Milwaukee County Department of Health & Human Services
Behavioral Health Division
Analysis of Incidents, January 2010 – June 2016

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Introduction

This report analyzes the Milwaukee County Behavioral Health Division's (BHD) incidents and reporting process from January 1, 2010, through June 30, 2016. The goals of this analysis included:

1. Supplementing the 2010 Milwaukee County audit;
2. Discovering trends in BHD inpatient incidents;
3. Discerning potential improvements in BHD processes; and
4. Summarizing best practices in incident trend process and analysis.

Scope of Work

This was a three-phase analysis of incidents occurring on BHD's inpatient and outpatient units to identify areas for potential improvements in patient and staff safety. The scope of work included: entry and discovery, evaluation and analysis, and report and exit. A description of the scope of work is included at **Appendix A**. The research protocol is included as **Appendix B**. Four strategies were employed to complete the analysis, each explained in detail below.

When a finding is characterized as "statistically significant" or "significant," it means that the relationship between two or more variables is due to something other than random chance. Significance analysis is conducted when the data being analyzed is a sample as in the case of this report.

Strategy 1 – Supplemental Audit Tables

Goal: Review and trend incident reports for acute units from 2010 through June 2016, modeled off of the 2010 Milwaukee County audit.

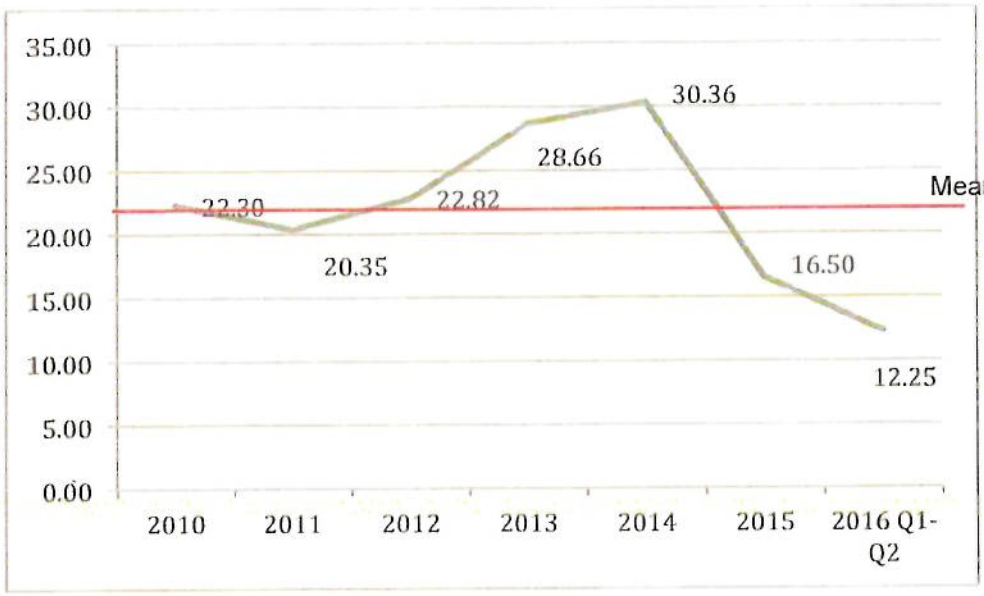
Process: Incident reports were gathered from the BHD Quality Department access database by type, unit and year. Reports were randomly checked to verify database numbers with actual reports gathered in the departments. The following tables represent incidents by year and by type for all acute units, aggression related incidents, and acuity related incidents. These specific categories were also reviewed in the 2010 audit report (**Appendix C**).

Sample: 100% of acute unit incident reports from 2010 – June 2016.

1. Table 1 - BHD Reported Incidents – All Categories Acute Adult Inpatient Units – Number of Incidents by Type by Year 2010- June 2016

Year	2010	2011	2012	2013	2014	2015	2016 Q1-Q2
Incident Type	Total	Total	Total	Total	Total	Total	Total
Other	59	47	57	49	43	30	20
Fall	182	143	106	102	101	45	22
Aggression PT/EMP	73	81	71	70	74	40	15
Aggression PT/PT	73	73	60	102	110	48	13
Injury self inflicted	40	31	30	33	41	15	3
Missing property/theft	20	16	13	18	11	4	1
Injury accidental	43	37	46	33	28	19	6
Exposure to infection	4	5	6	10	6	8	2
Medical Emergency Code 4	68	60	64	45	67	44	4
Property damage	12	14	17	13	23	3	1
Caregiver misconduct allegation	24	14	17	23	24	10	4
Suicide attempt	7	0	5	1	2	2	3
Contraband	19	22	10	23	14	4	4
Elopement from locked unit	9	7	11	10	6	1	2
Elopement from escort	2	2	1	1	1	0	0
Fall-employee visitor	3	2	8	6	1	0	0
Injury - S&R injury	17	11	4	21	18	4	0
Sexually inappropriate behavior	16	14	29	12	14	6	1
Confidentiality breach	3	0	0	1	3	0	0
Choking	2	2	4	5	4	0	1
Fire	0	0	0	0	0	0	0
Medication variance causing harm	0	0	0	0	1	0	0
Medical device equipment problem	0	0	0	0	0	0	0
Death - inpatient	0	0	0	0	0	0	0
Burns	0	1	0	0	0		0
Known or suspected sexual contact	8	10	1	9	6	0	0
Adverse drug reaction	0	0	0	0	0	1	0
Failure to return to unit	2	0	0	0	0	0	0
Hazardous Materials/Enviromental contamination	1	0	1	0	0	0	0
Total Incidents	687	592	561	587	598	284	102
Total Patient Days	30805	29098	24586	20480	19696	17209	8329
Incidents Per 1000 Patient Days	22.30	20.35	22.82	28.66	30.36	16.50	12.25

2. Chart 1 - BHD Reported Incidents – Adult Acute Inpatient Units – Incidents Per 1000 patient days trended from 2010- June 2016 (all incidents)



3. Table 2 – BHD Reported Incidents - Selected Incident Categories for Patient Acuity BHD Acute Adults Inpatient Units – Number of Incidents by Incident Type by Year 2010 – June 2016 (acuity related incidents only)

	2010	2011	2012	2013	2014	2015	2016 Q1-Q2
Incident Type							
Aggression PT/EMP	73	81	71	70	74	40	15
Aggression PT/PT	73	73	60	102	110	48	13
Injury self inflicted	40	31	30	33	41	15	3
Medical Emergency Code 4	68	60	64	45	67	44	4
Property damage	12	14	17	13	23	3	1
Suicide attempt	7	0	5	1	2	2	3
Injury - S&R injury	17	11	4	21	18	4	0
Sexually inappropriate behavior	16	14	29	12	14	6	1
Known or suspected sexual contact	8	10	1	9	6	1	0
Total Incidents	314	294	281	306	355	163	40
Total Inpatient Days	30805	29098	24586	20480	19696	17209	8329
Incidents Per 1000 Patient Days	10.19	10.10	11.43	14.94	18.02	9.47	4.80
Annual % Change in Incidents Per 1000 Patient - Days		-7.5	13	30.8	20.6	-47.4	-49.3

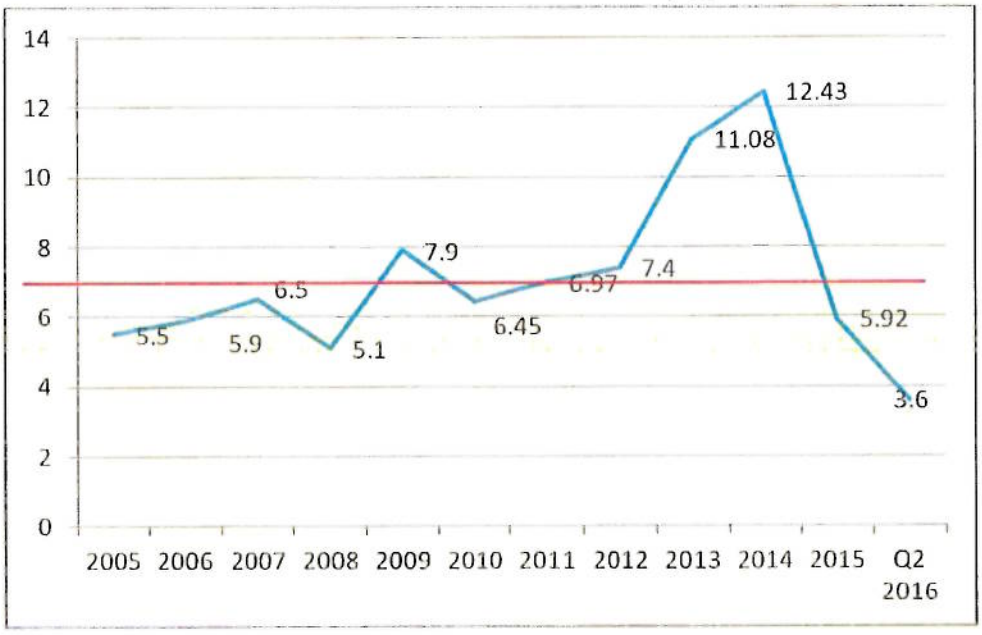
4. Chart 2 - BHD Reported Incidents - Selected by Categories for Patient Acuity Adult Acute Inpatient Units – Incidents Per 1000 patient days trended from 2010 – June 2016 (acuity related incidents only)

5. Table 3 – BHD Reported Incidents - Selected Incident Categories for Patient Aggression BHD Acute Adult Inpatient Units – Number of Incidents by Type by year 2010 – June 2016 (aggression related incidents only)

	2010	2011	2012	2013	2014	2015	2016 Q1-Q2
Incident Type							
Aggression PT/EMP	73	81	71	70	74	40	15
Aggression PT/PT	73	73	60	102	110	48	13
Property damage	12	14	17	13	23	3	1
Injury - S&R injury	17	11	4	21	18	4	0
Sexually inappropriate behavior	16	14	29	12	14	6	1
Known or suspected sexual contact	8	10	1	9	6	1	0
Total Incidents	199	203	182	227	245	102	30
Total Patient Days	30805	29098	24586	20480	19696	17209	8329
Incidents Per 1000 Patient Days	6.46	6.98	7.40	11.08	12.44	5.93	3.60
Annual % Change in Incidents Per 1000 Patient - Days		8.2	6	49.7	12.1	-52.3	-39.1

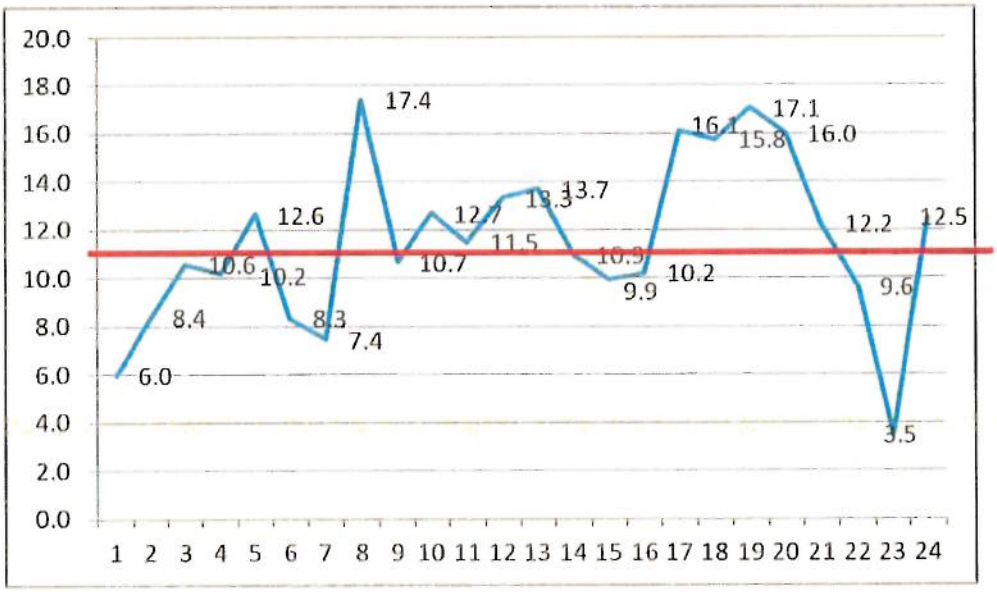
6. Chart 3 - Selected Incident Categories for Patient Aggression BHD Acute Adult Inpatient Units - Incidents Per 1000 patient days trended from 2010 – June 2016 (aggression related incidents only)

7. Chart 4 - Incident Rate Per 1000 Bed Days Trend 2005 – June 2016 (aggression related incidents only)

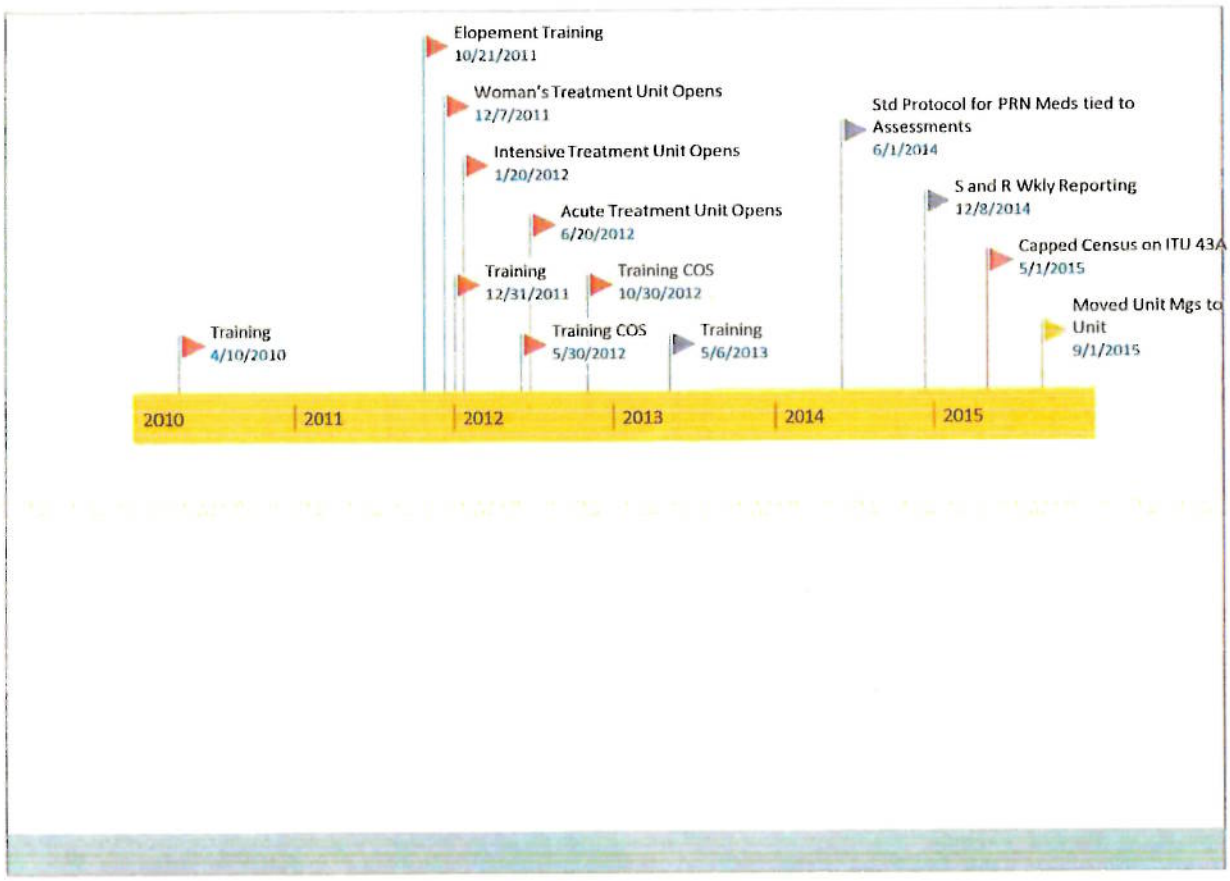


8. Chart 5 – Incident Trend by Month 2013-2014

Rates Per 1000 Beds by Month Jan 2013 - Dec 2014 (aggression Category Only)



9. Chart 6 – Timeline of BHD Process and Quality Improvement Efforts



Findings and Discussion:

The incident trends illustrated on the tables and charts above indicate a statistically significant downward trend in incidents since 2014. Incident peaks were observed for 2013 and 2014 due primarily to aggression incidents on the acute unit as demonstrated by the 49% increase from 2012 to 2013 (Table 3). Specific aggression categories as defined by the 2010 Milwaukee County audit team included the following:

- Aggression PT/EMP
- Aggression PT/PT
- Property damage
- Injury - S&R injury
- Sexually inappropriate behavior
- Known or suspected sexual contact

Chart 4 displays aggression incidents by month for 2013 and 2014. The mean for this time period was 11.53, well above the mean for the periods 2010 – 2016 (7.69) or 2005 – 2016 (7.05). The downward trend since 2014 may be attributed to several process changes/improvements that are highlighted in Chart 6.

Strategy 2 – Incident Report Analysis

Goal: Analyze a representative sample of incident reports by unit/incident type for opportunities to improve process and quality.

Process: A researchable database was developed containing all quantitative and qualitative data captured on an incident report. Random samples of incidents by year/incident type were chosen, coded and stripped of all personal health information. All data, including the incident code, were entered and analyzed for trends and impact based on historical process and quality improvement efforts. Opportunities to improve process and quality were identified through qualitative analysis of incident report findings. Suggestions were made concerning additional analysis for incidents that resulted in harm or death. Finally, comments were included regarding the need for incident tracking in community services environments as the volume of service increases and shifts to the outpatient environment.

Sample: Representative and random sample of incidents on all units from 2013 – Q2/2016 for the following incident types: elopement, injury, violence and aggression and sentinel events (excluding falls). 1,847 incidents were reported during the period but duplicate incidents, illegible reports and smaller samples from units that have since closed were excluded, resulting in a sample size of 1,499. The sample size is representative within 5%+/- of the overall total of incident reports for the period.

Sample Size

	2013	2014	2015	Jan – June 2016	Totals
Elopement	23	17	13	9	62
Other	199	135	79	44	457
Injury	210	150	79	28	467
Aggression	194	126	144	49	513
					1499

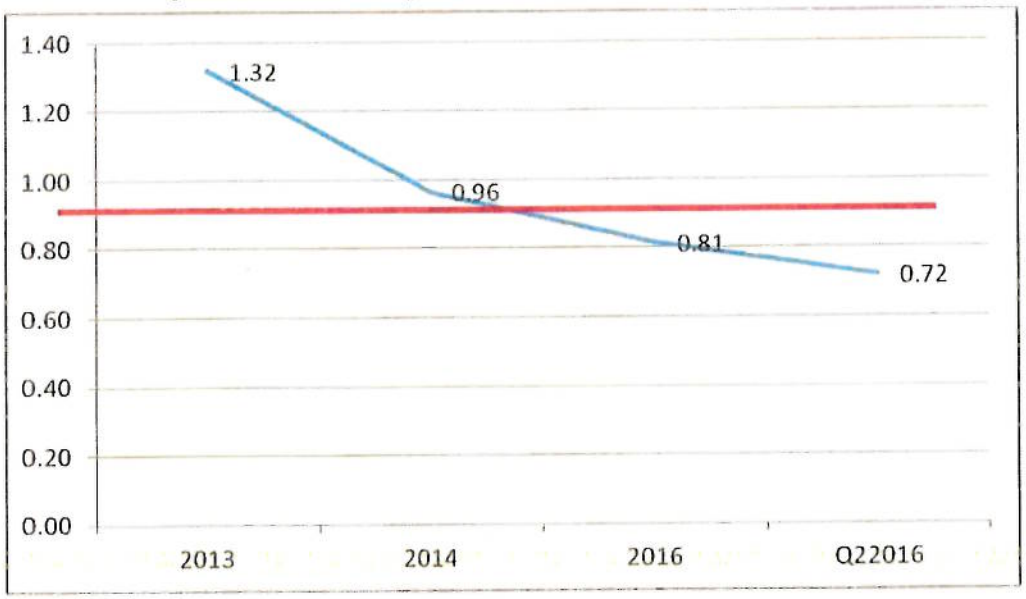
Elopement Analysis

The sample for elopement included three categories:

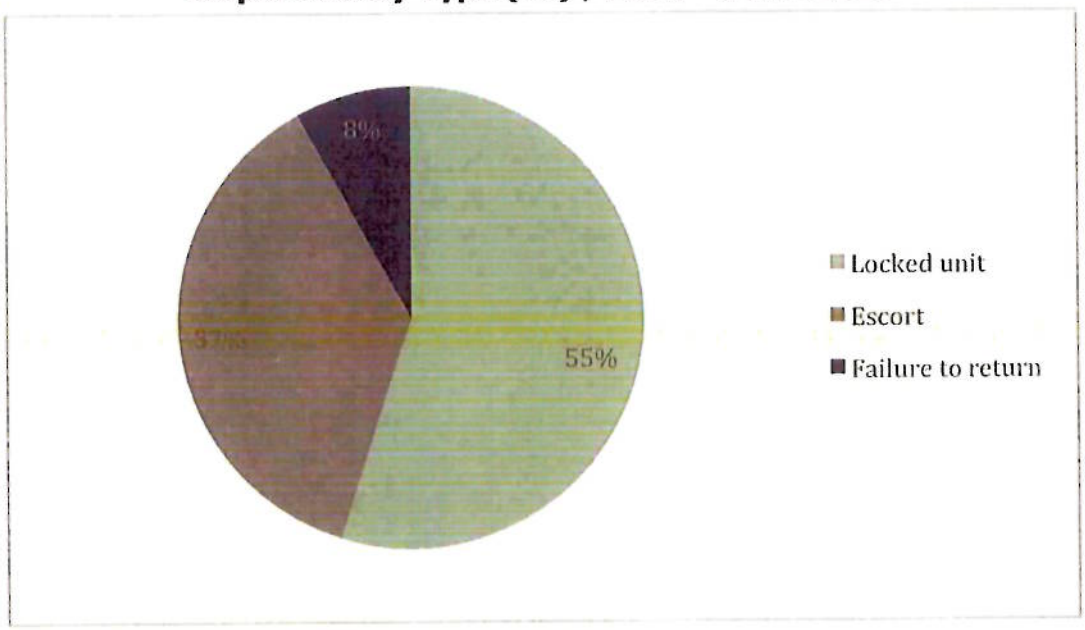
a) elopement from a locked unit;
b) elopement from escort; and
c) elopement for failure to return to the unit.

All elopement incidents were analyzed due to the small number represented (62).

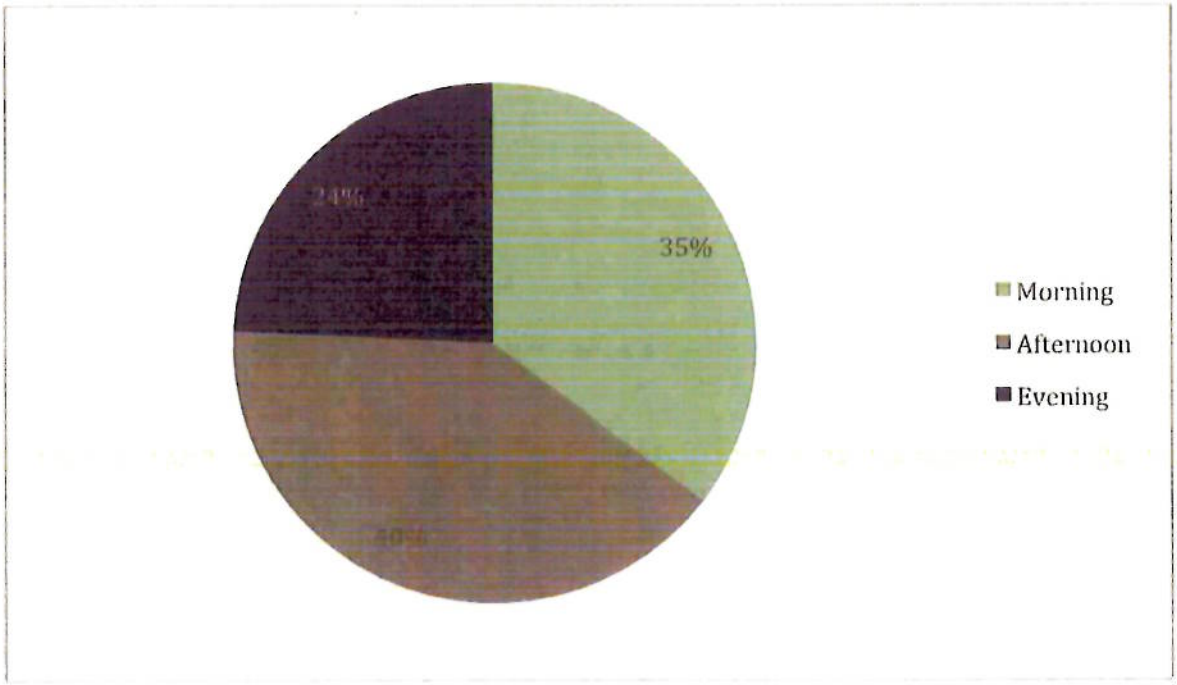
Elopement Rates per 1000 Patient Days by Year



Elopement by Type (%) , 2013 – June 2016



Elopement by Time of Day (%), 2013 - June 2016



Findings and Discussion:

- The majority of incident reports for elopement were incomplete (66%).
- Incident rates decreased significantly beyond the mean observed trend.
- The majority of the incidents were categorized as elopement from a locked unit.
- There were significantly less elopement incidents in the evening.
- The supervisor signed off 78% of all incidents reports less than five days after the incident occurred.
- Few of the elopement incidents resulted in staff education yet it would seem that education regarding escorting and transport would have been helpful.
- The majority of incidents were one-time patient events, i.e., no single patient or small group of patients eloped multiple times.

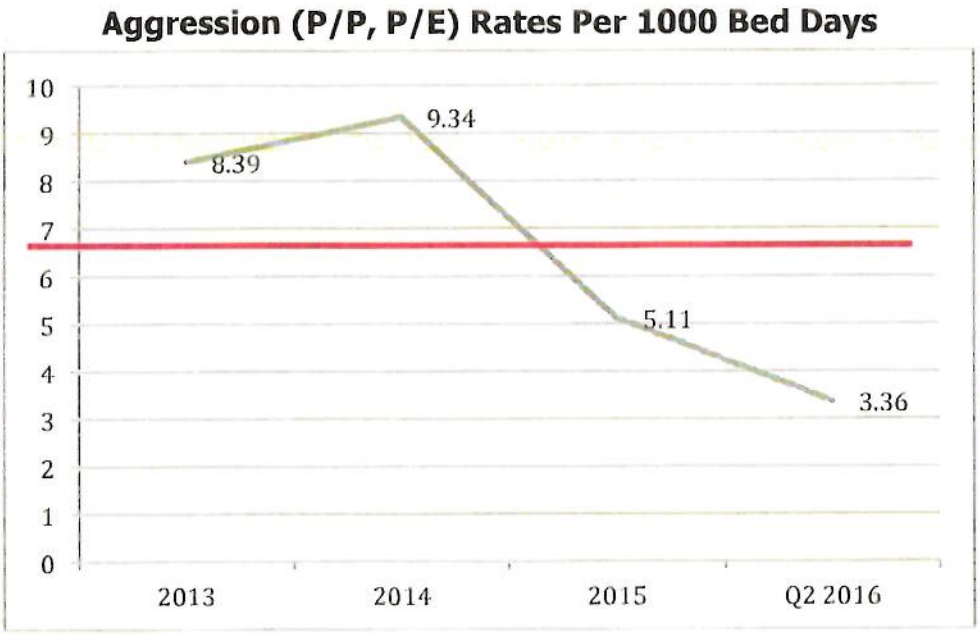
Qualitative Examples of Review Notes:

1. Medical record reviewed. Elopement risk reported to accepting faciilty (St. Joseph's). Transfer sheet from St. Joe's indicated mode of transport to BHD as "police." Patient was returned to BHD and admitted. This writer discussed with staff the need to place patient on precautions. Stated that U/A precautions entered on plan and staff aware.
2. Patient was found the following day at home with no injury from elopement. Review of 1:1 policy & intervention.
3. Patient escaped returned by sheriff assessed for injuries medicated placed into ambulatory restraints EE's notified of window broken, temp placement of window in place power notified of broken glass/clean up.

4. Reinforce education on monitoring door, ensuring it locks, checking behind to make sure no patients are near door or coming behind.
5. 1:1 was able and staff with security assistance was able to redirect patient back to her room. Patient began hitting the walls and swinging at staff. Patient placed into 4 patient restraints and assessed for injuries, none noted. Patient medicated.

Aggression Analysis

The sample for the aggression analysis included a representative sample of patient/patient and patient/employee data or reports from the acute, day treatment and outpatient units from 2013 to quarter 2 of 2016. The analysis was organized by measures focused on the process of reporting the incident and by the actual incident itself.

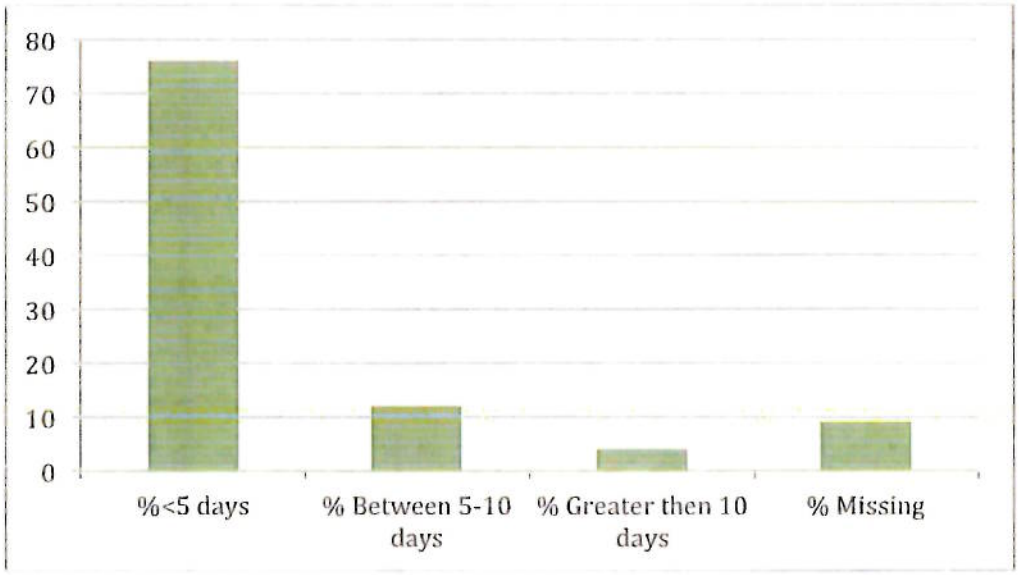


Findings and Discussion:

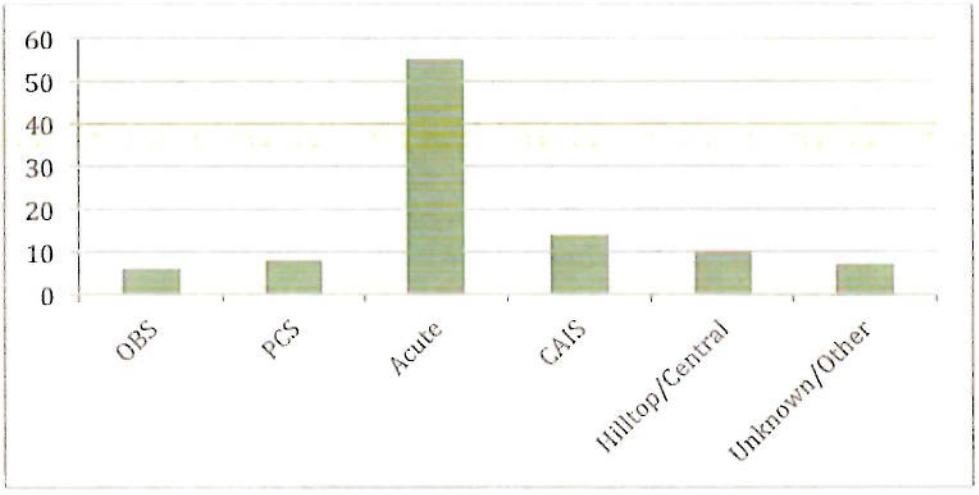
- The majority of incident reports for aggression were incomplete (55%).
- The majority of incident reports were completed in a timely manner, i.e. less then five days after the incident occurred.
- A majority of reports were completed by an RN (65%) and the remainder by a CNA (8%) or unknown (25%).
- The incident report notes indicate a broad range of compliance/non-compliance.
- The use of restraints (47%) was the action most often taken in the A2 level aggression incidents followed by the use of medication (29%) and doing nothing specific (19%).
- Restraint was the action taken most often for patient/employee (P/E) incidents while patient redirection was the action taken most often for patient/patient (P/P) incidents.
- 3% of the patients were responsible for 19% of the reported aggression incidents.

Days from Date of Incident until Supervisor Review, 2013-Q2/2016

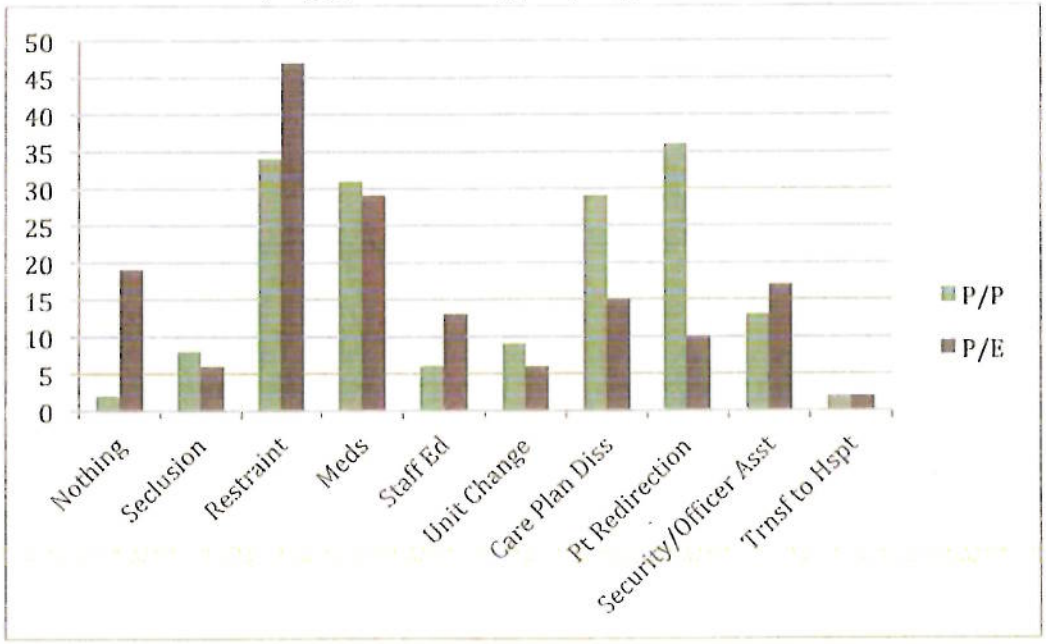
Average	Standard Deviation	Range
2.35 days	3.7 days	0-23 days



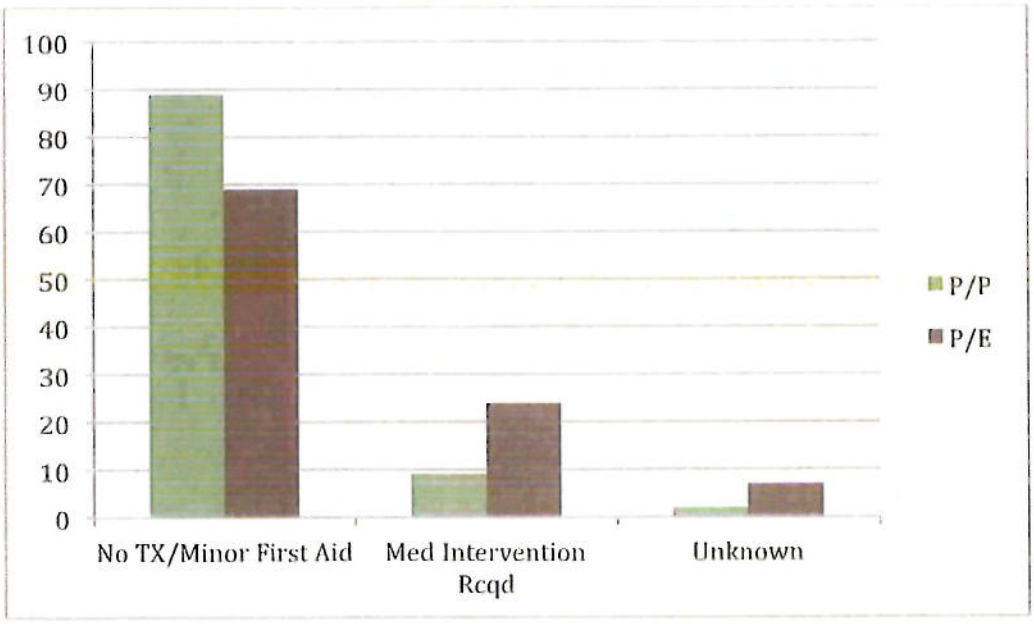
Incidents by Unit (%), 2013 – June 2016



Actions by Aggression Type (%), 2013 – June 2016



Incident Type by Severity Level (%), 2013 – June 2016



Qualitative Examples of Review Notes:

- Received safety protocol w/access clinic front desk & clinical staff. Reviewed use of panic buttons and safe escape routes. One staff expressed a desire for security swipes at the clinic.

- Employee educated on importance of contacting supervisor immediately. Employee interviewed. Careline called. Injury paperwork completed. Unable to interview patient on unit. Additional staff to be interviewed due to lack of teamwork which resulted in employee injury.
- Pt A hx of bipolar currently very paranoid thoughts, disorganized. Pts(patients) had been in same room and have been separated. Pt B refuses offer of contacting sheriff. Pt will be placed on a TDA(define) and admitted to acute inpatient due to physical aggression and mood changes. Accepted unit will be made aware of potential risk of aggression.
- Staff tried to verbally redirect when was unsuccessful; staff had to physically remove residents. No injury occurred.
- Pt is known to have this type of behavior - he has precautions (within arms length when out of room) in place - he's reactions are very quick. Residents separated. Pt returned to his room offered and received medication. Guardians notified. Pt assessed. Pt no injury, washed face denied concerns regarding incident Tx(treatment) plan updated.
- Pt B delusional with increased aggression threw chair at another pt A no inj. Code 1 called pt A placed into restraints and medicated after a 1/2 hour pt reassessed medications effective pt - aware of behavior and vocalize his actions were wrong. Triggers discussed with pt tx team.

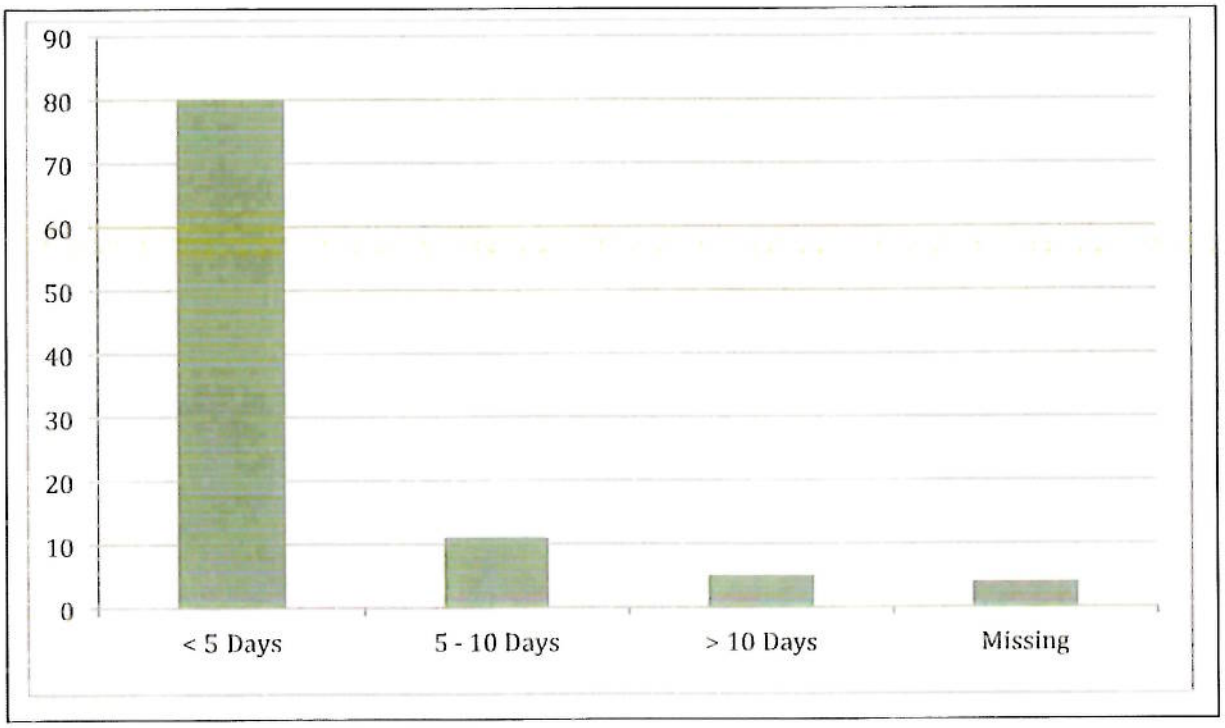
Injury Analysis

The injury analysis included a representative sample of three types of injury related incidents: accidental injuries, self-inflicted injuries, and injuries related to seclusion and restraint episodes (S and R). Overall, there was a significant decline in all injury related incidents from 2013 – June 2016.

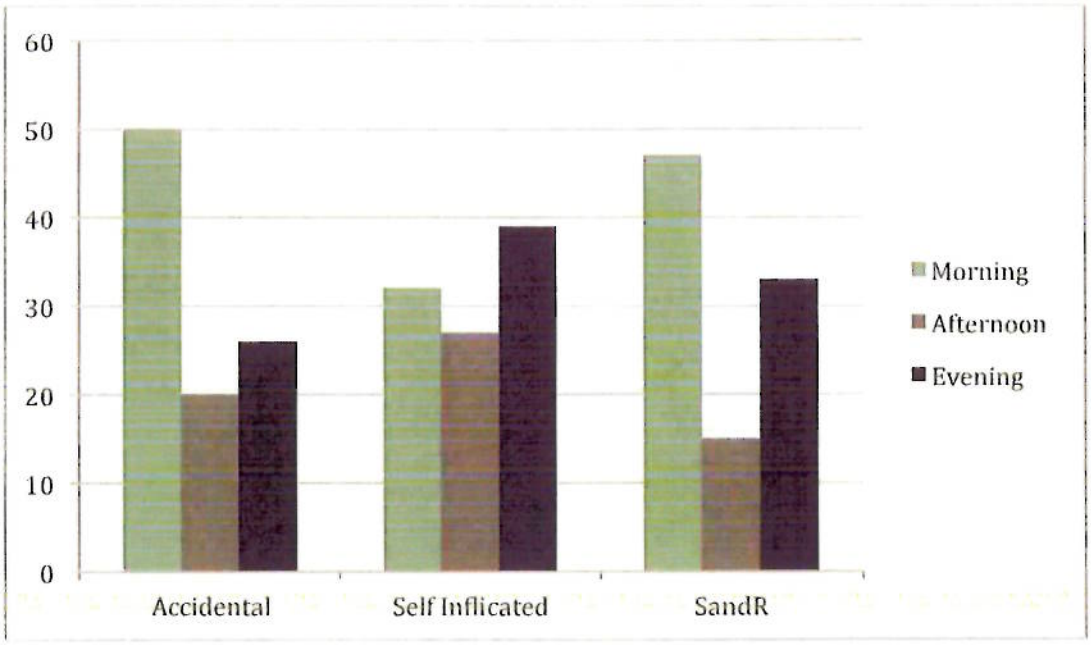
Injury Incidents by Injury Type Per 1000 Patient Bed Days

Days from Date of Incident until Supervisor Review, 2013 – June 2016

Average	Standard Deviation	Range
2.35 days	3.7 days	0-23 days



Incident Type by Time of Day (%), 2013 – June 2016



Findings and Discussion:

- The majority of incident reports for all types (accidental, self inflicted, seclusion and restraint) were fully completed (> 90%).
- A significant number of accidental injury incidents took place in the morning (50%).
- A significantly lower number of injury incidents related to S and R took place in the afternoon (15%).
- The majority of incidents related to injury are either accidental or self-inflicted. Injuries related to S and R are significantly less than the other two categories.
- Two percent (2%) of the patient sample was involved in twelve percent (12%) of the injury incidents.
- 75% of the incident reports were completed by an RN.
- The majority (80%) of incident reports were completed in less than five days from the date of the incident.
- The majority of S and R injury incidents (66%) resulted in a staff injury occurring while assisting to place a patient into restraints.

Qualitative Examples of Reviewer Notes:

- Employee was assisting another CNA with getting res up and in shower chair (protocol followed), was in proper position. Employee reports "back strain" upon completion of task, employee is known to work multiple "back to back" shifts.
- Emp completed notification of injury paperwork and called injury report # for county mutual. She declined follow up tx and said she felt better after ibuprofen. Reviewed property procedure to break down a box by cutting the tape on the seams. If this is too difficult, she should contact supervisory reminded to contact county mutual and supervisor if further attention is needed.
- RN notified at time of incident. Client held hand under cold water immediately. Next day A was scheduled for day tx groups. Per APNP, there was no sign of burn and pt had no complaints. Asked staff to remind clients not to fill cups to top with hot liquids, although it is unclear if that was a contributing factor.

- Chart reviewed. Incident report reviewed. MD appropriately notified and MD assessment complete. Mild tenderness & mild swelling noted to Rt frontal scalp. Neuro checks completed per MD orders. Pt disorganized, but was prior to injury no major trauma noted. VSS neuro checks WNL. Appropriately monitored by staff. Appropriate action taken.
- Emp B accidentally spilled water on the floor. Emp A walked into the spilled liquid. (A) Incident report completed, injury referral form and injury report form completed. Witness statements obtained. R employee A reports "to avoid falling, I strained my back and neck, but kept my balance. Emp A stated she had a chiropractor appt @ 4pm today r/t a recent fall, on ice, outside of work, off hospital grounds. Emp refused to leave work to be seen. No missing work time.
- Pt assessed for injuries, none noted assist pt in de-escalation trigger identified. Pt agreed to time out in room. Will refer to medical, tx plan updated.
- Pt A and B were fighting. Writer was in between them trying to keep them apart. B was on the phone and thought that A was coming after him. He tackled writer and A, knocking writer to the floor, injury my back left leg/calf and R wrist is sore.
- Fight broke out on the unit between female patients. While trying to break up the fight he slipped or tripped over his feet. He fell to the ground causing an abrasion to the lt elbow

Analysis of Other Incidents

Findings and Discussion:

- There were no specific trends in the incidents categorized as "other."
- Over 30% of the incidents categorized as "other" were incidents with their own category specifically aggression, injury, elopement, sexual contact.
- Over 25% of the "other" incidents did not seem to be incidents.
- Common themes included the broad categories of medication, misconduct, visitor issues.
- There was a greater proportion of incidents in the outpatient setting than in any other incident category. Based on an analysis of the comment sections of the reports, staff members in outpatient settings are not as well educated in incident reporting and categorization.

Qualitative Examples of Reviewer Notes:

Incorrectly categorized

- Pt A punched pt B in the face over disagreement of T.V,. C stepped in to separate the pts by wrapping his arms around pt A from behind. Pt A struggled with C slamming him against the wall/door jamb inuring his left forearm.
- Patient opened a door of secure unit and stood in doorway when alarm activated. Staff at exit redirected promptly. Patient back into unit and reset alarm
- Pt attempted to elope when OT staff exited conference room door. Security
- Received a call from Staff A at outpatient. Staff A reported that pt threatened to kill patient B in staff's presence
- Writer met with patients on 3/13/2014 @ 20:30 due to a verbal argument. They were arguing over the tv. Pt A was watching a program. House staff gave patient B permission to change the channel. Patient A became upset because he was in the middle of his program. Patient A told patient B he would "f[redacted] up" patient B. Patient B went into the kitchen and grabbed a butter knife.

Medication Related

- Discovered medications in WOW drawer labeled A and B. The meds were Iodipine 2.5 mg and HCTZ 25mg in the drawer labeled B. In the drawer labeled A there was a Depakote 250mg.
- Per Staff A, patient returned from outside, they suspected he had medication on him so confronted him in his room. They observed 6 Lorazepam and some Adderol were missing from the prescription that the patient did not report he had filled. Staff A called 911 per crisis mobile request

Strategy 3 – Staff Survey

Goal: Survey staff to assess the level of staff knowledge of incident reporting process.
Process: An electronic survey was developed (see Appendix D) that assessed staff understanding of the BHD incident reporting process. Analysis of the responses offered insight into the staff's level of knowledge regarding the incident reporting process and will help BHD better determine if incidents are being accurately reported. The survey included review of the BHD incident definition, as well as scenarios that staff assessed with regard to incident reporting. The survey depicted the following seven incident scenarios:

A. A client is exiting the building with a friend after an appointment. The friend damages a light on the way out of the building.
B. Inpatient A and inpatient B argue but no one is hurt.
C. A person calls at your workspace and threatens the safety of an individual located in the building.
D. You are in the common area of the front entrance and notice a spilled substance on the floor in the direct walkway.
E. You answer the phone and the caller would like to report abuse/neglect of a client/patient.
F. A staff member is injured lifting a patient up from the floor.
G. A patient and a staff member argue. The staff member uses curse words towards the patient during the argument.

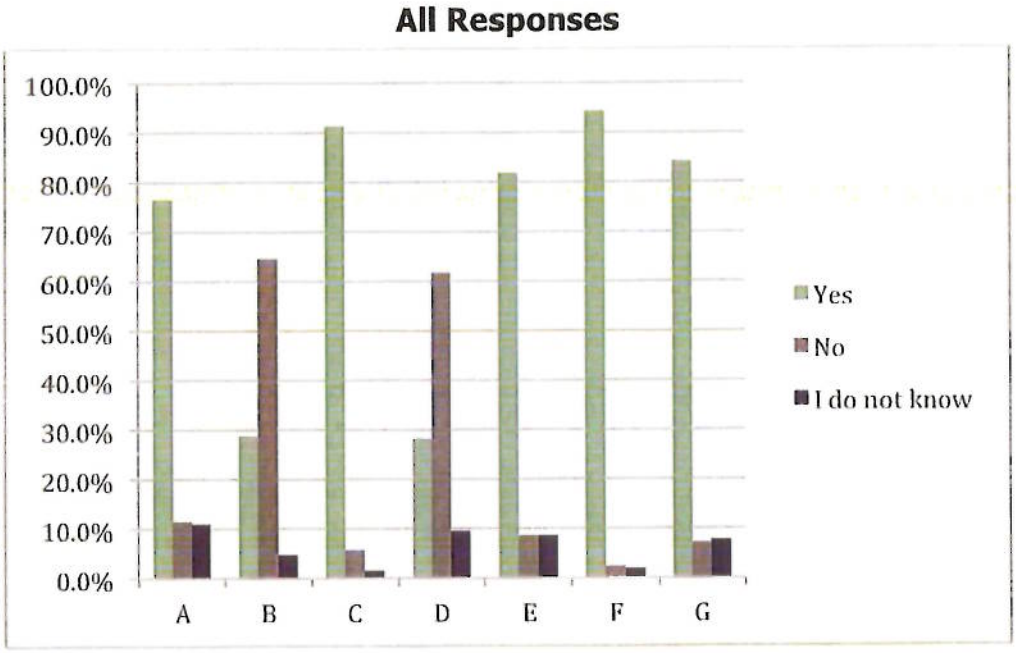
Sample: 100% of BHD staff (606 total) was offered the survey in November 2016. Two hundred nine (209) responses were returned for a 34% response rate.

Findings and Discussion:

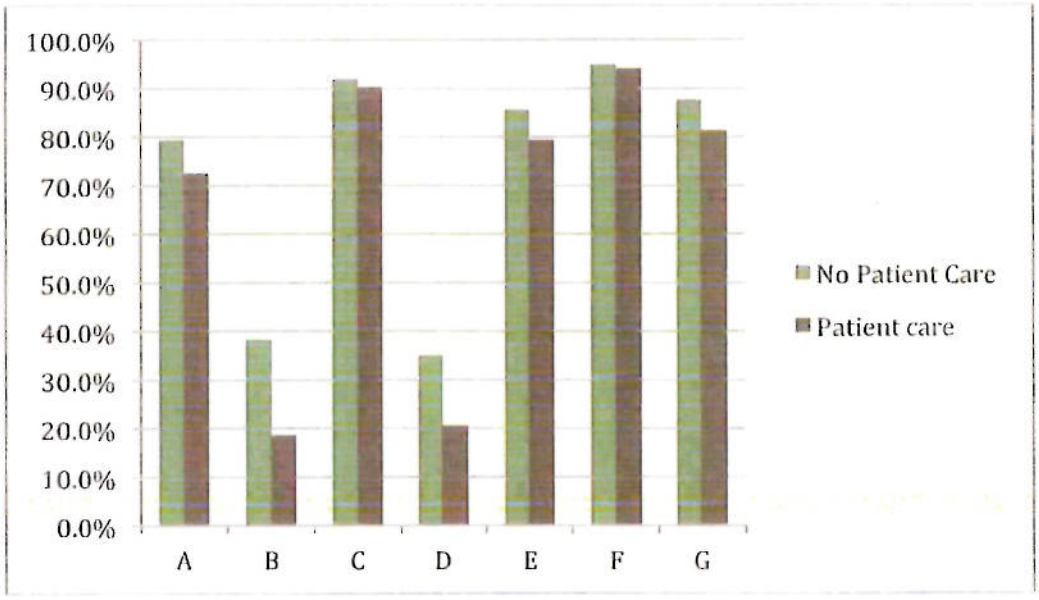
- The high response rate (34%) may suggest an interest among staff on the topic.
- There was an equal response from direct care and non-direct care staff.
- Surveys included 19 comments that were focused on:
    - Identifying the correct action based on the example.
    - Concerns regarding lack of reporting for fear of disciplinary action.
    - Concerns regarding the complexity of the reporting process.
    - Concerns regarding the impact of short staffing on incident reporting.
    - Concerns regarding lack of follow up once the incident is reported.
- The majority of respondents identified five of the scenarios as reportable incidents (A, C, E, F, G).
- The majority of the respondents identified two scenarios as non-reportable incidents: a spill in the walkway of the front entrance (B), and an argument between two patients (D). BHD incident reporting guidance is not as clear as it could be with regard to the spill scenario and this may be an opportunity for improved incident guidance and staff education. With regard to the patient argument scenario – BHD

incident guidance is also not clear on this as a reportable incident but if capturing near miss incidents is important to BHD recording patient/patient arguments may be helpful.

- There were statistically significant differences in responses between direct care and non-direct care staff for scenarios B (patients arguing) and D (spill on floor). A lower percentage of direct care respondents considered these scenarios to be incidents. With regard to scenario B, because direct care staff has greater exposure to patients arguing, the difference may suggest that these providers may be desensitized to the need to report these incidents. With regard to scenario D, these findings may suggest that direct care staff is not as knowledgeable regarding the importance of reporting spills as "near miss" incidents.



Percentage of Respondents Indicating that a Scenario Is a Reportable Incident: Direct Care vs Non-Direct Care Staff



Verbatim Qualitative Comments

Direct Patient Care	Comment
Yes	The examples left out contraband, sexual contact, unauthorized absence, self-harm...? Also, incidents still go unreported because they happen frequently or because employees fear disciplinary action. It would help for reporting to be as quick and easy as possible and for there to be an assurance that reporting will result in quality improvement that is cooperative, not punitive.
No	Sometimes, staff on 1:1 also have unit assignments when a unit is shot staffed.
Yes	A patient and staff member argue. The patient uses curse words towards the staff member during the argument.
Yes	Report behavior to supervisor, immediately.
Yes	When in doubt I will report an issue and fill out a report. After the investigation if it's unnecessary it can always be discarded.
Yes	Unsure about the I do not know answers, I think for those you would report to your supervisor and housekeeping for the spill.

No	I subscribe to the AHRQ definition of 'incident'. Each of the scenarios is a reportable 'event'.
No	4 the worker needs to clean up the spill or make sure no one falls.
Yes	The incident reports should be made as simple and "user friendly" as possible.
No	I am in Accounts Receivable and only talk to patients regarding billing.
No	A spilled substance would be reported to be cleaned up, not an incident report. If a report of abuse neglect is given, the information should be given to the nurse, pm supervisor and physician.
Yes	In some of these examples, an incident report is not the first or only thing to be done.
Yes	Most of us know this and have reported incidents. My concern is what has NOT happened when reporting has taken place
Yes	Patient delivered food to which they are allergic, i.e. peanuts.
No	As far as the spill, you should call EES to have it secured and cleaned so that no one slips and falls. It wouldn't be reported as an incident unless someone slips or falls due to the spill.
No	When patients are arguing it can be documented in chart, with spilled substance notify maintenance or and /or housekeeping, when visitor damages property the sheriff can be called.
Yes	For the pt A and B scenario--no incident report; however it needs to be documented in each individual's chart. As for the spill, I would call EES and wait for clean up, guiding people around the area. I would think EES documents they had a request for this service.
Yes	Regarding the spill, as long as someone cleans it up and no one fell or is hurt by it.
No	I answered yes to all due to each one relating to patient or possibly affecting one.

Strategy 4 – Best Practices Research

Goal: Identify best practices in incident reporting (as evidenced by literature and interviews with subject matter experts) for consideration by BHD leadership.

Process: Conduct review of literature and outreach to selected certification and accreditation organizations to understand best practices in incident reporting.

Sample: Small qualitative sample not meant to be fully representative of any one population. Interviews were conducted with representatives of The Joint Commission, the National Committee on Quality Assurance, and The National Association of County Behavioral Health and Developmental Disability Directors.

Incident reporting systems (IRS) are designed to gather information from past incidents that will provide insight into the collection process, and that will lead to improvements including a reduction in harm or the potential of harm to staff and patients. A review of an IRS should analyze the process of cataloging incidents as well as the incidents themselves. The analysis should support individual and organizational improvements in processes and outcomes.

In general, research suggests that effective incident reporting systems share the following attributes:

1. The definition of *incident* is clear and understood by all staff;
2. The system is supported and led by a clinically-oriented team; and
3. The IRS is embedded in a broader education and safety initiative.

While using an IRS for improved outcomes may seem straightforward, challenges do exist particularly with regard to behavioral health services. For example, some experts question the usefulness of incident reporting in a mental health setting where the priority should be on predicting behavior or minimizing the potential for aggressive behavior, which is different than the goal of IRS in clinical settings. Research (1) that includes a meta-analysis of systems internationally identify the following most common challenges to full implementation of IRS's:

1. Incident reporting systems collect information on incidents at a high level and tend to dilute the information to the specific incident in a summary or abstract form. This summary may lose important detail that will reduce the ability to learn from prior incidents;
2. Fear of recrimination may lead to under reporting for these systems;
3. Employee may be less likely to report and complete an incident report for a variety of reason such as lack of time, lack of knowledge, fear of consequences and a lack of understand of the purpose; and
4. A lack of clarity on who is responsible for each part of the process and who actually "owns" the incident and follow through.

There is a lack of peer reviewed literature focused on IRS for mental health services but subject matter experts suggest that research should focus on seclusion and restraint incidents, and at broader outcomes/incidents such as readmissions. Literature (1, 2, 3, 4) on general incident reporting systems (majority in clinical settings) offered the following best practice suggestions:

1. System should be objective;
2. System should not be under the control of one stakeholder;
3. System should be designed to facilitate the collection of detailed narratives in the reporter's own words;
4. Leadership should demonstrate that the information collected in the system is useful and appropriate;

5. Information gathered from the system should be used to create a shift in mindset and culture of the organization;
6. Impacts from the learnings should support direct improvements to procedures and broad organizational change;
7. If a blame culture exists, consider using an anonymous or confidential reporting system.
8. Leadership must emphasizes the goal of the system is to learn; and
9. Systems should focus on issues of most concern in a mental health setting such as incidents related to seclusion and restraints.

General Thoughts and Findings:

- Incident comments suggest that a lack of understanding of the reporting protocol may be a contributing factor to incidents being reported that may not, in fact, be incidents.
- Education regarding the accurate determination and categorizing of incidents may help ensure that incidents are reported and accounted for accurately.
- There may be an opportunity to educate security with regard to the use of restraints, and to responding to unit requests during aggression incidents.
- A review is necessary for all staff on how to complete the forms generally and in the various categories, and without dissention or tone. Perhaps an explanation as to the importance of each category and how to include the appropriate information would be warranted.

References:

(1) Incident Reporting to Improve Clinical Practice in a Medium-Secure Setting, Mental Health Practice, April 2013

(2) How Effective Are Incident-Reporting Systems for Improving Patient Safety? A Systematic Literature Review, Millbank Quarterly, November 2015

(3) Lessons Learned from the Evolution of Mandatory Adverse Event Reporting Systems, Advances in Patient Safety Volume 3, October 2016

(4) Can incident reporting improve safety? Healthcare practitioners' views of the effectiveness of incident reporting, International Journal for Quality in Healthcare, January 2013

(5) Interview: NCQA Director of Measurement

(6) Interview: Joint Commission, Past Director of Behavioral Health Certification

(7) Interview: President and Past Director of HRSA, National Association of County Behavioral Health and Developmental Disability Directors.

(8) Violence and Aggression in Psychiatric Units, Psychiatric Services, November 1998

(9) Reducing Restraint Use in a Public Psychiatric Inpatient Service, The Journal of Behavioral Health Services and Research, April 2004, Vol. 31 Issue 2

Appendix A – Scope of Work

Statement of Work: Risk Management Review of Incident Reports

The Milwaukee County Behavioral Health Division (BHD) seeks to engage a healthcare risk management subject matter expert to conduct a three-phase audit and analysis of incidents occurring on the inpatient units to assess areas for potential improvements in patient and staff safety.

Phase 1 – Entry and Discovery

- Intake with BHD Executive Team
- Intake and hand-off from Mr Heer and the County Audit Team
- Review of the 2010 County Audit Work
- Review of changes at BHD since 2010

Phase 2 – Evaluation and Analysis

- Evaluate Incident Reports to validate accuracy of type of incident, adequacy of incident's description, validate reported aggregated data, and review of actions taken post incident in context of regulatory (CMS, TJC, State WI) requirements.
- Assess incident data to determine identifiable trends suggesting areas for further improvement in policy, processes and patient safety.
- Assess incident data specific to those with staff injuries to identify trends suggesting areas of further improvement related to staffing, training, procedures, staff roles and physical plant.
- Assessment of BHD's processes and categorizations compared to national best practice (literature review)
- Survey staff regarding incident report process

Phase 3 – Report and Exit (Five weeks @ 25 per week)

- Summarize Findings (report development, draft review, final)
- Make recommendations regarding workflow improvement to insure risk management reporting is disarticulated as much as feasible from sensitive clinical data
- Make recommendations regarding areas for improvement related to trends in incidents.
- Make recommendations to update and improve incident reporting processes to be consistent with national best practice. (lit review, interviews)
- Conduct exit briefing with Mr Heer and the County Audit Team
- Conduct exit briefing with BHD Executive Team
- Develop synthetic report for the Milwaukee County Mental Health Board
- Develop synthetic report summary for public press release

Appendix B – Research Protocol

Milwaukee County, Department of Health and Human Services, Behavioral Health Division
Incident Review and Analysis
Research Protocol
Goal:
Analyze BHD incident reports from 2010 – Q2 2016.
Strategies:

1. Review and trend incident reports by unit from 2010 – Q2 2016 based on 2010 audit work with manual validation
2. Analyze a representative sample of incident reports by unit/incident type for quality improvement impact and new opportunities for both process and quality improvement focusing on 2013 forward
3. Survey staff to verify staff knowledge of incident report process
4. Identify incident reporting best practices for consideration by BHD leadership

Strategy 1: Review and trend incident reports by unit from 2010 – Q2 2016 based on 2010 audit work with random manual validation of counts
Sample: 100% of incident reports from 2010 – Q2 2016
Process: High level analysis of incident reports from 2010 – Q2 2016 in order to create the following tables/graphs

6. BHD Reported Incidents – All Categories Acute Adult Inpatient Units – Number of Incidents by type by year 2010-2016
7. BHD Reported Incidents – Adult Acute Inpatient Units – Incidents Per 1000 patient days trended from 2010-2016
8. Selected Incident Categories for Patient Acuity BHD Acute Adults Inpatient Units – Number of Incidents by Incident type by year 2010-2016
9. BHD Reported Incidents Selected by Categories for Patient Acuity Adult Acute Inpatient Units – Incidents Per 1000 patient days trended from 2010-2016
10. Selected Incident Categories for Patient Aggression BHD Acute Adult Inpatient Units – Number of Incidents by Type by year 2010-2016
11. Selected Incident Categories for Patient Aggression BHD Acute Adult Inpatient Units - Incidents Per 1000 patient days trended from 2010-2016

Strategy 2: Analyze a representative sample of incident reports by unit/incident type for quality improvement impact and new opportunities for both process and quality improvement
Sample: Representative and random sample of incidents on all units from 2013 – Q2 2016 for the following incident types: violence, aggression and sentinel events not including falls. Total sample size approximately 1847. The sample size will be representative within 5%+/- of the overall total of incident reports.
Process: Develop a researchable data base of all quantitative and qualitative data captured on an incident report. Random sample of incidents by year/incident type will be chosen, coded and stripped of all personal health information. All data including the incident code will be entered into a database and analyzed for trends as well as impacts based on historical process and quality improvement efforts. In addition analysis will include identification of any opportunities for addition improvement from both a process and quality perspective. Lastly, suggestions

will be made on the need for additional analysis for incidents that resulted in harm or death. Also, include discussion regarding future need for incident tracking in community services environments as volume increases and shifts from the inpatient environment.

Strategy 3: Survey staff to verify staff knowledge of incident reporting process

Sample: 100% of BHD staff will be offered the survey

Process: Electronic survey will be developed that assesses staff understanding of the BHD incident reporting process. Analysis of responses will offer insight into the staff level of knowledge regarding the incident process and will help BHD better determine if incidents are being accurately reported. Survey will include review of the BHD incident definition as well as scenarios that staff will assess with regards to incident reporting. Anonymous results will be shared in the final BHD Incident Analysis Report. Include opportunities for staff to offer non structured comments regarding the incident process either through open ended comment section on the survey, toll free phone number, and/or focus groups.

Strategy 4: Identify incident reporting best practices for consideration by BHD leadership

Sample: Small qualitative sample not meant to be fully representative of any one population

Process: Conduct review of literature and outreach to certification and accreditation organizations to understand best practices in incident reporting.

Final Report Development and Presentation

- Key Deliverables: Summarize Findings (report development, draft review, final)
- Make recommendations regarding workflow improvement to insure risk management reporting is disarticulated as much as feasible from sensitive clinical data. (does this mean the identifiable patient information is stripped from the database for analysis?)
- Make recommendations regarding areas for improvement related to trends in incidents.
- Make recommendations to update and improve incident reporting processes to be consistent with national best practice. (lit review, interviews)

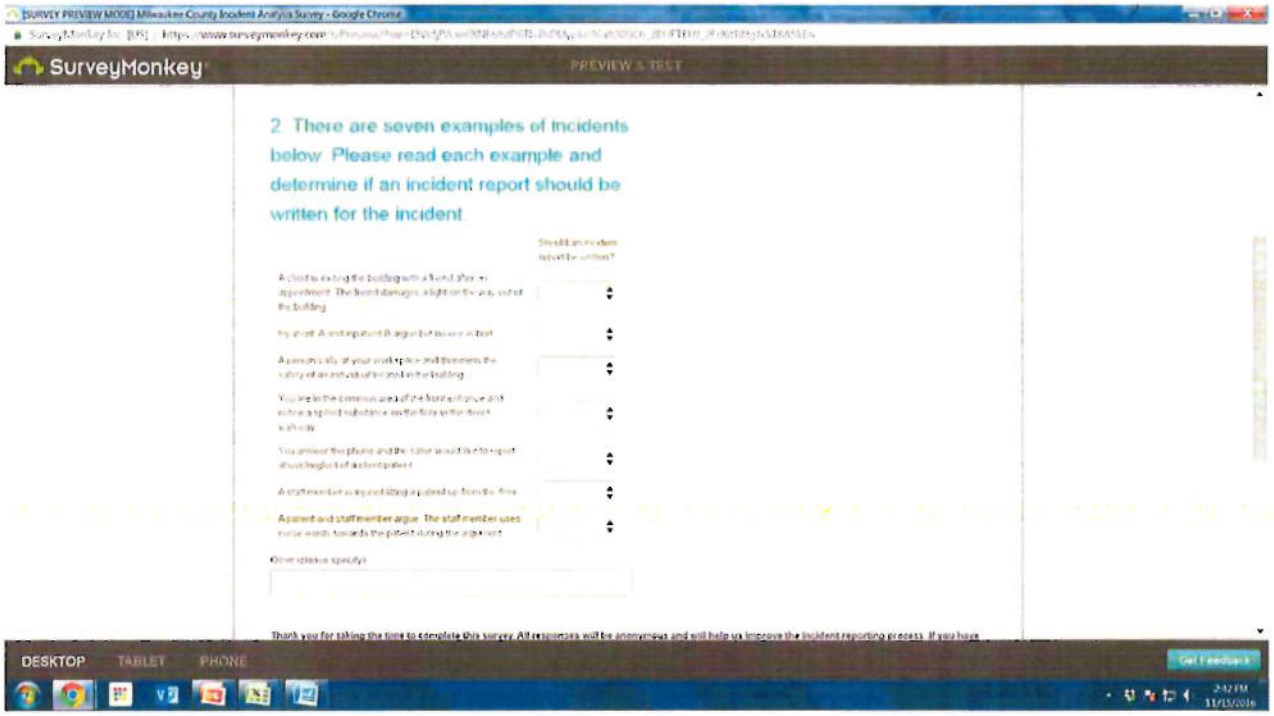
Key Presentations:

- Conduct exit briefing with Mr Heer and the County Audit Team
- Conduct exit briefing with BHD Executive Team
- Develop synthetic report for the Milwaukee County Mental Health Board
- Develop synthetic report summary for public press release

Appendix C – 2010 Audit Report

http://county.milwaukee.gov/ImageLibrary/Groups/cntyAudit/Report1019.pdf

Appendix D – Staff Survey



Quality Committee Item 2

Behavioral Health Division
Analysis of Incidents

DATE

Prepared Feb 22, 2017 Presented to MHB: June 5, 2017

PRESENTED BY

Jeanette May, Ph. D., MPH, Patina Professional

Purpose of Engagement

To improve care and safety of patients and staff.

Approach to Analysis:

1) Strategy One – Updates to the 2010 Audit Tables for Trending Analysis
2) Strategy Two – Incident Report Analysis
3) Strategy Three – Staff Survey
4) Strategy Four – Best Practices Research

Strategy One – 2010 Audit Tables Update

Goal: To review and trend incident reports for acute units from 2010 through June 2016.
Modeled off of the 2010 Milwaukee County audit.

Strategy One – Key Observations

1) The incident trends indicate a statistically significant downward trend in incidents since 2014.

2) Incident peaks observed for 2013 and 2014 were due primarily to aggression incidents on the acute unit as demonstrated by the 49% increase from 2012 to 2013.

3) The downward trend since 2014 may be attributed to several process changes/improvements noted in the full report.

Strategy Two – Incident Report Analysis

Goal: Analyze a representative sample of incident reports by unit/incident type for opportunities to improve process and quality.

Sections of Analysis:

1) Elopement
2) Aggression
3) Injury
4) Other

Strategy Two – Key Observations: Elopement

1) The majority (66%) of incident reports for elopement were incomplete.
2) Incident rates decreased significantly beyond the mean observed trend.
3) The majority of the incidents were categorized as elopement from a locked unit.
4) There were significantly less elopement incidents in the evening.
5) The supervisor signed off on 78% of all incidents reports less than five days after the incident occurred.
6) Few of the elopement incidents resulted in staff education yet it would seem that education regarding escorting and transport would have been helpful.
7) The majority of incidents were one-time patient events, i.e., no single patient or small group of patients eloped multiple times.

Strategy Two – Key Observations: Aggression

1) The majority (55%) of incident reports for aggression were incomplete.
2) The majority of incident reports were completed in a timely manner, i.e. less then five days after the incident occurred.
3) A majority of reports were completed by an RN (65%) and the remainder by a CNA (8%) or unknown (25%).
4) The incident report notes indicate a broad range of compliance/non-compliance.
5) The use of restraints (47%) was the action most often taken in the A2 level aggression incidents followed by the use of medication (29%) and doing nothing specific (19%).
6) Restraint was the action taken most often for patient/employee (P/E) incidents while patient redirection was the action taken most often for patient/patient (P/P) incidents.
7) 3% of the patients were responsible for 19% of the reported aggression incidents.

Strategy Two – Key Observations: Injury

1) The majority of incident reports (>90%) for all types (accidental, self inflicted, seclusion and restraint) were fully completed.
2) A significant number (50%) of accidental injury incidents took place in the morning.
3) A significantly lower number (15%) of injury incidents related to S and R took place in the afternoon.
4) The majority of incidents related to injury are either accidental or self-inflicted. Injuries related to S and R are significantly less than the other two categories.
5) Two percent (2%) of the patient sample was involved in twelve percent (12%) of the injury incidents.
6) 75% of the incident reports were completed by an RN.
7) The majority (80%) of incident reports were completed in less than five days from the date of the incident.
8) The majority of S and R injury incidents (66%) resulted in a staff injury occurring while assisting to place a patient into restraints.

Strategy Two – Key Observations: "Other"

1) There were no specific trends in the incidents categorized as "other."
2) Over 30% of the incidents categorized as "other" were incidents with their own category specifically aggression, injury, elopement, sexual contact.
3) Over 25% of the "other" incidents did not seem to be incidents.
4) Common themes included the broad categories of medication, misconduct, visitor issues.
5) There was a greater proportion of incidents in the outpatient setting than in any other incident category. Based on an analysis of the comment sections of the reports, staff members in outpatient settings are not as well educated in incident reporting and categorization.

Strategy Three – Staff Survey

Goal: Survey staff to assess the level of staff knowledge of incident reporting process.

Process: An electronic survey was developed that assessed the staff's current understanding of the BHD incident reporting process. Seven incidents were offered and staff were asked to categorize each as a reportable or non reportable incident.

Sample: 100% of BHD staff (606 total) was offered the survey in November 2016. Two hundred nine (209) responses were returned for a 34% response rate.

Strategy Three – Key Observations: Survey

1) The high response rate (34%) may suggest an interest among staff on the topic.

1) There was an equal response from direct care and non-direct care staff.

1) There were statistically significant differences in responses between direct care and non-direct care staff for scenarios focused on patients arguing and an incident involving a spill on floor.

Strategy Four – Best Practices Research

Goal: Identify best practices in incident reporting for consideration by BHD leadership.

Strategy Four – Key Observations: Best Practices Research

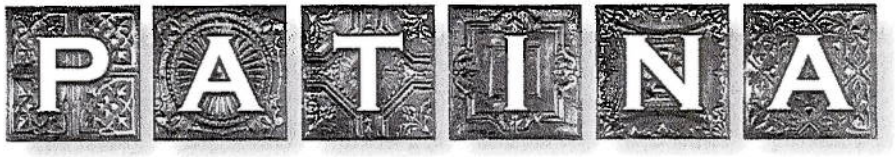
1) System should be objective.
2) System should not be under the control of one stakeholder.
3) System should be designed to facilitate the collection of detailed narratives in the reporter's own words.
4) Leadership should demonstrate that the information collected in the system is useful and appropriate.
5) Information gathered from the system should be used to create a shift in mindset and culture of the organization.
6) Impacts from the learnings should support direct improvements to procedures and broad organizational change.
7) If a "blame" culture exists, consider using an anonymous or confidential reporting system.
8) Leadership must emphasize the goal of the system is to learn.
9) Systems should focus on issues of most concern in a mental health setting such as incidents related to seclusion and restraints.

Key Findings / Opportunities for Improvement

- ✓ Increase training and education on the following topics:
  - ✓ Standardized Reporting Protocol pursuant to comments suggesting that a lack of understanding may contribute to *non*-incidents being reported as incidents.
  - ✓ Determination and Categorization of incidents to ensure accurate reporting and accounting of incidents.
  - ✓ For Security personnel regarding response to aggression incidents including use of restraints.
  - ✓ Timely and proper completion of incident reports.

Thank you for partnering with Patina on this critical analysis.

Your success. Accelerated by our experience.



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