**NRS-441V: Capstone Project**

**Exemplar of Evidence-Based Practice**

Running head: SIGNIFICANCE OF EARLY ASSESSMENT AND INTERVENTION

Significance of Early Assessment and Intervention on the Severity of Alcohol Withdrawal

(Student Name)(Grand Canyon University

(NRS 441V: Professional Capstone)

Instructor: (Name)

(Date)

**Abstract**

Based on documented studies, the prevalence of alcohol dependence in medical settings indicates that as many as 1 in 5 patients may require treatment for alcohol withdrawal (AW) while hospitalized for a concurrent illness. Research has indicated a definitive problem in recognizing and treating those patients at risk for AW. Symptom-triggered treatment, based on the use of appropriate assessment tools and treatment protocols, has been shown to be safe, and it is associated with a decrease in the quantity of medication required and the duration of treatment. Implementing standardized screening tools and initiating treatment based on established protocols, can prevent disease progression and an increased complication rate. These interventions can potentially decrease length of stay and health care costs.

Key words: alcohol withdrawal, assessment, CAGE, CIWA-Ar, symptom-triggered, protocol.

**(Problem Statement- Module 1)**

Significance of Early Assessment and Intervention on the Severity of Alcohol Withdrawal

Patients admitted to the acute care setting with a secondary diagnosis of alcohol abuse carry a significant risk of alcohol withdrawal (AW) when there is a failure to recognize and treat their alcoholism. Early recognition of AW is essential to early intervention, which, in turn, has the potential to prevent or decrease serious complications associated with AW.

(Support from Literature Review- Module 2)

Alcohol withdrawal has been described as a syndrome that affects those people accustomed to regular alcohol intake, who suddenly stop drinking and subsequently develop those clinical manifestations associated with AW (Saitz, 1998). An estimated 15-20% of hospitalized patients are dependent on alcohol, putting them at risk for prolonged or complicated hospital stays (Lussier-Cushing, Repper-DeLisi, Mitchell, Lakatas, Mahmoud, & Lipkis-Orlando, 2007).

Dependence on alcohol usually remains undetected in the hospitalized patient until withdrawal signs appear, secondary to cessation of their alcohol intake. Nursing staff must recognize the warning signs and symptoms of AW. Without an established assessment process, it is difficult to predict withdrawal symptoms or assess risk factors associated with an increased severity of withdrawal symptoms and subsequent impact on the patient’s treatment plan. An established assessment process/protocol has the potential to reduce patient morbidity and mortality as well as health care costs.

One fifth of the total national expenditure for hospital care is related to alcohol dependence, as evidenced by prolonged hospital stays (particularly in the Intensive Care setting) and characterized by major complications for patients progressing through AW, with an increase in utilization of health care resources/services (Phillips, Haycock, & Boyle, 2006). In addition to the increase in required health care resources, patient and staff safety must be considered; consideration for the physical safety of the patient during a withdrawal episode and for the safety of the health care worker exposed to patient behaviors during a withdrawal episode is paramount. Further significant issues related to AW are found/indicated in the progression of symptoms during the course of AW including the increased use of restraints and the increased use of sitters during the progression period (Chaney & Gerard, 2003).

The determination of need for a program directed at identifying and addressing AW within a population should begin with retrospective chart audits of identified patients, and data collection related to cost and length of stay (LOS). Development of an audit tool for an initial risk assessment and the development of an ongoing assessment process should follow. Development of treatment protocols/interventions would be the final step in addressing the identification and treatment of the patient with AW.

Once the process has been developed and approved for implementation, initial and ongoing education for the administrative team, physicians, and nursing staff would be a priority. Updated summaries of program progress during a pilot period should be made available to administration, physicians, and staff alike.

One or more outcome measures should be initiated to determine success of the process. Quality monitoring and data collection through retrospective audits should be completed to determine compliance with the program, as well as the success of the patient assessment and intervention processes as determined by LOS and subsequent health care costs. Further quality monitoring could be obtained through subjective data collection related to patient and staff satisfaction.

**Implementation (From Module 3 Plan)**

Theories of health behavior and promotion play a decisive role in helping to improve health by directing plans and processes that assist in the identification of risk issues, the management of disease processes, the development of implementation processes, and the measurement of process outcomes. When addressing alcohol withdrawal (AW), referred to as Alcohol Withdrawal Syndrome in some literature, theory helps to understand why AW is problematic and/or a significant health care issue; to identify what information is required in addressing the identified problem and how to use that information; to define and/or develop the necessary changes and processes; and to define what and how to monitor and evaluate the change for outcomes.

**(Incorporated Theory from Module 2)**

There are two types of theory significant to the planning of health care, and to change in health care planning. Explanatory theory helps to identify why a problem exists and assists in the search for modifiable factors, while change theory guides the development of health promotion interventions (National Cancer Institute, 1998). Consideration of theory allows for review of research, in this case, related to AW and recognized interventions. Explanatory theory allows for focus on the problem of AW, its variables (i.e., co-morbidities, variations in clinical presentation, appropriate treatment); why it is a problem (i.e., increased severity of illness, increased health care costs); and what can be changed. Change theory is directed at improvement processes and helps to identify the strategies for process change (i.e., early identification and assessment of patients at risk for AW, appropriate interventions based on assessments) and makes assumptions related to the success of those interventions. These theories incorporate concepts that can be translated or developed into strategies, plans, and evaluations. The use of theory allows for a complete review and appraisal of available information related to AW, with appropriate emphasis on solutions and interventions. Theory also provides the basis for judging the appropriateness of those solutions and intervention through an evaluation process.

Alcohol withdrawal is most often defined as a group of symptoms that occur with the cessation, usually abrupt, of alcohol intake. It affects people who are accustomed to regular alcohol intake, and is the most common withdrawal syndrome next to nicotine withdrawal. Alcohol addicted patients admitted to an inpatient setting may not be recognized as at risk for AW, which can produce negative outcomes and increase health care costs (Patch, Phelps, & Cowan, 1997). Ten million Americans consume alcohol excessively on a regular basis. Fifteen to forty percent of hospitalized patients are addicted to alcohol, putting them at risk for prolonged and/or complicated hospital stays; 25% of them may experience seizures within the first 24 hours of hospitalization. Alcohol withdrawal has a 1-10% mortality rate with the majority of those deaths occurring from cardiovascular or metabolic complications as a result of severe withdrawal, particularly delirium tremens (DT). Delirium tremens occurs in approximately 5% of patients undergoing withdrawal, appearing 2-4 days after the patient stops drinking (Myrick & Anton, 1998). Twenty percent of the total national expenditure for hospital care is related to alcohol dependence (Phillips et al., 2006). In the year 2008, a total of 90 patients were hospitalized at Casa Grande Regional Medical Center (CGRMC) with a diagnosis of AW: 10 of them with an admission diagnosis of AW, 27 with a principal diagnosis of AW, and 53 with a secondary diagnosis of AW. Despite a significant patient population with documented or verbalized histories of AW, CGRMC currently has no program in place for assessment and intervention related to AW. If changes are not implemented within the Casa Grande Regional Medical Center organization, the impact will remain significant as it relates to patient care, patient safety, and health care costs. Thus, the development of an assessment process and interventional protocol, the initiation of education for the physicians and staff on the new process and protocol, and evaluation of the effectiveness of the process and protocol should be given high priority. If process changes are not considered, developed, and implemented, a health care system already compromised, will continue to be impacted by issues such as AW.

Manifestations of mild AW may begin as soon as 5-12 hours after the patient’s last drink, while major withdrawal syndromes tend to occur 48-72 hours after the last drink, manifesting themselves as hallucinations, seizures and/or delirium tremens (Hartsell, Drost, Wilkens, & Budavari, 2007). Though there are many tools and processes for evaluating the patient with a history of alcohol abuse and/or at risk for AW, a screening process using the CAGE questionnaire (Ewing, 1984)(Appendix A) readily determines whether the patient may be at risk. The CAGE, designed to be a screening tool, was developed by Dr. John Ewing and introduced for international use in Australia in 1970; its simplistic question format has made it the instrument of choice in most clinical settings (O’Brien, 2008). This questionnaire would serve as an initial screening tool for patients having been identified with a past or current alcohol dependency. The CAGE questionnaire can be administered in as little as five minutes; a positive CAGE (a score of 2 or greater) would prompt further assessments of the patient, based on developed protocol, using the Revised Clinical Institute Withdrawal Assessment for Alcohol Scale (CIWA-Ar) (Sullivan, Sykora, Schneiderman, Naranjo, & Sellers, 1989) (Appendix B) which has a documented utility for measuring withdrawal symptoms. Pharmacological therapy using the symptom-triggered approach would be initiated according to an approved and established physician order set/protocol, based on the patient’s CIWA-Ar scores.

Nurses can help to improve patient outcomes by developing a plan of care that includes assessment for AW, providing interventions accordingly, and evaluating the outcomes of those interventions. Implementation of a process change, related to a plan of care for those patients identified as at risk for AW, would begin with a patient history and assessment. Early physical indicators of AW can be identified during routine assessments; these indicators occurring as early as 5-12 hours after the patient’s last drink and manifested as mild tremors, diaphoresis, agitation, insomnia, and increased heart rate and blood pressure (Phillips et al., 2006). When implementing the CAGE questionnaire, those patients receiving a score of 2 or greater would then be assessed initially, and at established intervals, using the CIWA-Ar to determine the existence and severity of withdrawal symptoms. A score of less than 10 would prompt supportive care to include maintaining a quiet and safe patient environment and providing psychosocial support. A score equal to or greater than 10 would prompt the initiation of an approved physician treatment order set/protocol (Appendix C) for pharmacological therapies, including symptom triggered dosing of Lorazepam. Thiamine and electrolyte replacement and ongoing assessment guidelines would be also addressed. Patients should be reassessed using the CIWA-Ar every 4 hours while their score remains under 10; when their score equals or exceeds 10, assessment should be completed every hour following the initiation of pharmacotherapy times three doses of medication (Crumpler & Ross, 2005). If a score of less than 10 is not achieved at that time the physician should be notified and further direction obtained. Studies demonstrate that symptom triggered pharmacotherapy/treatment achieves symptom control and has demonstrated a decreased amount of drugs used, decreased duration of treatment, a decrease in the occurrence of oversedation or undersedation, a decrease in the number of adverse events, and a decrease in the use of restraints and sitters (Stanley et al., 2003). All documentation would initially be in paper form using an approved assessment and treatment flow sheet (Appendix D). Pertinent information required by the flow sheet includes hourly assessments, medication administration, any additional nursing interventions applied. Following a 6 month trial period, the suitability of converting the documentation of all process components to an electronic format would be discussed and determined. It is anticipated that electronic documentation would promote consistency, expediency, and efficiency. In addition, there would be an opportunity to write a report within the documentation software to expedite data collection and analysis. Policy and procedure would be developed to support the process change (Appendix E).

The process plan in its entirety would initially be presented to the Senior Administration members at a specifically scheduled meeting, using a PowerPoint presentation and handouts. In addition to the planned process change itself, the group would be given information on the impact of AW on patient morbidity and mortality as well as health care costs. Following presentation to, and approval by this group, a presentation in the same manner would be given to the members of the Medical Executive Board. A third presentation of the same information and in the same format would be given to the Nursing Directors. Following approval by the Medical staff and review by the Nursing Directors, the plan for the process change would be rolled out to the staff. An abbreviated PowerPoint presentation and handouts, with specific focus on process and intervention would be given to the nursing unit Patient Care Coordinators at their monthly meeting. Written information and education would be presented to general nursing staff by means of the hospital’s “Topic of the Week” education process; additional information by means of oral presentation and handouts would be provided at individual nursing department meetings as needed. Ongoing education would be provided using the Care Learning computerized process during annual competency reviews. Education of the nursing staff would include a pre- and post-test (Appendix F); information/direction on conducting a risk assessment, including patient observation, recognition of early signs and symptoms, and use of the CAGE questionnaire; information on withdrawal management, including use of the CIWA-Ar tool and review of the protocol and/or order set; and discharge planning to include social service referrals and patient education on AW (McKay, Koranda, & Axen, 2004). Education would include orientation focused on the appropriate use of the CAGE questionnaire and the CIWA-Ar assessment tool, using the actual forms as a reference point. In addition, an assessment and treatment algorithm (Appendix G) would be provided to nursing staff to assist in decision making. A review of that form would be included in their process focused education. As well, the treatment protocol/order set would be reviewed/discussed at length during the education process.

**Evaluation (From Module 4 Plan)**

Outcomes of nursing care must be shown to relate to the specific care aspects of the process change (Frisch & Kelley, 2002). The general purpose of an evaluation is to measure the impact of the process change and to determine if compliance with all aspects of the process has been met. A 6-month pilot will be completed to test the efficacy and feasibility of a process change related to the early recognition and effective management of AW. The AW Protocol Quality Management/Performance Improvement Data Collection Tool (Appendix H) will be used when doing a retrospective audit of charts for all patients admitted with a principal, primary, or secondary diagnosis of AW during the 6-month trial period. Questions to be answered during that audit will include:

* Were the assessment tools (CAGE and CIWA-Ar) appropriately and successfully completed?
* Was the treatment protocol appropriately initiated?
* Was documentation adequately and appropriately completed based on the protocol and policy?
* Was additional supportive care in the form of restraints and/or sitters required?

Data collection for this evaluation process will be limited to a retrospective chart audit that may be labor intensive. However, the actual number of patients diagnosed with AW at Casa Grande Regional Medical Center (90 patients in 2008) may impact the time/work necessitated by this audit. Patient identification for the intent of the audit will be based on information obtained from Health Information Management (HIM), related to and restricted by admission diagnosis type as defined earlier.

Data for this pilot time frame will be collected by the author and prepared for oral presentation to identified groups. Handouts recalling the general outline of the process change/protocol and the results of the chart audit, in graph format, will be made available to all groups. The initial presentation will be made to the senior administrative group and will allow them to review and determine how the data may impact patient care and safety, as well as possible financial impact. The Medical Executive Board will receive the information to review for the appropriate use of the CAGE and CIWA-Ar tools in successfully and accurately identifying patients at risk and in need of treatment. As well, this group will examine the appropriateness of the protocol orders, specifically pharmacotherapy. They would further review data for the accuracy and efficacy of the documentation flowsheet as it relates to assessment and intervention. The nursing department directors will review the data and address the efficiency and efficacy of the assessment tools (CAGE and CIWA-Ar) and the treatment protocol as it relates to nursing assessment and documentation and for any impact on nursing care delivery as it relates the use of restraints and/or sitters. The Patient Care Coordinators and nursing staff groups will review the data and discuss any impact related to the assessment tools, the treatment protocol, and the documentation flowsheet, and they will discuss the use of restraints and/or sitters as it impacts their care delivery. All recommendations will be forwarded to a committee, yet to be formed, at the completion of the pilot.

Following the initial data review by the indicated groups, a quality management/performance improvement team composed of four to six nursing department staff and a medical advisor will be formed. Data will be collected monthly using the same process previously outlined; data will be collated and reported quarterly to all groups. Team meetings will be held monthly to address any newly identified limitations to the protocol and/or the evaluation process, discussing any necessary process changes related to the protocol, and to discuss continued validity of the data collection tool. These activities will help to establish and validate an evidence-based and standardized process for the early identification of AW and any required interventions. In addition, collected data may provide the basis for additional changes including expansion of electronic documentation for AW, development of nursing care plans specific to AW, and development of AW clinical pathways.

**Dissemination (From Module 4)**

The ultimate impact of a process change rests in the effectiveness of the dissemination strategy and presentation (RUSH, 2001). To promote and expedite the proposed protocol/process change, the intent is to complete the dissemination plan in a 2-month time frame. This would allow for sufficient time to schedule presentations with all groups comprising the audience. The intended audience for the introduction of the protocol/process change at CGRMC is the senior administration team, the medical staff, the nursing department directors, the PCCs, and the professional nursing staff. The variation in audience needs, which is based on position within the CGRMC organization, can be met on all levels by the information provided. The goal of the dissemination plan is for all members of the audience, as previously noted, to have access to information related to the significance and impact of AW, and to the design and implementation of the AW protocol/process change. By way of an objective, that same group will acknowledge an understanding of the significance of the development and implementation of the AW protocol/process change. Content of the presentation will include research data related to the significance and impact of AW on the patient and the health care delivery system, and an outline of the proposed protocol/process change. Secondary to time constraints, all groups will be addressed through oral presentations. Handouts which include data related to the significance/impact of AW and copies of the policy, the assessment tools, the treatment protocol, the documentation flowsheet, and the process evaluation tool will be made available to all members of the audience. A review of all handout information will be included in the presentation.

Ultimately the intent of the presentation is for the audience to improve practice. All members of the identified audience have the skills and awareness levels to effectively promote and implement the protocol/process change. Continued monitoring following implementation will help to keep the group engaged as they become aware of the successes and failures, and what needs to be done to achieve success with the new protocol/process change.

Evaluation of the proposed process change would be based on retrospective chart audits using a specifically developed paper data collection tool. Elements to be examined would include compliance in the use of the Cage and CIWA-Ar screening/assessment tools, compliance in initiating and following the physician order set/protocol, review of the need/use of restraints and/or sitters, and review of the level of care required by the patient. Results of those audits would be reviewed, collated, and made available to Senior Administration, the Medical Executive Board, the Nursing Directors, and the staff on a quarterly basis. Recommendations related to the process and any suggested or needed change would be considered at the end of the 6-month trial period.

**Conclusion (Should pull major themes of paper together in concise manner)**

Studies and data have demonstrated the significance of AW on patient safety, patient care, and health care in general. Alcohol withdrawal affects as many as 1 in 4 hospitalized patients. Twenty percent of the national expenditure for hospital care is related to alcohol dependence. Early recognition of those patients at risk for AW and early intervention for those affected by AW, is essential to the prevention of the serious complications, or even mortality, which may accompany AW.

The need for a program/process change, directed at identifying and addressing AW within a population, has been determined. This process change has several facets, beginning with using recognized tools for the risk recognition and assessment processes; CAGE and the CIWA-Ar are seen as the tools of choice for this process. Positive risk (≥ 2) and assessment scores (≥ 10) would trigger pharmacological interventions based on a written order set/protocol. All ongoing assessments and interventions would be documented on a specifically designed flowsheet. Dissemination of information related to the process change would target an identified audience, using an established presentation mode/method. Education of all identified personnel would ensue, based on a formalized educational process including initial and annual education. Organized data collection would assist in determining the success of the change and provide the basis for any future change or edition to the process.

The risk of AW can be effectively addressed and controlled with early assessment and intervention. Early assessment and intervention can prevent or decrease the severity of AW complications, potentiating safe and effective care.

**Review of Literature (from module 2)**

Bayard, M., Hill, K. R., Keith, R., & Mcintyre, J. (2004). Alcohol withdrawal syndrome.

*American Family Physician, 69*(6), 1443-1450.

After briefly addressing the pathophysiology of alcohol withdrawal (AW), and

discussing the diagnosis and evaluation of the patient in AW, this article focuses

extensively on pharmacological interventions. Also includes attachments related to

diagnostic criteria, symptomatology, and treatment regimes. Provides general

information related to assessment, evaluation, and general care of the patient with AW.

Of greater significance and value is the more extensive information related to

pharmacological interventions.

Chaney, M., & Gerard, J. C. (2003). Improving care of patients with alcohol withdrawal in a

community hospital. *Joint Commission Journal on Quality and Safety, 29*(2), 94-97.

Focuses on a quality improvement process/opportunity as the basis for the development of a process to identify and treat patients with alcohol withdrawal. The process includes the development of an assessment flowsheet. It is significant in that it provides a guideline for this author’s assessment flowsheet design. Also provides insight into criteria selected for the process evaluation.

Crumpler, J., & Ross, A. (2005). Development of an alcohol withdrawal tool: a quality care

initiative. *Journal of Nursing Quality Care, 20*(4), 297-301.

Discusses the introduction of a formal symptom-triggered protocol at Wake Forest University Baptist Medical Center. Protocol includes use of CIWA-Ar for assessment, an alcohol withdrawal algorithm, and a physician order set. Also discusses the implementation and education processes simply and concisely. It is extremely helpful in the formulating and validating this author’s process change plan and very helpful in directing the implementation and education processes.

Daeppen, J. B., Gache, P., Landry, U., Sekera, E., Schweizer, V., Gloor, S. et al. (2002).

Symptom-triggered vs. fixed-scheduled doses of benzodiazepine for alcohol withdrawal: A randomized treatment trial. *Archives of Internal Medicine, 162*(10), 1117-1121.

Addresses symptom-triggered versus fixed-scheduled doses of medication for the treatment of alcohol withdrawal syndrome (AWS). The method used is defined as a prospective, randomized, double blind, controlled trial of 117 participants. The study is directed at modification of previously accepted treatment methods. The intervention outcomes noted in this study are purposeful to this author’s study in developing a plan/protocol for symptom-triggered pharmacotherapy.

Day, E., Patel, J., & Georgiou, G. (2004). Evaluation of symptom-triggered front-loading

detoxification technique for alcohol dependence: A pilot study. *Psychiatric Bulletin*, 28(11),

407-410.

Evaluates a symptom-triggered front-loading alcohol detoxification technique. Subtopics include patient and health care worker satisfaction related to the study topic and process, and a defined process for a patient assessment tool. The problem/purpose of the study and the significance to patient care are well stated. This is a simple randomized controlled trial, with a small sample size (23). New information related to different types of intervention and discussion related to a variation in drug therapy is purposeful to author’s study. Information related to health care worker satisfaction is of interest for future considerations related to this author’s project.

Driessen, M., Lange, W., Junghanns, K., & Wetterling, T. (2005). Proposal of a comprehensive

clinical typology of alcohol withdrawal: A cluster analysis approach. *Alcohol and*

*Alcoholism, 40*(4), 308-313.

Evaluates alcohol withdrawal symptomatology and the opportunity for clustering of withdrawal symptoms based on severity. Each phase of the study is clearly defined. The significance of the identification of alcohol withdrawal and appropriate treatment is clearly indicated. Hierarchical cluster analysis and discriminate analysis is applied to the research subjects (sample size of 217). The clustering process discussed may be beneficial in the development of a withdrawal identification process, helping to define the various stages of alcohol withdrawal so as to better provide the appropriate intervention.

Hardern, R., & Page, A. V. (2005). An audit of symptom triggered chlordiazepoxide treatment of

alcohol withdrawal on a medical admissions unit. *Emergency Medicine Journal, 22*, 805-6.

This brief article is based on information obtained using a 2-tailed Mann-Whitney U test for comparisons. The trial process uses symptom-triggered pharmacological intervention and the the CIWA-Ar assessment in an inpatient setting. The conclusion contains information related to time for resolution of symptoms, length of stay, duration of treatment, and staff benefits. Though this article is brief, it provides statistically sound information related to symptom-triggered treatment and outcomes of that treatment. This information provides further validity for data obtained in other articles, related to pharmacological intervention.

Lussier-Cushing, M., Repper-DeLisi, J., Mitchell, M., Lakatos, B. E., Mahmoud, M., & Lipkis-

Orlando, R. (2007). Is your medical/surgical patient withdrawing from alcohol. *Nursing2007*, *37*(10), 50-55.

Gives a brief overview of the impact of alcohol abuse/withdrawal on adult patients in the United States. It also includes general information related to the physiology of alcohol abuse. Of the most interest is the discussion related to the interaction with patients and the identification of abuse/withdrawal; and to the nursing care requirements/suggestions for these patients.This article does not provide any significant information related to formulation of a process change, but does include information on nursing care which could become part of an extended education process.

McKay, A., Koranda, A., & Axen, D. (2004). Using a symptom-triggered approach to manage

patients in acute alcohol withdrawal. *MedSurg Nursing, 13*(1), 15-21, 31.

Provides substantial background on a symptom-triggered approach to the pharmacological management of AW based on the physiology of AW. Also provides significant discussion related to education on the management of AW. Provides this author with substantial information on the impact and significance of AW. The clinical management piece provides significant direction on education processes that will help in the development of an educational piece to the process change plan.

Myrick, H., & Anton, R. F. (1998). Treatment of alcohol withdrawal. *Alcohol Health and*

*Research World, 22*(1), 38-43.

Examines the actual detoxification of patients with a primary diagnosis of alcohol withdrawal (AW). Focuses on the clinical features of AW, supportive care for AW, treatment settings for detoxification, and pharmacological versus nonpharmacological interventions. Provides significant information on supportive care as well as nonpharmacological therapies, both of interest as they relate to nursing education and patient care. Additional information on the clinical features of AW is also of interest and benefit.

O’Brien, C. P. (2008). The CAGE questionnaire for detection of alcoholism. A remarkably useful but simple tool. *Journal of the American Medical Association, 300*(17), 2054-2056.

Discusses the significance and simplicity of the CAGE questionnaire in detecting alcoholism and identifying those at risk for alcohol withdrawal. O’Brien also makes note that there is a significant issue related to physician tendency to overlook alcoholism in diagnostic consideration. Gives this author additional information related to the use of the CAGE tool and insight into the opportunity for change in the process of identifying patients at risk for alcohol withdrawal.

Saitz, R., Mayo-Smith, M. S., Roberts, M. S., Redmond, H. A., Bernard, D. R., & Calkins,

D. R. (1994). Individualized treatment for alcohol withdrawal. A randomized double-blind controlled trial. *The Journal of the American Medical Association*, 272(7), 519-523.

Discusses individualized treatment for alcohol withdrawal, focusing on symptom-triggered treatment/therapies versus standard fixed-scheduled treatment. Conclusions related to the specific treatment are significant to author’s study as they relate to symptom-triggered treatment.

Saitz, R. (1998). Introduction to alcohol withdrawal. *Alcohol Health and Research World, 22*(1),

5-12.

Examines and discusses the mechanisms of alcohol withdrawal (AW), the clinical features of AW, and the management and treatment of AW. Also suggests possible future studies related to all of these aspects of AW, as well as specifics related to treatment settings, methods, clinical practice, and the use of evidence-based practice in treatment. Provides this author with extensive clinical information related to AW and information related to different interventions using a variety of medications. A discussion related to medical conditions easily confused with AW is informative but more directed to physicians.

Wetterling, T., Weber, B., Depfenhart, M., Schneider, B., & Junghanns, K. (2006). Development

of a rating scale to predict the severity of alcohol withdrawal syndrome. *Alcohol and*

*Alcoholism,* 41(6), 611-615.

Focuses on the development of a rating scale to predict the severity of alcohol withdrawal syndrome. Evaluates the clinical feasibility of a single assessment tool or process, the LARS (Luebeck Alcohol Withdrawal Risk Scale). Limitations are noted related to concurrent medical conditions of the subjects, as well as to treatment required for ethical reasons. Proposes further studies to validate the findings of this study as there are no known comparison scales. Provides additional information related to the development of an assessment tool as part of author’s study even though the study itself is weak from a validation standpoint.

Williams, D., Lewis, J., & McBride, A. (2001). A comparison of rating scales for the alcohol- withdrawal syndrome. *Alcohol and Alcoholism, 36*(2), 104-108.

Addresses a comparison of rating scales for AWS. Uses literature to identify rating scales for AWS and then compares their content and ease of application. Concludes that trials designed to assess reliability and validity are necessary to improve the measure of any scale. Difficult to read/comprehend and provides this author with little new significant/useful information.

Wojtecki, C. A., Marron, J., Allison, E. J., Kaul, P., & Tyndall, G. (2004). Systematic ED

assessment and treatment of alcohol withdrawal syndromes: A pilot project at a Veterans Affairs Medical Center. *Journal of Emergency Nursing, 30*(2), 134-140.

Discusses a project led by a multidisciplinary team to address the patient safety concerns related to the management of alcohol withdrawal. Goals include: identify an evidence-based practice guideline for pharmacological management of alcohol withdrawal (AW); identify a standardized clinical assessment tool to guide assessment and treatment; and educate staff on the selected process. Helps to provide some of the framework for the process change discussed in author’s paper. It also provides some direction as to staff education.

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Phillips, S., Haycock, C., & Boyle, D. (2006). Development of an alcohol withdrawal protocol: CNS collaboration exemplar. *Clinical Nurse Specialist, 20*(4), 190-198.

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APPENDIX A

|  |  |  |
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| **CASA GRANDE REGIONAL MEDICAL CENTER**  **CAGE Questionnaire** | | |
| The CAGE is a brief questionnaire for detection of alcoholism. It is to be administered to all patients with a documented or verbalized history of alcohol abuse, or to all patients exhibiting early signs of alcohol withdrawal. | | | |
| Score 0 for NO and 1 for YES.  A total score of 2 or more is considered clinically significant  and requires further assessment, using the CIWA-Ar. | | | |
|  | Score  1 Point | Score  0 Points | |
| 1. Have you ever felt you should cut down on your drinking? | YES | NO | |
| 2. Have people annoyed you by criticizing your drinking? | YES | NO | |
| 3. Have you ever felt bad or guilty about your drinking? | YES | NO | |
| 4. Have you ever had a drink first thing in the morning to steady your nerves to get rid of a hangover? (eye-opener) | YES | NO | |
| POINTS |  |  | |
|  | TOTAL = |  | |



APPENDIX C

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| CASA GRANDE REGIONAL MEDICAL CENTER  **Alcohol Withdrawal Protocol\*** | | | (Patient Sticker) | | | |
| *\* Requires bedside assessment and/or written orders*  *by the physician for implementation.* | | | | | | |
| 1. Complete CIWA-Ar assessment every 1 hour until score is less than 10, and then reassess every 4 hours. | | | | | | |
| 2. For CIWA-Ar score of 10-20:  Give Lorazepam 1 mg \_\_\_ orally \_\_\_\_ intramuscularly \_\_\_\_intravenously  every 1 hour until score is less than 10. | | | | | | |
| 3. For CIWA-Ar score greater than 20:  Give Lorazepam 2 mg \_\_\_ orally \_\_\_\_ intramuscularly \_\_\_\_ intravenously  every 1 hour until score is less than 10. | | | | | | |
| 4. If CIWA-Ar score has not decreased after 4 consecutive doses of Lorazepam, contact the physician. | | | | | | |
| 5. Call physician stat if there is delirium tremens. | | | | | | |
| 6. Give Thiamine 100 milligrams in 100 ml. NS, to infuse over 1 hour every 24 hours x 3 doses. | | | | | | |
| 7. Multivitamins orally daily. | | | | | | |
| 8. Baseline labs to include: (check all applicable) | | | | | | |
| CMP with magnesium  CBC with differential  Liver enzymes | | | | | | |
| 9. Complete I&O every 4 hours or per unit protocol. | | | | | | |
| 10. Discontinue protocol when CIWA-Ar is less than 10 for 48 hours. | | | | | | |
| 11. Other medications: | | | | | | |
| a. |  | | | | |  |
| b. |  | | | | |  |
| c. |  | | | | |  |
|  | | | | | | |
|  | |  | |  |  | |
| Physician Signature: | |  | | Date: |  |  |
|  | | | | | | |

Date

Shift

**1**

Dr.

Notified

**8**

Side rails up

**2**

Dr.

Notified

**9**

Family at bedside

**3**

**10**

Sitter at bedside

**4**

**11**

**5**

orientations

**6**

**12**

Other:

Other:

**7**

**13**

Other:

**14**

Other:

Initials

Initials

Initials

Seizure precautions

Quiet environment

**Interventions:**

Restraints in place

Printed Name

RN Signature

Printed Name

RN Signature

Safety check every 1 hr

Bed alert on

CASA GRANDE REGIONAL MEDICAL CENTER

**ALCOHOL WITHDRAWAL ASSESSMENT/FLOW SHEET**

APPENDIX D

*(Patient Label)*

Initials

RN Signature

**Outcomes:**

(end of shift evaluation)

No progression of score

Medication for scores

Printed Name

Simple, quiet explanations/

Interventions

CIWA-Ar Score

Time

Lorazepam

Dose IV/PO

APPENDIX E

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| CASA GRANDE REGIONAL MEDICAL CENTER  System Wide | | | Policy and Procedure Manual  Nursing Department | | |
| Chapter  D | Section  H | Subject:  **ALCOHOL WITHDRAWAL PROTOCOL** | Date  Issued  6/2009 | Date  Revised | Page  1 of 2 |

|  |  |
| --- | --- |
| **I. PURPOSE** | The purpose of this policy is to direct the process for identifying the patient at risk for AW and utilizing the AW protocol when initiated via physician order. |
| **II. POLICY STATEMENT** | The goal of CGRMC is to minimize the effects of AW in a safe, humane and proactive manner while the patient is hospitalized. |
| **III. DEFINITIONS** | AW: Alcohol Withdrawal  CAGE: Standardized questionnaire used to determine possible alcohol abuse.  CIWA-Ar: Clinical Institute Withdrawal Assessment of Alcohol Scale, Revised |
| **IV. PROCEDURE** | A. The CAGE questionnaire (attached) will be initiated when a history of alcohol abuse is verbalized or documented. The CAGE questionnaire will be initiated when a previous history of AW is documented or verbalized.  B. The CIWA-Ar (attached) assessment will be complemented when the patient scores 2 or greater on the CAGE questionnaire or manifests early symptoms of AW, including ALOC, tremors, anxiety, diaphoresis, and increased heart rate and blood pressure.  C. The CGRMC AW protocol will be initiated upon a physician’s order when the patient scores 10 or greater on the CIWA-Ar assessment.  D. Assessments and interventions will be completed by a licensed nurse per established protocol (attached).  E. Nursing documentation will be completed on the Alcohol Withdrawal Assessment/Flowsheet (attached) and in Cerner as per policy. |

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| --- | --- | --- | --- | --- | --- |
| SA GRANDE REGIONAL MEDICAL CENTER  System Wide | | | Policy and Procedure Manual  Nursing Department | | |
| Chapter  D | Section  H | Subject:  **ALCOHOL WITHDRAWAL PROTOCOL** | Date  Issued  6/2009 | Date  Revised | Page  2 of 2 |

|  |  |
| --- | --- |
| **V. REFERENCES** | None |
| **VI. ATTACHMENTS** | CAGE  CIWA-Ar  Alcohol Withdrawal Protocol  Alcohol Withdrawal Assessment/Flowsheet |

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APPENDIX F

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| **CASA GRANDE REGIONAL MEDICAL CENTER**  **Alcohol Withdrawal Education Program**  **Pre- and Post-Test** | | | | |
| 1. Alcoholism affects approximately 15 million adults in the United States. | True |  | False |  | |
| 2. An estimated 20-50% of all hospital admissions are related to the effects of alcoholism. | True |  | False |  | |
| 3. 15-20% of all hospitalized patients are dependent on alcohol. | True |  | False |  | |
| 4. Approximately 25% of patients withdrawing from alcohol have seizures. | True |  | False |  | |
| 5. GI upset, insomnia, tachycardia, or hypotension may be early signs of alcohol withdrawal. | True |  | False |  | |
| 6. Symptoms of alcohol withdrawal can manifest as soon as 6 hours after the patient’s last drink. | True |  | False |  | |
| 7. Alcohol withdrawal cannot be confirmed until the patient displays significant agitation, confusion, DT, or seizure activity. | True |  | False |  | |
| 8. Lorazepam is the drug of choice in treating patients with hepatic compromise. | True |  | False |  | |
| 9. Symptom-triggered drug treatment regimens are less effective than fixed dose regimens because of the inconsistency of dosing. | True |  | False |  | |
| 10. Early intervention in alcohol withdrawal can decrease the amount of drugs required in the treatment of alcohol withdrawal. | True |  | False |  | |

