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Improving staff safety and the patient experience through redesign of security's role in the emergency department

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A multi-pronged approach that provided training to ED staff so that they would be more comfortable in dealing with emotionally disturbed patients and which realigned Security's role from patient observation to more of a response and support role has had positive results, according to the author. These include a significant improvement not only in staff's perception of personal safety, and real monetary savings, but also in the perception of care by the patients themselves. The project has also resulted in a decrease in security officer time spent in patient observation, he reports.

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The Emergency Department at Mayo Clinic Health System in Eau Claire hospital is the only Level II trauma center in northwestern Wisconsin and treats over thirty thousand patients each year. A significant number of these patients are present due to symptoms from mental illness that will result in their admission into the hospital's Inpatient Behavioral Health unit.

A survey of staff in the Emergency Department staff revealed that many of the department's staff clamored for an increased Security presence in their department to deal with a perceived problem with patient on staff violence. After thorough analysis of the problem, a solution was found that improved staff perceptions of safety and the patient experience by redesigning the way care was

provided to mental health patients in the emergency department rather than increasing levels of security staffing levels and involvement in the emergency department.

HEALTHCARE FAILURE MODES AND EFFECTS ANALYSIS

Based on the survey responses, a multi-disciplinary team was formed with membership made up of front line employees and leaders from the Emergency Department, Behavioral Health, Security, Social Services, Nursing, and Quality Improvement Departments. This team used a Healthcare Failure Modes and Effects Analysis (HFMEA) methodology to quantify and isolate what issues could be driving the staff's concerns.

The HFMEA methodology began with identifying and mapping 22 high level process steps for providing care in the Emergency Department for a patient who would be admitted to the inpatient Behavioral Health department. Once process steps were identified, each was evaluated for potential failure modes, or ways that the process step could result in a less than optimal situation. Each of the 322 failure modes identified was then evaluated for potential causes and rated on severity and probability to assign an overall hazard score to the failure mode. Those failure modes with a hazard score over a set threshold were then further evaluated for action.

The initial results of the HFMEA showed that the medical staff felt that in order to assure their safety additional security officer staffing should be employed in the Emergency Department. Appropriate levels would include one-to-one security officer observation with any patient deemed to present a risk of violence, and around the clock security officer presence in the emergency department's waiting area.

Further analysis by leadership from the Emergency Department, Behavioral Health Department, and Security indicated that a possible root cause of the problem could be related not to having too few security officers, but instead to the comfort level of the emergency department staff in managing mental illness. While 27% of patients presenting to the emergency department had a behav-

Example of a HFMEA worksheet

			Scoring			Decision Tree Analysis				
Process Step	Failure Mode	Potential Cause	Severity	Probability	Hazard Score	Control? (HS ≥8)	Single Point Weakness?	Existing Control Measure?	Detectability?	Proceed?
Patient arrives in the Emergency Deaprtment	**No Security Officer present**	**Security Officers busy with other ED patients**	2	4	8	Y	N	Y	Y	N
		Security Officers busy with in other areas of facility	2	4	8	Y	N	Y	Y	N
		Security Officers not notified of patient arrival	2	4	8	Y	N	Y	Y	Y
		Security Officers responding, but not yet arrived due to large physical footprint of facility.	2	4	8	Y	N	Y	N	N
	No appropriate room available	**Only two rooms designed for high risk patients**	2	4	8	Y	Y	N	Y	Y
		All ED rooms are full	2	4	8	Y	Y	N	N	N

The HFMEA methodology begins with mapping each step in the process that is being evaluated. Once process steps are identified each is evaluated for potential causes, and each potential cause is scored as to the severity if it were to occur and the probability that it will occur on a 1-4 scale. Probabilities and severity are then combined to create a hazard score for each potential cause and causes with a hazard score over a set threshold are further evaluated for action.

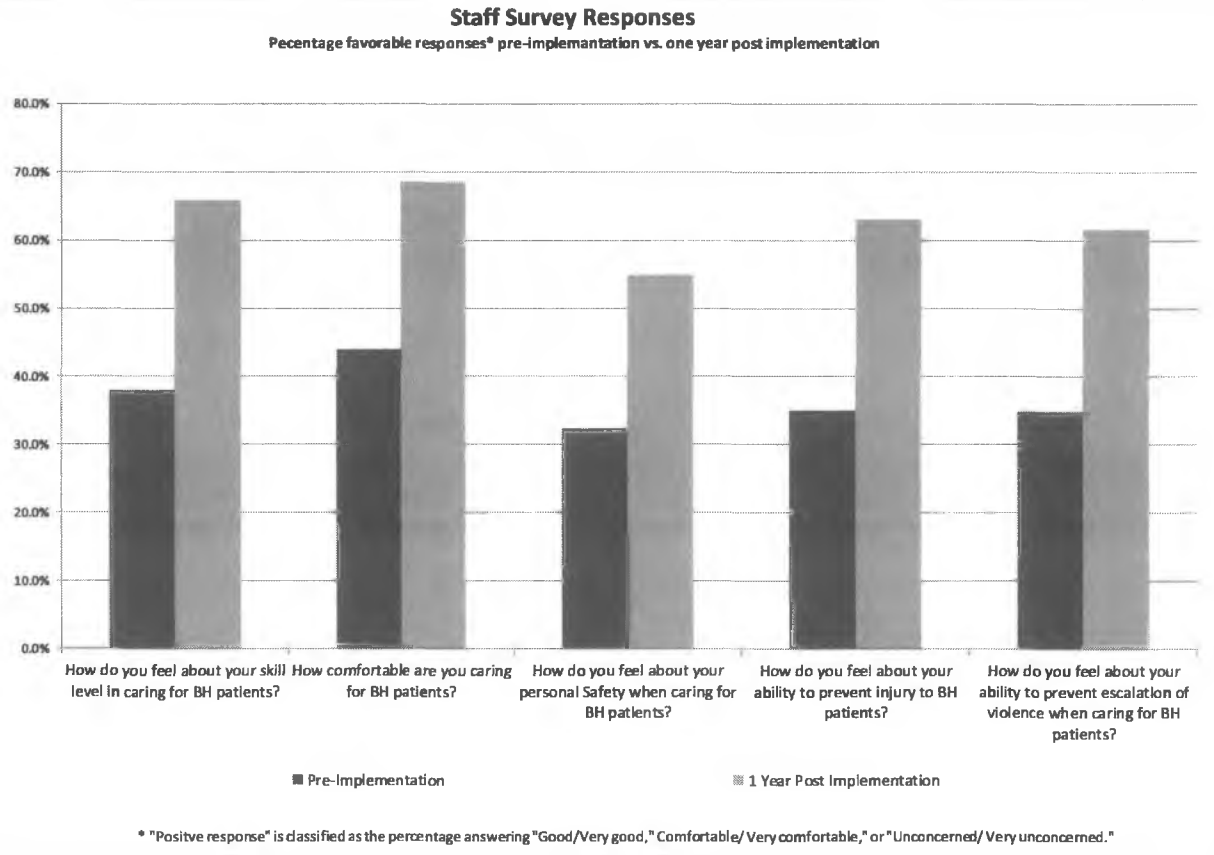
ioral health disorder as either their primary or a contributing secondary diagnosis, few of the emergency department staff felt that they had the necessary comfort level or training to deal with this type of illness. In fact the survey given to emergency department staff indicated that less than forty percent of the staff surveyed responded positively to the question "how do you feel about skill level in dealing with BH patients?"

A multi-pronged approach was developed that would be implemented by providing training to ED staff so that they would be more comfortable in dealing with emotionally disturbed patients and be more able to recognize and signs of incipient violence. This would allow for early intervention, re-align Security's role from patient observation to more of a response and support role that would allow them to apply their specialized skills more appropriately, and to establish a Behavioral Health Liaison RN position within the ED to provide expertise.

REALIGNMENT OF SECURITY'S ROLE

During the FMEA process it was identified that while security officers were already spending nearly four thousand hours each year in the Emergency Department conducting one-to-one observation of patients. It had become so common for emergency department staff to see a security officer with a patient that some of them had begun to refer to patients who had presented in need of care for mental illness as "Security's patients." This was also reflected in complaints from patients who mentioned the perception that they were being "arrested" or that they feared that assumptions were being made about them due to having a uniformed security officer posted outside of their room based not on their behavior but only on their diagnosis.

In addition to these issues it was determined that in order to provide the level of security that the emergency department staff felt was needed to keep them safe while treating their patients, the Security Department would need to add minimally three security officers around the clock to their stuffing model, this would cost the organization over $630,000 annually.



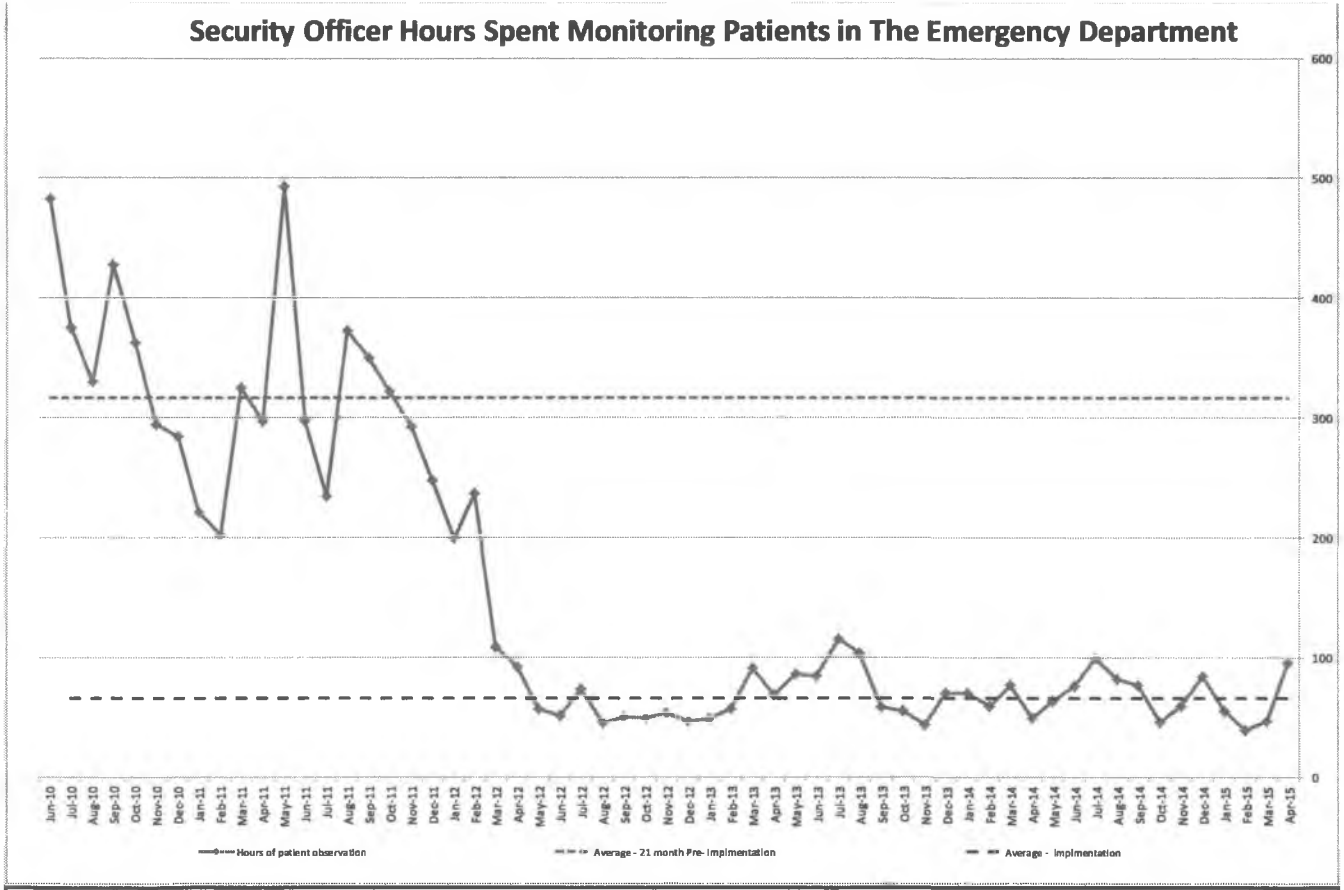
Prior to project kick-off a survey was given to Emergency Department staff members to judge their perception of their personal safety and perception of their skill level whenn treating patients who were suffering from behavioral related disorders, the survey indicated significant room for improvement. After completion of the project a re-survey of ED staff also indicated an average twenty six percentage point positive effect on the scores of questions regarding perception of personal safety and feelings of competence in caring for patients suffering from a behavioral health diagnosis.

Based on these projections, it was determined early in the process that the model of making security officers responsible for the one-to-one observation of any patients deemed to be at risk for self-harm or harm to others was not sustainable or desirable. Alternatives were researched and it was determined that by shifting some of the responsibilities away from the Emergency Department Technicians, who were all licensed EMTs currently engaged in supporting the emergency department Registered Nurses, and onto the nurses that enough time could be freed up to shift the one-to-one observation duties onto these technicians.

This allowed security officers more freedom to respond where needed to de-escalate and manage potentially violent incidents both within the emergency department and in surrounding areas. To ensure appropriate response ability of the security officers who were no longer tied down performing patient observation, systems were put in place to allow emergency department staff to quickly notify security officers of developing situations. These systems included a personal duress alarm for each emergency department staff member and placing a handheld radio at the emergency department nurses' station to allow for direct communication from the staff to the security control center as well as to the responding security officers. The personal alarm system that was chosen for the project utilizes infrared technology. It consists of Personal Infrared Transmitter (PIT) devices that all staff wear attached to their clothing, and infrared receivers throughout the area. Once a staff member either presses a button on their PIT or pulls it off of its lanyard, a signal is sent to the receiver and activates audio and visual alarms in the department notifying other staff and Security of the issue.

TRAINING ED STAFF

While all Emergency Department staff felt fully confident in their ability to deal with someone suffering from a heart attack or broken leg, many were not nearly as confident in dealing with non-physical symptoms of a patient suffering from mental illness. In fact when surveyed nearly sixty percent of Emergency Department staff said that they did not



Prior to implementation of this project in August 2011 Security Officers spent on average three hundred and thirty three hours per month in the Emergency Department engaged in patient observation. The project was completed in May 2012 and three years post implementation that average has been reduced to sixty six hours per month, a reduction of over eighty percent.

feel comfortable in their abilities to care for these patients. During the staff interviews and group discussions it was also became evident that staff did not feel fully comfortable in recognizing early signs of behavior that could lead to violence if not properly addressed and because of this were often categorizing all patients suffering from behavioral health disorders as having a high potential for violence.

To address these concerns and ensure that the Emergency Department Technicians were adequately prepared to take on the duties of one-to-one observation of the patients, the Security and Behavioral Health departments collaborated to provide training to Emergency Department staff in the basics of mental health diagnosis and appropriate strategies for working with patients who are affected by them, appropriate use of restraint and seclusion and the rules governing both, identification and de-escalation of potentially violent behavior, and self-defense techniques to prevent injury to them self or others in case a situation were to turn violent. Once they were equipped with these tools, emergency department staff were much better prepared to make risk based assessments of what, if any, preventative measures should be put in place with an individual patient.

THE BEHAVIORAL HEALTH LIAISON NURSE PROGRAM

Even with the additional training that was being provided to the Emergency Department staff it was deemed that it would be beneficial to have a subject matter expert with experience in mental health present in the emergency department during times when peak volumes of patients were being seen.

At the beginning of the project the emergency department was staffed with a social worker between the hours of eight o'clock in the morning and four o'clock in the afternoon. Interviews with staff showed that these social workers played a critical role in assisting with patients who were being admitted for treatment of a mental illness, and emergency department nursing staff relied on them heavily for their subject matter expertise. Unfortunately an analysis of volumes of patients being admitted for treatment of a mental illness showed that peak volumes of admissions were consistently presenting to the emergency department between the hours of two o'clock in the afternoon and two o'clock in the

morning, during the hours where there was no social worker coverage available in the emergency department.

It was decided that based on patient volumes, a subject matter expert in mental health was needed in the emergency department from when the social workers ended their day at four o'clock in the afternoon until at least two o'clock in the morning. After considerable discussion it was determined that this coverage would be provided utilizing a nurse with significant experience working with mental health patients. This nurse would be able to assist the emergency department nurses not only by providing mental health expertise, but also by beginning specialized mental health care earlier and working to facilitate the patient's transfer to the inpatient behavioral health unit if appropriate.

RESULTS

Two years after implementation the project has resulted in significant improvement not only in staff's perception of personal safety, and real monetary savings, but also in the perception of care by the patients themselves. The project has resulted in a decrease in security officer time spent patient performing observation from an average of 317 hours per month to a post implementation average of 66 hours per month, an 81% decrease, as well as a significant decrease in the number of incidents of assaults on staff perpetrated by patients. It has also resulted in speeding the throughput of patients from the emergency department to the inpatient behavioral health department, decreasing the average time a patient requires observation in the ED from an average of more than three hours to an average of slightly less than two hours, a thirty nine percent reduction.

A secondary, but even more important, benefit of this was seen in a significant rise in patient satisfaction scores for patients admitted to the inpatient Behavioral Health unit through the emergency department. Within one year of project implementation, patient satisfaction scores rose from the 70th percentile to the 90th percentile nationally. After completion of the project, a re-survey of ED staff also indicated an average 26 % positive effect on the scores of questions regarding perception of personal safety and feelings of competence in caring for patients suffering from a behavioral health diagnosis.