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Implementation of a Psychiatric Admission Acuity Tool in the Pediatric Behavioral Health Unit

Tyler T. Wansley
The University of Southern Mississippi

IMPLEMENTATION OF A PSYCHIATRIC ADMISSION ACUITY TOOL IN THE

PEDIATRIC BEHAVIORAL HEALTH UNIT

by

Tyler T. Wansley

A Doctoral Project
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Approved by:

Dr. Patsy Anderson, Committee Chair
Dr. Karen Rich

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Dr. Patsy Anderson   Dr. Lachel Story   Dr. Karen S. Coats
Committee Chair   Director of School   Dean of the Graduate School

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ABSTRACT

Staffing, patient ratios, and acuity are not new concepts in health care. While these are popular concepts in medical units, inpatient psychiatric facilities are lacking the tools to correctly quantify patient acuity. An even considerably larger gap exists in the literature regarding the quantification of acuity in pediatric behavioral health units.

A needs assessment was conducted to determine if an existing psychiatric acuity tool would prove useful after implementation in a pediatric behavioral health unit. A need for such a tool was found which led to the purpose of this doctoral project, which was to measure nurse satisfaction with the implementation of a psychiatric admission acuity tool in the pediatric behavioral health unit. The acuity tool used for this project was originally created by Alyssa Howver (2014) for an inpatient adult psychiatric unit at Vanderbilt Hospital.

An implementation of the admission acuity tool was completed for two weeks in the pediatric behavioral health unit. These two weeks with the admission acuity tool in place were compared to the weeks prior without the acuity tool in place. At the end of the four-week study, nurse satisfaction was measured via a survey to determine if the tool met their needs. One hundred percent of nurses surveyed were satisfied with the implementation of the admission acuity tool.

ACKNOWLEDGMENTS

DEDICATION

Words cannot express the gratitude I have for my parents, James and Lisa

Wansley, for their constant love, support, and guidance throughout my educational

journey. My parents have been the driving force in my life by always placing me first and

encouraging me to reach my goals no how matter how big or small. They have always

taught me to keep God first and that everything else will fall into place.

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LIST OF ILLUSTRATIONS

LIST OF ABBREVIATIONS

AACN   American Association of Colleges of Nursing

APNA   American Psychiatric Nurses Association

DNP   Doctor of Nursing Practice

ED   Emergency Department

IHI   Institute for Healthcare Improvement

IRB   Institutional Review Board

NAMI   National Alliance on Mental Illness

PDSA   Plan Do Study Act

PTSD   Post-Traumatic Stress Disorder

TVBH   Twin Valley Behavioral Healthcare

USM   The University of Southern Mississippi

1:1   One-to-one

CHAPTER I - INTRODUCTION

According to the National Alliance on Mental Illness (NAMI, 2019), 1 out of every 5 American adults experiences mental illness each year with one out of every 25 adults experiencing serious mental illness. Mental illness is not isolated to adult populations. According to NAMI (2019), 1 in every 6 persons aged six to 17 experiences a mental illness yearly. "Unfortunately, less than 20% of children and adolescents with diagnosable mental health problems receive the treatment they need" (MentalHealth.gov, 2017, para. 6).

To compound a general lack of treatment among children with mental illness, hospital administrators currently are exploring new ways to decrease expenditures in their facilities. Due to these administrative expenditure cuts, staffing is sometimes reduced, and nurses and technicians are experiencing increasingly larger patient loads (Stanton, 2014). In psychiatry, these increased patient loads pose a safety problem due to the potential of violence from patients experiencing acute psychiatric illnesses. Thus, the quality of patient care is negatively affected as well as the quality of the work environment for mental health staff.

According to Slemon, Jenkins, and Bungay (2017), safety among patients and staff is not only a goal but is the top priority in psychiatric care units. Maintaining safety in psychiatric facilities is becoming increasingly difficult with the admission of patients who have criminal backgrounds, including arrests for violence, battery, and sexual assault (Ng, Kumar, Ranclaud, & Robinson, 2001). Patients who are experiencing chronic or acute psychosis pose an especially high safety risk in psychiatric hospitals.

Specific safety precautions are taken with some patients admitted to psychiatric units, including 15-minute checks, visual contact at all times, or one-to-one patient to staff ratios (Jayaram, Sporney, & Perticone, 2010). These safety precautions are ordered by physicians for patients presenting with conditions such as violent behavior, acute psychosis, potential for an elopement, or suicidal ideation. Special safety precautions precipitate the need for extra staffing requirements. With the implementation of a psychiatric admission acuity tool, behavioral health unit staff may be better able to determine patients who will need special safety precautions from the point of admission and who will warrant the need for additional staff.

Problem Statement

The U. S. Department of Labor Occupational Safety and Health Administration (2017) denotes risk factors for violence is present in healthcare settings that involve working with populations with a known history of violence. The susceptibility to becoming victims of violence is especially true regarding registered nurses working in acute psychiatric care facilities with patients who each require additional safety precautions (Stevenson, Jack, O'Mara, & LeGris, 2015). Psychiatric nurses' exposure to violence can result in the nurses experiencing long term post-traumatic stress disorder (PTSD), feelings of blame, shame, lower quality of life, and occasionally even serious permanent disability. Hospitalized patients who have a past criminal history, including assault and homicidal ideation, as well as patients who have an acute or chronic form of psychosis, may increase the risk for violence on behavioral health units.

Hospitals have fallen into financial uncertainty over the past several years due to a number of factors including lower reimbursements from payers, higher acuity patients,

and competition among healthcare facilities to survive in an environment of limited

healthcare dollars (Everhart, Neff, Al-Amin, Nogle, & Weech-Maldonado, 2013). With

these factors plaguing healthcare systems, hospitals have explored ways to reduce costs.

Nurses' salaries and health benefits are the main cost center for healthcare facilities,

which can lead to reduced nurse staffing and increased nurse-to-patient ratios (Stanton,

2004). Reduction in the number of staff in behavioral health units, as a means to reduce

expenditures, can be disastrous due to the significant number of patients who require

extra staffing due to safety concerns.

<div align="center">Background and Significance</div>

Violence against nurses can lead to low morale and an increase in nurse turnover

(Iozzino, Ferrari, Large, Nielssen, & de Girolamo, 2015). An increase in nurse turnover

can lead to a decrease in unity among staff over time. Between 75% to 100% of nurses

have reported some form of physical assault during their time on psychiatric units

(Iozzino et al., 2015).

During the pre-admission process, a psychiatric acuity tool can serve as a standard

methodology to rank patients based on their current and past medical history, including

violent or potentially violent behaviors. These rankings can provide nurses with a better

overall view of patient acuity, which can help them provide more objective data to

admitting physicians. Physicians will then be able to better determine if the patient being

evaluated for admission is an appropriate fit for the unit, especially related to staffing

levels, at a given time.

Needs Assessment

An informal needs assessment was conducted with the director and the manager

of a small pediatric behavioral health unit in New Orleans, Louisiana. Intake staff at the

facility currently do not use a standard method for determining the acuity level of patients

who are being evaluated for admission. Consultation with the director, manager, and

members of the treatment team led to verbalized agreement that a psychiatric admission

acuity tool might be helpful in providing standardization regarding staffing needs and

clear communication guidelines with admitting physicians. The group indicated that

being able to better evaluate patient acuity would likely allow intake staff and physicians

to decline admissions when the unit currently has a significant number of patients who

require extra staffing. By identifying and providing appropriate staffing, costs will be

reduced and safety on the unit can be better maintained.

Review of the Evidence

A review of the evidence was conducted using current clinical and scholarly

literature to gain a better understanding of psychiatric acuity, violence, and staffing in

psychiatric healthcare units. The following databases were used: EBSCOhost, PubMed,

CINAHL with Full Text and Google Scholar. Publication years used were between 2001

and 2019 in order to review the most recent and relevant literature. This review was

guided by a single Population, Intervention, Control, Outcome (PICO) question, "Does

the nurses' (P) use of a patient acuity tool, especially in psychiatric nursing practice (I) as

compared to not using an acuity tool (C) provide a safer patient care environment (O)?"

The following key search terms were used in a variety of ways, including: acuity

scale, psychiatric acuity scale, and psychiatric unit, violence, and staffing. The search for

these terms yielded 29 articles with 9 being the most applicable to this project. A synthesis of the literature is located at the end of this chapter.

Patient Acuity Tools

A substantial gap in the literature exists for acuity scales and tools in psychiatry. Much of the information retrieved from the search of *psychiatric acuity scales* pertains to acuity tools focused on other units of health care organizations. One study found during a review of evidence explored the use of a pre-/postsurvey on nurse satisfaction after the implementation of an acuity tool in a pulmonary medicine unit. The results of this survey indicated that overall nurses were satisfied with the acuity tool, and they saw an increase in professional autonomy as well as improvement in nurse-to-nurse communication (Firestone-Howard, Zedreck-Gonzalez, Dudjak, Ren, & Rader, 2017).

According to Harper and McCully (2007), acuity tools are critical in assisting managers and administrators to determine staffing needs. The ability of acuity tools to predict appropriate staffing plays a direct role in providing correlations to make good decisions about nurse-to-patient ratios. Patient assignments can be made more safely and effectively if there are guidelines in place to denote what a safe number of patients per nurse would be for a specific unit. These guidelines lead to an overall improvement in the quality of care patients receive.

Ingram and Powell (2018), explored the use of an acuity tool for the use of objective and quantifiable patient assignments in a medical-surgical unit. The overarching goal of the implementation of an acuity tool was to increase nurse satisfaction with their patient assignments and increase patient safety by equally assigning higher acuity patients. Each patient was assessed by the registered nurse each

shift and given a rating on a scale of 1 to 4 based on their condition and criteria of the tool with one being stable and four being high-risk.

A pilot study was conducted for 28 with the implementation of the tool which revealed a 35% compliance rate among nurses (Ingram & Powell, 2018). Interventions were completed during the pilot study to increase compliance which led to overall compliance of 77% at the end of the pilot study. After the implementation of the tool, nurses were surveyed to rate their satisfaction. Surveys reported an 11% increase in nurses feeling less overwhelmed after tool implementation. When it came to patient safety, the survey results indicated a 5% improvement in nurses view of patient safety.

Differentiating levels of acuity is often subjective due to the vast differences in medical units. The development of the tool by Chiulli, Thompson, and Reguin-Hartman (2014) was used to decrease patient loads consisting of multiple acute patients to improve outcomes. The original tool created consisted of 20 categories rating patients on a scale of 2 (least acute) to 4 (most acute) but was narrowed down to 10 over the course of planning. Six categories related to the condition of the patient, and four categories focused on nurse workload. During the pilot study of this acuity tool, 40 nurses assessed 183 patients. Fifty-one percent of patients received a rating of two and 49% received a rating of three. No patient received a rating of four during the pilot study. The next phase of the project involving the actual implementation of the tool began with 43 nurses assessing 488 patients. During this phase 51% of patients received an acuity rating of two, 38% received a rating of 3 and 12% received a rating of four. The study conducted proved that patients were being under-rated without the objective acuity tool in place.

Based off of results from the study, nursing assignments have been adjusted to create more safe assignments to improve satisfaction and quality of care (Chiulli et al., 2014).

Acuity in the emergency department (ED) is much different than in inpatient units. Triaging patients is an important part of the acuity process in the ED to assess patients appropriately. Many EDs lack the tools to correctly triage the psychiatric patients that present to the ED. To combat this lack of resources, an Irish ED implemented a Mental Health Triage scale for psychiatric patients to test its functionality in triaging psychiatric patients (Tanner, Cassidy, & O'Sullivan, 2014). This Mental Health Triage scale is based on the Australian Mental Health Scale; this scale is also recommended by the National Institute of Excellence guidelines. Two hundred forty-five cases were triaged with the Mental Health Triage Scale over an 11-day period. Results concluded that 79% (194) were able to be triaged safely after the implementation of the Mental Health Triage scale. The primary information obtained from the study revealed that with the Mental Health Triage scale in place patients were able to be appropriately assessed which leads to a higher level of care.

Howver (2014) created an acuity tool for an adult inpatient psychiatric facility for the purpose of improving the standard of patient care. The problem precipitating the development of the tool was poor methods of communicating to the treatment team safety needs, as well as, the need for a quantitative depiction of unit acuity. Howver laid out three objectives of her acuity tool that included allocating resources to nurses appropriately, establishing fair patient assignments for nurses, and providing an overall snapshot of patient acuity on her nursing unit.

Howver's (2014) tool was considered to be successful because physicians reported being more likely to have increased awareness of the safety precautions needed by patients during the admission process. While her tool was successful for her nursing unit, she laid out implications for future practice. Howver stated that the validity of her tool needs to be continually assessed while also implementing the tool on other psychiatric units at Vanderbilt Hospital. Two other steps laid out by Howver included monitoring staffing trends based off of unit acuity along with obtaining continual feedback of the tools' relevance on the unit. During the implementation of this acuity tool, 40 nurses assessed 183 patients.

Violence in Psychiatric Units

The incidence of violence is far more than just physical for nurses working in psychiatric facilities. Violent episodes can create lasting emotional effects on nurses. Nurses may experience anger, shock, depression, regret and even post-traumatic distress from patient attacks (Iozzino et al., 2015).

A study by Iozzino and colleagues. (2015) was conducted to explore the prevalence and the risk factors associated with violence in acute psychiatric wards in general psychiatric hospitals. The performed meta-analysis performed 35 studies that reported on 23,972 patients in acute psychiatric care facilities. The studies reviewed in this meta-analysis were from the countries of Europe, Italy, the United Kingdom, Ireland, Norway, The Netherlands, Switzerland, Germany, Sweden, and Greece.

The most prevalent finding from the study revealed that almost one in every five patients admitted to these psychiatric care facilities committed an act of violence while hospitalized. Many factors exist that could play a role in the rates of reported violence in

inpatient settings such as a difference in the definition of violence, differences in data collection between wards, and an under-reporting of attacks. The study explores several socio-demographic elements that play a role in increased aggression in hospitalized psychiatric patients. These elements include a history of violence, longer hospitalization stays, previous aggressive behaviors, involuntary admission, hostility, and alcohol abuse (Iozzino et al., 2015).

According to Taylor (2013), the risk of violence against clinicians is an ever-growing problem. She reports in the year 2000 the Bureau of Labor revealed that 48% of work-related assaults occur in health care and social service settings. A U. S. Department of Justice survey for 1993 to 1999 reported that the average rate on non-fatal assault for mental health professional workers was 68.2% and the rate for mental health custodial workers was 69%. Forty percent of psychiatrist reported the assault at some point during their career.

Due to the increasing rates of violence in these inpatient psychiatric facilities, the Twin Valley Behavioral Healthcare (TVBH) system developed guidelines in 2004 to be implemented in order to maintain a safer more therapeutic environment for patients and staff (Short et al., 2008). These guidelines were set in place after TVBH noticed an increased number of lost workdays due to staff injuries. TVBH reported that 90% of the injuries were related to staff-patient physical interventions and 50% were due to staff retraining patients in times of crisis. The guidelines are stated as follows: respectful staff interactions, early recognition and avoidance of physical intervention, only intervene physically if absolutely necessary, the safety of using emergency medication during intervention, correct way to share critical information, and monitoring data related to staff

and patient safety. These guidelines were created as a best practice to promote a sense of safety for patients and staff (Short et al., 2008).

Psychiatric Unit Staffing

Eighty percent of expenses in inpatient psychiatric facilities are related to personnel (Coleman & Paul, 2001). According to Coleman and Paul, high staff-patient ratios play a direct role in the effectiveness of treatment in adult psychiatric hospitals. Hospital administrators are focused on the reduction of overall expenditures, which leads to a reduction in the well-paid staff who work in inpatient psychiatric units. A reduction in the number of staff results in a lower quality level of care being provided to patients due to increased patient to staff ratios. The reduction in the number of mental health workers on the job is not solely due to healthcare facilities' budgets. According to d'Ettorre and Pellicani (2017), the decline of mental health workers is due to workplace violence. The type of violence experienced by mental health workers drives workers to leave the field of mental health due to job dissatisfaction and injury.

Another concern about staffing in acute psychiatric facilities is the dynamics between patients and staff. Several factors are thought to cause a potential for violence on the unit. These factors include lack of control by the staff, unorganized activities, fear of how the patients view staff and overall poor staff interaction with the patients (Ng et al., 2001).

According to the American Psychiatric Nurses Association (APNA) (2012), a multitude of variables exist that affect the levels of staffing in inpatient psychiatric facilities. These variables include acuity and multimorbidity, number of patient admissions and discharges, education, experience, workload, physical environment, and

care delivery model. The APNA ties in the information mentioned previously regarding acuity and safety, stating that aligning staff needs with acuity is imperative for a safe work environment. The higher incidences of comorbidities have contributed to the increased need for registered nurses on psychiatric units. Patients are dealing with the complexity of mental illness combined with physical illnesses. Nurses requiring special skill sets are needed to provide high-quality care to these individuals. The APNA discusses the impact that increased the workload on staffing has in not only patient outcomes but staffing outcomes. Increased workloads have contributed to more injuries for nurses on a psychiatric unit which plays a direct role in staff turnover.

Individuals, specifically pediatric patients, suffering from mental illnesses are extremely vulnerable. These patients require close monitoring and deserve high-quality care. According to Hanrahan (2011), one million discharges from inpatient psychiatric facilities occur yearly. With the demands of admissions and discharges, staff is being overworked and patients are being undertreated. This type of turnaround goes directly against the Institute for Healthcare Improvement's (IHI) six aims for changing the healthcare system (IHI, n.d.). IHI's second aim is that health care must be effective (IHI, n.d.). In acute psychiatric facilities, patients may not be able to receive the full treatment they are warranted due to lack of staff in these facilities. The third aim IHI is that care should be patient-centered (IHI, n.d.). If psychiatric facilities are short on staff due to reasons discussed previously, nurse loads are increased, and patient care is often decreased.

Synthesis of Evidence Review

A comparison of the literature reviewed during the search showed positives results of acuity tools in nursing units along with the prevalence of violence among mental health workers. In contrast, many of the researched articles mention staffing, but the APNA (2012), holds a different view. According to APNA (2012), the research regarding the staffing level of nurses in psychiatric units is not substantial. Factors such as violence and increased patient loads experienced by nurses are driving them their positions. The implementation of acuity tools in healthcare units have shown to improve the outcomes of both patient loads and safety for nurses. These outcomes not only benefit nurses, but they improve the quality of care being provided to patients.

DNP Essentials

According to the American Association of Colleges of Nursing (AACN, 2006), the Doctor of Nursing Practice (DNP) degree contains eight elements that are essential as laid out Appendix C. These DNP Essentials are viewed as the foundation of core competencies to be achieved by nurses who receive the DNP degree. All eight of these DNP Essentials were met in the development of this project, but DNP Essentials II, IV, and VI are most related to this project.

DNP Essential II focuses on quality improvement through the use of systems and organizational leadership (AACN, 2006). This project was a quality improvement project and was guided by the use of a quality improvement model. Quality improvement is focused on improving patient outcomes, while simultaneously finding ways to improve healthcare organizations (AACN, 2006). With this psychiatric admission acuity tool in place, the goal of improving health care organizations through nurse satisfaction was met.

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Transforming patient care through the use of technology systems is DNP Essential IV (AACN, 2006). Technology is particularly important in health care. The use of electronic health records provides a visual and chronological perspective of patients' healthcare encounters. Electronic health records were used in this project to explore patients' past psychiatric history. Having this information enabled intake nurses to evaluate the patients' ranking on the acuity tool used for the project.

DNP Essential VI emphasizes collaboration among the healthcare team (AACN, 2006). At the project site, all members of the team including physicians, nurses, social workers, and mental health technicians interact daily. Effective communication is a key feature needed for successful collaboration to achieve positive patient outcomes. The team collaborated when determining how potential patients were scored with the admission acuity tool. With more acutely violent patients being denied admission, a theory was developed that current patients in the treatment program would be in a better environment to receive the care and attention they deserve to overcome the mental illness they are facing.

Project Purpose

The purpose of this DNP project was to determine if intake (admission) nurses at an adolescent behavioral health unit were satisfied with the implementation of a psychiatric admission acuity tool. An assumption made is that if using the acuity tool is perceived by the nurses to increase unit environmental safety for both patients and nurses, the nurses will be satisfied with using the tool. Therefore, both satisfaction and increased safety may be achieved.

Summary

As the demand for treatment of psychiatric patients increases, so does the potential for problems associated with the admission of multiple patients who require special safety precautions, such as visual contact at all times or one-to-one staffing. Nurses in acute inpatient psychiatric facilities are facing the potential for high levels of violence and assault. These occurrences are due to low levels of staffing and high patient acuity.

The need for a psychiatric admission acuity tool at a pediatric behavioral health unit in New Orleans, Louisiana was identified by the director, manager, and treatment team. The project was based on the premise that the standard of patient care would improve through the use of such a tool. These patient care improvements created by the use of the tool would lead to increased nurse satisfaction.

CHAPTER II – METHODS

Context

The setting for this project is an inpatient adolescent behavioral health unit within

a hospital located in New Orleans, Louisiana. This adolescent behavioral health unit is

composed of two floors serving patients ages 6 through 18 years. The first floor is a 17-

bed floor used for patients aged 13 to 18. The second floor is a 21-bed floor for younger

patients aged 6 to 12. The behavioral health unit serves adolescent patients suffering from

various forms of mental health diagnoses, as well as patients exhibiting behavioral issues.

Stakeholders identified in this project include patients, staff at the facility, and

administrators.

Interventions

Approval was sought and received from the acuity tool developer to use the tool

in this DNP project. After facility administrators and The University of Southern

Mississippi Institutional Review Board (IRB) approved the project, a meeting was held

with the six intake (admission) nurses at the facility. The project was explained to the

intake nurses. A copy of the acuity tool was provided to each nurse along with a detailed

explanation of the tool's criteria. During this time, the six nurses were able to ask

questions and discuss any concerns they had with using the admission acuity tool. All

nurses agreed to participate in the project.

The tool was used for a two-week period from August 15, 2019 until August 29,

2019 and evaluated approximately 42 patients. During this time, the project leader (DNP

student) talked with the nurses to assure that the tool was being used correctly and

consistently. After completion of the two-week period, the six nurses were given a survey

to anonymously provide data about using the tool. One of the questions on the post-intervention survey asked nurses if modifications were needed in order to make the tool more adaptable to the unit. No modifications for the admission acuity tool were suggested by nurses. Data was then presented to the unit manager.

Measures

The psychiatric acuity tool used for this DNP project was created by Howver (2014) for use on an adult psychiatric unit. This acuity tool is structurally simple and is used to score patients on specific criteria. The acuity tool is shown in Appendix A and is narratively summarized below using some language quoted directly from the tool. This tool is divided into four categories with each category containing several criteria. A score of 0, 1, 2, or 3 is assigned to the patient by the intake nurse based on the patient's medical history and presenting factors at the time of the admission assessment. Patients receiving a score of 3 in any one of four main categories included in the tool will require an extra staff member to monitor them at all times.

The four categories included in Howver's (2014) tool are aggression, unpredictable behavior, precautions (above standard every 15-minute observations), and high utilizer. A protocol score of zero is given to a patient who does not require any extra interventions. A patient receiving a score of 1 will be generally monitored; a patient scoring a 2 will need more frequent monitoring. A patient scoring a 3 requires the extra use of staff due to the patient's acuity needs.

The category of aggression is comprised of suicidality, self-injury, agitation, and homicidality. A score of 0 in the category of aggression is assigned if the patient has no history of aggression. A score of 1 in aggression is due to a history of aggression, suicidal

ideation, self-injury, or homicidal thoughts. A score of 2 in this category represents a concern for the potential of any of these behaviors. A score of 3 is assigned to patients with impulsive behavior; active suicidal or homicidal thoughts; or patients who intimidate, threaten, or incites negative behaviors in other people.

The next category is unpredictable behavior. This category is comprised of catatonia, disorganization, and altered mental status. A score of 0 is given if there is no evidence of delusions, hallucinations, or impulsive behavior. A score of 1 is given if there is a history of psychosis or behavior problems associated with a psychotic disorder, a problem with impulsive behavior, a history of sexually acting out, or if it is easy to redirect the patient. A score of 2 is given if the patient is having current delusions or hallucinations, has impulsivity control issues, sexually acts out, and is not easily redirected. The patient should receive a score of 3 if delusions or hallucinations place others at a risk for harm, the patient is directly sexually inappropriate to other patients, has uncontrolled impulsive behavior, or is not redirectable without constant interventions.

Precautions above standard 15-minute observations is a category that denotes visual patient contact at all times, patients requiring one-to-one (1:1) supervision, and patients on elopement precautions. A score of 0 is given to patients if they are not on any specific precautions. A score of 1 is assigned to patients "on the verge" of needing a potential intervention. A score of 2 is given if the patient is on visual contact out of the room, as well as being an elopement risk. A score of 3 is assigned if the patient is 1:1, requires visual contact at all times, has to go off-unit, or is in seclusion or restraints.

A high utilizer patient may be frequently symptomatic, has oppositional behaviors, has intensive family needs, or may need to be constantly reassured. A score of

0 is given is a patient who is not deemed a high utilizer. A score of 1 is assigned if the patient has a recent onset of defiance, is inconsistent in complying with treatment, or has a large number of visitors. A score of 2 is given if the patient has persistent anxiety, has defiant behavior causing emotional harm to other patients and staff, is resistant to taking medications, or is consistently worried about symptom management. A score of 3 is assigned to patients if their anxiety impedes their ability to function; they exhibit oppositional behavior, including threats to harm self or others; they refuse medications or request as needed medications exceeding normal administration parameters.

Howver's (2014) tool was designed to achieve three main objectives: to "appropriately allocate nursing resources, assisting with fair patient assignment loads, and providing an objective snapshot of patient acuity on the unit at a given time" (para 3). This DNP project shares a focus similar to objective number three, which is providing an objective snapshot of patient acuity on the unit at a given time. Howver's study indicated that with the use of her acuity tool, physicians reported a better understanding of patient safety needs throughout the period of their admission and stay in the psychiatric unit.

In the current project, an anonymous survey provided to the six intake nurses was used to assess satisfaction with the admission acuity tool (see Appendix B). These anonymous surveys were hand-delivered to the six intake nurses by the DNP student at the end of the two-week implementation period. The survey contained questions regarding the nurses' satisfaction with the tool and their assessment of the value of using the acuity admission tool. This survey took no longer than five minutes to complete. Nurses were allowed seven days to complete their survey. After completion of the

survey, nurses were directed to leave their forms in an empty envelope on the unit, which was retrieved by the DNP student.

Ethical Considerations

This project was approved by The University of Southern Mississippi IRB (Protocol # IRB-19-331; Appendix F). All participants agreed to sign a consent form before the initiation of the project. All surveys remained anonymous, to eliminate bias in the survey responses. Patient information used during the study was not shared with any sources other than on a need to know basis among personnel at the project site. Consent forms and surveys will be kept with the conductor of the DNP project for one year then disposed of in a locked shred box located on the unit where the project was conducted.

Conceptual Framework

The framework is used to guide this project is the Plan Do Study Act (PDSA) cycle or the Shewart cycle. This cycle is used commonly for organization and quality improvement (Butts & Rich, 2015). This cycle is also referred to as the Deming cycle as W. Edwards Deming implemented this model into practice to serve as "a practical method for applying a scientific method in an operational space" (Bennett & Provost, 2015, p. 38). The framework of the Plan Do Study Act is used extensively in health care as a stand-alone method for guiding change or as part of larger quality improvement measures (Taylor et al., 2013). The following discussion outlines how the model was used in this DNP project.

The planning stage consisted of preparing for the implementation of using the chosen psychiatric admission acuity tool. Planning involved conducting research regarding staffing and the ways violence impacts behavioral health units. A needs

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assessment was conducted to determine how useful a tool such as this would be in a pediatric behavioral health unit. As part of the needs assessment, a meeting involving the director, manager, and the treatment team was held to discuss the tool and to answer questions regarding its implementation.

The doing portion of the model focused on the actual implementation of the tool on the behavioral health unit consisting of two floors. The tool was used for two weeks to determine its effectiveness in providing intake admission nurses with a better view of staffing needs for appropriate patient care and an overall view of unit acuity. During the doing portion of the model, supervision of the nurses was important to assure that the tool was being used correctly with every admission. The six intake nurses were routinely monitored during the implementation of the acuity tool and questions were answered to ensure that the tool was being used consistently for every patient admission.

The study phase was retrospective. This phase was done after the two-week time period of using the tool. An anonymous survey was given to the six intake nurses to determine if they were satisfied with the acuity tool and to identify their evaluation about whether it would be beneficial to continue to use the tool for patient admissions. Data from the surveys were analyzed to identify if the tool was evaluated by the nurses to be beneficial during the two-week study. During the study phase, no modifications were suggested or made to the acuity tool.

The act phase of the model was the final step. During this step, the results of the surveys from the six nurses were presented to the manager. The decision was made that the tool would not become a permanent fixture on the unit at this time.

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Summary

   Chapter II presented "what was done" during this DNP project. The intervention

was explained, and the design of the admission acuity tool used in the project was

described. Finally, ethical considerations were addressed.

CHAPTER III - RESULTS

The purpose of this DNP project was to determine if intake (admission) nurses at an adolescent behavioral health unit were satisfied with the implementation of a psychiatric admission acuity tool. The intake nurse survey contained four questions regarding the understanding of the survey process along with seven questions regarding satisfaction with the admission acuity scale. The final survey question was a write-in question that gave nurses the opportunity to provide proposed modifications of the tool.

Survey questions and related data are shown below. The data is shown graphically in Figure 1.

1. Are you a nurse that handles patient admissions at the pediatric behavioral health unit?   100% answered "Yes."

2. Are you aware that survey participation is voluntary with no repercussion for refusal to participate?

   100% answered "Yes."

3. Are you aware that partially completed surveys are acceptable?
   100% answered "Yes."

4. Are you aware that all surveys will be anonymous to prevent bias?
   100% answered "Yes."

The following seven questions pertain to nurses' satisfaction with the admission acuity tool:

1. Are you satisfied with the implementation of an admission acuity tool in the pediatric behavioral health unit?

100% answered, "Agree."

2. Would you continue to use this admission acuity tool?

100% answered "Yes."

3. Do you feel like this admission acuity tool helps create a better view of patient safety status when reviewing admission paperwork to present to the accepting/denying physician?

50% answered "Agree". The other 50% answered, "Neither agree nor disagree."

4. How satisfied are you with the ease of use of the admission acuity tool?

100% answered "Satisfied."

5. Do you feel like the implementation of the admission acuity tool has created extra work for you?

90% answered "No." The other 10% answered, "Neither agree nor disagree."

6. Did you use this tool consistently over patient admissions?

100% answered "Yes."

7. How would you modify this tool?

100% left no suggested modifications on this question.

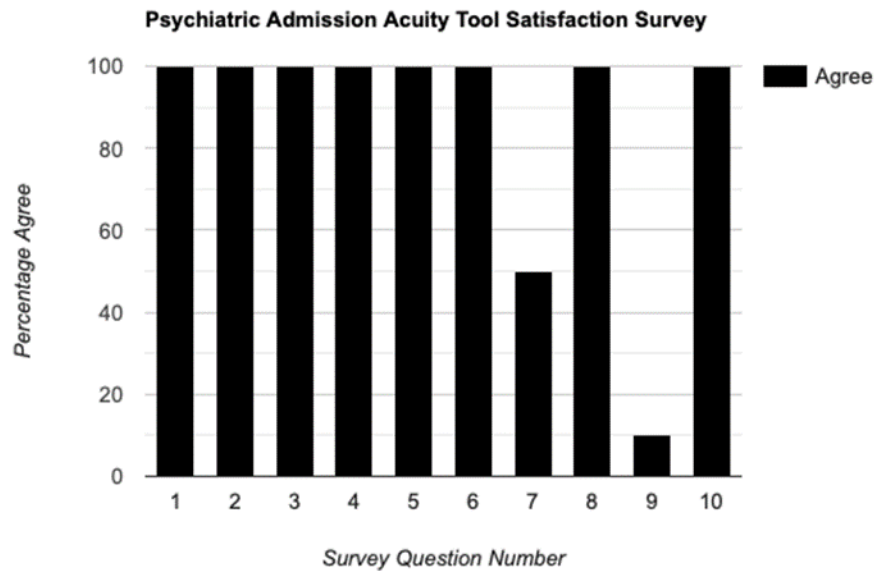**Psychiatric Admission Acuity Tool Satisfaction Survey**

Figure 1. *Psychiatric admission acuity tool survey results.*

Data for four of the quantitative survey questions are of particular interest.

Question 5 relates specifically to the purpose of this project. This question asked, "Are

you satisfied with the implementation of an admission acuity tool in the pediatric

behavioral health unit?" This question provided results that 100% of the nurses surveyed

were satisfied with using the admission acuity tool during the project period. Question 7

asked "Do you feel like this admission acuity tool helps create a better view of patient

safety status when reviewing admission paperwork to present to the accepting/denying

physician? Half of the nurses answered "agree," and the other half answered, "neither

agree nor disagree." Another data point of the intervention that needs to be noted is the

survey response to question 9. Question 9 asked, "Do you feel like the implementation of

the admission acuity tool has created extra work for you?" Ninety percent of nurses (5)

selected "disagree." The response of the remaining 10% (1 nurse) indicates that the

implementation of the admission acuity tool did create a sense of extra work.

The final question on the survey was a qualitative question that asked, "How

would you modify the tool?" These modifications would have been to make the tool more

useful for the current unit. None of the nurses surveyed provided feedback regarding

modifications

Summary

The analysis of the post-intervention surveys reveals that 100% of nurses were

satisfied with the implementation of an admission acuity tool in the pediatric behavioral

health unit. The results indicate that nurses were satisfied with the ease of use of the tool

along with believing it created a better overall view of unit acuity. The majority of nurses

surveyed did not find that any extra work was created for them by using the tool.

CHAPTER IV – DISCUSSION

Summary

The purpose of this DNP project was to determine if intake (admission) nurses at an adolescent behavioral health unit were satisfied with the implementation of a psychiatric admission acuity tool. Four questions and responses of particular significance were discussed in Chapter III. Based on survey responses, nurses were satisfied overall with the implementation of the admission acuity tool and found it easy to use. Though 100% of the nurses were satisfied with using the acuity tool, the unit manager declined to implement the tool on an ongoing basis.

Interpretation

Based on the data obtained from question 5 of the intake nurses' survey, the aim or purpose of this project was achieved. All nurses were satisfied with using the acuity tool. This project does not allow for correlations to be drawn between the nurses' satisfaction and increased safety of the unit environment, but the literature supports an association between the use of the acuity tools and appropriate nurse staffing.

Unlike Howver (2014), who reported that physicians had a better understanding of unit acuity after the implementation of her tool, the responses from the survey regarding question 7, "Do you feel like this admission acuity tool helps create a better view of patient safety status when reviewing admission paperwork to present to the accepting/denying physician?" yielded mixed responses. With 50% (n=3) nurses agreeing and the other 50% (n=3) choosing to neither agree nor disagree, responses indicate that tool was not as effective in providing an overall view of patient acuity when relaying information to physicians. While it is unclear as to why 50% (n=3) did not agree that the

tool provided a better view of patient safety status, possibilities could be related to nurses interpreting patient data differently. Nurses could have viewed patient history they believed did not fit into one a specific category of the tool or information they believed would place a patient in a "gray" area. Another explanation of the results could be related to nurses believing the tool did not change the pre-existing procedure of relaying patient safety status when reviewing admission paperwork to present to the accepting or denying physician.

The post-intervention survey question 9 explored nurses' feelings about the tool creating extra work for them during its implementation on the unit. A majority disagreed that they experienced extra work in completing the tool. The lack of feeling extra work from using the tool may account for some of the reason why nurses were satisfied with using the tool, which was the aim of the project. The data from this survey question also can be interpreted as a reason why the nurses responded as they did to question 11 by not suggesting any modifications to the tool. The responses indicate that the tool was simple to use in its original form without needing modifications to better fit the unit.

Based on the results of this project, an inference can be made that Howver's (2014) tool, although created for an adult psychiatric unit, can be implemented on other psychiatric units. Although no modifications were suggested by the intake nurses after using the acuity tool at the chosen pediatric behavioral health unit, differing populations may require changes for the tool to be adapted for use on other units. Changes may potentially need to be made to account for different population demographics, such as age, gender, and ethnicity.

While this acuity tool showed satisfaction from nurses, the tool was not implemented permanently at the site of the DNP project. The unit where the DNP project occurred is undergoing many new changes. The unit is currently expanding with new staff and patient populations. These new expansions have caused priorities to shift, which led to the decision of no permanent implementation of the tool at the time of this DNP project.

Limitations

One limitation of this study is the small number of nurses who participated in the project and who were surveyed about their use of the acuity tool. With only six nurses participating in the project, the data collected regarding satisfaction could have been impacted. he nurses' short time frame in using the acuity tool is another significant limitation. If a larger number of nurses were used for the project and if they used the tool for a longer period of time, results could potentially shift in a negative direction. Hackshaw (2008), stated that small studies with quick results do not always provide reliable or precise outcomes.

The purpose of this project was to measure nurse satisfaction with the admission acuity tool with patient and nurse safety and staffing being additional concepts that could potentially improve with the implementation of the tool. Due to the changing priorities of the project site, levels of safety and staffing were not able to be accurately measured with this project. Factors, such as bias, could have potentially been present with the post-intervention survey portion of this project. Due to the small size of the project and the use of paper surveys, anonymity could have been compromised. The perception of

compromised anonymity could have could have led to distorted responses by nurses on the post-intervention surveys.

Finally, the DNP student project leader's inexperience with quality improvement methods was a significant limitation. However, this project represents an effort to move toward accomplishing the AACN's (2006) DNP Essential Competency III of organizational and systems leadership for quality improvement and systems thinking. According to the AACN, "advanced nursing practice includes an organizational and systems leadership component that emphasizes practice, ongoing improvement of health outcomes, and ensuring patient safety" (p. 10).

Conclusion

The results collected from the surveys indicate that the participating intake nurses were satisfied with the admission acuity tool that was implemented in the chosen pediatric behavioral health unit. Unfortunately, based on unit priorities at the end of the project, the unit manager's decision was to not adopt the acuity tool for continued use. The next step ideally would involve continued use of the tool longer than the short two-week period included in this project. With use over time, modifications may be identified to make the tool more useful to the current unit.

Research beyond a quality improvement study is needed for the Howver (2014) acuity tool to evaluate the validity and reliability of the tool. Using a methodology that allows for correlations to determine if using the tool positively affect nurse staffing, patient safety, and staff safety is an important recommendation. Research should include a variety of cultures and populations, both adult and pediatric, who are in psychiatric care

facilities. In addition to studying the use of acuity tools, other ways to provide standardization of patient admissions in psychiatric care facilities should be explored.

A gap in the literature exists regarding acuity in psychiatric facilities, with a considerable literature gap in pediatric behavioral health facilities. With the number of assaults occurring in psychiatric units, effective ways of measuring patient acuity must be explored further in order to provide safer units for patients and staff. While nurses were satisfied with the admission acuity tool used for this study, this project was only a singular quality improvement study with a small number of nurse participants. An implicit need exists for further investigation of psychiatric acuity in order to meet the demands of the increasing population of individuals suffering from mental illness while preserving a healthy work environment for nurses.

Psychiatric Acuity Tool

Score:	0	1	2	3
Protocols	• No protocol	• Monitoring and symptom management • CIWA • CNS-DP • COWS	• Scoring on protocol such that requires more frequent monitoring • CIWA • CNS-DP • COWS	• Loading on a protocol • CIWA • CNS-DP
Aggression • Suicidality • Self-injury • Agitation • Homicidality	• No history of aggression • No suicidality, or suicidality without plan or intent • No homicidality, or homicidality without plan or intent	• History of aggression, suicidality, self-injury, agitation, or homicidality • Suicidal ideation or homicidal ideation with a plan outside of hospital	• Concern for aggression, self-injury, agitation • Concern that patient may have suicidal or homicidal intent, or act on ideation in the hospital	• Impulsive behavior putting the patient at risk of physical harm • Temper and lack of control resulting in physical or threats of physical altercations with others • Others are intimidated, threatened or incited by patient • Active suicidality and/or homicidality with intent and plan/attempt while in hospital
Unpredictable Behavior • catatonia • disorganization • altered mental status	• No evidence of delusions/hallucinations • No evidence of impulsive behavior	• Psychosis- hx of delusions or bizarre behavior associated with psychotic d/o • Some problems with impulsive/distractible behavior • History of sexually acting out behavior • Readily redirectable	• Current delusions/hallucinations associated with psychotic d/o • Impulsivity and distractible behavior impairing function • Behavior indicating intent toward sexually acting out or manipulation of others while in hospital • Difficult to redirect	• Delusions/hallucinations that place others at risk of harm • Manipulation of others or sexually acting out/attempts to engage others in hospital • Uncontrolled impulsive behavior such as exhibited with developmental delay • Redirectable only with constant intervention
Precautions (above q15) • eyesight • 1:1's • Elopement	Q 15 min	Q 15 min, but "on the verge"	• Eyesight OOR • Elopement risk	• 1:1 • Eyesight • Off-unit appointments • Seclusion/restraint
High Utilizer • Frequently symptomatic • PRN frequency • Non-adherence • Visitation • Oppositional behaviors • Intensive Family needs	Not a high utilizer Occ PRN Non-acute requests	• Recent onset of defiance type behavior • Inconsistent compliance with treatment regimen • Lg groups of visitors or including small children	• Anxiety associated with frequent needs for reassurance and numerous demands • Defiant behavior causing emotional harm to others • Partial or complete resistance to taking medications. • Frequent requests to address symptom management, multiple PRNs	• Anxiety associated with frequent needs for reassurance and numerous demands and impairs ability to function • Oppositional behavior involving threat of harm to self or others • Medication non-compliance, can result in TRC • Constant request for symptom management and/or prn requests exceeding normal administration parameters

(Howver, 2014).

APPENDIX B – Psychiatric Admission Acuity Tool Satisfaction Survey

By completing this questionnaire, you are giving consent to the researcher to complete the study.

1. Are you a nurse that handles patient admissions at the pediatric behavioral health unit?

   o Yes

   o No

2. Are you aware that survey participation is voluntary with no repercussion for refusal to participate?

   o Yes

   o No

3. Are you aware that partially completed surveys are acceptable?

   o Yes

   o No

4. Are you aware that all surveys will be anonymous to prevent bias?

   o Yes

   o No

5. Are you satisfied with the implementation of an admission acuity tool in the pediatric behavioral health unit?

   o Agree

   o Neither agree nor disagree

   o Disagree

6. Would you continue to use this admission acuity tool?

   o Yes

   o No

7. Do you feel like this admission acuity tool helps create a better view of patient safety status when reviewing admission paperwork to present to the accepting/denying physician?

    o Agree

    o Neither agree nor disagree

    o Disagree

8. How satisfied are you with the ease of use of the admission acuity tool?

    o Satisfied

    o Neither satisfied nor dissatisfied

    o Dissatisfied

9. Do you feel like the implementation of the admission acuity tool has created extra work for you?

    o Agree

    o Neither agree nor disagree

    o Disagree

10. Did you use this tool used consistently over patient admissions?

    o Yes

    o No

11. How would you modify the tool?

APPENDIX C – The Essentials of Doctoral Education for Advanced Nursing Practice

I.	Scientific Underpinnings for Practice	Evidence-based practice guidelines researched to create future practice advancements. This DNP project is based on evidence-based practice and is ethically sensitive in its entirety.
II.	Organizational and Systems Leadership for Quality Improvement and Systems Thinking	This DNP project required organizational leadership to improve healthcare systems while ensuring ethical problems were not made.
III.	Clinical Scholarship and Analytical Methods for Evidence-Based Practice	This project utilized existing research and put it into practice following the creation of a PICOT question. This project aimed to implement a new tool to enhance practice.
IV.	Information Systems/Technology and Patient Care Technology for the Improvement and Transformation of Health Care	Electronic Health Records were utilized in this DNP project to review past medical history in order to transform admission practices in order to reduce costs and improve unit safety.
V.	Health Care Policy for Advocacy in Health Care	This DNP project creates a standard of care which will become an institutional policy in order to reduce expenditures while advocating for a safer environment for patients on the unit.
VI.	Interprofessional Collaboration for Improving Patient and Population Health Outcomes	This DNP project promotes collaboration for improving health outcomes by utilizing the entire treatment team to determine what criteria are optimal for a safe unit while balancing costs.
VII.	Clinical Prevention and Population Health for Improving the Nation's Health	The acuity admission tool simultaneously reduces costs while improving unit safety by preventing the admission of excessive patients that would post a safety risk to the unit.
VIII.	Advanced Nursing Practice	In this DNP project the APRN 1. Promotes evidence-based practice according to research 2. Uses technology to better practice 3. Collaborates with the entire team to ensure the quality of care 4. Mentors 5. Ensures that ethical considerations are always met while ensuring that evidence-based guidelines are the standard of care at this behavioral health unit.

(American Association of Colleges of Nursing, 2006).

APPENDIX D – Acuity Tool Consent from Author

Allyssa Howver <ajhowver@gmail.com>
Tue 7/2/2019 10:26 PM
Tyler Wansley ⌄

Hi Tyler!

No problem, I'm glad that you can use the tool. I am very much ok with you using it in any way that you feel could be beneficial for you and your project.

Thanks,
Allyssa

. . .

| I really appreciate that. | Thank you very much for your support. | Thank you very much for your understanding. |

Are the suggestions above helpful?   Yes   No

APPENDIX E – Facility Consent

KN

K█████████████

Wed 8/14/2019 9:03 AM

Wansley, Tyler ⌄

Yes

██████████████████

Manager, Behavioral Health

████████████████████████████

████████████| New Orleans, LA 70118

OFFICE (████████████)

████████████████████████████████

FOUNDING MEMBER OF ████████████

...

WT

Wansley, Tyler

Do I have permission to complete my DNP project on the unit?   Wed 8/14/2019 8:59 AM

APPENDIX F – USM IRB Approval Form

Office *of*
Research Integrity

THE UNIVERSITY OF
SOUTHERN
MISSISSIPPI.

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NOTICE OF INSTITUTIONAL REVIEW BOARD ACTION

The project below has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services regulations (45 CFR Part 46), and University Policy to ensure:

- The risks to subjects are minimized and reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered involving risks to subjects must be reported immediately. Problems should be reported to ORI via the Incident template on Cayuse IRB.
- The period of approval is twelve months. An application for renewal must be submitted for projects exceeding twelve months.

PROTOCOL NUMBER: IRB-19-331
PROJECT TITLE: IMPLEMENTATION OF A PSYCHIATRIC ADMISSION ACUITY TOOL IN THE PEDIATRIC BEHAVIORAL HEALTH UNIT
SCHOOL/PROGRAM: College of Nursing - GP, School of LANP
RESEARCHER(S): Tyler Wansley, Patsy Anderson

IRB COMMITTEE ACTION: Exempt
CATEGORY: Exempt

Category 2.(i). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording). The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects.

APPROVED STARTING: August 14, 2019

Donald Sacco Jr.

Donald Sacco, Ph.D.
Institutional Review Board Chairperson

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