cognitive Disorder	3%	9%	4%	2%
	Psychotic Disorder	67%	74%	67%	68%
	Mood Disorder	16%	17%	21%	18%
	Substance Related Disorder	7%	0%	0%	2%
	Other in Axis-I	5%	0%	2%	5%
	Axis-II	2%	0%	6%	6%

** 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 FY11.*

V. Clinical Profile of Individuals in Care

1. Principal Diagnosis

- Seventy-two percent (72%) of individuals admitted during FY11 had a psychotic disorder as their principal admission diagnosis. Comparatively, 67% of those discharged during FY11 and 81% of the individuals remaining in care on September 30, 2011 had this diagnosis.
- There were only few admissions (0.5%) with a cognitive disorder identified as their principal diagnosis but 6% or 18 individuals remaining in care on September 30, 2011 had a cognitive disorder as the principal diagnosis.
- Those who entered with a mood disorder were more likely to be discharged than those with other types of disorders. A total of 60 individuals or 14% of those admitted in FY11 were diagnosed with a mood disorder as the principal diagnosis while only 6% of the individuals remaining in care had a mood disorder. Of those 60 individuals admitted with a mood disorder, 52 or 87% were discharged on or before September 30, 2011 whereas 74% of all admissions in FY11 were discharged by the end of FY11.

Table 23. Principal Diagnosis: Admissions (FY11), Discharges (FY11), and Remaining (9/30/10)

Principal Diagnosis	Admissions in FY11		Discharged in FY11		Remaining on 9/30/11	
	Number	Percent	Number	Percent	Number	Percent
Cognitive Disorder	2	0.5%	13	3%	18	6%
Psychotic Disorder	306	72%	298	67%	234	81%
Mood Disorder	60	14%	72	16%	18	6%
Substance Related Disorder	23	5%	29	7%	6	2%
Axis-II (MR or Personality D/O)	1	0.2%	11	2%	3	1%
Other or unspecified	31	7%	21	5%	11	4%
Total	**423**	**100%**	**444**	**100%**	**290**	**100%**

**Data presented hereinafter is based on diagnosis information from AVATAR for the 290 Individuals remaining in care as of 9/30/11.*

2. Clinical Disorders (Axis I)

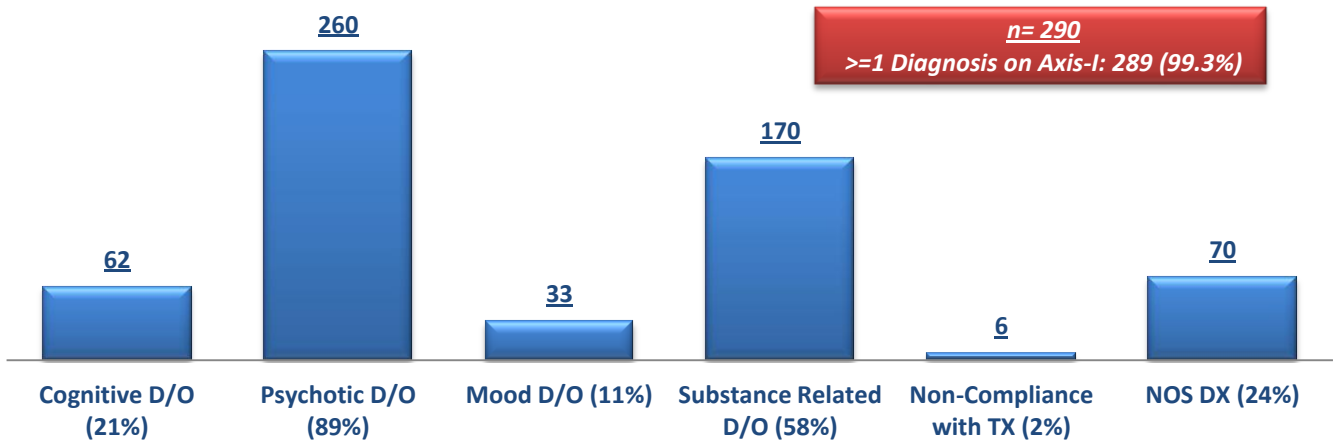
- Of the 290 individuals served on September 30, 2011, all but one had at least one clinical disorder on Axis I identified. One individual was indicated to have *No Diagnosis or Condition on Axis I* (DSM-VI Code V71.09).
- A total of 261 individuals (90%) were diagnosed with a psychotic disorder – schizophrenia, schizophreniform disorder, schizoaffective disorder, delusional disorder or any other psychotic disorders[9].
- The number of individuals who had a cognitive disorder, which includes delirium, dementia, and amnestic and other cognitive disorders, was 62 (21%).
- Thirty-three (33) individuals had a mood disorder, which includes depressive disorders and bipolar disorders. This is an increase from the previous year.
- A total of 170 individuals or 58% were diagnosed as having a substance use disorder. This is a notable increase from a year ago, when 154 or 50% of the then population were carrying a substance use disorder.
- A total of 70 individuals (24%) were diagnosed with a *Not Otherwise Specified (NOS)* diagnosis[10] on at least one of their Axis I diagnoses. In September 2010, 68 or 22% of the then population had a NOS diagnosis.

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

[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.

- Six (6) individuals were identified as *Noncompliance with Treatment* (DSM-IV code V15.81)[11]

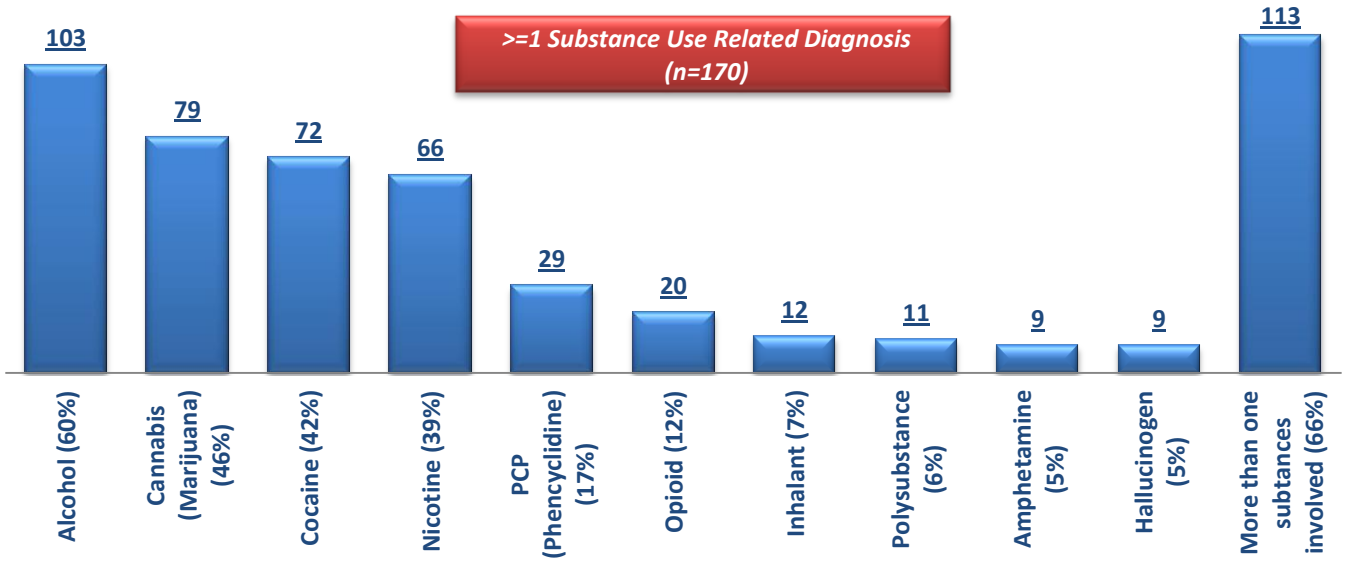
Figure 18. Individuals in Care with Diagnosis on Axis I (9/30/11)



3. Substance Use Disorders

- Of the 170 individuals who had at least one substance related disorder, 66% or 113 individuals were identified to use more than one substance.
- The four most frequently related substances were alcohol (60%), cannabis (46%), cocaine (42%), and nicotine (39%).

Figure 19. Individuals in Care with Substance Use and Related Diagnosis by Substance Type (9/30/11)



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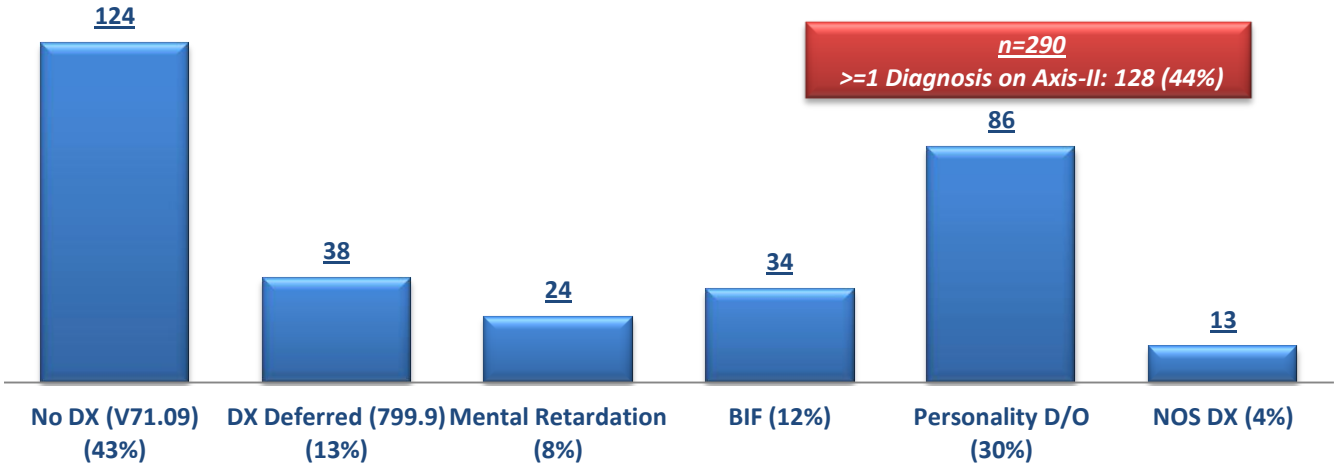
[11] "This category can be used when the focus of clinical attention is noncompliance with an important aspect of the treatment for a mental disorder or a general medical condition. The reasons for noncompliance may include discomfort resulting from treatment, expense of treatment, decisions based on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

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

- Forty-four percent (44%) or 128 individuals in care on September 30, 2011 had one or more diagnoses identified on Axis II, 124 (43%) had *No Diagnosis or Condition on Axis II* (DSM-VI Code V71.09), and the remaining 38 (13%) had *Diagnosis Deferred on Axis II* (DSM-VI Code 799.9).
- A total of 86 individuals (30%) had a personality disorder diagnosed.
- A total of 58 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 13 individuals (4%) had a NOS diagnosis on Axis II.

Figure 20. Individuals in Care with Diagnosis on Axis II (9/30/11)



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*; 138 individuals or 47%.
- Sixty-two (62) individuals (21%) were diagnosed as having *Type II Diabetes*. This is a slight decrease from 24% a year ago.
- Ninety (90) individuals (31%) were diagnosed with *Obesity* through Axis-III. This is slightly smaller than the number of obesity diagnoses projected from the *Body Mass Index (BMI)* calculation, which revealed that 98 Individuals (34%) were obese as their BMI was 30 or above.
- Twenty-one (21) individuals were diagnosed as having a seizure disorder.
- Forty-one (41) individuals or 14% were identified with *Tardive Dyskinesia (TD)*[13].
- The number and the percentage of individuals diagnosed as having an anemia or blood disease, asthma, gastro-esophageal reflux disease (GERD), HIV/AIDS, and thyroid, respectively, increased from the previous year.

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

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

Figure 21. Individuals in Care with Major Medical Conditions (9/30/11)

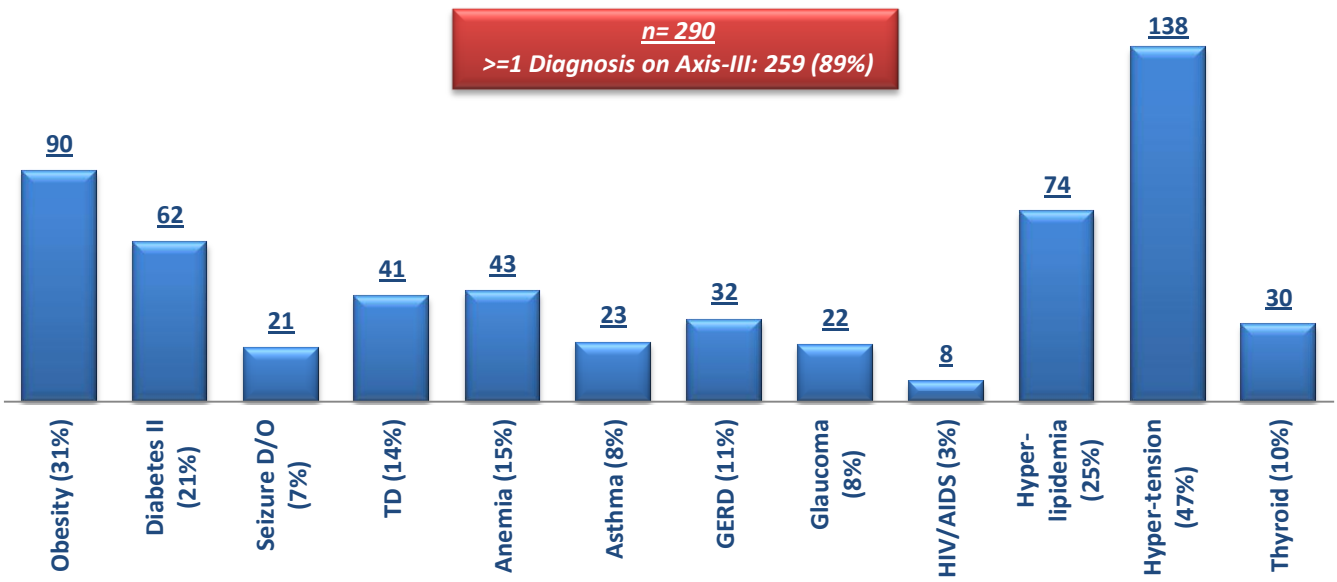
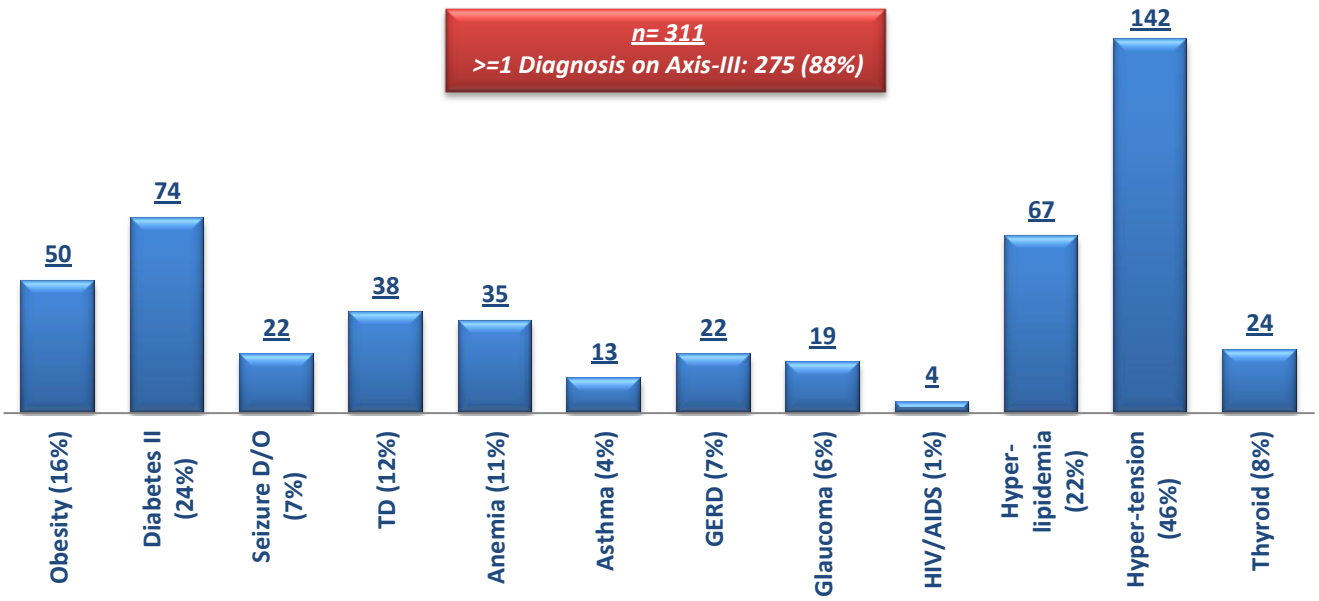


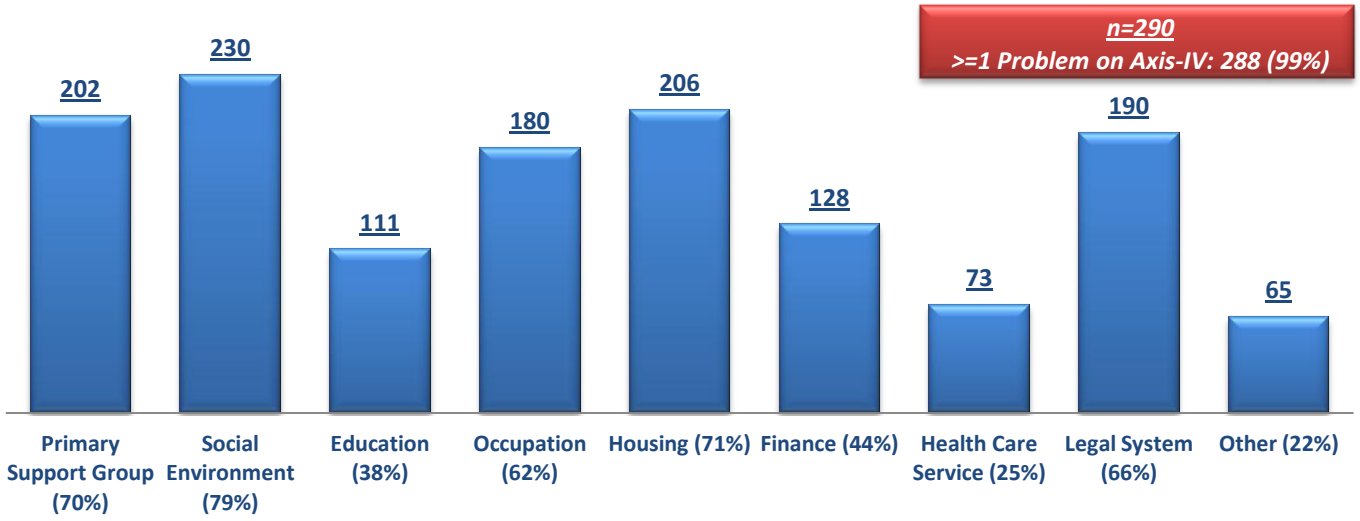
Figure 22. Individuals in Care with Major Medical Conditions (9/30/10)



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

- Of the 290 individuals, 99% or 288 had at least one identified psychosocial and environmental problem and 97% or 280 of them had more than one problem identified.
- Problems with 'social environment' (79%), 'housing '(71%), and 'primary support group' (70%) were identified as major contributing psychosocial and environmental factors. Also, 66% were identified as having problems related to 'interaction with the legal system or crime', and 62% for 'occupational problems'.

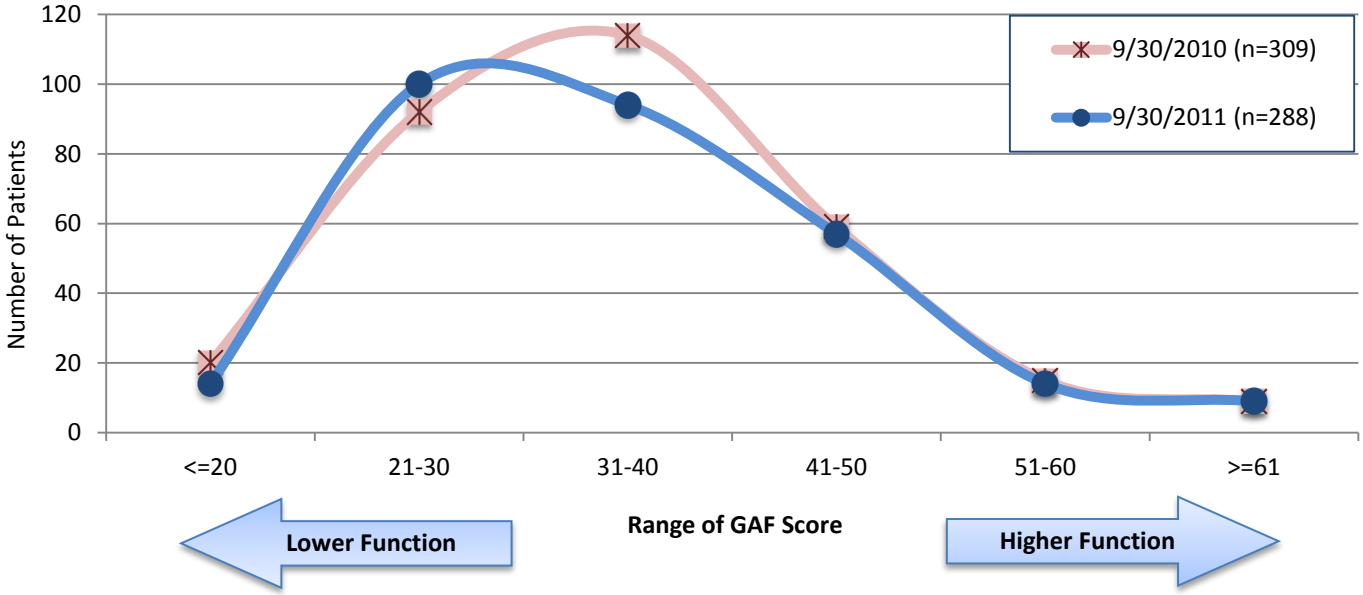
Figure 23. Individuals in Care with Psychosocial/Environmental Problems (Axis IV) Identified (9/30/11)



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

- Those who were identified as being *Unable to Function in Almost All Areas* (21~30) slightly increased to 34% from 30% in the previous year while those in *Major Impairment in Several Areas* (31~40) dropped from 37% to 32%. The FY11 average GAF score (35.6) is same as in FY10.
- Individuals served in 2A and 2B had the highest GAF score (at around 44 on average) followed by those served in 2C (38.6) and 1C (38.3) while those in 1E (29.9) and 1A (30.5) had the lowest scores.

Figure 24. Distribution of GAF Score (9/30/10 vs. 9/30/11)

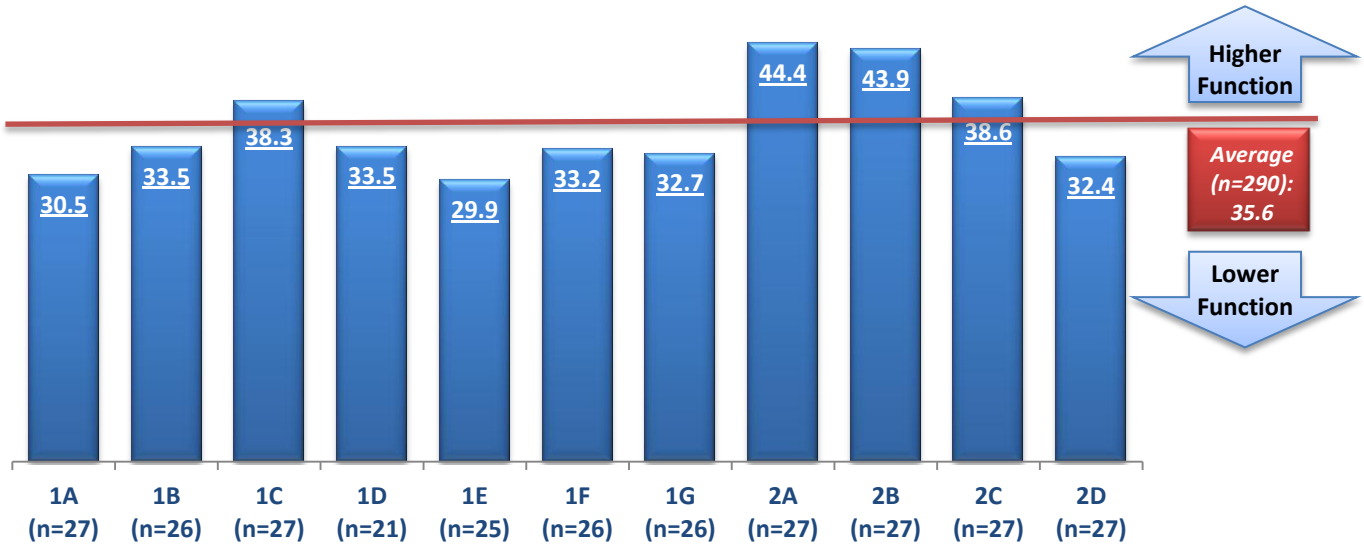


[14] GAF is a numeric scale (0 through 100) used by mental health clinicians and doctors to rate the social, occupational and psychological functioning of adults. Higher scores indicate better functioning.

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 25. Average GAF Score by Unit (9/30/11)



8. Body Mass Index (BMI) and Obesity

- Weight and height information necessary to calculate BMI was obtained from the most recent *History and Physical Assessment* in AVATAR for 94% or 273 individuals.
- According to BMI measure findings, as of 9/30/11, a total of 98 individuals (34%) were obese as their BMI was 30 or above. The number of individuals who were formally diagnosed with obesity on Axis-III was a little bit lower at 90 (31%).

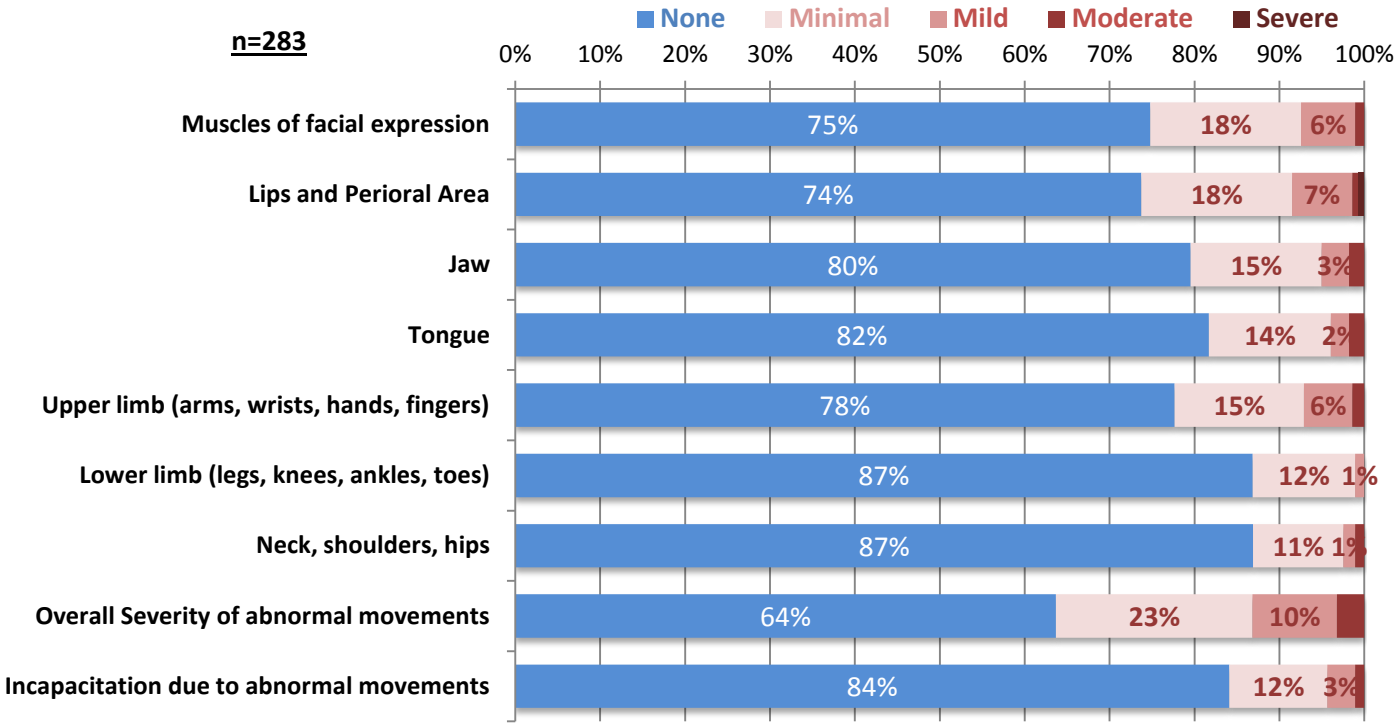
9. Abnormal Involuntary Movement Scale (AIMS) Test Results

- Results of the most recent *Abnormal Involuntary Movement Scale (AIMS)* tests conducted for a total of 283 unique individuals indicate that more than one third of individuals in care on September 30, 2011 had some kind of abnormal involuntary movement observed. However, only 32 individuals or 11% were assessed to be

clinically positive[15] and 37 individuals or 14% were those assessed to have overall mild or more severe level of abnormal movements.

- Abnormal involuntary movements were observed more frequently in muscles of facial expression, and lips and perioral area than other parts of the body.

Figure 26. Abnormal Involuntary Movements by Severity (FY2011)

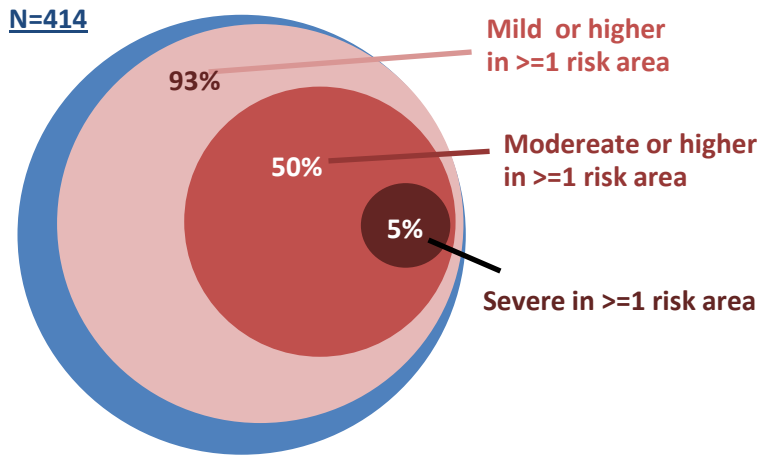


- AIMS test also included assessment on dental status, according to which, 43% of the individuals in care tested were identified to have a problem with teeth or dentures.

10. Risk Identified at Admission

- *Comprehensive Initial Psychiatric Assessment (CIPA)* conducted for every individual admitted to the Hospital includes risk assessment in eight (8) categories. Of the 423 admissions made during FY11, a total of 414 CIPAs were available for analysis. Findings indicate that 93% of individuals entering care present at least mild level of risk in one or more areas. One half of the individuals admitted to the Hospital were assessed to have a moderate or higher level of risk in one or more areas.

Figure 27. Overall Risk Level of Individuals Entering Care (FY2011)



[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 automatically analyzed based on the scoring result of each question.

- Of the eight (8) risk categories, physical aggression was the most frequently identified risk: three out of four admissions presented some level of physical aggression risk; one out of three admissions presented a moderate or severe level of physical aggression risk. A little more than a half (53%) of admissions were identified to have self-injury risk but only 13% were indicated to be at a moderate or severe level of self-injury risk.
- Twelve percent (12%), 10%, and 9% of admissions, respectively, were identified to pose a moderate or severe level of risk of medical emergency, aggression to property, and accidental injury.

Figure 28. Number of Admissions with Risk Identified through CIPA (FY 2011)

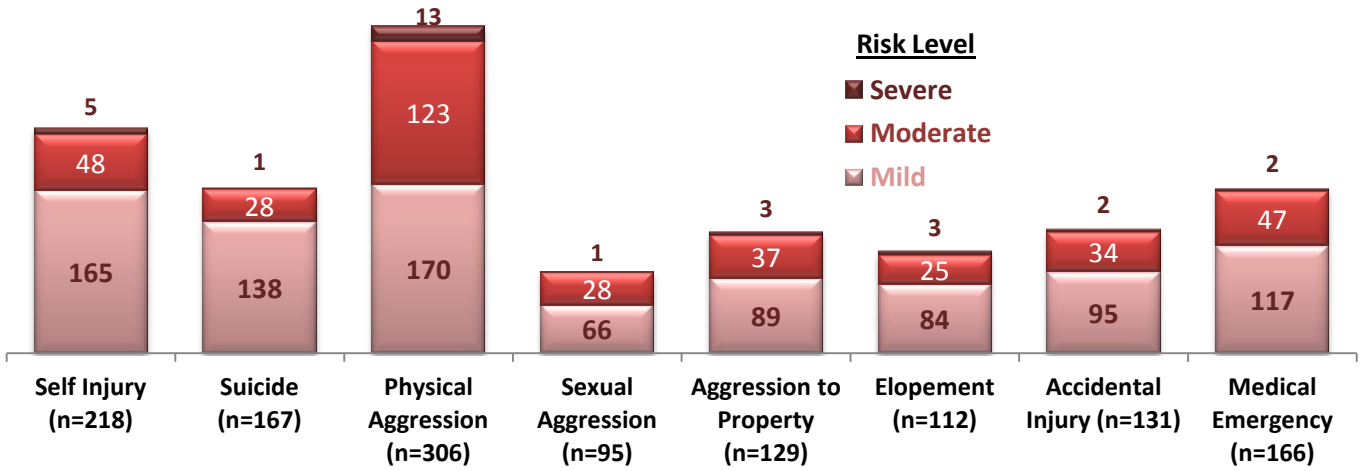
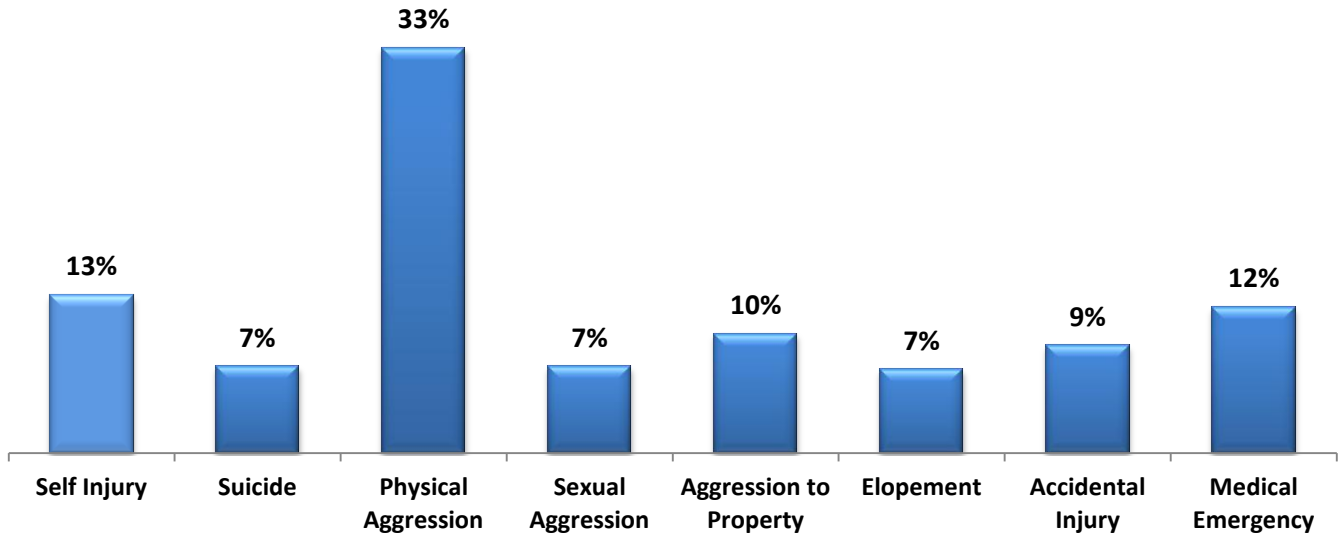


Figure 29. Percent of Admissions with Moderate or Severe Level of Risk Identified (FY 2011)

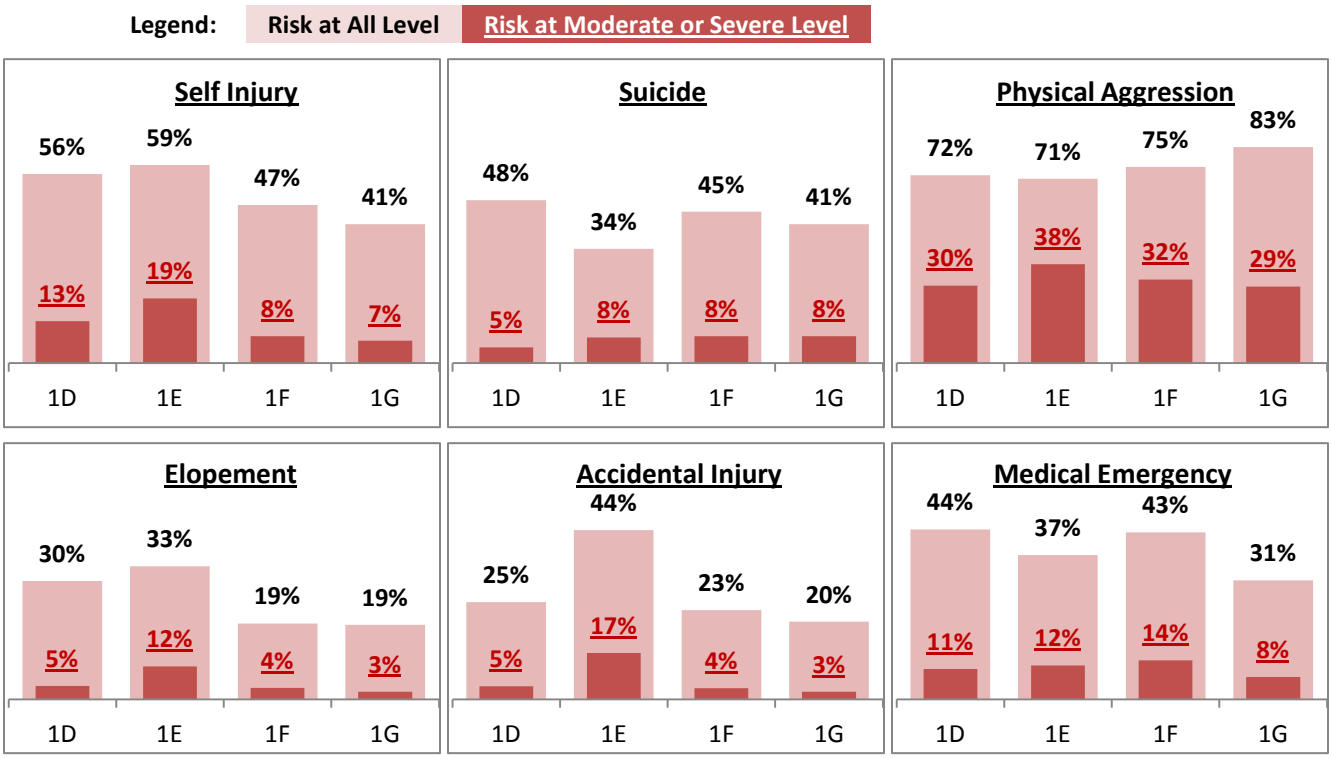


- The Hospital has primarily four (4) admission units and sometimes clinical characteristics of individuals show different patterns by unit. For example, individuals entering 1D and 1E had higher risk of self-injury compared with those entering 1F or 1G. One out of five individuals admitted to 1E had a moderate or severe level of self-injury risk identified. 1D had the highest percentage of admissions with suicide risk[16] but most of them are at mild level and it had the lowest percentage of those with moderate or severe level of suicide risk.

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

- Overall, 1G had the highest percentage of admissions identified to have a risk of physical aggression, but the lowest percentage of moderate or severe risk whereas 1E had the highest percentage of moderate or severe level of risk for physical aggression.
- Admissions to 1E had the highest risk of elopement and accidental injury at all levels.

Table 24. Percent of Admissions with Risk Identified by Unit (FY11)



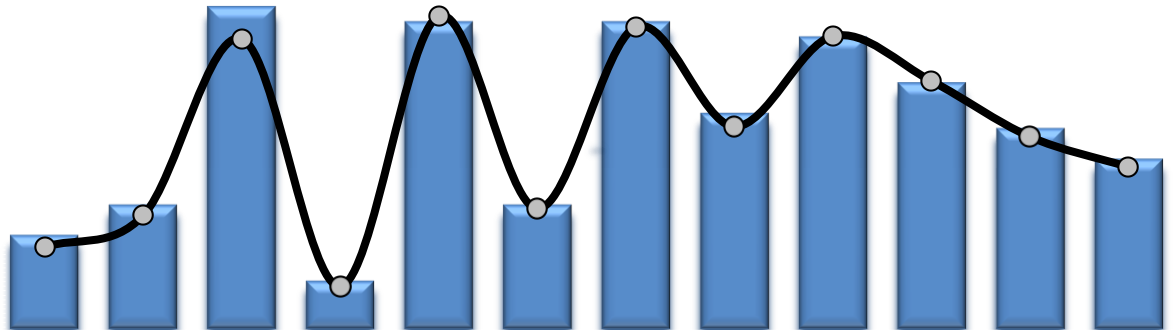
VI. Medication and Pharmacy

Data Source: MEDMARX[17] for data prior to December 2009 and internal databases (UI DB and ADR DB) for data since December 2009.

1. Medication Variances (MV)[18]

- During FY11, a total of 159 medication variances (13 per month on average) were reported.
- The number of reported MV incidents varied month by month, ranging from three (3) to 21.

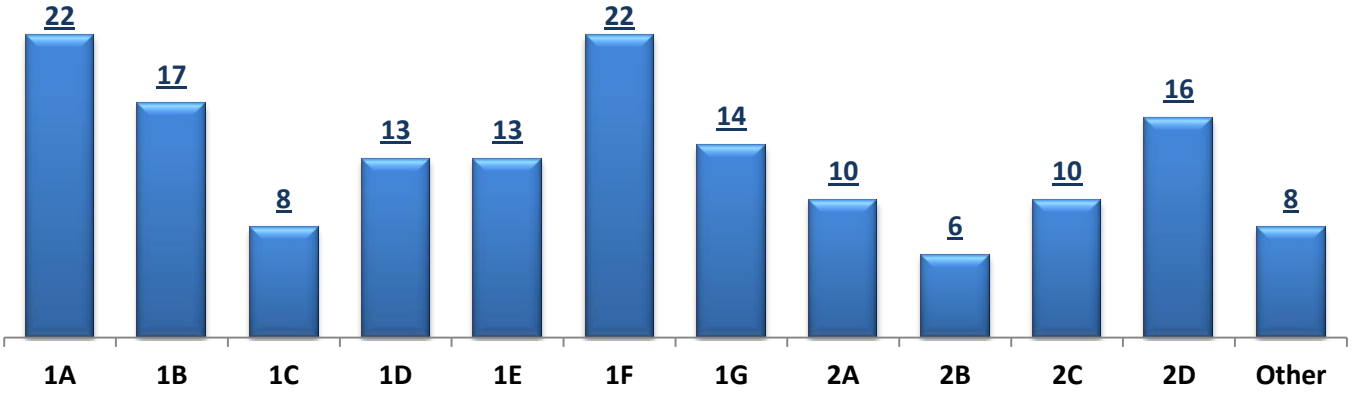
Figure 30. Volume of Reported Medication Variances (FY11)



	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11
# of MVs	6	8	21	3	20	8	20	14	19	16	13	11
MV Rate	0.65	0.91	2.34	0.33	2.52	0.96	2.43	1.63	2.36	2.00	1.55	1.30

- 1A and 1F reported the most MV incidents (22) followed by 1B (17) while some units reported fewer than ten for FY11.

Figure 31. Medication Variance Reports by Unit (FY11)

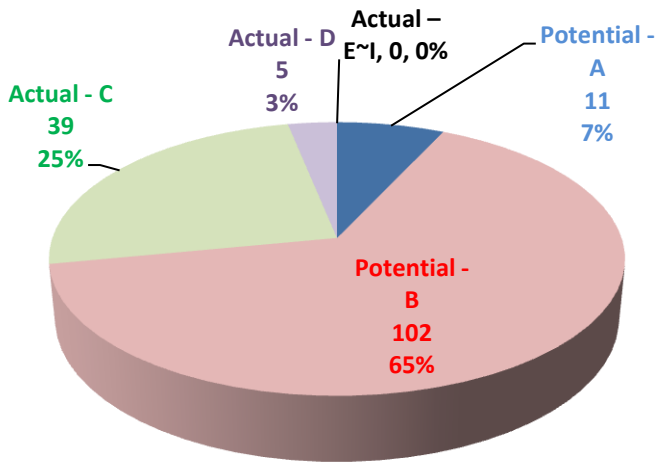


- Of the 159 reports, 11 (7%) were those where no actual variances occurred but it had the capacity to cause an actual error (Category A), 103 (65%) cases did not reach patients (Category B), and the remaining 45 were MVs that actually occurred.
- Of the 45 actual MVs, 40 cases reached the patient but did not cause the patient harm (Category C) and the other five (5) required monitoring and intervention to preclude harm (Category D).

[17] An internet-based medication variance and drug reaction reporting database many hospitals and health care systems use to document and track medication variances and ADRs and the Hospital participated between April 2007 and November 2009.

[18] 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)*.

Figure 32. Outcomes (Category) of Medication Variances (FY11)



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 MVs that had a critical break point identified, 105 (66%) MVs occurred during the medication prescribing process, 20 (13%) in the dispensing process, 19 (12%) in the administering process, 7 (4%) in the transcribing and documenting process, 4 (3%) in the procurement process, and 4 (3%) in Other.
- A majority of MVs were discovered and reported by pharmacy personnel (106 or 68% of the total 159 MVs reported) and MVs reported by nursing staff and physicians composed 46 or 29% and 4 or 3%, respectively.

Figure 33. MV by Critical Break Point (FY11)

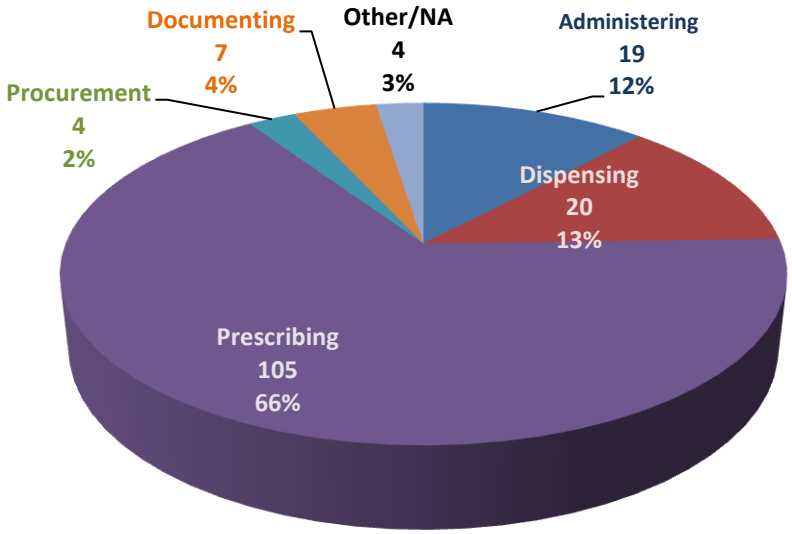


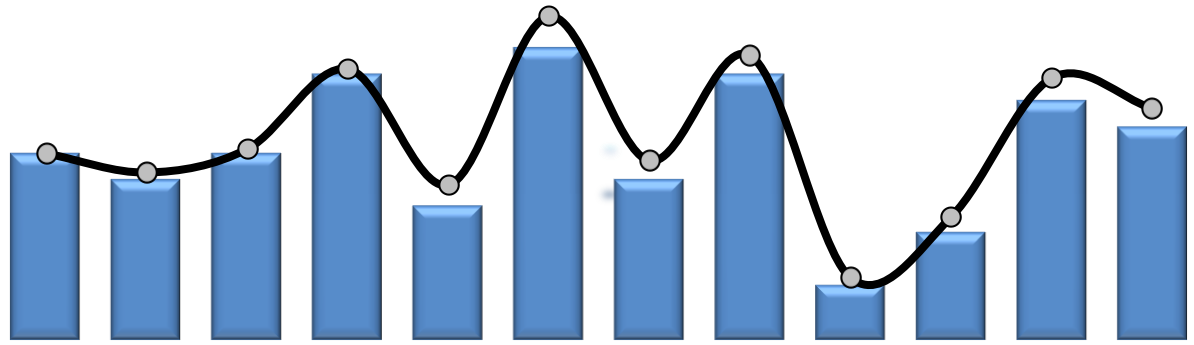
Table 25. MV by Reporter's Discipline (FY11)

Discipline	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total	Average
Physician	0	1	0	0	0	0	0	0	1	2	0	0	4	0.3
Nursing Staff	3	6	11	2	6	2	5	1	2	3	1	4	46	3.8
Pharmacy Personnel	2	1	10	0	14	6	15	13	15	11	12	7	106	8.8
Not Identified	1	0	0	1	0	0	0	0	1	0	0	0	3	0.25
Grand Total	**6**	**8**	**21**	**3**	**20**	**8**	**20**	**14**	**19**	**16**	**13**	**11**	**159**	**13.3**

2. Adverse Drug Reaction (ADR) [19]

- During FY11, a total of 85 ADRs or an average of seven (7) per month were reported. This is an increase of 31% from 65 ADR reports in FY10.
- The monthly number of reported ADRs ranged from two (2) to 11.

Figure 34. Number of Reported ADRs (FY11)



	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11
# of ADRs	7	6	7	10	5	11	6	10	2	4	9	8
ADR Rate	0.76	0.68	0.78	1.11	0.63	1.32	0.73	1.16	0.25	0.50	1.07	0.95

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 85 ADRs reported for FY11, 3 (4%) were doubtful ADRs, 45 (53%) were possible ADRs, 36 (42%) were probable ADRs, and one (1%) was a definite ADR.
- 1F had the most ADRs reported (a total of 18) while most units had ADRs of less than 6 reported for the entire fiscal year.

Figure 35. Probability of ADR (FY11)

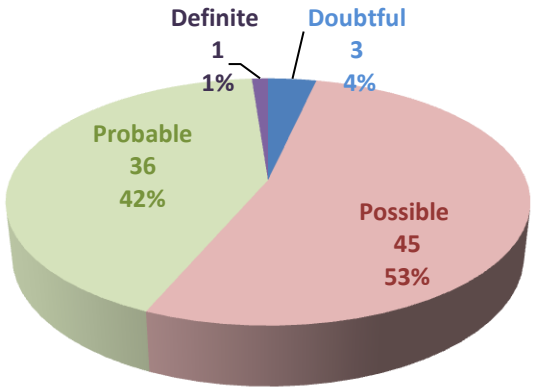
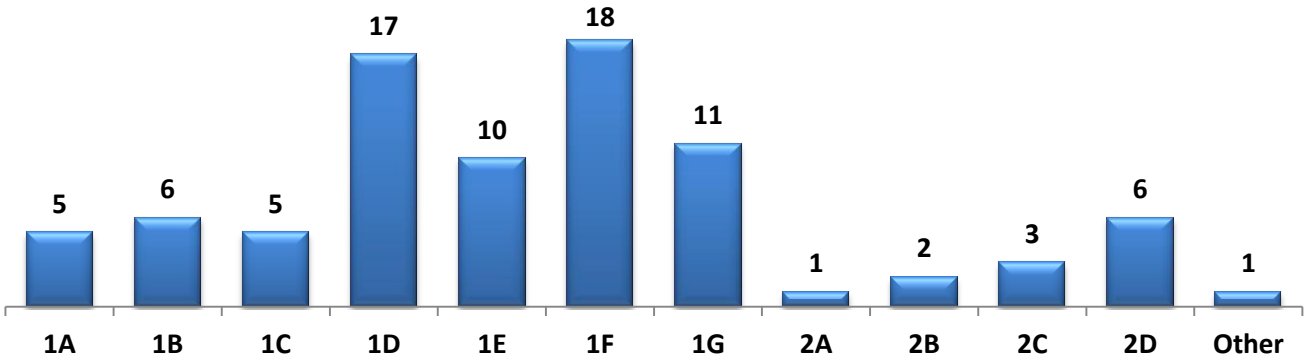


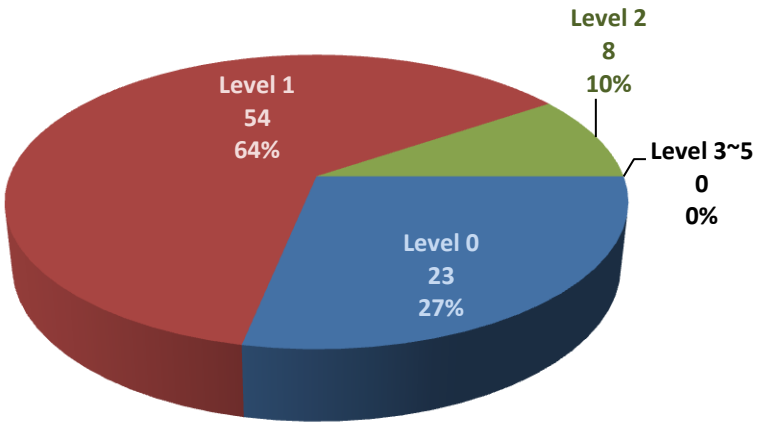
Figure 36. ADR Reports by Unit (FY11)



[19] 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 85 ADRs reported for FY11, 54 or 64% required dosage change and required treatment or caused an extension of stay in the facility (Level 1) while eight (8) required initial or prolonged hospitalization (10%) (Level 2), 23 cases (or 27%) required little or no treatment (Level 0). There were none reported ADRs that were in the severe category.

Figure 37. Severity Level of ADR (FY11)



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

Data Source: Unusual Incidents Database

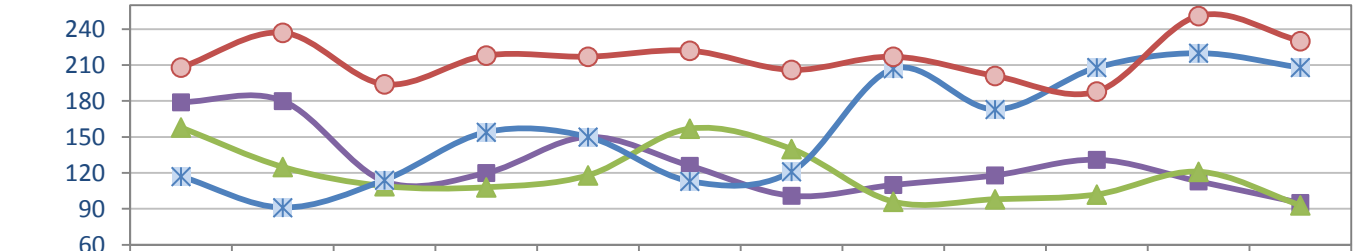
1. Volume of Unusual Incident Reports (UI)

Table 26. Monthly Average of UIs (FY07 ~ FY11)

Year	Monthly Average
FY07	115
FY08	128
FY09	119
FY10	156
FY11	**216**

- A total of 2589 unusual incidents or an average of 216 per month was reported during FY11. This represents an increase of 38% from FY10, when there were 156 UIs reported per month.
- The number of incidents notably increased beginning in May 2010, when the Hospital moved all of the individuals in care to the new facility. Since May 2010 and throughout FY11, the number of reported incidents averaged about 200 or higher per month, reaching the highest level at 251 in August 2011.
- Although the number of UIs often fluctuated, the past few years of data exhibits a few interesting seasonal trends: the number of reported incidents consistently declined in September, and tended to increase in January.

Figure 38. Reported Unusual Incidents by Month (FY08 ~ FY11)

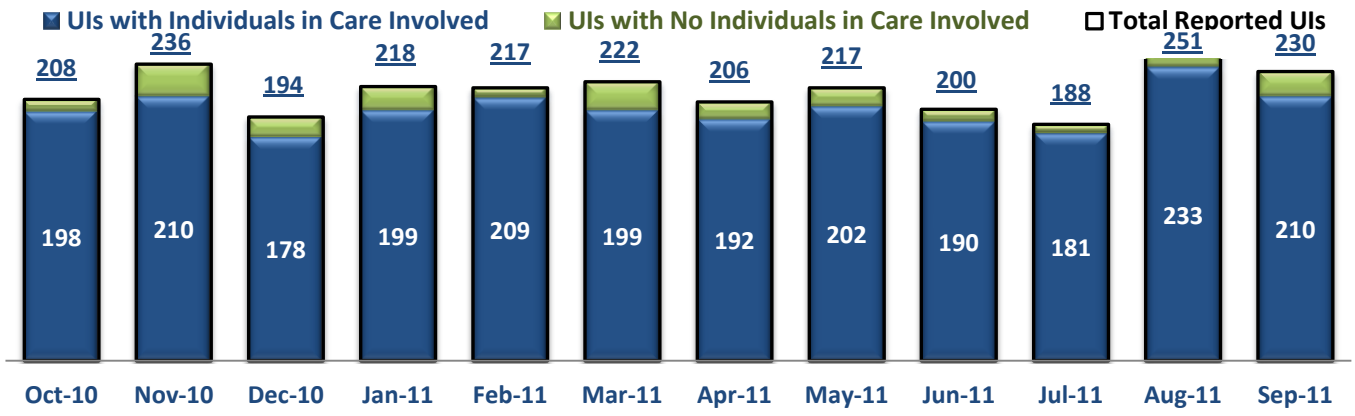


	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
FY08	179	180	113	120	150	126	101	110	118	131	113	95
FY09	158	125	109	108	118	157	140	96	98	102	121	93
FY10	117	91	114	154	150	113	121	207	173	208	220	208
FY11	208	237	194	218	217	222	206	217	201	188	251	230

2. Individuals Involved in UI

- Of the 2589 incidents reported in FY11, 93% or 2403 (200 per month on average) involved at least one individual in care. The other 7% were classified as non-patient related incidents.

Figure 39. Number of Incidents by Involvement of Individuals in Care (FY11)



- One out of three individuals in care (36%) was involved in at least one incident each month. During FY11, each month, the Hospital served an average of 324 unique individuals at least 1 day or more, and of those, about 118 individuals in care were involved in at least one incident during month.
- Of the 118 individuals, on average, 51 were repeatedly involved in more than one incident within a month period. That is about 16% of the total population served during each month. Of those repeatedly involved in UIs, 16 individuals were involved in four (4) or more UIs and seven (7) of them were involved in six (6) or more UIs.
- Some individuals in care were also frequently alleged as aggressors. On average, about 43 individuals or 13% of the total population served were alleged as aggressors in assault incidents. Of those, 15 individuals were alleged as aggressors in more than one incident within a month period.

Table 27. Unique Individuals in Care Involved in UIs (FY11)

# of Incidents Involved	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Mean	Percent
1 Incident	76	65	68	53	71	66	57	64	67	77	61	68	66	20%
2 Incidents	20	20	26	22	26	21	26	26	26	25	28	23	24	7%
3 Incidents	8	13	11	12	9	13	16	16	15	4	12	8	11	4%
4~5 Incidents	5	5	4	12	12	10	11	12	8	11	9	13	9	3%
6~10 Incidents	2	8	3	7	9	4	6	3	6	4	8	7	6	2%
>=11 Incidents	3	2	2	1	0	1	0	0	0	0	2	1	1	0.3%
Pts involved >=4UIs (#)	*10*	*15*	*9*	*20*	*21*	*15*	*17*	*15*	*14*	*15*	*19*	*21*	*16*	*5%*
Total unique Individuals in care involved in UI	**114**	**113**	**114**	**107**	**127**	**115**	**116**	**121**	**122**	**121**	**120**	**120**	**118**	**36%**
Total Individuals served >=1 day during month	**343**	**343**	**334**	**334**	**325**	**308**	**311**	**324**	**308**	**305**	**319**	**331**	**324**	**100%**

Table 28. Unique Individuals in Care Alleged as Aggressors in UIs (FY11)

# of Allegations	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Mean	Percent
1 Incident	20	26	31	27	33	29	28	29	28	27	32	27	28	9%
2 Incidents	6	5	5	6	4	8	8	11	10	5	12	5	7	2%
3 Incidents	4	4	5	6	3	1	2	4	5	4	5	6	4	1%
4~5 Incidents	0	2	0	2	4	2	2	0	3	1	4	4	2	1%
6~10 Incidents	1	2	2	1	3	2	1	0	1	1	1	4	2	0.5%
>=11 Incidents	0	1	0	0	0	0	0	0	0	0	1	0	0	0.1%
Pts alleged in >=2UIs (#)	11	14	12	15	14	13	13	15	19	11	23	19	15	5%
Total Alleged Aggressors	**31**	**40**	**43**	**42**	**47**	**42**	**41**	**44**	**47**	**38**	**55**	**46**	**43**	**13%**
Total Individuals served >=1 day during month	**343**	**343**	**334**	**334**	**325**	**308**	**311**	**324**	**308**	**305**	**319**	**331**	**324**	**100%**

3. UI by Type and Severity

- Two out of three incidents (66%) reported in FY11 were considered to be major incidents.
- A majority of incidents had a severity level identified by the Risk Manager to be low (31%) or medium (47%) and those considered to be critically severe (high or catastrophic) constituted about 23%.

Table 29. Major UIs vs. Non-Major UIs (FY11)

UI Type	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total	Mean	Percent
Major Incidents (#)	104	183	130	148	147	150	127	132	135	117	170	171	**1714**	**143**	**66%**
(%)	50%	78%	67%	68%	68%	68%	62%	61%	67%	62%	68%	74%	*66%*		
Non-Major Incidents (#)	104	54	64	70	70	72	79	85	66	71	81	59	**875**	**73**	**34%**

Table 30. UIs by Severity (FY11)

Severity	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total	Mean	Percent
Catastrophic	0	0	0	0	0	0	1	0	0	0	0	0	**1**	**0.1**	**0.04%**
High	35	71	51	53	59	52	47	56	45	38	37	38	**582**	**49**	**22.5%**
Medium	130	118	92	115	98	103	85	97	73	88	107	105	**1211**	**101**	**46.8%**
Low	43	48	51	50	60	67	73	64	83	62	107	87	**795**	**66**	**30.7%**

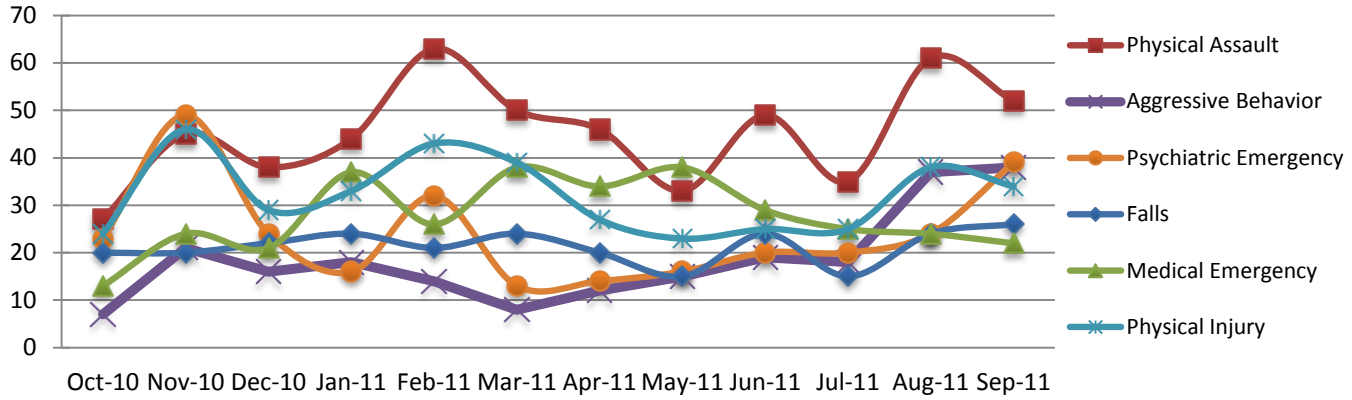
- Physical assaults (21%), medication refusals (15%), physical injuries (15%), medical emergencies (13%), and psychiatric emergencies (11%) were the most frequently reported incidents in FY11.
- The frequency of incidents by each incident type varied month by month. However, physical assault, physical injury and psychiatric emergency incidents exhibit a similar trend among themselves: when one of them increases, the others tend to increase as well. That is because an assault often accompanies psychiatric emergency and/or results in a physical injury.
- The frequency of aggressive behaviors surged in August and September 2011. The number of UIs of self-injurious behaviors and any suicide attempts or gestures declined during the 2nd half of the fiscal year.
- In FY11, the SEH Risk Manager received a total of 12 reports of fatalities, including eight (8) deaths that occurred after discharge or outplacement in the community.

Table 31. Incidents by Type (FY11)

UI Type	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total	Average	Percent
Abuse/Neglect/Exploitation	8	19	4	10	7	3	4	6	4	5	7	6	**83**	**7**	**3%**
Aggressive Behavior	7	22	16	18	14	8	12	15	19	18	37	38	**224**	**19**	**9%**
Attempted UL	1	3	2	4	2	3	0	2	1	0	3	6	**27**	**2**	**1%**
Contraband	11	13	9	11	12	13	6	13	18	9	15	18	**148**	**12**	**6%**
Crime	0	0	0	2	1	1	1	2	1	2	2	4	**16**	**1.3**	**1%**
Death	0	2	2	0	0	1	2	2	1	1	1	0	**12**	**1**	**1%**
Emergency Invol. Medication	5	1	3	3	1	2	2	3	2	4	5	8	**40**	**3**	**2%**
Environment	5	4	3	2	1	1	1	0	1	0	0	5	**23**	**1.9**	**1%**
Falls	20	20	22	24	21	24	20	15	24	15	24	26	**255**	**21**	**10%**
Fire	0	0	0	0	0	1	0	0	0	1	0	1	**3**	**0.3**	**0.1%**
Medical Emergency	13	24	21	37	26	38	34	38	29	25	24	22	**331**	**28**	**13%**
Medication Refusal	82	23	14	31	17	37	42	31	22	40	29	25	**393**	**33**	**15%**
Medication Variance	6	8	21	3	20	8	20	14	19	16	13	11	**159**	**13**	**6%**
Physical Assault	27	45	38	44	63	50	46	33	49	35	61	52	**543**	**45**	**21%**
Physical Injury	24	46	29	33	43	39	27	23	26	25	38	34	**387**	**32**	**15%**
Property Destruction	2	5	3	0	1	0	1	3	2	2	10	4	**33**	**3**	**1%**
Psychiatric Emergency	23	49	24	16	32	13	14	16	20	20	24	41	**292**	**24**	**11%**
Reportable Disease	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0%**
Restraint	3	4	8	1	0	0	0	0	2	2	0	1	**21**	**2**	**1%**
Seclusion	2	2	5	3	3	5	2	1	1	3	1	6	**34**	**3**	**1%**
Security Breach	2	9	6	4	4	9	5	5	6	4	9	5	**68**	**6**	**3%**
Self Injurious Behavior	2	15	7	7	7	3	0	5	3	3	3	2	**57**	**5**	**2%**
Sexual Assault	1	2	1	4	1	3	1	2	0	1	2	5	**23**	**2**	**1%**
Suicide Attempt/Gesture	0	1	0	1	0	0	0	0	0	0	0	0	**2**	**0.2**	**0.1%**
Unauthorized Leave	8	6	1	4	3	4	3	7	4	5	3	5	**53**	**4**	**2%**
Vehicle Accident	1	0	0	0	0	1	1	1	2	1	1	0	**8**	**0.7**	**0.3%**
Vital Sign/Finger Stick Refusal	1	1	2	7	1	2	1	5	4	2	6	2	**34**	**3**	**1%**
Other (None of above)	15	9	10	16	15	23	9	18	8	9	17	7	**156**	**13**	**6%**
Total*	**208**	**237**	**194**	**218**	**217**	**222**	**206**	**217**	**201**	**188**	**251**	**230**	**2589**	**216**	**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 incidents.*

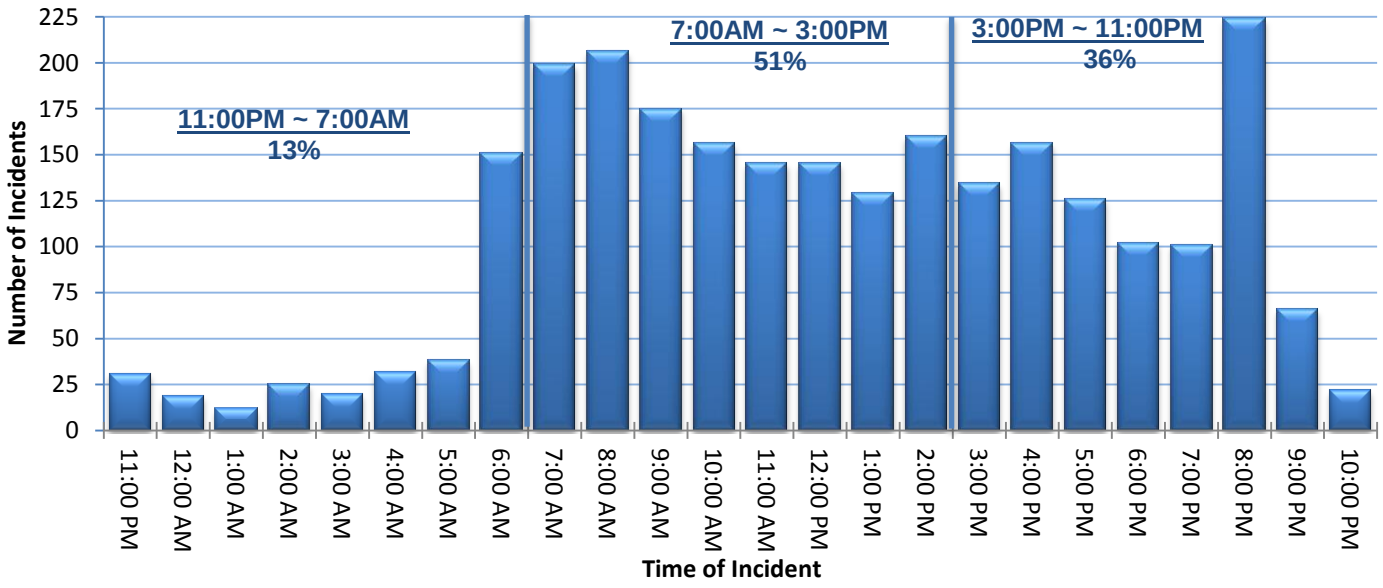
Figure 40. Trend of Selected UIs (FY11)



4. UI by Time and Location

- More than half (51%) of the UIs occurred during the day shift, between 7:00 a.m. and 3:00 p.m., and 36% 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 7:00 a.m. and 9:00 a.m. The frequency of UIs slows down in the late morning but slightly rises between 2:00 p.m. and 3:00 p.m., and between 4:00 p.m. and 5:00 p.m. UIs tend to decline again early evening but surge again, reaching the highest level between 8:00 p.m. and 9:00 p.m. The number of incidents significantly drops after 9:00 p.m. and stay low until 6:00 a.m. in the morning.

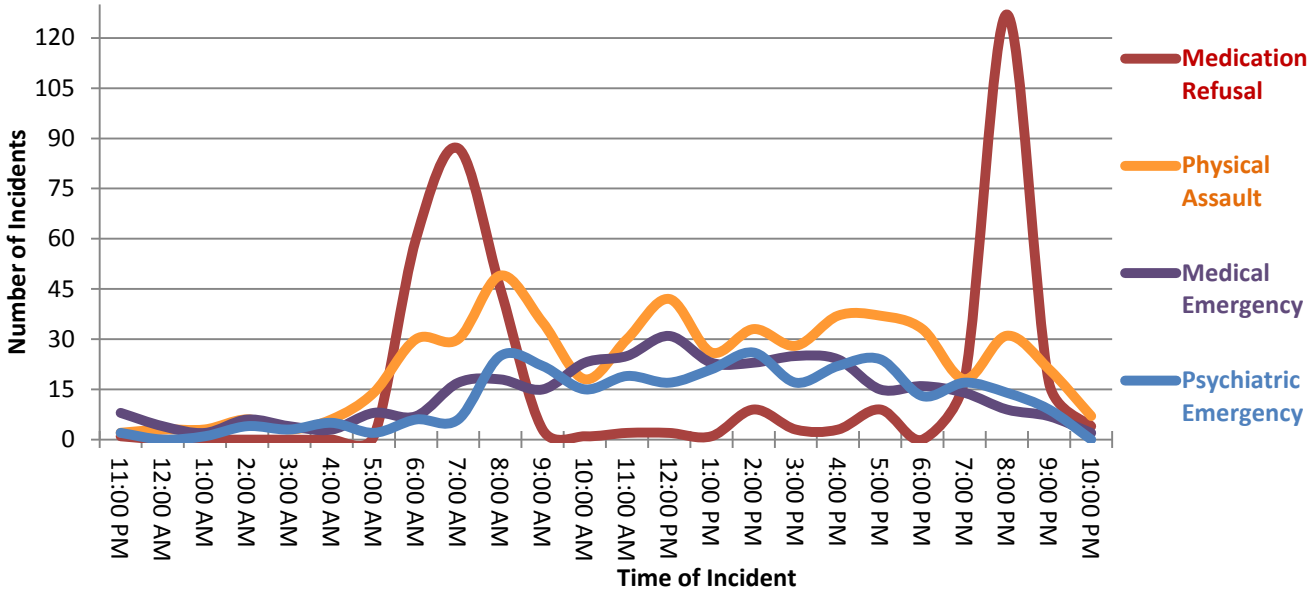
Figure 41. Incidents by Time and Shift (FY11)



- A significant number of UIs reported between 6:00 a.m. and 9:00 a.m. and between 8:00 p.m. and 9:00 p.m. involved medication refusal: of the total of 199 incidents that occurred between 7:00 a.m. and 8:00 a.m., 44% were medication refusal and 57% of the incidents that occurred between 8:00 p.m. and 9:00 p.m. were medication refusals. Medical refusals tend to occur more during the evening hours whereas MVs were reported mostly in the morning, and few MVs were reported in the evening.

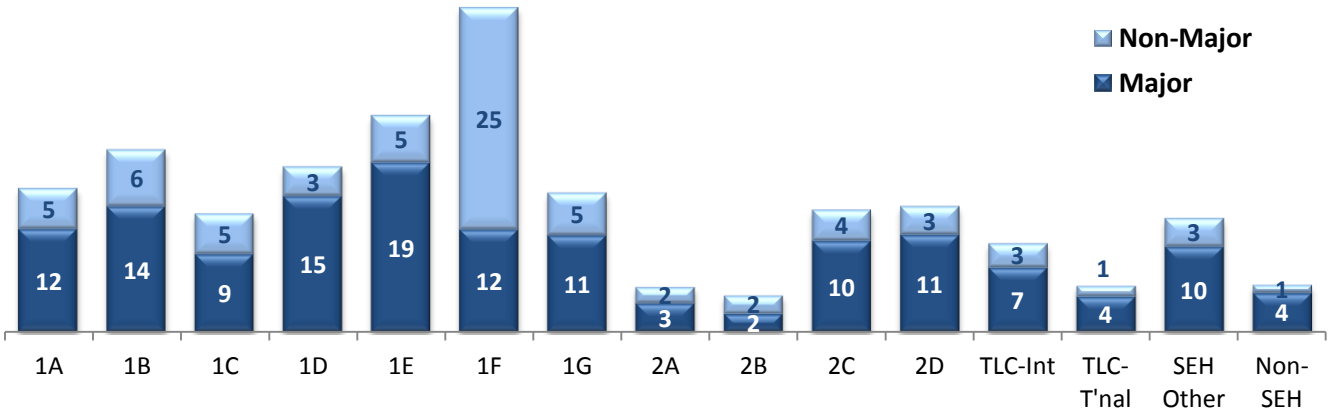
- Physical assaults occurred most frequently between 8:00 a.m. and 9:00 a.m., at around or after breakfast. They slowed down and rose again between 12:00 p.m. and 1:00 p.m., at around or after lunch. They declined a little bit and increased between 4:00 p.m. and 6:00 p.m., during and after the privilege hours.

Figure 42. Time Trend of Key Incidents (FY11)



- Certain units reported incidents more frequently than other units. During FY11, unit 1F reported an average of 37 incidents per month whereas 2A (5) and 2B (4) reported five or fewer incidents per month. A majority of incidents reported from 1F, however, were non-major UIs (25) that include medication refusals and only 12 per month were major incidents. Unit 1E reported major incidents most frequently (19 per month).

Figure 43. Monthly Average Number of UIs by Incident Location (FY 11)



5. Time Lag between Incident and Reporting[20]

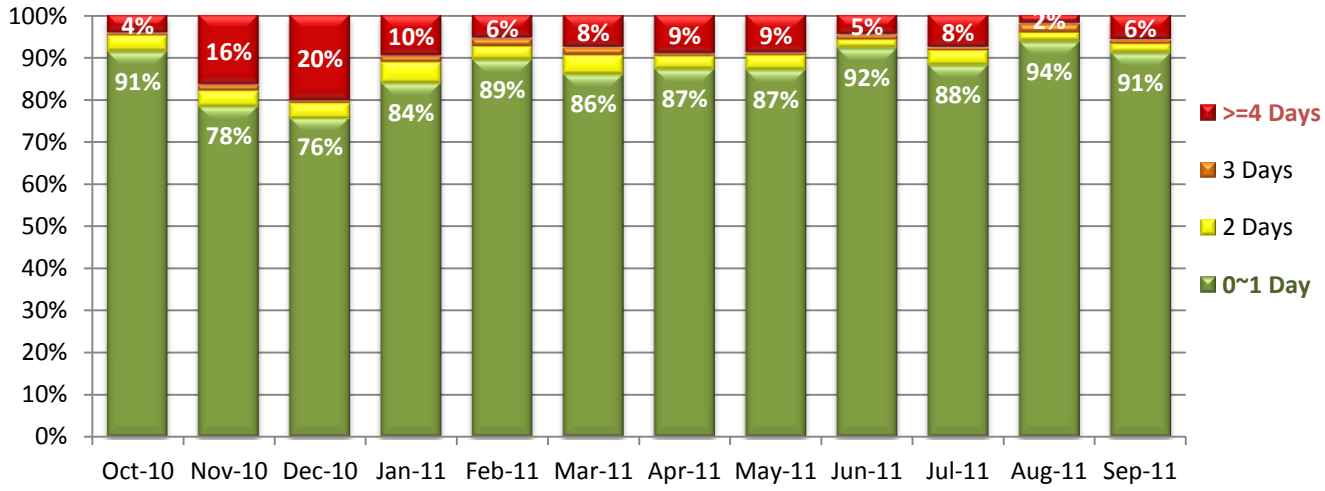
- By the beginning of FY11, 91% of incident reports were submitted timely, within 1 day of occurrence. However, timely reporting performance significantly dropped between November and December 2010. It gradually improved throughout the year and by the end of FY11, 91% of UIs were reported timely.

[20] 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 (FY11)

UI Type	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Average Length (Days)	3.6	10.7	8.0	4.6	1.7	2.4	4.2	2.5	1.9	1.7	0.6	0.9
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 44. Time Lag between Incident and Reporting (FY11)



6. Physical Injury

- Physical injuries are often associated with either physical assaults or falls. In FY11, a total of 387 injury incidents (32 per month) were reported[21] and of those, 55% (211) were associated with physical assaults and 18% (70) were caused by falls.
- There were a total of 543 physical assault incidents reported in FY11, and of those, 211 or 39% resulted in injuries to individuals in care or staff. However, most of injuries were minor.
- The 387 injury incidents reported in FY11 resulted in injuries to a total of 264 individuals in care (22 per month) and 171 employees (14 per month).

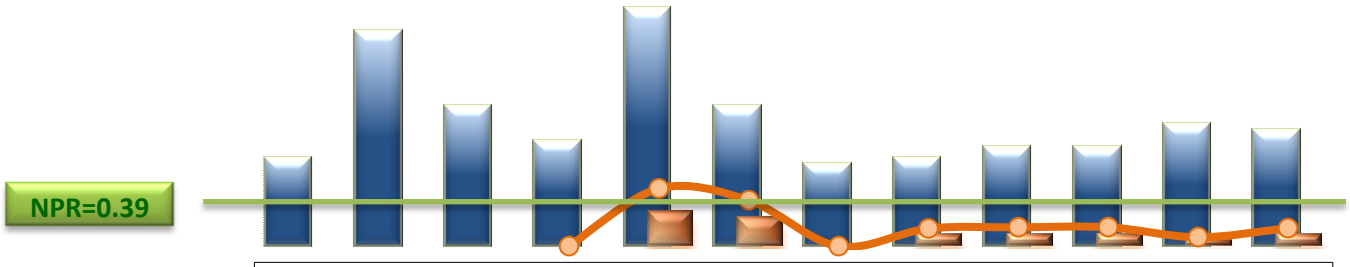
Table 33. Association between Physical Injuries and Physical Assaults/Falls (FY11)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total	Mean	%
Total Physical Injury UIs	24	46	29	33	43	39	27	23	26	25	38	34	387	32	100%
Physical Assault	13	17	15	14	32	22	16	10	17	13	21	21	211	18	55%
Fall	7	7	2	10	3	6	6	4	8	5	6	6	70	6	18%
Neither Assault nor Fall	4	22	12	9	8	11	5	9	1	7	11	7	106	9	27%
Total Physical Assault UIs	27	45	38	44	63	50	46	33	49	35	61	52	543	45	100%
Resulted in Physical Injury	13	17	15	14	32	22	16	10	17	13	21	21	211	18	39%
No Physical Injury	14	28	23	30	31	28	30	23	32	22	40	31	332	28	61%

- Of the 264 individuals reported to be injured, 244 had first aid level minor injuries that were handled at the unit level. The other 20 were determined to have major injuries that required them to be transported to 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 FY11 recorded 0.20, which is much lower than the national public rate of 0.39.
- Sixty-eight percent (68%) of the staff injuries were associated with physical assaults.

[21] 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 45. Patient Injury Rate (FY11)



	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11
Total Pts Injured	15	37	24	18	41	24	14	15	17	17	21	20
Major Pt Injuries*				0	6	5	0	2	2	2	1	2
Patient Injury Rate				0.00	0.76	0.60	0.00	0.23	0.25	0.25	0.12	0.24

Table 34. Staff Injury (FY11)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total	Mean	%
Staff Injured	**12**	**9**	**12**	**23**	**18**	**16**	**10**	**9**	**11**	**8**	**20**	**23**	**171**	**14**	**100%**
Associated with Assault	10	4	9	13	14	11	6	4	9	7	12	17	116	10	68%
Not Associated with Assault	2	5	3	10	4	5	4	5	2	1	8	6	55	5	32%

7. Restraint and Seclusion[22]

- The total number of restraint and seclusion episodes for FY11 was respectively 21 and 34. The number of restraint episodes remained the same as in FY10 but the number of seclusion episodes declined 44% from FY10.
- In FY11, on average, almost two (1.8) restraint episodes were reported per month, ranging between zero (0) and eight (8). Also, nearly three (2.8) seclusion episodes were reported per month, ranging between one (1) and six (6).
- The total duration of the restraint episodes in FY11 was 24 hours 9 minutes for 21 episodes, which average about an hour per restraint episode. The total duration of 34 seclusion episodes was 41 hours 50 minutes, which corresponds to an average of 1 hour and 14 minutes per seclusion episode.

Figure 46. Total Number of Restraint & Seclusion Episodes (FY07 ~ FY11)

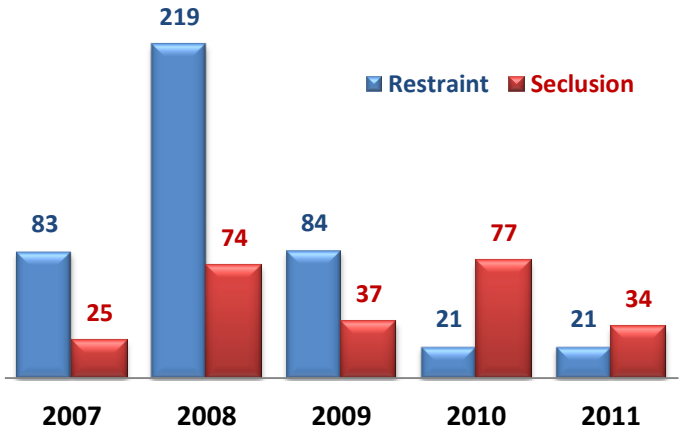


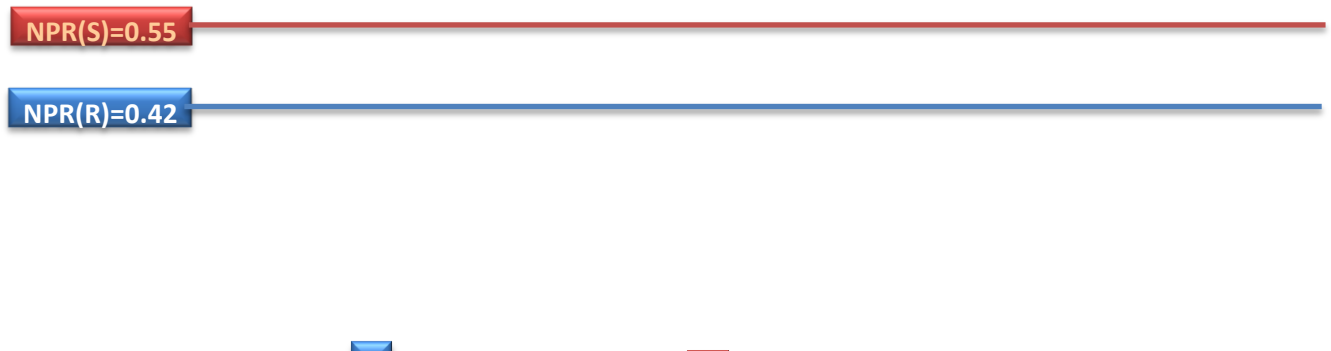
Table 35. Restraint and Seclusion Episodes (FY11)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total	Monthly Average
Total Restraint Episodes	**3**	**4**	**8**	**1**	**0**	**0**	**0**	**0**	**2**	**2**	**0**	**1**	**21**	**1.8**
Unique Individuals Restrained	3	3	2	1	0	0	0	0	2	2	0	1		*1.2*
Total Duration (hh:mm)	3:20	2:46	11:08	0:20	0:00	0:00	0:00	0:00	2:50	1:45	0:00	2:00	*24:09*	*1:50*
Total Seclusion Episodes	**2**	**2**	**5**	**3**	**3**	**5**	**2**	**1**	**1**	**3**	**1**	**6**	**34**	**2.8**
Unique Individuals Secluded	2	2	4	2	3	3	2	1	1	3	1	5		*2.4*
Total Duration (hh:mm)	1:20	4:57	6:40	2:10	3:25	7:20	2:00	1:00	1:11	5:10	1:00	5:37	*41.50*	*3:29*

[22] 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.

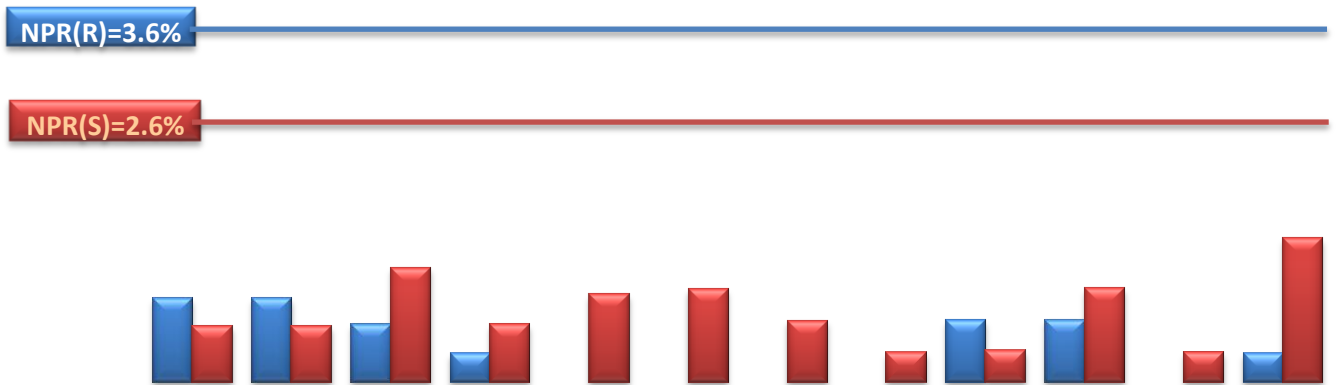
- In FY11, the restraint hour rate[23] mostly stayed at 0.02 or below except for the month of December when it recorded 0.5. The seclusion rate[24] was 0.04 or below throughout the year.
- The average restraint and seclusion hour rates at SEH during FY11 were much lower than the NPR (0.42 for restraint and 0.55 for seclusion).
- The percent of unique individuals in care restrained or secluded was also much lower than the NPR throughout FY11. On average, 1.2% and 2.4% of the individuals served at the Hospital were restrained or secluded in a given month while the NPR is 3.6% and 2.6%, respectively.

Figure 47. Restraint Hours Rate & Seclusion Hour Rate (FY11)



	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11
Restraint	0.02	0.01	0.05	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.01
Seclusion	0.01	0.02	0.03	0.01	0.02	0.04	0.01	0.00	0.01	0.03	0.00	0.03

Figure 48. Percent of Individuals in Care Restrained or Secluded (FY11)



	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11
Restraint	0.9%	0.9%	0.6%	0.3%	0.0%	0.0%	0.0%	0.0%	0.6%	0.7%	0.0%	0.3%
Seclusion	0.6%	0.6%	1.2%	0.6%	0.9%	1.0%	0.6%	0.3%	0.3%	1.0%	0.3%	1.5%

[23] Number of restraint hours per 1000 patient hours
[24] Number of seclusion hours per 1000 patient hours