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# Alcohol Use Disorder and Withdrawal Syndrome in Correctional Facilities: An Evidence-Based Clinical Practice Guideline to Prevent Alcohol-Related Adverse Events

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This is to certify that the doctoral study by

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has been found to be complete and satisfactory in all respects,
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Abstract

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Project Submitted in Partial Fulfillment

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Abstract

In the United States, one in every 100 adults is confined to a correctional facility. Approximately 60% of inmates have an alcohol use disorder (AUD). When compared to the general population, inmates are twice as likely to have AUD. As they are unable to readily access alcohol, inmates entering a correctional facility with AUD are at high risk for the lethal alcohol withdrawal syndrome (AWS). AWS is preventable and yet correctional nurses process new inmates without an evidence-based clinical practice guideline (CPG) to assess for AUD, the prerequisite for AWS. The purpose of this project was to develop an evidence-based CPG with implementation algorithm to guide the inmate assessment for AUD. The ACE star model of knowledge transformation guided the project, the AGREE II was used to develop the CPG, and the Delphi technique was used to evaluate the final CPG with algorithm. Nationally, 20 correctional health experts were identified and asked to participate in the Delphi expert panel, although 11 experts agreed to participate only 9 completed the evaluation. The experts were correctional health experts, nurses and physicians, from different regions of the United States. The resulting CPG satisfied all 23-items of the AGREE II. Through 2 Delphi panel rounds, all participants recommended the CPG with minor modifications (6 experts recommended as presented while the 3 recommended with modifications). At the project conclusion, all 9 experts agreed the CPG will help improve the identification, referral, and management of inmates with AUD. This project contributes to positive social change as the CPG addresses a serious problem, AUD with possible AWS, in a vulnerable population. The CPG may be generalizable for use in other correctional facilities.

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# Dedication

This project is dedicated to all the nurses responsible for providing high quality health services to inmates in correctional facilities across the United States. It is also dedicated to my supportive family and panel of experts that supported my project.

Acknowledgments

I want to express my appreciation for the contributions of my doctoral committee to the completion of this DNP project. Thank you to Dr. Patrick Palmieri (chair), Dr. Eric Anderson (committee member), and Dr. Oscar Lee (University Research Reviewer).

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Section 1: Nature of the Project

## Introduction

The World Health Organization (WHO) classifies alcoholism as a medical and psychiatric disease (Hasin, 2003; WHO, 2016). In 2013, the American Psychological Association (APA) issued the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM–5). In the DSM–5, alcohol abuse and alcohol dependence disorders are integrated into a single disorder called AUD with mild, moderate, and severe sub classifications (National Institutes of Health [NIH], 2016). AUD is a medical diagnosis for individuals with a pattern of uncontrollable alcohol use including the urge to consume alcohol, the inability to stop drinking, the need for more alcohol to get the same effect, and the manifestation of the symptoms of alcohol withdrawal syndrome (AWS) with abrupt decreases or elimination of alcohol use (APA, 2012).

AUD affects approximately 6.2% or 16 million of all adults (9.8 million men and 5.3 million women) in the United States (National Institute on Alcohol Abuse and Alcoholism [NIAAA], 2012). Also, an estimated 623,000 adolescents (aged 12–17) are at significant risk for having AUD (NIAAA, 2012). According to the U.S. National Institute on Alcohol Use Disorder, almost 25% of individuals 18 years or older reported in 2012 that they had consumed five or more alcoholic drinks on the same occasion and at least one per day in the past 30 days. Furthermore, about 7% of U.S. adults reported engaging in heavy drinking in the past month (Substance Abuse and Mental Health Services Administration NIH, 2012).

Similar to the general U. S. American population, in correctional settings individuals with AUD are present. In 2010, the National Center on Addiction and Substance Abuse assessed the

presence of AUD in correctional settings in the United States. About 80% of surveyed inmates were identified as substance abusers, this are individuals who regularly consumed alcohol and/or illegal drugs (National Center on Addiction and Substance Abuse, 2010; see Appendix A). In 2002, an estimated 66% of prison inmates reported using alcohol at least once a week for a month (James, 2004). Thirty-three percent of inmates were under the influence of alcohol at the time of their current offense (James, 2004). When compared to the general population, AUD is 59% higher for incarcerated inmates. The current available data support that AUD is a present common issue in incarcerate as well as any other form of detention. Researchers may conclude that AUD is a variable related to incarceration.

Multiple support group and interventions exist to treat AUD. These include Alcoholic Anonymous, prescription medications, counseling services, and self-help resources on the Internet (Morrow, 2013). Health care systems such as the Veterans Administration; the Substance Abuse and Mental Health Services Administration (SAMHSA), which is part of the U.S. Department of Health and Human Services; private health insurance; and nonprofit organizations, also provide resources and interventions for those with AUD (SAMHSA, 2013). The principal purpose of these programs is to reduce the impact of substance abuse and mental illness on U.S. communities (SAMHSA, 2013). However, incarcerated inmates are not able to access these or community services nor can they enter alcoholism treatment programs (SAMHSA, 2013). In many correctional facilities, inmates lack access to family and friends and the Internet to pursue self-help for alcoholism treatment (Immigration and Custom Enforcement Health Service Corps [IHSC], 2012). As such, inmates rely on the correctional facilities' medical department to manage alcohol issues (Smith, 2009).

Nurses are the clinicians responsible for providing continuous health services to inmates in U.S. correctional facilities. They are the first health service contact for inmates and provide health assessments, initial care, and placement recommendations (IHSC, 2012; Smith, 2009). Sick call is the primary way inmates can access health services, including alcohol treatment, while incarcerated (Smith, 2009). In the detention center, inmates can access sick call via a correctional officer referral or by completing a form (see Appendix B), which is reviewed by the correctional facility triage registered nurse, who schedules an appointment based on the level of urgency (IHSC, 2012). At these appointments, nurses can assess inmates for alcohol use, intoxication, and/or withdrawal and refer them for treatment (IHSC, 2012).

In sick call, nurses provide services requiring expert clinical assessment and advanced decision-making competencies. For example, they can be first emergency responders who make decisions on an inmate's disposition, provide wound care, and select and administer medication (Smith, 2009). They depend on strong evidence-based practice guidelines and facility protocols to provide care and identify medical conditions, such as alcohol withdrawal, in a timely manner (Smith, 2009). Using such protocols, nurses can consistently complete the appropriate assessments and use their findings to implement evidence-based treatment strategies, thus decreasing the likelihood of subsequent complications and adverse events (Smith, 2009). Evidence-based guidelines also provide nurses with current knowledge to ensure that they are familiar with the best available practice interventions (Sackett et al., 1996).

Sick call provides an opportunity for registered nurses to implement an evidence-based guideline for AUD-related interventions. The aim of this project was to develop an evidence-based guideline for nurses in U.S. correctional facilities to use in assessing inmates to determine

if they are AUD and at risk for acute AWS. In addition, the project leader sought to determine whether the evidence-based guideline constituted an addition in the patient care that would be of benefit for nurses in these situations as well as the correctional facilities. The overall project goal is to increase the effectiveness of alcohol abuse screening in U.S. correctional facilities to decrease the number of adverse related events.

## Problem Statement

Excessive alcohol intake, or intoxication, increases the risk for behavior problems such as violence and depression and health problems such as personal injury, liver diseases, and cancer among others (Centers for Disease Control and Prevention [CDC], 2016a, 2016b). Alcohol abuse is defined as a pattern of alcohol consumption that leads to physical and/or mental health problems (WHO, 2014). Alcohol abuse is prevalent in the United States with 16 million adults and an estimated 623,000 U.S. adolescents (between ages 12–17) reported to have AUD (NIAAA, 2012). Slightly over one million of these adults and an estimated 73,000 adolescents received treatment for an AUD at a specialized facility in 2013 (NIAAA, 2012).

In the United States, one in every 100 adults is confined in a correctional facility (Pew Charitable Trusts, 2008). In 2006, 56% of inmates in state prison had substance dependence or abuse without mental health problems while 74% had mental health problems and met criteria for substance dependence or abuse. Similarly, in local jails 53% of inmates are substance dependent or have abuse issues but no mental health problems while 76% have concurrent mental health problems (James & Glaze, 2006).

According to an assessment completed by staff at the detention facility during January-March, 2011 used in this project study, 30% of inmates had an AUD resulting in approximately

25% AUD related emergency room visits. The facility inmates with AUD are at risk of serious medical complications such as AWS (IHSC, 2012). The correctional facility assessment revealed that the sick call program plan and protocols had last been updated in 2000. According to IHSC (2012) standards, these guidelines are outdated for assessing and directing the care of patients with signs and symptoms of AUD. To improve services in the sick call area, nurses at the facility needed current evidence-based guideline to appropriately assess alcohol withdrawal signs and symptoms. I believe that the availability of such guidelines will result in improved nursing assessment and early identification and management of inmates with AUD.

## Background

The origin of evidence-based health care (EBHC) extends back to ancient time. Evidence was primarily historical or anecdotal accounts about what worked and what failed in treating patients (Claridge & Fabian, 2005). In the Renaissance era, which began roughly during the seventeenth century, physicians started maintaining medical journals and textbooks (Claridge & Fabian, 2005). Nursing also has a rich history of using research in practice, which was pioneered by Florence Nightingale in the late 1800s (Titler, 2008). Since Nightingale, leaders in the nursing profession have sought to improve health care through the application of research findings to clinical practice (Titler, 2008). The need to move research into practice was the rationale for the many institutions' decision to offer Doctor of Nursing Practice degrees starting in the 2000s (American Association of Colleges of Nursing [AACN], 2006).

The most widely cited definition of Evidence Based Practice (EBP) is that is the meticulous, overt, and judicious use of current best evidence in making decisions about the care of patients (Sackett, Rosenberg, Muir, Haynes, & Richardson, 1996). EBP involves the

integration of clinical expertise with the best available evidence from systematic research to improve practice (Sackett et al., 1996). Best evidence includes empirical data from randomized controlled trials and descriptive and qualitative research as well as information from case reports, scientific principles, and expert opinions (Titler, 2008). The principles and practice of EBHC provide nurses with the means to close the gap between research and practice (Bhargava & Jaeschke, 2001). EBP is a process that may benefits nursing practice and patients by implementing best available research information.

Continuous improvement in nursing practice is essential to providing safe and effective care to patients (Institute of Medicine [IOM], 2004). Contemporary nurses integrate evidence into their practice. As such, EBP is a problem-solving approach wherein nurses integrate the best research evidence, clinical expertise, and patient preferences to deliver optimal care (Melnyk, Fineout, Ford, & Stillwell, 2011). The use of EBP helps nurses to avoid errors in decision making relative to patient care and to recognize practices that are not ethically justified for continued use (Houser & Oman, 2011). Therefore, the integration of EBP is crucial to improve patient care and the quality of services.

Thinking on patient care and the quality of services improvement, nurse will integrate EBP into their practice. When nurse integrate evidence into their daily workflow, nurses are empowered to contribute to better patient outcomes and reduce the risk of unexpected and adverse events in patient care (Majid et al., 2011). To integrate evidence into practice, nurses have begun to develop and implement evidence-based guidelines (Smith, 2009). These guidelines offer practicing nurses quick and simple to use access to care modalities, which have been developed and validated by expert clinicians based on high quality research in different

health care specialties (Stevens, 2013). Having nursing guidelines may support nursing in improving patient care to enhance the quality of outcomes.

According to ICE (2012), nursing guidelines within detention facilities are often outdated or not based on evidence. This was an important rational for moving into this project work. One of the project objectives is to improve nursing assessment, identification, and referral of inmates with alcohol addiction. Integrating strategies such as nursing practice guidelines may improve nursing practice and patient care in detention facilities (Smith, 2009).

## Purpose

The correctional facilities administrators ensured that quality care is available to all inmates and does not differ by race, ethnicity, or other personal characteristics unrelated to a patient's reason for seeking care (Mayberry, Nicewander, Huanying-Qin, & Ballard, 2006). The project purpose was to improve nursing inmate assessments by nurses to prevent alcohol withdrawal by developing an evidence-based guideline with algorithm for the nursing assessment of inmates entering a correctional facility to determine if they are at risk for AWS. By implementing an EBP guideline, with performance improvement goals, nurses were to understand the best assessment method, the proper referral for at-risk inmates, and the detention center goals (Brockopp, 2011). The project objective was to develop an evidence-based nursing assessment algorithm, assessment guideline, and management expectations for inmates at-risk for alcohol intoxication.

## Significance to Nursing Practice

Clinical practice guidelines are a method for moving evidence into nursing practice (Thomas, 1999). The adoption of a clinical practice guideline for this project benefits nurses in

the early identification of inmates with AUD/alcohol intoxication, especially those with the signs and symptoms of AWS. This, in turn, allowed nurses to initiate the appropriate interventions in a timely manner, thus avoiding potentially complications (NIH, 2012). In the correctional setting, nurses care for inmates arriving at the correctional facility from the streets, often without health services prior to incarceration (Schoenly & Know, 2013). As a result, inmates enter with exacerbations of chronic illnesses, especially in the context of long-term narcotic abuse and AUD (Schoenly & Know, 2013).

In addition to assessments, nurses are responsible for the evaluation of the health complaints without the benefit of a medical history or cooperation from the inmate (ICE, 2012). There are also time constraints inherent in clinical practice in a correctional facility, exacerbated by increasing demands for nursing care (Pipe et. al., 2005). With these practice challenges in the correctional setting, guidelines for assessments and referrals can reduce the time required to perform essential clinical work. Despite the best efforts to provide optimal care, nurses need to manage the rapid inmate turnover in correction facilities, in the context of assessment with incomplete treatment (Schoenly & Know, 2013). Nevertheless, an evidence-based clinical practice guideline can facilitate a robust inmate assessment for AUD that results in better health outcomes.

Nursing practice will advance when evidence is used to guide care that is safe, effective, and efficient (Stevens, 2013). In the context of this project, nurses will learn to standardize AUD assessments with a clinical practice guideline and to develop individualized care plans (Stevens, 2013). The National Institute for Health & Clinical Excellence, or NICE, (2013) believes clinical practice guidelines are intended to improve the processes to facilitate better health outcomes. An

important objective is to provide evidence-based information to guide the care of inmates with AUD (Naegle, 2012). Moreover, adoption and adherence to guidelines supports informed decision making specific to interventions (NICE, 2013). Implementing clinical practice guidelines in correctional setting will improve nursing care leading to improved inmate outcomes.

Finally, an evidence-based clinical practice guideline increases nurse confidence in performing as an expert nurse (Stevens, 2013) in managing inmates with AUD. With increased knowledge, nurses are more likely to provide better care and more accurate identification of AUD. The resulting product of this project contributes to the body of knowledge for correctional nursing and serves as a reference to address other issues in the sick call program.

**Project Question(s)**

In research, the formulation of a question is one important step. Formulating a clinical question in a systematic way facilitates an efficient process and a prompt answer, leading to improved processes and patient outcomes (Stillwell, et.al., 2010). Commonly for this purpose researchers utilize the PICOT format. PICOT format is a helpful approach for summarizing research questions (Riva, Malik, Burnie, Endicott, & Busse, 2012) PICOT help to formulate a clinical question and guide the search for evidence to find the best evidence available in a more rapidly and efficient manner (Stillwell et al., 2010) PICOT acronym stand for ***P****= patient / population / problem,* ***I****= intervention or issue of interest,* ***C****= comparison intervention or issue of interest,* ***O****= outcome and* ***T****= type of project / time frame.*

The project question is: What is the appropriate evidence-based alcohol use disorder (AUD) guideline with algorithm to guide nurses in the assessment, identification, and treatment of inmates at risk for alcohol withdrawal syndrome (AWS)?

**Population / Problem** (Elkins, 2010) = Inmates with AUD at risk for AWS entering a correctional facility.

**Intervention** = Evidence-based guideline with algorithm to guide the process for identifying inmates with AUD at risk for AWS.

**Comparison** = Current standard of care.

**Outcome** = Timely identification of alcoholism and referral for treatment to reduce the number of emergent alcohol withdrawals.

**Type / Time** = Quality improvement project, clinical practice guideline development

## Evidence-based Significance of the Project

In health systems, preventable harm is caused by major deficits in processes and limitations in human performance (IOM, 2000). A health system should be safe, effective, patient-centered, timely, efficient, and equitable in delivering health care (IOM, 2001). These principles set forth the foundation for the process of performance improve to obtain better care outcomes and improve overall health care system, including correctional setting (IOM, 2001). In an effort to mitigate health issues such as substance abuse, a key recommendation is to employ evidence-based practice to close the gap between what is known to be effective care and what is actually practiced (Stevens, 2013). Evidence-based practice utilized the latest research base information available to achieve quality care and above principals (Emanuel, Day, & Diegnan, 2011).

Nursing, an integral health system component, is responsible for evidence-based care delivery purposed to improve practice and patient outcomes (Rycroft-Malone, Bucknall, & Melnyk, 2004). The NICE (2013) stated evidence is intended to advance current knowledge to advance clinical practices and processes to improve health outcomes. In correctional settings, evidence leads to the new knowledge necessary to change AUD assessment processes and to improve interventions for inmates at risk for AWS change interactions with inmates (Serin, 2005).

This project resulted in the development of a clinical practice guideline with algorithm specific to identifying inmates with AUD and or intoxication at risk for AWS. The intended effect of the clinical practice guideline is to standardize nursing practice in the correctional setting to produce predictable health outcomes for inmates at risk for AWS (Stevens, 2013). Overall, this project applied the principles evidence to enhance decision making to initiate interventions to improve inmates' wellbeing (Predergast, 2011).

In correctional facilities nurses are the primary health care providers. Correctional nurses are responsible for the inmate screenings and assessments, housing recommendations, and advancing inmates to high level health services. In correctional nursing, the prerequisite knowledge and clinical expertise that includes the use of research evidence in clinical decision making to optimize nursing practice and promote positive health outcomes within correctional facilities (Almost et al., 2013). This project aims to add knowledge and experience to the correctional nursing practice caring for patients with AWS. The project findings are available to others interested in the clinical practice guideline to determine whether the approach presented here is a solution for similar practice-related problems.

## Definitions of Terms

For this project, the following concepts and definitions:

*Alcohol intoxication status*: The condition whereby a person abuses or misuses alcohol. (Medline Plus, 2013).

*Alcohol use disorder (AUD)*: The consistent use of alcohol that causes clinically and functionally significant impairment, such as health problems, disability, and failure to meet major responsibilities at work, school, or home (Substance Abuse and Mental Health Administration [SAMHSA], 2015). In May 2013, the American Psychiatric Association combined the alcohol abuse and alcohol dependence disorders into AUD NIH, 2016). According to the DSM-5, a diagnosis of substance use disorder is based on evidence of impaired control, social impairment, risky use, and pharmacological criteria. The severity of the AUD is defined as mild (the presence of 2 to 3 symptoms), moderate (the presence of 4 to 5 symptoms) or severe (the presence of 6 or more symptoms); (NIH, 2016).

*Alcohol withdrawal syndrome (AWS)*: The state whereby a person who has consumed too much alcohol daily abruptly stops or slows the intake leading to signs and symptoms of deprivation (Medline Plus, 2013).

*Clinical practice guideline*: The EBP guidelines are systematically developed statements based on the latter scientific information may assist nurses in decisions about appropriate health care for specific clinical circumstances in this case alcohol intoxication and or alcohol withdrawal (Thomas, 1999).

*Delirium tremens (DT)*: is the severest form of alcohol withdrawal syndrome, frequently after alcohol withdrawal seizures and is characterized by disturbance of consciousness and a

change in cognition (Kim & Peterson, 2014). Delirium tremens is commonly caused by habitual excessive alcohol consumption, often accompanying sudden deprivation or withdrawal. It can present acutely and can even result in death. Common signs and symptoms include sweating, trembling, anxiety, confusion, and hallucinations (Kim, Kyung, Bae, Park, & Kwang 2015).

*EBNP registered nurse alcohol assessment guidelines*: Guidelines designed to assess and manage patients with alcohol use disorders (alcohol misuse, harmful drinking, and alcohol dependence), as well as potential intoxication and signs/symptoms of withdrawal.

*Evidence-based practice (EBP)*: The incorporation of best evidence obtained from research with healthcare clinical expertise and individualization of care through inclusion of patient values/ preferences (Stevens, 2013).

*Intake*: The process during which an inmate's medical history is collected (ICE, 2012).

*Intoxication*: A condition that follows the administration of a psychoactive substance and results in disturbances of psychophysiological functions and responses (WHO, 2016).

*Nursing sick call (in correctional setting)*: An autonomous nursing practice with the purpose of assessing and treating individuals presenting with minor health complaints for which they would normally self-treat using over the counter medications (Smith, 2009).

*Sick call reassessment*: The process in which patients with a history of alcoholism and withdrawal are re-assessed 48-96 hours and 5-10 days after the last drink to verify their alcohol withdrawal status.

*Sick call visit*: The appointment given to the inmates to be seen in the sick call area (IHSC, 2012).

*Sick call walk in*: An urgent visit to evaluate patients when, upon a complaint, the correctional officer or correctional officer observes that inmate does not look well, but his/her status does not require the use of the emergency call process (IHSC, 2012).

*Triage in sick call*: The process through which the registered nurse triages patients based on their need for immediate medical treatment taking into consideration benefits arising from such care (Knox, 2014).

## Scope and Delimitations

### Assumptions

For this project, an important assumption is an evidence-based guideline is a beneficial tool for nurses to reference in providing high quality patient care that translates into better patient outcomes. Another project assumption was a nursing assessment guided by an evidence-based approach, will improve the identification of patients presenting with the signs and symptoms of AUD. The last assumption is an appropriate inmate assessment for AUD will decrease the AWS incidence. These assumptions focus the project towards the desired outcomes, correct identification of inmates at risk for AWS. Overall, there will be improved correctional setting health services processes, and better assessment and management of AUD.

### Limitations

An important project limitation is the evidence was largely derived from non-correctional setting literature as there was sparse correctional setting literature. Second, the detention center's Correctional Investigation Research Board (IRB) has a lengthy and cumbersome process limiting the project implementation. This resulted in the use of an expert consensus to evaluate the guideline and algorithm. Third, many individuals invited to participate in the expert consensus

process were not able to participate due to Federal Government research participation process which is also lengthy and cumbersome. Finally, the appropriateness of the clinical practice guideline was developed with non-correctional setting research and evaluated by correctional facility experts. These limitations are common in areas of clinical practice involving protect human subjects, such as inmates.

With the development of the clinical practice guideline, there are possible implementation barriers, such as guidelines approvals and management support in the correctional setting. For example, a recent survey about evidence and practice among nurses indicated that despite their desire and positive attitudes toward EBP as a means to gain more knowledge and skills, they still faced significant barriers to utilizing it in practice (Stevens, 2013). The top three barriers to adopting EBP were lack of time, inability to understand statistical terms, and inadequate understanding of the jargon used in research articles (Majid et al., 2011). The guideline evaluators will receive clear instructions about the EBP guideline and the evaluation process.

Another possible limitation affecting the project is the number of nurses that are willing to participate in the project. This is a volunteer basis project no mandatory neither comes as a requirement from the organization management. Nevertheless, the group of nurses had showed interest on the project and voice consent of participation. The sample of this project is relatively small and this compromise the reliability of the findings. Projects conducted on larger sample sizes provide more reliable findings (Burns & Grove, 2009).

In correctional setting, any project implementation faces all these limitations. In addition to the fact that the detention center in where the project will be implemented has three different leadership and multiples stakeholders. This can delay or stop the project at any given time.

## Implications for Social Change in Practice

Rapid turnover (due to the release or transfer from one correctional setting to another) often results in incomplete medical services, missed diagnoses, and untreated communicable diseases (Schoenly & Know, 2013). The correctional facility population has a high incidence of poor nutrition, substance abuse, homelessness, lack of medical care, and risky sexual behaviors that leads to disproportionately higher rates of HIV, Hepatitis C, sexually transmitted infections, and tuberculosis (Hammett, 2006). In correctional facilities, the HIV rate is nearly four times greater than the general population, and as many as 35% of inmates have chronic HCV infection (Gough et al., 2010). Furthermore, tuberculosis is a growing concern, with reported rates at least three times greater than the general population (MacNeil, Lobato, & Moore, 2005). To identify and address the inmates with AUD, nurses working in a correctional setting needed strong assessments skills, critical thinking, and relationships with local community and public health services (Schoenly & Know, 2013). With an appropriate clinical practice guideline to identify and manage inmates with alcohol issues, there will be less withdrawal issues. With a successful implementation, other clinical practice guidelines can be developed for implementation in correctional facilities.

Another social benefit derived from the implementation of this project is the improvement in sick call services in other community settings, such as military bases, half-way houses, and shelters. Correctional facilities manage a population with a high prevalence of

alcoholism, drug abuse, or other medical conditions related to alcohol consumption. Thus, successful interventions in this setting can provide community benefit as inmates leave confinement.

## Implications for Nursing Practice

Clinical guidelines are a potential means by which evidence can be incorporated in to nursing practice (Thomas, 1999). The exploration of the adoption of evidence-based guidelines can benefit the correctional setting nurses, as it can assist them in the early identification of patients with AUD, alcohol intoxication and/ or with signs and symptoms of AWS. This, in turn, would allow them to start appropriate patient care in a timely manner, thus avoiding potentially for complications (NIH, 2012). In a correctional setting, in their daily practice, nurses are required to treat inmates who are coming straight from the street to the detention centers and have often received no health care prior to incarceration (Schoenly & Know, 2013). Nurses are thus responsible for the assessment of the inmate and evaluation of the health complaint, which may be a challenge, due to the absence of medical history and/ or lack of cooperation from the inmate (IHSC, 2012). In addition, in correctional setting time constraints are inherent in clinical practice, and they are exacerbated by increasing demands for nursing care (IHSC, 2012). Although these challenges in the correctional setting, nurses based on the initial assessment will recommend the patient for care and treatment. Despite the best efforts of the nurses to provide optimal care, the rapid inmates' turnover experienced in detention centers jeopardizes these goals and can result in an incomplete assessment and treatment (Schoenly & Know, 2013). Nevertheless, by having an AUD/alcohol intoxication/ AWS evidence-based nursing guideline

with algorithm to assess incoming inmates with potential AUD/ alcohol intoxication/ AWS issues may increase the chance of having a better health outcome.

These EBP guidelines that are systematically developed statements based on the latter scientific information may assist nurses in decisions about appropriate health care for specific clinical circumstances in this case alcohol intoxication and or alcohol withdrawal (Thomas, 1999). Utilizing this AUD/ AWS guideline nurse will aim to achieve a goal-oriented assessment to promptly identify patients with intoxication and or signs and symptoms of alcohol withdrawal. It is expected that the result of this assessment will be of great help to select the appropriate inmate placement for health follow up and care.

In nursing practice, in general, it is necessary to implement changes that are evidence-based to attain care that is effective, safe, and efficient (Stevens, 2013). To achieve this care nurses must understand EBP and how to implement EBP guidelines to properly assess inmates for AUD /AWS and to provide timely individualized care (Stevens, 2013). EBP clinical guidelines are a series of recommendations on clinical care, supported by the best available evidence in the clinical literature (Watters, 2008). The NICE (2013) specified that, in general, clinical guidelines are intended to improve the process and outcomes of healthcare. One of the guidelines' objectives is to provide a standard of practice protocol for best nursing practices to care for patients in this case inmates with alcohol misuse, AUD or AWS (Naegle, 2012). The guidelines can provide current evidence-based recommendations for the management of patients' conditions and disorders in this case AUD/ potential AWS (NICE, 2013). EBP provides nurses with a method to use critically appraised and scientifically proven evidence for delivering quality health care to a specific population in this case inmates (Majid, 2011). Moreover, adoption and

adherence to guidelines can support healthcare professionals in making informed decisions about treatment and care they provide (NICE, 2013). Implementing the EBP guidelines and protocol in correctional setting could greatly improve nursing care and patients' health outcomes. All these are some of the benefits the detention center staff, patients and healthcare services will have.

In general, having updated nursing guidelines for management of AUD/ AWS will increase nurses' confidence, professional reputation, and the likelihood of achieving better care implementation and must likely better patient care results (Stevens, 2013). In line with these envisaged improvements, it is expected the findings of this project may contribute to the nursing body of knowledge, specifically on the validation of the importance of EBP nursing guidelines use in correctional setting. The project may also benefit the community sick call processes, as the findings may be used for comparison, application, or evaluation. Although the population and setting differ, the project results may serve as reference for other healthcare settings aiming to revise and improve their sick call program.

## Summary

EBP it is the way to bring best knowledge available to the practice. The timely assessment and appropriate care provided to patients with AWS in correctional setting may prevent adverse events. Evidence-based improvements are necessary for nursing practice to result in effective, safe, and efficient care (Stevens, 2013). A nursing guideline specific to managing AUD will help frontline nurses assess inmates' needs and provide the appropriate intervention(s) to prevent or decrease AWS (Stevens, 2013). Improvement such as this not only benefit inmates, but also the health care professionals the correctional facility. Thus, the clinical practice guideline resulting from this project will contribute to the nursing body of knowledge as

a standard evidence-based assessment tool. The next section presents a review of the literature review that supported the development of this project, including producing the evidence for the clinical guideline and organizing the implementation.

Section 2: Background and Context

## Introduction

The prevalence of alcohol abuse among inmates in the U.S. correctional system was reported to be as high as 80% (National Center on Addiction and Substance Abuse, 2010). In the Houston, Texas, Correctional Detention Center from January to December 2011, the number of inmates with signs and symptoms of AWS had increased 30% while emergency department visits related to AWS increased to 25% (IHSC, 2012). Health care professionals in the Center did not appropriately identify signs and symptoms indicating that inmates were at risk for AWS, according to the PIP (IHSC, 2012). These inmates manifested basic complications specific to AWS, such as anxiety, and more complex complications such as delirium tremor and seizures that require emergency interventions (Goodson, Clark, & Douglas, 2014).

In order to improve health services for inmates at risk for AWS, all level of correctional facilities including detentions centers, need to update and implement evidence based information into practice. To achieve the goal clinical guidelines is an option. These guidelines will be developed from existing literature on evidence-based practices in health care settings (Majid et al., 2011). Importantly, the unique characteristics and attributes specific to inmates will be considered by healthcare professional when constructing clinical practice guidelines for prisons (Knox, 2010). In conducting the literature review, few guidelines specific to correctional facilities were identified. As the IHSC (2012) noted, guidelines for assessing and directing the care of patients with signs and symptoms of AWS are lacking. This project work is intended to address this gap. In this section, the theoretical basis for the project will be described, the literature review will be discussed, and evidence applied to this project will be presented.

## Concepts, Models, and Theories

Early in the EBP movement, nurse scientists developed models to organize nurses' attitudes towards EBP. Nurses developed a number of EBP models to aid in understanding evidence in the context of nursing practice. The literature review revealed the presence of 47 EBP models that serve as frameworks to guide the design and implementation of approaches intended to strengthen evidence-based decision-making (Stevens, 2013). Stevens develop the ACE star model of knowledge transformation to translate evidence into nursing practice (Stevens, 2004). This model provides a way to examine and apply EBP in an organized manner and also beneficial for nursing in the introduction of the discipline into the formal EBP network. (Academic Center for Evidence-Based Practices [ACEBP], 2012).

The ACE star model, to increase the understanding of the use of EBP in nursing, accounts for the origins of knowledge and knowledge transformation necessary for utility and relevance in clinical decision-making as is necessary (Stevens, 2013). In other words, care decisions are better supported by evidence-based recommendations in the form of clinical practice guidelines. The ACE star model also revealed barriers encountered when moving evidence into practice and provides solutions grounded in EBP. The model emphasized essential steps to translate knowledge and integrate best research evidence with clinical expertise and patient preferences, thus achieving EBP (Stevens, 2013). The model was represented by a five-point star that defines the forms of knowledge. Point 1 represents the discovery (primary research studies). Point 2 refers to evidence summary—a synthesis of all available knowledge compiled into a single statement such as a systematic review. Systematic reviews (as an important new form of knowledge) are characterized as the central link between research and

clinical decision-making, and are used to create clinical practice guidelines (IOM, 2013). Point 3 is a translation into action (referred to as evidence-based clinical practice guidelines), combining the evidential base and expertise to extend recommendations. Point 4 represents the integration into practice (evidence-in-action), in which practice is aligned to reflect the best evidence. Finally, point 5 refers to evaluation, which is an inclusive view of the impact that the evidence-based practice has on patient health outcomes, satisfaction, efficacy and efficiency of care, and health policy (Stevens, 2013). This model will guide the organization's nursing department in the identification, organization, and implementation of EBP to improve the care offered to patients that suffer from alcohol abuse and withdrawal. EBP would assist in their future care decisions and practice.

The Appraisal of Guidelines for Research & Evaluation (AGREE II) instrument will be used to assess the quality of the EBP guideline. AGREE II is a tool that assesses the methodological rigor and transparency in which a guideline is developed (Brouwers et al., 2010). To establish the quality of the guideline resulting from this project, the latest version of the AGREE II instrument was used (See Appendix C).

The Guideline Implementability for Decision Excellence Model (GUIDE-M) is a conceptual model comprised of components intrinsic to practice guidelines (PGs) that play a role in optimizing the implementability of PG (Brouwers et al., 2010). The GUIDE-M aims to provide a common structure and nomenclature to facilitate communication and advancement about guideline implementability (Brouwer, Makarski, Kastner, Hayden, & Bhattacharyya 2015). GUIDE-M will be used as the framework to create the EBP guideline.

For the continuation of this project, the EBP guidelines will be used for the assessment and management of AUD. To develop the EBP guideline to assess and manage, the AUD, the team will integrate in them research evidence, clinical expertise and client/patient /caregiver perspective. The key steps in EBP process are: framing the clinical question, searching the evidence, reviewing the evidence, and making the decision (ASHA, 2015). The project is focused on adult inmates of both genders (aged 18 years or older). The primary objective is to adapt and incorporate the assessment section into the organization's EBP guidelines to manage the care provided to patients with potential intoxication. In addition, for the identification and assessment of alcohol withdrawal, the Clinical Institute Withdrawal Assessment of Alcohol Scale, revised (CIWA-Ar) was employed (Appendix D).

## Literature Search Strategy

The project leader conducted an extensive literature review to inform the project and identify gaps in the extant research. To complete the review, several databased were searched, including CINAHL and PubMed and other Internet resources. Only papers from peer-reviewed journals, published within the past 10 years and in the English language, were included in the review. The search terms included sick call, sick call in correction, healthcare guidelines for alcoholism, healthcare guidelines for alcoholism in correctional setting, benefits of adopting alcohol guidelines, alcohol abuse, and alcohol withdrawal. The initial search yielded 170 articles. This set of papers was narrowed using Boolean operators and additional key words to yield 71 papers. All the article abstracts were reviewed to determine the relevance for inclusion. The relevant papers were organized into a matrix with the level of evidence (see Appendix I).

The American Association of Critical-Care Nurses, or AAC-CN, revised evidence-leveling system was used to develop the evaluation matrix (Armola, 2009). This system provides uniformity and the most comprehensive list of evidence congruent with most other evidence-labeling systems (Armola, 2009). Following AAC-CN system, the project leader classified the literature sources into six levels, A-M, where Level A encompassed a meta-analysis of multiple controlled studies or meta-synthesis of qualitative studies with results that consistently support a specific action (i.e., intervention or treatment). No literature sources reviewed in this study were categorized to this group. Level B encompassed well-designed controlled studies, both randomized and nonrandomized, with results that consistently support a specific action, intervention, or treatment (Armola, 2009). Thirty-three studies were categorized this category. Level C included qualitative studies, descriptive or correlation studies, integrative reviews, systematic reviews, or randomized controlled trials with inconsistent results. No literature sources reviewed here were categorized this group. Level D included peer-reviewed professional organizational standards, with clinical studies to support recommendations. Twelve studies were in this category. Level E referred to theory-based evidence from expert opinion or multiple case reports. Twenty-six studies were in this category. Level M encompassed manufacturers' recommendations only. No literature sources reviewed belonged to this group.

In the literature reviewed was found the description of clinical guidelines, general use, and criteria that can be adopted to develop guidelines. Moreover, NICE (2013) defined clinical guidelines as methodically developed statements that support health care and service users in making decisions about appropriate care-treatment for specific conditions. The guidelines should be developed from the best available evidence with a systematic method to categorize and

appraise the evidence relating to the specific condition in question (NICE, 2013). When evidence is lacking, researchers should develop guidelines that incorporate statements and recommendations based upon the consensus statements developed by the Guideline Development Group, according to NICE (2013).

## Literature Review

### General Literature

Quality healthcare is the degree to which health services for persons and populations augment the probability of positive expected health outcomes and are consistent with current professional knowledge (IOM, 2013). To achieve quality healthcare, professional disciplines rely on EBP, defined as the incorporation of best research evidence with clinical expertise and patient values (Sackett et al., 1996). EBP demands changes in education of students, more practice-relevant research, and closer working relationships between clinicians and researchers (Youngblut & Brooten, 2001).

As nursing became involved in this EBP movement, the quest to define best practices began, often resulting in complex challenges that have no easy solutions. What is clear is the nurses' responsibility to deliver care based on evidence and the nurses' ability to access, evaluate, integrate, and use the best available evidence in order to improve practice and patient outcomes (Rycroft-Malone et al., 2004). The benefit making evidence-based practice the standard for health services is that evidence-based health services will be better able to meet the challenges of improving patient safety and the quality of services (Dalheim, 2012). EBP is intended to ingrain current knowledge into common care decisions with the aim of improving care processes and patient outcomes. The intended effect is to standardize healthcare practices

and align them with the relevant scientific findings and best evidence, to increase the predictability of health outcomes (Stevens, 2013). Practices based on research findings are more likely to result in the desired patient outcomes across various settings and geographic locations (Youngblut et al., 2001).

The demand for accountability in safety and quality improvement in healthcare and the call for evidence-based quality improvement and healthcare transformation has assisted nurses in their effort to redesign care, thus ensuring that it is effective, safe, and efficient (Stevens, 2013). EBP also provides opportunities for nursing care to be more individualized, more effective, streamlined, dynamic, and to maximize effects of clinical judgment (Youngblut et al., 2001). When evidence was used to define best practices rather than to support existing practices, nursing care keeps pace with the latest technological advances and takes advantage of new knowledge developments (Youngblut et al., 2001). The use of EBP has become the standard of health care practice. EBP provides nurses with a method to use critically appraised and scientifically proven evidence for delivering quality health care to a specific population. (Majid et al., 2011). Nurses were expected to use best evidence widely on a variety of areas; thus far most nurses have limited time, resources, and skills to access and evaluate the quality of research and evidence needed to practice evidence-based nursing.

A clinical EBP guideline is as a systematically developed statement to assist healthcare professionals and patient decisions about appropriate health care for specific clinical situation (IOM, 1990). Evidenc**e-**based implies that the guideline has been created using an unbiased and transparent process of systematically reviewing, appraising, and using the best clinical research findings of the highest value to aid in the delivery of optimum clinical care to patients (Watters,

2008). EBP guidelines can be used to reduce inappropriate variations in practice and to promote the delivery of high-quality, evidence-based health care (Thomas, 1999). EBP guidelines allowed nurses to have research information collected, analyzed, and condensed into specific practice recommendations by experts (Adams & McCarthy, 2007). EBP guidelines can set standards that can be utilized to assess the practice of healthcare professionals and used to outline the foundation for healthcare professionals' education and training development (NICE, 2013). Health care professionals must keep updating guidelines because of continuous research, advancements in the treatment and new practices (Prendergast, 2011).

There is a significant gap between the capacity of the healthcare systems to deliver quality of care and the quality of care they currently deliver. This gap in the quality of care is largely due to the failure of healthcare organizations to incorporate known improvement measures into the process of care (Mayberry et al., 2006). Similarly, EBP guidelines can improve communication among healthcare professionals and ancillary services. Also, EBP guidelines help users in the identification of areas that requires additional research (NICE, 2013). The IOM (2001) challenged all healthcare organizations to pursue six major aims of healthcare improvement: Safety, timeliness, effectiveness, efficiency, equity, and patient-centeredness. These aims are not only interrelated but are equally important, especially in correctional settings, as the inmates have the right to receive healthcare services (Knox, 2014). Although the goal is to ensure that all members of society are healthy, healthcare professionals and the correctional facilities administrators face numerous challenges when attempting to meet this aim.

In 2010, 2.3 million inmates and over 7.2 million individuals were under some form of correctional supervision (Glaze, 2011). The latest information available at October 2013 shows

that U.S. has the largest incarcerated population in the world with 2.24 million (Walmsley, 2014). According to the 2009 Bureau of Justice Statistics, males are imprisoned at a 14 times greater rate than the females (Glaze, 2011). The temporary and transient nature of a jail stay results in an additional challenge while trying to conduct assessment and provision of care. Therefore, in correctional settings, prompt identification of medical conditions like AUD, alcohol intoxication and withdrawal to protect the health status of newly entering inmates is a priority (Schoenly & Know, 2013). Having an EBP nursing guideline to prevent AWS will standardize the assessment process for the timely identification of intoxicated or withdrawing inmates for immediate intervention, including transfer

As part of the AWS assessment, nurses need to assess inmates for education level, which tends to be very low. Nationwide, 59% of federal inmates are high school drop-outs. Inmates, irrespective of gender, typically achieve lower average scores on all three literacy scales than adults of the same gender living in households and 56% of inmates have Below Basic or Basic prose literacy skills (Oklahoma Literacy Resource Office, 2014). Lack of general education and inadequate literacy among inmates are of concern, as this can affect their comprehension of the EBP nursing guideline assessment questions and health education.

**Specific Literature**

In 2004, the WHO estimated that more than 75 million people had alcohol use disorder worldwide over a 12-month period from January to December 2004. The prevalence of AUDs in primary care ranges from 20 to 36 percent and approximately two million deaths each (Johnson, 2016). In 2012, USA had more than 8 million Americans dependent on alcohol; twice the

number who abuse illicit drugs (Carlson et al., 2012). Alcohol abuse was associated with 85,000 deaths and other problems like accidents suicides and family abuse (Carlson et al., 2012).

The literature review shows the prevalence of AUD status in the incarcerated population (47.8%), is greater than in general population (8.5%) (Kerridge, 2008). There are 17 million Americans have AUD; only 15% receive treatment (Substance Abuse and Mental Health Services Administration, 2012; Huebner et al., 2011, NIH, 2012). In American correctional facilities 80% of inmates are involved in substance abuse, and many consume both alcohol and illegal drugs (National Center on Addiction and Substance Abuse, 2010). Currently in U.S. jail 37% of almost 2 million convicted offenders, report that they were drinking at the time of their arrest (United State Department of Justice, 2008). Alcohol is an issue that requires the attention of health care professional and strategists to stabilize this health condition of newly entering inmates (Schoenly & Know, 2013). Each year approximately 1 million arrestees may be at risk for untreated alcohol or opiate withdrawal (Fiscella, Pless, Meldrum, & Fiscella, 2004a).

Despite the evidence of AUD among inmate population many large correctional institutions do not currently have a substance abuse treatment program (Peters, 1992). Untreated AUD was associated with adverse outcomes like pain and suffering, morbidities, and even death (Fiscella, Pless, Meldrum, & Fiscella, 2004b). The incidence of withdrawal symptoms often begins before arrestees have been formally charged with a crime, which may take up to 72 hours (Fiscella et al., 2004a). The high prevalence of alcohol-related health issues in correctional settings, combined with the expected positive outcomes of the use of guidelines, confirms the importance of this project.

Correctional facilities are highly controlled environments where inmates are closely monitored and their daily activities are controlled (California Department of Justice, 2014). Detentions centers are the facilities that initially receive the inmates after they are found for committing a crime (IHSC, 2012). Normally these facilities have a rapid turnover (release or transfers to another level of correctional setting) of 100 inmates every 24 hours (IHSC, 2012). This rapid turnover can result in incomplete medical services, missed diagnoses, and untreated communicable diseases (Schoenly & Know, 2013). Most of the correctional facilities did not offer alcohol detoxification which affects approximately one million inmates in need (Fiscella et al., 2004b). These services need to be provided for both genders as females incarcerated for drug-related offenses represent one of the fastest growing populations within every level of correctional institutions (Peters, Strozier, Murrin, & Keams, 1997). Since 2010, the female jail population has increased by an average annual rate of 3.4 percent (Kaeble, Glaze, Tsoutis, & Minton, 2016). Nursing assessment of inmates using EBP guidelines and timely evaluation of the health complaint may result in the initiation of care treatment, provide advice on some form of self-care, educate or inform the inmates about an aspect of care or symptom management, and provide them with a referral for a higher level of care (Knox, 2010).

Practices based on research findings are more likely to result in the desired patient outcomes across various settings and places (Youngblut et al., 2001). If nurses are to provide appropriate quality care they must be competent in the assessment and implementation of care. In a study conducted by Majid et al. (2011), nurses felt EBP training, time availability, and mentoring by nurses with EBP experience would encourage them to implement EBP more readily. In addition, these nurses felt that the assessment tools they are using are beneficial to

them and can assist them in achieving the ultimate goal of properly identifying medical conditions, in this case alcohol intoxication / withdrawal for early intervention.

Individuals consuming alcohol in quantities above healthy limits are likely to develop an AWS when they abruptly stop or substantially reduce their alcohol consumption (Anthony et.al., 2010); (See Appendix C for more information on AWS onset, severity, and signs and symptoms.). Inmates with Alcohol Withdrawals could present certain medical conditions like epilepsy, coronary heart disease, and diabetes can intensify withdrawal symptoms (Burns & Pinsky, 2017). Alcohol withdrawal symptoms usually occur within 6 to 8 hours after the last drink, but peak by 24-72 hours and may persist for weeks (Burns & Pinsky, 2017). In a cross-sectional hospital-based study, conducted at Centre for Addiction Psychiatry, Ranchi, India, during May 2005 to June 2006 with a study sample of 201, found that the acute alcohol withdrawal symptoms were most severe at 36-hours of abstinence (Bakhla, et al., 2014). Common symptoms included anxiety, nervousness, depression, fatigue, irritability, jumpiness or shakiness, mood swings, nightmares, not thinking clearly, clammy skin, dilated pupils, headache, insomnia, loss of appetite, nausea and vomiting, pallor, tachycardia, sweating, and tremor (Eyers, et al., 2011). Delirium tremens can occur in some cases; a severe form of reaction to alcohol withdrawal, and includes agitation, fever, hallucinations, seizures, and severe confusion (Eyers, et al., 2011). The common treatment goals are reducing withdrawal symptoms, preventing complications of alcohol use, and therapy aimed to achieve abstinence (Medline Plus, 2013).

EBP is the integration of the best research evidence, clinical expertise, and patient values (IOM, 2001). EBP clinical guidelines were defined as methodically developed statements that support healthcare and service users in making decisions about appropriate care-treatment for

specific conditions (NICE, 2013). Such guidelines should be based on the best available research evidence, using preset and systematic methods to categorize and appraise the evidence relating to the specific condition in question (NICE, 2013). When evidence is lacking, the guidelines should incorporate statements and recommendations based upon the consensus statements developed by the Guideline Development Group (GDG). In the correctional setting evidence-based practice can improve the quality of treatment and for reducing levels of substance abuse, AUD, and crime among offenders and promoting public health and safety (Prendergast, 2011).

## Summary

The information obtained from the literature review utilized for this project revealed that alcohol abuse within the correctional population was an issue that correctional healthcare professionals face. This information also revealed that the combination of the inmate population rapid turnover and lack of appropriate assessment in the correctional setting can jeopardize inmates' health. Approximately 1 million arrestees per year may be at risk for untreated alcohol withdrawal, and among newly arrested individuals, withdrawal have been shown to contribute to deaths (Ficella et al., 2004).

One of the challenges in this project's literature review was the limited information on EBP guideline use in correctional setting. NCCHC have documented that this lack of correctional health care research has hampered policy decision making in all aspects of health care organization, provision, and financing for incarcerated populations (NCCHC, 2002). This project may help the organization in closing the lack of guidelines gap to incorporate the EBP nursing guideline by incorporating EBP nursing guideline to assess inmates with AUD, alcohol

intoxication/ alcohol withdrawal into the process of care, aiming to improve patient safety and the quality of services.

Section 3: Collection and Analysis of Evidence

## Introduction

The goal for this project was to improve the clinical practice in a correction facility through the development of an evidence-based clinical guideline with algorithm. The rationale in undertaking this project was to develop a robust process to guide nurses in the timely assessment, identification, and referral for treatment of inmates at risk for AWS. For the project, the focus was to advance quality improvement for correctional clinical practice.

## Project Design and Methods

The project was guided by the ACE star model of knowledge transformation and the GUIDE-M, which is also a quality improvement approach (Brouwer et al., 2010). The ACE star model is a process model that researchers use to develop an evidence-based quality improvement project (ACEBP, 2012). Each of the five points of the star in the model provide a discrete step to move evidence into practice (ACEBP, 2012). This model is discussed in the next section. The GUIDE-M provides the multidisciplinary conceptualization of how to move evidence-based knowledge from the research literature into practice through a clinical practice guideline. The steps of the GUIDE-M were incorporated into the process model.

In the ACE star model, there are five phases to implement the evidence-based project process. The five star points include

1. discovery research,
2. evidence summary,
3. translation to guidelines,
4. practice integration, and

5. process/outcome evaluation.

For star point 1, the project leader completed the literature review presented in Section 2. Star point 2 required an assessment with aggregation of the evidence identified in the literature review. The project leader completed the aggregation through the development of a literature matrix (see Appendix I) into an evidence summary. Star point 3 was the phase in which the project leader developed the nursing clinical practice guideline with algorithm. The draft product was the incorporation of the literature into an evidence-based guideline to standardize the assessment of inmates for AWS risk factors, including potential intoxication and active alcohol withdrawal (see Appendix G). The purpose of this guideline is to provide direction to correctional nursing staff on the management of inmate patients with a history of AUD, who are presumably alcohol intoxicated or alcohol withdrawal. The project leader utilized the nursing process to design the clinical guideline. Each step of the nursing process includes an intervention recommendation for nurses to implement or follow. The project leader designed the algorithm following correctional health processing and health care screening process' flow. The algorithm describes steps check points to complete AUD assessments and guidelines to manage inmates with AUD, who may be intoxicated and or showing signs and symptoms of AWS.

For star point 4**,** the project leader completed the draft clinical practice guideline with algorithm and a panel of experts evaluated the document using the Delphi technique. This technique originated from a series of studies conducted by the RAND in the 1950s (Okoli & Powlowski, 2004). It is a structured evaluation technique for using group communication to discuss and assess the effectiveness of a project, process, or practice or address a complex problem (Yousuf, 2007). The Delphi technique is useful when it is need the opinions and

judgments of experts for quality improvement but find it unfeasible to convene a panel to work together in the same physical location (Hsu, 2007). The Delphi technique is a group process involving an interaction between the project leader and a group of identified experts on a specified topic; this interaction usually occurs via a series of questionnaires completed by participant experts (Yousuf, 2007). The Delphi technique was used to gain a consensus regarding future trends and projections using a systematic process of information gathering (Hsu, 2007).

The expert reviewers needed to be male or female clinical professionals in nursing with a minimum of a master's degree and 5 years of working experience in a correctional setting. The scholars needed to be knowledgeable about evidence-based practice and preferably have experience in correctional nursing or another related nursing specialty. Also, the project leader sent the tools to scholars from other health care disciplines (e.g., psychologists).

For the evaluation using the Delphi technique, the project leader sent the clinical practice guideline with algorithm to five masters-prepared nurses currently working at correctional facilities in California; Washington, DC; Florida; Texas; Arizona; and Maryland. Other panelists included two doctorate-prepared individuals (one DNS and one PhD) and two physicians. The DNS nurse and the physicians have experience in correctional health while the PhD nurse has experience in research.

The panelist conducted the review individually and privately. The expert panel received the developed questionnaire. The objective was to control and direct their opinions and feedback to specific areas of interest. In addition to the ranked feedback, the questionnaire had open-ended questions. These open-ended questions gave the experts the opportunity to provide additional information. The questions used to direct the evaluations were as follows:

1. Is this algorithm describing the basic screening process flow upon inmates' arrival?
2. Is this algorithm directing an appropriate process to establish the care on inmates presumably alcohol intoxicated and or alcohol withdrawal?
3. Does the algorithm have steps to address inmates' re-evaluation for potential complications?
4. Are the algorithm recommendations considering inmate safety?
5. Is the algorithm base on EBP?
6. Is the algorithm clear and concise?
7. Is there any step that you will add or removed from the algorithm?
8. Participant do you have any recommendations to improve the clinical practice guideline with algorithm?

Once the evaluations were completed, the project leader reviewed the feedback and categorized the feedback into recommendations, or themes. Then, these recommendations were incorporated into the clinical practice guideline with algorithm, noting the themes parallel with the evidence. Star point 4, if the algorithm is approved for use then the algorithm will be utilized to direct the care of inmates presumably alcohol intoxicated or alcohol withdrawals syndrome.

Project concluded with star point 5, where an in-situ evaluation is conducted to assess the impact that the evidence-based practice has on patient health outcomes, satisfaction, efficacy and efficiency of care, and health policy (Stevens, 2013). However, for the purpose of this project, star point 5 was completed by incorporating the quantitative and qualitative data acquired from the Delphi technique into the final revision of the clinical practice guideline with algorithm. While these five phases completed, with revisions to star points 4 and 5 to accommodate the

constraints of implementing a quality improvement project in a correctional setting, the project leader finalized the clinical practice guideline for detecting the risk for AWS. The star points 4 and 5 meet specific objectives; they are interrelated, as the overall aim is to achieve the full implementation of the EBP nursing guidelines.

**Project Plan and Objectives**

1. Phase 1: Systematic review
    a. Literature review (Systematic Review) focused on identifying Alcohol Addiction Identification and Withdrawal Risk Assessment.
    b. Developed an algorithm to describe the steps of nursing management process of patients presumably intoxicated and or are presenting signs and symptoms of alcohol withdrawals.
    c. Clinical nurse experts in correctional facilities and two scholars reviewed and assessed the clinical practice guideline with algorithm.
2. Phase 2a: Algorithm
    a. Developed the algorithm of the current process and the proposed revisions.
3. Phase 2b: Developed nursing assessment EBP guidelines.
    a. Used of AGREE II and the Guide-M model to developed the EBP guideline.
4. Phase 3: Develop a training power point presentation/ educational lecture for nurses.
    a. Provide education to nurses on the use of EBP guidelines in the assessment of inmates that are potentially alcohol intoxicated.
5. Phase 4: Evaluation process

   a. Conduct RN survey to determine if the guideline is a beneficial tool for nurses while assessing patients in the Sick Call area to promptly identify patients presenting signs and symptoms of alcohol intoxication and or alcohol withdrawal.
   b. Collect and analyze the nurses' survey results to identify what is the nursing perception on the EBP tool benefit while assessing patients in the Sick Call area to promptly identify patients presenting signs and symptoms of alcohol intoxication and or alcohol withdrawal.

6. Phase 5: Implementation
   a. In this project implementation will not be completed but maybe in future project. Nevertheless, in this phase it is expected to have the algorithm and the guideline implemented follow by an evaluation.

The clinical practice guideline was constructed as a quality improvement method to complete this project. In order to evaluate the evidence-basis, specificity, and fit for the correctional setting, the clinical practice guideline with algorithm was evaluated with the completion of Section 3 which marks the end of the proposal sections.

**Population and Sampling**

The expert reviewers and scholar reviewers selection process was purposeful. For the expert reviewer panel, these people needed to be clinical professionals in nursing, with at least a master degree, and five-years working experience in correctional setting. The scholar needed to be knowledgeable in evidence-based practice with experience in correctional nursing (preferably), or another related nursing specialty. Also, the tools were sent to scholars from other health care disciplines: i.e. psychologist, as well. The expert reviewers can be of both genders.

**Data Collection**

For the Delphi technique, a structured data collection instrument was developed to evaluate the AWS clinical practice guideline with algorithm (Appendix F). The instrument has six dichotomous yes/no questions (Trochim, 2006) with two free texting questions for qualitative feedback (Riiskjaer, 2012). The instrument was sent to the expert panelist for the algorithm evaluation. Subsequently, evaluating data increases the likelihood of constructing the best possible evidence-based clinical practice guideline, while complying with the basic rules, regulations, and standards used for research (Hodges & Videto, 2011). The initial guideline with algorithm was sent to the panelist by October 10-15, 2016. The panelist's evaluation data was evaluated and utilized to revise the guideline with algorithm. Subsequently, the upgraded guideline with algorithm was sent to the panelist for the second evaluation process. The panelists' opinion data obtained from this evaluation phase was analyzed and utilized to modify the guideline with algorithm.

**Protection of Human Subjects**

This project included human participants, the experts involved in the consensus process. This project was approved by the Walden University Institutional Review Board (IRB) as protocol approval number 09-23-16-0318085. All participants completed consents forms prior to engaging in any expert assessments and consensus activities. The project leader maintained the ethical guidelines for managing information with confidentiality. The project leader removed all the personal identifiable data from documents; only the project manager has access to emails and paper documents. All the participants were treated with dignity and respect. There were no adverse events reported during this project.

**Project Evaluation Plan**

The project evaluation plan included the initial assessment of EBP information to put together the guideline with algorithm. Following the completion of the guideline with algorithm and utilizing Delphi methodology they were sent to the participants in two separate occasions for their evaluation. In this phase of the project, the evaluation's main goal was to determine whether or not the EBP guideline with algorithm described the necessary steps to direct the efforts to manage inmates with history of AUD, potentially intoxicated with alcohol and or with signs and symptoms of alcohol withdrawal syndrome. Subsequently, the project leader evaluated the data obtained from the participants and upgraded the guideline with algorithm

## Summary

In this section, it was presented the approach to the project. The project design was a clinical practice guideline with algorithm development as a quality improvement for the correctional setting. The project plan included five phases: 1) development and assessment of a nursing EBP guideline for AUD/ AWS assessment. The sample was to be selected by convenience sampling from correctional facility, nurses that comply with the inclusion criteria. These registered nurses were requested to evaluate the guideline with algorithm shared with them and return their critic to the project leader. The project leader evaluated and updated the guideline with algorithm in accordance with EBP recommendations.

Section 4: Findings and Recommendations

## Introduction

The purpose of this project was to develop an evidence-based guideline with algorithm for the nursing assessment of inmates to determine if they are at risk for AWS. By implementing a guideline with performance improvement goals, nurses may be able to identify the best assessment method and proper referral to use with at-risk inmates and meet correctional facility goals (Brockopp, 2011). By meeting this goal, nurses may be able to correctly identify at-risk inmates and refer them for treatment prior to developing AWS. This project may have the potential to prevent life-threatening adverse events like AWS in correctional setting.

The Delphi technique was used to conduct the project evaluation. The Delphi technique is a structured evaluation technique for using group communication to discuss and assess the effectiveness of a project, process, or practice or address a complex problem usually through a series of questionnaires (Yousuf, 2007). This technique is useful when opinions and judgments of experts are essential for quality improvement but unlikely to convene a panel to work together in the same physical location (Hsu, 2007). The Delphi technique has been used to gain a consensus regarding future trends and projections using a systematic process of information gathering (Hsu, 2007).

For the evaluation using the Delphi technique, the project leader sent the clinical practice guideline with algorithm to a panel of experts as described in Section 3. The review was conducted individually and privately. A questionnaire was developed and shared with the expert panel with the objective to control and direct their opinion feedback on specific areas. In addition to the ranked feedback, the questionnaire has opened-ended question. Once the expert completed

the first evaluation, the information was used to revise and improved the original guideline with algorithm. The project leader resubmitted the revised guideline with algorithm to the panel of expert for a second evaluation. The evaluation outcomes are discussed in the findings and implications section.

## Findings and Implications

After searching through journal publications, professional networks, and academic referrals for correctional experts to serve as reviewers for the guideline, the project leader identified 20 experts. An expert for the purpose of this search was a master's degree-prepared nurse with at least 5 years of work experience in correctional health. The scholars experts were doctorate-prepared individuals preferably with correctional health experience or experience in other health care discipline. October 5-10, 2016, the project leader contacted and invited the 20 experts to participate in the review. Of the 20 experts contacted, 11 agreed to participate. October 10, 2016, the project leader sent the guideline and algorithm evaluation materials. By the dead line of October 21, 2016, the project leader received in return just 9 (82%) experts' evaluation documents. The participation rate of the sample pool was 82% (9/11) and 45% (9/20) of the total experts contacted.

The aggregated participant characteristics are presented in Table 1. The majority of the sample pool was female (56%). 78% of participants were registered nurses while the other 22% were medical doctors. All participants had correction facility experience. Among the nursing experts, all had a Master of Science in Nursing, while two were doctoral prepared (one with a PhD and the other with a DNS). Seven participants had work experience in a correctional facility setting. An additional two participants were experts in evidence-based practice and had extensive

research experience. All participants reported more than 16 years of experience in health care; the seven with correctional setting experience reported having more than 7 years of experience in health care.

Table 1.

*Characteristics of Participants*

| Characteristic | Frequency | Percent |
|---|---|---|
| Gender | | |
| Female | 5 | 56 |
| Male | 4 | 44 |
| Professional degree | | |
| RN MSN | 5 | 56 |
| RN DNS | 1 | 11 |
| RN PhD | 1 | 11 |
| MD | 2 | 22 |
| Years professional experience | | |
| 5-15 | 0 | 0 |
| 16-25 | 5 | 56 |
| 26-35 | 2 | 22 |
| 36+ | 2 | 22 |
| Years experience in correctional setting | | |
| 5-15 | 3 | 33.3 |
| 16-25 | 4 | 44.5 |
| 26-35 | 0 | 0 |
| 36+ | 0 | 0 |
| Years experience in other settings | | |
| 5-15 | 0 | 0 |
| 16-25 | 0 | 0 |
| 26-35 | 1 | 11.1 |
| 36+ | 1 | 11.1 |

In all six survey items regarding their opinions on the algorithm evaluation instrument, 8 of the experts answered “yes” compliant with the criteria evaluated while 1 expert answered “no” to two questions. It is important to note that the two nurses with doctoral degrees recommended implementing the guideline with algorithm to validate the instruments. Specifically, these nurses observed that, while there appears to be adequate research published about non-correctional facility settings, there is sparse research for the targeted setting. They commented that this lack

of research may be a limitation in determining the best practices for the correctional facility setting. The expert assessment is presented in Table 2.

Table 2.

Expert Assessment for the Evidence-Based Practice Guideline

| Question | Yes Number and percentages | No Number and percentages | Participants Comments |
|---|---|---|---|
| 1. Is this algorithm describing the basic screening process flow upon inmates' arrival? | 9 (100%) | 0 (0%) | |
| 2. Is this algorithm directing an appropriate process to establish the care of inmates presumably alcohol intoxicated and or alcohol withdrawal? | 9 (100%) | 0 (0%) | |
| 3. Does the algorithm have steps to address inmates' re-evaluation for potential complications? | 9 (100%) | 0 (0%) | This algorithm has all the steps we follow but in my facility, we automatically are doing pre-screening to 100% of inmates. Recommendations to modify to add this as part of the process. |
| 4. Are the algorithm recommendations considering inmates safety? | 8 (89%) | 1 (11) | The four central interventions described in this document are screening, treatment, transfer or discharge. Safety is not clearly stated in each of these phases. |
| 5. Is the algorithm base on EBP? | 8 (89%) | 1 (11) | Although several citations are included in the guideline, there is a lack of research conducted with this population to support the needs for an action. |
| 6. Is the algorithm clear and concise? | 9 (100%) | 0 (0%) | |

The experts provided additional recommendations when answering the open-ended questions. The project leader took into consideration and implemented the recommendations to improve the algorithm and guideline. Few of the recommendations are as follow:

1. "I think the word EBP is not needed in the title".

2. “I would add the word intoxication in the title since this is also a variable that will be assessed in inmates”.
3. “I suggest a change in the title to read: Gonzalez’s alcohol use disorder/withdrawal algorithm to use the following initials (GAUWA, 2016)”.
4. “Add a step to address pre-screening and sober inmates flow”.
5. “Include time for the expected time for the pre-screening.”
6. “This algorithm will help this facility to improve the process. Also I will recommend the Governing Body to use the CIWA-AR to assess inmates.”

This process also included the evaluation of a nursing guideline utilizing the AGREE II evaluation form. The results of this evaluation showed that 67% of the experts will recommend this guideline for use and 33% will recommended the guideline use with modifications. The experts all agreed that the guideline is a great precursor to guide the management of inmates with AUD. The experts (44%) like the use of the nursing process approach taken to develop the guideline. The Agree II domains to improve are: rigor of development and applicability. These areas will be the focus for improvement.

In summary, the experts agreed that this algorithm is a tool that describes an appropriate process to establish the care of inmates presumably alcohol intoxicated, sober presenting alcohol withdrawal or sober with history of heavy drinking/ AUD. The participants provide multiple recommendations. These recommendations were considered and implemented to improve the algorithm tool as well as the guideline.

## Discussion of the Findings

The ACE star model emphasized essential steps to translate knowledge and integrate best research evidence with clinical expertise and patient preferences, thus achieving EBP (Stevens, 2013). In this research a literature review was conducted utilizing the ACE model and available knowledge was synthesized and link to clinical decision-making, to create the clinical practice guideline (IOM, 2013). The clinical guideline as well as the algorithm was shared with the panel of health care professionals' experts that have experience working in correctional health and research. These panel of health care professionals' experts agreed that the guideline as well as an algorithm represent a valid alternative to address the issue of lack of AUD assessment in correctional nursing.

The AGREE II instrument was used to assess the quality of the EBP guideline. AGREE II is a tool that assesses the methodological rigor and transparency in which a guideline is developed (Brouwers et al., 2010). Multiple recommendations were suggested and implemented to improve the clinical guideline and the algorithm. It was also remarked the current lack of EBP data in correctional nursing as a limitation in the development of an EBP nursing clinical guideline. Therefore, the clinical guideline was developed utilizing the available EBP information in nursing field but also utilizing other disciplines EBP information like the AGREE II, ACE Star Model of Knowledge Transformation and the Guideline Implementability for Decision Excellence Model and CIWA-AR.

### Impact for Practice

This project contributed to nursing practice by adding new information on the development and use of EBP guideline and algorithm to guide nursing care. The project provides

an alternative approach for nursing care to inmates with AUD which is one of the most common conditions nursing face in the field. The project brought available evidence based information to implement a process to guide the care for inmates with AUD.

**Impact for Future Research**

The project results can be used as fundamental information for future projects and or researches as the information is the result of the consensus of nursing scholars and experts in correctional and other healthcare fields. The project may contribute to the development of additional guidelines and algorithms in nursing practice. This algorithm and refine nursing guideline tools may be use and implement to address care for inmates with AUD or alcohol withdrawals.

The greater understating of the use of nursing guidelines and algorithms as tools to improve quality of care and healthcare outcomes provides with pertinent data measuring outcomes and performance. The results inspire future knowledgeable management strategies such as training sessions, process mapping, or actively engaging the community of staff to pursue a progressive growth plan for utilizing additional algorithms and guidelines during the delivery of care.

**Impact on Social Changes**

In U.S. the prevalence of incarcerated individuals is recognized as the largest worldwide. The latest information available at October 2013 shows that U.S. has the largest incarcerated population in the world with 2.24 million (Walmsley, 2014) and over 7.2 million individuals were under some form of correctional supervision (Glaze, 2011). AUD is a common issue among incarcerated and other forms of detention individuals. 80% of inmates are involved in substance

abuse/ AUD (National Center on Addiction and Substance Abuse, 2010). In the correctional setting evidence-based practice holds great promise for improving the quality of treatment and for reducing levels of substance abuse, AUD, and crime among offenders and promoting public health and safety (Prendergast, 2011). The use of the developed EBP guideline (Appendix G) and the algorithm (Appendix E) is expecting to impact positively health outcomes and improve and standardize nursing practice approach. The guideline and algorithm has the potential to become a nationwide use to improve correctional nursing healthcare. Also, the guideline may reduce inmates' complications and death by early AUD/ AWS identification and care. The work will increase correctional nursing body of knowledge and facilitate the delivery of a safe evidence-based nursing care.

## Projects Strengths and Limitations

### Strengths

One of the strengths of the project was the participation of a panel of nurses with expertise in correctional nursing/setting. Additional strengths were the participation of 2 doctorate degree nurses and expert in research and the participation of 2 physicians with expertise in correctional health care. Another strength was the used of available EBP information in the development of the guideline and the use of validated tools like AGREE II and CIWA-Ar to assess patients.

### Limitations

A limitation was participants' barrier to participate in the research. All participants that work for Federal Government had to go through the outside activity participation request. The

process first step took over a month. The detention center has three different leadership and multiples stakeholders. This can delay or stop the project at any given time.

This guideline was not implemented. The process to implement the project, with the guideline and algorithm could take more than a year due to the ethical protections provided to inmates. This might explain why there is limited evidence-based practice guidelines and protocols in correctional health nursing. There is a gap on EBP and the use of nursing guideline in correctional health.

## Summary

In summary, this project is a first step in the development of an EBP guideline with algorithm to be implemented to improve AUD nursing care. It may be a way to assist nurses to improve and provide better assessment conducive to prevent alcohol withdrawals and as much as possible mortalities. The guideline with algorithm is precursor for the development of future algorithm and guidelines.

In conclusion, the algorithm and the guideline was completed and shared with two Scholars, five Master Science Nurse-prepared and two physicians with experience in correctional field and research. The panelist found that the algorithm and the nursing guideline for the management of inmates with AWS, AUD and sober with history of AUD are a great idea and very well needed in the correctional field and nursing practice. They all recommended the use of these two tools with modifications. The panelist all agree that this research help them to realize the lack of research and EBP information in correctional nursing and field. The guideline and the algorithm were revised as result of the participants' recommendations. The nursing guideline requires yearly revision to add any EBP information to update it to the current expectations.

This project process continues to motivate the development and refinement of these two tools with the expectation to be part of nursing body of knowledge for the benefit of the patients and nurses. The use of Delphi methodology helped to expose the two tools and get expert opinion to assist in the refinement process. More research and guidelines are needed in correctional setting.

Section 5: Dissemination Plan

## Introduction

Dissemination is recognized as an important component of the research process (Crosswaite et al., 1994). Dissemination is a way to deliver and communicate new research information and outcomes to interested individuals in nursing and or other discipline (Dhawan, n.d.). The dissemination process helps to make information accessible to researchers so that it can be used to close gaps in nursing practice and research (Dhawan, n.d.). Dissemination is an important step in translating evidence to practice by creating an environment that fosters change, implementation, innovation, and evaluation for better health outcomes nursing professionals need to translate evidence to practice (International Council of Nurses, 2012).

The project leader plans to disseminate the project, including the guideline with algorithm, to augment the body of knowledge regarding nursing in correctional facilities. The project leader created a dissemination plan considering starting the dissemination process within professional nursing organizations oriented to correctional health as well as general nursing. Internally at the correctional facility the new knowledge will be disseminated within: Clinical Nurse Educator Group, Nursing Research Council and in the leadership meetings. External dissemination will be targeting Annual Nursing Research Symposium - Poster Presentation, NCCHC and journal publication like NCCHC Nursing Journal, American Correctional Association Journal and Puerto Rico College of Professional Nursing. The project leader expectation is that stakeholders become interested and start closing the practice gap by using the nursing guideline with algorithm (Strauss, Tetroe, & Graham, 2009).

## Dissemination Products

The project leader developed a manuscript for publication (see Appendix H). This manuscript will be submitted to the National Commission on Correctional Healthcare Organization, American Correctional Association, and Professional Nursing College of Nursing Puerto Rico for assessment and future publishing if accepted. In addition to the manuscript, the project leader developed a poster, and a power point presentation for use in the dissemination effort. Creating flyers, posters, or brochures about research projects and findings offer a concise and visually-appealing way to disseminate information to broad audiences (Community Alliance for Research and Engagement, 2016).

## Analysis of Self

This project has resulted in significant changes in me as a person, a DNP student, and a future scholar. As a person, I expanded in multiple aspects of my life. I learned skills to improve my writing at scholar level, be more detail oriented and specific. The project development experience opened my interest in projects to integrate practice with EBP. Before the dissertation, I had a different notion of EBP. The project development process has helped me in developing my competency and confidence in translating theory and research into evidence-based practice. This experience developing a dissertation also helps me to develop competencies to discuss conceptual models, EBP meaning and use, translation of evidence into practice, and integration of multidisciplinary approach to achieve the aims of health care among others.

## Analysis as Practitioner

The project has motivated me to look for better ways to perform with the goal of improving health care outcomes, staff competencies, and nursing practice. The experience

emphasized the importance of using EBP to achieve my proposed goals and implement the best EBP. I feel competent to improve patient care by using EBP knowledge. It also helps me to understand that research and practice must be integrated at all levels of the nursing discipline.

## Analysis as Project Developer

The development of this project helped me to develop the competencies to create a project at a scholar level, which I feel is appropriate for dissemination in a selected nursing publication or that in another discipline. I have improved my writing skills and techniques and knowledge of EBP literature to provide this level of documentation. In the future, I believe that professional development will provide me with an opportunity to continue to evaluate improvement strategies based on research-supported evidence. I plan to continue expanding this project. I also want to seek opportunities to contribute to the body of evidence-based knowledge and research in nursing with the goal of positively influencing nursing clinical practice.

## Summary

In summary, dissemination is an important component of the research process of any professional discipline (Crosswaite et.al., 1994). Dissemination is a step that researchers and project leaders use to share with colleagues and other professionals research and project findings and outcomes. It is a way to help decrease and in some instances eliminate gaps in the practice. The development and availability of knowledge strength the profession body of knowledge and improve nursing practice to achieve better patient's care outcomes.

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Appendix A: United States Department of Justice statistics on alcohol use disorder

| Gender | Ethnicity | Criminal convictions |
|---|---|---|
| 44% of male | 78% of white | Burglary had the highest rate of substance dependence or abuse (85%) |
| 52% of women | 64% of black | Driving while intoxicated (DWI) / driving under the influence (DUI) (82%) |
| | 59% of Hispanic | |

*Note.* Table data obtain from United State Department of Justice. (2008). *Drugs and crime facts*. Retrieved from http://www.bjs.gov/content/pub/pdf/dcf.pdf

Appendix B: Sick call form

Date/Fecha: _____ Dorm/cuarto:_____

Name/nombre: _____

ID number/ Número de Identificación: _____

Complaint/ queja: _____

_____

_____

# Appendix C: AGREE II score sheet

| Domain | Item | | AGREE II Rating *1 Strongly Disagree* | *2* | *3* | *4* | *5* | *6* | *7 Strongly Agree* |
|---|---|---|---|---|---|---|---|---|---|
| Scope and purpose | 1. | The overall objective(s) of the guideline is (are) specifically described. | | | | | | | |
| | 2. | The health question(s) covered by the guideline is (are) specifically described. | | | | | | | |
| | 3. | The population (patients, public, etc.) to whom the guideline is meant to apply is specifically described. | | | | | | | |
| Stakeholder involvement | 4. | The guideline development group includes individuals from all the relevant professional groups. | | | | | | | |
| | 5. | The views and preferences of the target population (patients, public, etc.) have been sought. | | | | | | | |
| | 6. | The target users of the guideline are clearly defined. | | | | | | | |
| Rigor of development | 7. | Systematic methods were used to search for evidence. | | | | | | | |
| | 8. | The criteria for selecting the evidence are clearly described. | | | | | | | |
| | 9. | The strengths and limitations of the body of evidence are clearly described. | | | | | | | |
| | 10. | The methods for formulating the recommendations are clearly described. | | | | | | | |
| | 11. | The health benefits, side effects and risks have been considered in formulating the recommendations. | | | | | | | |
| | 12. | There is an explicit link between the recommendations and the supporting evidence. | | | | | | | |
| | 13. | The guideline has been externally reviewed by experts prior to its publication. | | | | | | | |
| | 14. | A procedure for updating the guideline is provided. | | | | | | | |
| Clarity of presentation | 15. | The recommendations are specific and unambiguous. | | | | | | | |
| | 16. | The different options for management of the condition or health issue are clearly presented. | | | | | | | |
| | 17. | Key recommendations are easily identifiable. | | | | | | | |
| Applicability | 18. | The guideline describes facilitators and barriers to its application. | | | | | | | |
| | 19. | The guideline provides advice and/or tools on how the recommendations can be put into practice. | | | | | | | |
| | 20. | The potential resource implications of applying the recommendations have been considered. | | | | | | | |
| | 21. | The guideline presents monitoring and/ or auditing criteria. | | | | | | | |
| Editorial independence | 22. | The views of the funding body have not influenced the content of the guideline. | | | | | | | |
| | 23. | Competing interests of guideline development group members have been recorded and addressed. | | | | | | | |
| Overall Guideline Assessment | 1. | Rate the overall quality of this guideline. | 1 *Lowest possible quality* | 2 | 3 | 4 | 5 | 6 | 7 *Highest possible quality* |
| Overall Guideline Assessment | 2. | I would recommend this guideline for use. | *Yes* | | | *Yes, with modifications* | | | *No* |

# Appendix D: Alcohol withdrawal assessment scoring guidelines

| Nausea/Vomiting – Rate on scale 0 – 7 | Tremors – have patient extend arms & spread fingers. Rate on scale 0 – 7. |
|---|---|
| 0 – None | 0 – No tremor |
| 1 – Mild nausea with no vomiting | 1 – Not visible, but can be felt fingertip to fingertip |
| 2 | 2 |
| 3 | 3 |
| 4 – Intermittent nausea | 4 – Moderate, with patient's arms extended |
| 5 | 5 |
| 6 | 6 |
| 7 – Constant nausea and frequent dry heaves and vomiting | 7 – severe, even w/ arms not extended |

| Anxiety – Rate on scale 0 – 7 | Agitation – Rate on scale 0 – 7 |
|---|---|
| 0 – no anxiety, patient at ease | 0 – normal activity |
| 1 – mildly anxious | 1 – somewhat normal activity |
| 2 | 2 |
| 3 | 3 |
| 4 – moderately anxious or guarded, so anxiety is inferred | 4 – moderately fidgety and restless |
| 5 | 5 |
| 6 | 6 |
| 7 – equivalent to acute panic states seen in severe delirium or acute schizophrenic reactions. | 7 – paces back and forth, or constantly thrashes about |

| Paroxysmal Sweats – Rate on Scale 0 – 7.<br>0 – no sweats | Orientation and clouding of sensorium – Ask, "What day is this? Where are you? Who am I?" Rate scale 0 – 4 |
|---|---|
| 1- barely perceptible sweating, palms moist | 0 – Oriented |
| 2 | 1 – cannot do serial additions or is uncertain about date |
| 3 | |
| 4 – beads of sweat obvious on forehead | 2 – disoriented to date by no more than 2 calendar days |
| 5 | |
| 6 | 3 – disoriented to date by more than 2 calendar days |
| 7 – drenching sweats | 4 – Disoriented to place and / or person |

| Tactile disturbances – Ask, "Have you experienced any itching, pins & needles sensation, burning or numbness, or a feeling of bugs crawling on or under your skin?" | Auditory Disturbances – Ask, "Are you more aware of sounds around you? Are they harsh? Do they startle you? Do you hear anything that disturbs you or that you know isn't there?" |
|---|---|
| 0 – none | 0 – not present |
| 1 – very mild itching, pins & needles, burning, or numbness | 1 – Very mild harshness or ability to startle |
| 2 – mild itching, pins & needles, burning, or numbness | 2 – mild harshness or ability to startle |
| 3 – moderate itching, pins & needles, burning, or numbness | 3 – moderate harshness or ability to startle |
| 4 – moderate hallucinations | 4 – moderate hallucinations |
| 5 – severe hallucinations | 5 – severe hallucinations |
| 6 – extremely severe hallucinations | 6 – extremely severe hallucinations |
| 7 – continuous hallucinations | 7 – continuous hallucinations |

| Visual disturbances – Ask, "Does the light appear to be too bright? Is its color different than normal? Does it hurt your eyes? Are you seeing anything that disturbs you or that you know isn't there?" | Headache – Ask, "Does your head feel different than usual? Does it feel like there is a band around your head?" Do not rate dizziness or lightheadedness. |
|---|---|
| 0 – not present | 0 – not present |
| 1 – very mild sensitivity | 1 – very mild |
| 2 – mild sensitivity | 2 – mild |
| 3 – moderate sensitivity | 3 – moderate |
| 4 – moderate hallucinations | 4 – moderately severe |
| 5 – severe hallucinations | 5 – severe |
| 6 – extremely severe hallucinations | 6 – very severe |
| 7 – continuous hallucinations | 7 – extremely severe |

*Note.* Procedure:

1. Assess and rate each of the 10 criteria of the CIWA scale. Each criterion is rated on a scale from 0 to 7, except for "Orientation and clouding of sensorium" which is rated on scale 0 to 4. Add up the scores for all ten criteria. This is the total CIWA-Ar score for the patient at that time. Prophylactic medication should be started for any patient with a total CIWA-Ar score of 8 or greater (ie. Start on withdrawal medication). If started on scheduled medication, additional PRN medication should be given for a total CIWA-Ar score of 15 or greater.
2. Document vitals and CIWA-Ar assessment on the Withdrawal Assessment Sheet. Document administration of PRN medications on the assessment sheet as well.
3. The CIWA-Ar scale is the most sensitive tool for assessment of the patient experiencing alcohol withdrawal. Nursing assessment is vitally important. Early intervention for CIWA-Ar score of 8 or greater provides the best means to prevent the progression of withdrawal

| Scale for Scoring: | Indications for PRN medication: |
|---|---|
| Total Score =<br>0 – 9: absent or minimal withdrawal<br>10 – 19: mild to moderate withdrawal<br>more than 20: severe withdrawal | a. Total CIWA-AR score 8 or higher if ordered PRN only (Symptom-triggered method).<br>b. Total CIWA-Ar score 15 or higher if on Scheduled medication. (Scheduled + prn method)<br>Consider transfer to ICU for any of the following: Total score above 35, q1h assess. x more than 8hrs required, more than 4 mg/hr lorazepam x 3hr or 20 mg/hr diazepam x 3hr required, or resp. distress. |

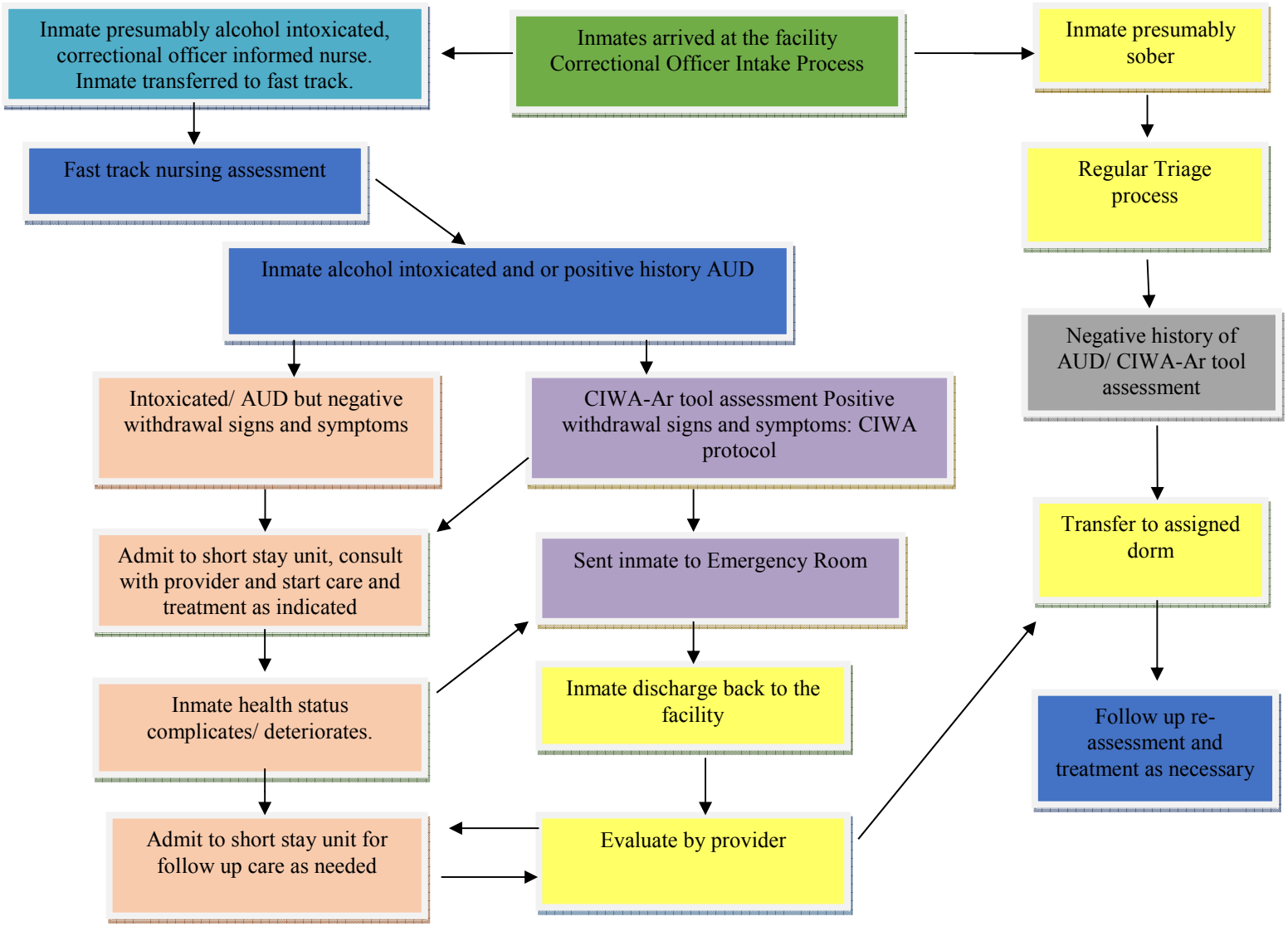
| Signature/ Title | Initials | Signature / Title | Initials |
|---|---|---|---|
| | | | |

# Alcohol Withdrawal Assessment Flow sheet (revised Nov 2003)

# Appendix E: DSM–5 criteria for alcohol use disorder

| | | |
|---|---|---|
| 1 | Alcohol is often taken in larger amounts or over a longer period than was intended. (See DSM– IV, criterion 7.) | The presence of at least 2 of these symptoms indicates an AUD.<br>The severity of the AUD is defined as:<br>Mild: The presence of 2 to 3 symptoms<br>Moderate: The presence of 4 to 5 symptoms<br>Severe: The presence of 6 or more symptoms |
| 2 | There is a persistent desire or unsuccessful efforts to cut down or control alcohol use. (See DSM–IV, criterion 8.) | |
| 3 | A great deal of time is spent in activities necessary to obtain alcohol, use alcohol, or recover from its effects. (See DSM–IV, criterion 9.) | |
| 4 | Craving, or a strong desire or urge to use alcohol.<br>**This is new to DSM–5** | |
| 5 | Recurrent alcohol use resulting in a failure to fulfill major role obligations at work, school, or home. (See DSM–IV, criterion 1.) | |
| 6 | Continued alcohol use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of alcohol. (See DSM–IV, criterion 4.) | |
| 7 | Important social, occupational, or recreational activities are given up or reduced because of alcohol use. (See DSM–IV, criterion 10.) | |
| 8 | Recurrent alcohol use in situations in which it is physically hazardous. (See DSM–IV, criterion 2.) | |
| 9 | Alcohol use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by alcohol. (See DSM–IV, criterion 11.) | |
| 10 | Tolerance, as defined by either of the following:<br>a) A need for markedly increased amounts of alcohol to achieve intoxication or desired effect<br>b) A markedly diminished effect with continued use of the same amount of alcohol (See DSM–IV, criterion 5.) | |
| 11 | Withdrawal, as manifested by either of the following:<br>a) The characteristic withdrawal syndrome for alcohol (refer to criteria A and B of the criteria set for alcohol withdrawal)<br>b) Alcohol (or a closely related substance, such as a benzodiazepine) is taken to relieve or avoid withdrawal symptoms. (See DSM–IV, criterion 6.) | |

Appendix F: Evidence based alcohol use disorder / withdrawal syndrome algorithm




WWG/2016

Appendix G: Evidence-based practice: Alcohol use disorder/ alcohol withdrawal syndrome algorithm evaluation instrument

Evaluator name & degree: _____ Date: _____

Years of experience in correctional nursing: _____ Professional years of experience: _____

| Question | Yes | No | Comments |
|---|---|---|---|
| 1. Is this algorithm describing the basic screening process flow upon inmates' arrival? | | | |
| 2. Is this algorithm directing an appropriate process to establish the care of inmates presumably alcohol intoxicated and or alcohol withdrawal? | | | |
| 3. Does the algorithm have steps to address inmates' re-evaluation for potential complications? | | | |
| 4. Are the algorithm recommendations considering inmates safety? | | | |
| 5. Is the algorithm base on EBP? | | | |
| 6. Is the algorithm clear and concise? | | | |

Is there any step that you will add or removed from the algorithm? _____

Any additional recommendations:

_____

_____

_____

Appendix H: Nursing management of patient with alcohol use disorder/ withdrawal syndrome

Purpose:

The purpose of this guideline is to provide direction to correctional nursing staff on the management of patients (inmates) presumably alcohol intoxicated, alcohol intoxicated or alcohol withdrawal.

Definition/ concepts:

NIH estimated that an average of 17 million Americans suffer from alcoholism use disorder (AUD), of whom only 15% receive treatment (NIH, 2012).

1. Alcohol withdrawal Syndrome (AWS) - Refers to the signs and symptoms that may occur when a person who has been abusing alcohol every day abruptly stops drinking (Medline Plus, 2013). Although it is most prevalent among adults, it may occur in teenagers or children.
    a. AWS- usually occur within 6 to 8 hours after the last drink, but peak by 24-72 hours and may persist for weeks (Burns & Pinsky, 2017). Common symptoms include: Anxiety/ nervousness, depression, Fatigue, Irritability, Jumpiness or shakiness, Mood swings, Not thinking clearly, Clammy skin, Dilated pupils, Headache, Insomnia, Loss of appetite, Nausea and vomiting, Pallor, Tachycardia, Sweating, and tremor.
    b. Delirium tremens (DT) can also occur in some cases, as it is a severe form of reaction to alcohol withdrawal, and includes agitation, fever, hallucinations, seizures, and severe confusion (University of Maryland Medical Center, 2014).

Nursing Process implementation upon receiving a patient presumably intoxicated, alcohol intoxicated or alcohol withdrawal:

Assessment:

1. Triage and determine if the patient is intoxicated and or sober presenting he/she is presenting sign and symptoms of withdrawals.
    a. Collected past medical history and concurrent illness.
    b. Assess history of sustained drinking.
    c. Assess history of previous AW/DT.

d. Assess when the last drink was, frequency of consumption and how much alcohol was consuming at the time.

2. Initial assessment would include:

   a. Assess and assure a patent airway. Recognize the need for potential intubation.

   b. Place on pulse oximetry and cardiac monitor.

   c. Assess vital signs and monitor patient status continuously (every hour the first 8 hours then base on findings). Recognize any dysrhythmia / abnormal vital signs.

   d. Assess for injuries and bleeding. Notify provider the presence of any abnormal findings.

   e. Assess for alcohol withdrawals signs and symptoms with CIWA-Ar tool (see Appendix A) every hour the first 8 hours then based on findings. Notify provider the presence of results. CIWA-Ar interpretation (Bakhla et al., 2014):

| Scale for Scoring: | Indications for PRN medication: |
|---|---|
| Total Score = 0 – 9: absent or minimal withdrawal 10 – 15: mild withdrawal 16-20: modest withdrawal ..21-67 severe withdrawal | a. Total CIWA-AR score 8 or higher if ordered PRN only (Symptom-triggered method). b. Total CIWA-Ar score 15 or higher if on Scheduled medication. (Scheduled + prn method) Consider transfer to ICU for any of the following: Total score above 35, q1h assess. x more than 8hrs required, more than 4 mg/hr lorazepam x 3hr or 20 mg/hr diazepam x 3hr required, or resp. distress. |

   f. Glasgow Coma Scale every hour the first 8 hours then base on findings.

   g. Evaluate the need for safety measures: i.e. pads, soft restrains (provider orders) and one-on-one observation.

   h. Evaluate fall risk

   i. Assess nutritional risk.

Diagnosis

1. Nurses will utilize *North American Nursing Diagnosis Association* current nursing diagnosis.

Plan

Develop a nursing care plan base on nursing diagnosis to attend patients' needs. The plan must be written and communicate and organize the actions of nursing care.

Interventions

1. Present the patient to provider.
2. Provide the care in accordance with assessment findings.
3. Monitor vital signs every hour if CIWA-Ar score is > than 8. Otherwise every 2 hrs first 24 hrs then every 4 hrs until discontinued.
4. Cardiac monitoring.
5. Prepare for cardiopulmonary resuscitation and seizures management.
6. Glasgow Coma Scale every hour the first 8 hours then base on findings.
7. Observe behavioral responses such as hyperactivity, disorientation, confusion, sleeplessness, irritability.
8. Re-orient frequently and orient the patient to reality.
9. Implement aspiration precautions as deemed necessary (suction/nasogastric tube)
10. Implement safety measures as deemed necessary: i.e. pads, soft restrains (provider orders) and one-on-one observation.
11. Provide for environmental safety when indicated.
12. Provide comfort and a quite, calm environment minimizing noise and shadows as much as possible.
13. Prepare patient for treatments and medications, as needed.
14. Monitor I&O. Note 24-hr fluid balance.
15. Check deep-tendon reflexes. Assess gait, if possible.
16. Assist with ambulation and self-care activities as needed.
17. Per providers orders:

a. Establish IV access.
b. Medications: i.e. Chlordiazepoxide (CDZ), Lorazepam, Haloperidol, Diazepam
c. Foley
d. Oxygen
e. EKG
f. Blood sugars sticks
g. Restrain (if any restrain order is place, nursing will follow Facility Wide Restrain and Seclusion policy).
h. Prepare for transfer/ admission at the Medical Healthcare Unit (MHU)

18. Tests/ studies are selected based on clinical suspicion. Obtain labs as recommended by the provider.
19. Provide meals and snack as feasible base on patient status.
20. Coordinate with ancillary services any test or services.
21. Conduct hourly rounding
22. Patient Education (i.e. cessation of alcohol use, nutrition and resources).

Evaluation

1. Re-evaluate patient's status and interventions outcomes.
2. Update care plan as many times as it is necessary.

Documentation shall include, but not be limited to:

1. Mechanism of intoxication: alcohol or other substance
2. Initial assessment and past medical history
3. Glasgow Coma Scale
4. CIWA
5. Initial and subsequent vital signs and monitoring
6. Allergies
7. Location and description of injuries
8. Treatments and responses
9. Re-evaluations
10. Examination by consulting physician
11. Current medications, herbal supplements, over-the-medications
12. Disposition of patient
13. Other as estimated necessary

Guideline to follow to discharge patients with alcohol intoxication to the dorms:

1. A patient can be discharged to the dorms when the blood alcohol level (BAL) is between <80mg/dL, has a Glasgow Coma Scale of 15 and is not showing sign / symptoms of alcohol withdrawals.
2. A patient with disruptive behavior- nurse will call correctional officer or will call a “code one” or use body alarm.
3. If a patient presents a behavior that is a risk of harm himself or other, nurse will inform the correctional officer. If appropriate and after provider medical screening examination (MSE) and clearance the patient will be transfer to the appropriate housing. Correctional officer will conduct hourly checks and inform nurses if any change. Nurse is responsible to re-assess patients every 8 hrs or when necessary.

# Appendix H: Part 1: Alcohol withdrawals assessment scoring guidelines (CIWA-AR)

**Alcohol Withdrawal Assessment Scoring Guidelines (CIWA - Ar)**

**Nausea/Vomiting** - Rate on scale 0 - 7

0 - None
1 - Mild nausea with no vomiting
2
3
4 - Intermittent nausea
5
6
7 - Constant nausea and frequent dry heaves and vomiting

**Tremors -** have patient extend arms & spread fingers. Rate on scale 0 - 7.
0 - No tremor
1 - Not visible, but can be felt fingertip to fingertip
2
3
4 - Moderate, with patient's arms extended
5
6
7 - severe, even w/ arms not extended

**Anxiety** - Rate on scale 0 - 7
0 - no anxiety, patient at ease
1 - mildly anxious
2
3
4 - moderately anxious or guarded, so anxiety is inferred
5
6
7 - equivalent to acute panic states seen in severe delirium or acute schizophrenic reactions.

**Agitation** - Rate on scale 0 - 7
0 - normal activity
1 - somewhat normal activity
2
3
4 - moderately fidgety and restless
5
6
7 - paces back and forth, or constantly thrashes about

**Paroxysmal Sweats** - Rate on Scale 0 - 7.
0 - no sweats
1- barely perceptible sweating, palms moist
2
3
4 - beads of sweat obvious on forehead
5
6
7 - drenching sweats

**Orientation and clouding of sensorium** - Ask, "What day is this? Where are you? Who am I?" Rate scale 0 - 4
0 - Oriented
1 – cannot do serial additions or is uncertain about date

2 - disoriented to date by no more than 2 calendar days

3 - disoriented to date by more than 2 calendar days
4 - Disoriented to place and / or person

**Tactile disturbances** - Ask, "Have you experienced any itching, pins & needles sensation, burning or numbness, or a feeling of bugs crawling on or under your skin?"
0 - none
1 - very mild itching, pins & needles, burning, or numbness
2 - mild itching, pins & needles, burning, or numbness
3 - moderate itching, pins & needles, burning, or numbness
4 - moderate hallucinations
5 - severe hallucinations
6 - extremely severe hallucinations
7 - continuous hallucinations

**Auditory Disturbances** - Ask, "Are you more aware of sounds around you? Are they harsh? Do they startle you? Do you hear anything that disturbs you or that you know isn't there?"
0 - not present
1 - Very mild harshness or ability to startle
2 - mild harshness or ability to startle
3 - moderate harshness or ability to startle
4 - moderate hallucinations
5 - severe hallucinations
6 - extremely severe hallucinations
7 - continuous hallucinations

**Visual disturbances** - Ask, "Does the light appear to be too bright? Is its color different than normal? Does it hurt your eyes? Are you seeing anything that disturbs you or that you know isn't there?"
0 - not present
1 - very mild sensitivity
2 - mild sensitivity
3 - moderate sensitivity
4 - moderate hallucinations
5 - severe hallucinations
6 - extremely severe hallucinations
7 - continuous hallucinations

**Headache** - Ask, "Does your head feel different than usual? Does it feel like there is a band around your head?" Do not rate dizziness or lightheadedness.

0 - not present
1 - very mild
2 - mild
3 - moderate
4 - moderately severe
5 - severe
6 - very severe
7 - extremely severe

Procedure:

1. Assess and rate each of the 10 criteria of the CIWA scale. Each criterion is rated on a scale from 0 to 7, except for "Orientation and clouding of sensorium" which is rated on scale 0 to 4. Add up the scores for all ten criteria. This is the total CIWA-Ar score for the patient at that time. Prophylactic medication should be started for any patient with a total CIWA-Ar score of 8 or greater (ie. start on withdrawal medication). If started on scheduled medication, additional PRN medication should be given for a total CIWA-Ar score of 15 or greater.
2. Document vitals and CIWA-Ar assessment on the Withdrawal Assessment Sheet. Document administration of PRN medications on the assessment sheet as well.
3. The CIWA-Ar scale is the most sensitive tool for assessment of the patient experiencing alcohol withdrawal. Nursing assessment is vitally important. Early intervention for CIWA-Ar score of 8 or greater provides the best means to prevent the progression of withdrawal.

*Note.* National Institute for Health & Clinical Excellence. (2011). Alcohol-used disorders: diagnosis, assessment and management of harmful drinking and alcohol dependence. Clinical Guidelines, No. 115 National Collaborating Centre for Mental Health (UK). Retrieved from http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0042158/

# Appendix H: Part 2: Evaluation documentation

| Evaluation criteria | Scores |
|---|---|
| Nausea/Vomiting - Rate on scale 0 – 7 | |
| Tremors - have patient extend arms & spread fingers. Rate on scale 0 - 7. | |
| Anxiety - Rate on scale 0 – 7 | |
| Agitation - Rate on scale 0 – 7 | |
| Paroxysmal Sweats - Rate on Scale 0 - 7. | |
| Orientation and clouding of sensorium - Ask, "What day is this? Where are you? Who am I?" Rate scale 0 - 4 | |
| Tactile disturbances - Ask, "Have you experienced any itching, pins & needles sensation, burning or numbness, or a feeling of bugs crawling on or under your skin?" | |
| Auditory Disturbances - Ask, "Are you more aware of sounds around you? Are they harsh? Do they startle you? Do you hear anything that disturbs you or that you know isn't there?" Rate on Scale 0 - 7. | |
| Visual disturbances - Ask, "Does the light appear to be too bright? Is its color different than normal? Does it hurt your eyes? Are you seeing anything that disturbs you or that you know isn't there?" Rate 0-7 | |
| Headache - Ask, "Does your head feel different than usual? Does it feel like there is a band around your head?" Do not rate dizziness or lightheadedness. Rate on Scale 0 - 7. | |
| Total score | |

| Signature/ Title | Initials | Signature / Title | Initials |
|---|---|---|---|
| | | | |

Appendix H: Part 3: The Situation-Background-Assessment-Recommendation technique

---

S

Situation:

Author:
Date:
Situations:

---

B

Background

Not required

A

Assessment:
Total Amount:
Ages:
Total: Ideations _____ Attempts _____ Completions _____

R

Recommendation

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# Appendix I: Analysis of literature-matrix of selected papers

| Citation | Conceptual Framework / Theory | Main Finding | Research Method | AANC Level of Evidence |
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| Adams, S., & McCarthy, A. (2007). Evidence-based practice guidelines and school nursing. *Journal of School Nursing,* 23(3), 128-136. | None | The article defines EBP guidelines and discusses the process of guideline development, including identification of topics, systematic literature searches, and evaluation and rating of research. Criteria for determining the quality of existing guidelines are reviewed. The steps needed to develop EBP guidelines specifically for school nursing are discussed. | General review. | Level E |
| Afilalo, M., Guttman, A., Colacone, A., Dankoff, J., Tselios, C., Beaudet, M., . . . Lloyd J. (1995). Emergency department use and misuse. *Journal of Emergency Medicine,* 13(2), 259-264. | None | Overall, 69% of the patients were appropriate users and could have been seen only in the ED. Fifteen percent of the patients were classified as inappropriate users and should have been seen at an OPF. The remaining 15.8% represented "gray zone" cases. An interview conducted on a subset of ambulatory patients revealed the main reasons for choosing to visit the ED were lack of awareness of other facilities, perceived seriousness of condition, trust in the ED staff, or proximity of the ED. It was concluded that misusers represent a small portion of our ED caseload. | Survey. A 14-day survey of the emergency department (ED) to examine appropriate and inappropriate use of the ED. The results are based on a convenience sample of 849 patients, selected to represent a 1-week period. Three categories (CAT) of patients were defined. | Level E |
| American Society of Addiction Medicine. (2001). Addiction medicine essentials clinical institute withdrawal assessment of alcohol scale, revised (CIWA-Ar). | None | The best known and most extensively studied scale is the Clinical Institute Withdrawal Assessment - Alcohol (CIWA-A) and a shortened version, the CIWA-A revised (CIWA-Ar). | Report of an instrument study. Brief description of CIWA-Ar tool use to assess patients with alcohol withdrawals. | Level E |
| American Society of Addiction Medicine. (2003). Public policy statement on access to appropriate detoxification services for persons incarcerated in prisons and jails. *Journal of Addictive Diseases*, 22(3), 111-113. | None | Recommendations were developed to guide assessment on newly incarcerated inmates. | Public policy statement | Level E |
| Arantes, J., Berg, M. E., Lawlor, D., & Grace, R. C. (2013). Offenders have higher delay-discounting rates than non-offenders after controlling for differences in drug and | General Theory of Criminal Offending | Offenders discounted future rewards substantially more than non-offenders, and rates varied systematically with amount and delay for both groups, consistent with previous research. The difference in delay discounting between offenders and controls | Researchers measured rates of delay discounting for adult offenders incarcerated in two medium-security facilities in New Zealand ($n$= 63) and non-offender controls ($n$= 70) using a questionnaire which asked participants to nominate | Level B |

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| alcohol abuse. *Legal & Criminological Psychology*, 18(2), 240-253. | | remained significant after controlling for self-reported drug and alcohol use. There were no significant gender differences. | an indifference point – an amount of money to be received after a delay that was equal in value to an immediate amount – for immediate rewards varying from $500 to $4,000. Indifference points were converted to annual discounting rates. Self-reported measures of alcohol and drug abuse were also obtained. | |
| Armola, R., Bourgault, A., Halm, M., Board, R., Bucher, L., Harrington, C. A., . . . Medina, J. (2009). AACN levels of evidence: What's New? *Critical Care Nurse,* 29, 70-73. | None | New AACN's evidence-leveling system was developed | Review and model development. In 2008, AACN's volunteer EBPRWG conducted a comprehensive review of AACN's evidence leveling system, which included a review of 12 existing grading systems from other organizations.6-18 Following lengthy discussions, a decision was made to reverse the order of AACN's evidence-leveling system to maintain consistency with the hierarchies used by other health organizations. | Level D |
| Bertakis, K. D., & Azari, R. (2007). Determinants of physician discussion regarding tobacco and alcohol abuse. *Journal of Health Communication*, 12, 513–525. | None | Patients reporting better physical health were more likely to have their physicians employ a practice style emphasizing addiction behaviors (p ¼ .0186). Substance use (p ¼ .0117) and health promotion counseling (p ¼ .0130) occurred more frequently with younger patients. Physicians discussed substance use (p ¼< .0001) and addiction (p < .0001) more often with male patients. Problem drinkers were more likely to have physicians address their substance use (p ¼ .0069) and focus on addiction behaviors (p ¼ .0017). Physicians adopted an addiction-oriented practice style (p < .0001), addressing substance use (p ¼ .0009) and smoking (p < .0001), more often with patients who smoked. Physicians appear more apt to discuss these behavioral risk factors with healthier, younger, male patients who abuse tobacco and alcohol. | The study employed direct observation and interactional analysis of medical visits to investigate factors associated with physician discussion of tobacco and alcohol use with patients. New adult patients were randomly assigned to primary care at a university medical center. Videotapes of the visits were analyzed using the Davis observation code. Regression equations related discussions of substance use (alcohol and other substances), smoking, and health promotion to patient health status, depression, age, education, income, gender, alcohol abuse, and current smoking. | Level C |
| Brockopp, D., Schreiber, J., Hill, K., Altpeter, T., Moe, K., & Merritt, S. (2011). A successful evidence-based practice model in an acute care setting. | Watson's Theory of Caring | Focuses on process and resources needed to develop an evidence-based practice (EBP) environment in nursing. It states that nursing philosophical direction in the institution, supportive administrative goals and actions, and EBP goal are needed for EBP success. It discusses the Watson's Theory of Caring which gives the | General narrative review. | Level D |

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| | | philosophical foundation for nursing within the institution. It also mentions the nursing performance evaluation and nursing practice studies. | | |
| Chithiramohan, A., & George, S. (2015). Pharmacological interventions for alcohol relapse prevention. *Internet Journal of Medical Update*, 10 (2), 41-45. | None | Discusses how each intervention can be used in clinical practice and review the efficacy of each drug. No one drug is clearly superior to the other, and clinical factors and patient choice should inform the choice of drug. | Review. The pharmacological profile, mode of action, pharmacokinetics, and safety and tolerability of each of these pharmacological interventions. | Level D |
| Claridge, J., & Fabian, T. (2005). History and development of evidence-based medicine. *World* Journal of Surgery, 29(5), 547-553. | None | This article illustrates the timeline of the development of evidence-based medicine (EBM). | Narrative review. | Level E |
| Cornett, S. (2009). Assessing and addressing health literacy. *The Online Journal of Issues in Nursing*, 14(3). | None | This article provides guidance regarding establishing an environment that promotes health literacy, assessing health literacy levels, utilizing strategies to increase health literacy, evaluating the learning that has occurred, and incorporating health literacy concepts into the nursing curriculum. | Narrative review. | Level E |
| Delheim, A., Harthug, S. Nilsen, R., & Nortvedt, M. (2011). Factors influencing the development of evidence-based practice among nurses: A self-report survey. *BMC Health Services Research,* 12 (367). | None | Nurses largely used experienced-based knowledge collected from their own observations, colleagues and other collaborators for support in practice. Evidence from research was seldom used. The greatest barriers were lack of time and lack of skills to find and manage research evidence. The nurse's age, the number of years of nursing practice, and the number of years since obtaining the last health professional degree influenced the use of sources of knowledge and self-reported barriers. Self-reported skills in finding, reviewing and using different sources of evidence were positively associated with the use of research evidence and inversely related to barriers in use of research evidence. Skills in evidence-based practice seem to reduce barriers to using research evidence and to increase use of research evidence in clinical practice. | Cross-sectional data was collected from 407 nurses during the period November 8 to December 3, 2010, using the Norwegian version of Developing Evidence-based Practice questionnaire (DEBP). The DEBP included data on various sources of information used for support in practice, on potential barriers for evidence-based practice, and on self-reported skills on managing research-based evidence. The DEBP was translated into Norwegian in accordance with standardized guidelines for translation and cultural adaptation. | Level C |
| Elkins, M. Y. (2010). Using PICO and the brief report to answer clinical questions. *Nursing, 40*(4), 59-60. | None | This article explained how to use the PICO method to search and assess the current best practices, share information with colleagues, and improve patient outcomes. | Theory and research development. | Level E |

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| Ekendahl, M. (2009). Alcohol abuse, compulsory treatment and successive aftercare: A qualitative study of client perspectives *International Journal of Social Welfare*, 18 (3), 260-269. 10. | None | Alcohol abusers claimed to want adequate help during primary care and after discharge. | Studied 12 compulsorily treated alcohol abusers were provided a qualitative interview coded in themes and sub-themes. | Level C |
| Fazel, S., Bains, P., & Doll, H. (2006). Substance abuse and dependence in prisoners: a systematic review. *Addiction*, 101 (2), 181-191. | None | Thirteen studies with a total of 7563 prisoners met the review criteria. There was substantial heterogeneity among the studies. The estimates of prevalence for alcohol abuse and dependence in male prisoners ranged from 18 to 30% and 10 to 24% in female prisoners. The prevalence estimates of drug abuse and dependence varied from 10 to 48% in male prisoners and 30 to 60% in female prisoners. | A systematic review of studies measuring the prevalence of drug and alcohol abuse and dependence in male and female prisoners on reception into prison was conducted. Only studies using standardized diagnostic criteria were included. Relevant information, such as mean age, gender and type of prisoner, was recorded for eligible studies. The prevalence estimates were compared with those from large cross-sectional studies of prevalence in prison populations. | Level B |
| Fiscella, K., Pless, N., Meldrum, S., & Fiscella, P. (2004). Benign neglect or neglected abuse: Drug and alcohol withdrawal in U.S. jails. *Journal of Law, Medicine & Ethics,* 32(1), 129-136. | None | More than a third of prisoners presented either AAD or DAD in the last 12 months. Cannabis was the most frequent drug and just under a fifth of prisoners had AAD. AAD and DAD were clearly different for the following: socio-demographic variables, childhood history, imprisonment characteristics, psychiatric comorbidity and Cloninger's TCI. Profiles of AAD in prison are similar to type II alcoholism. | The aim of this study is 1) to assess prevalence of both drug and alcohol abuse and dependence (DAD/AAD) in a national randomized cohort of French prisoners, short or long-term sentence 2) to assess the risk factors associated with DAD/AAD in prison. A stratified random strategy was used to select 1) 23 prisons among the different types of prison 2) 998 prisoners. Diagnoses were assessed according to a standardized procedure, each prisoner being assessed by two psychiatrists, one junior, using a structured interview (MINI 5 plus), and one senior, completing the procedure with an open clinical interview. At the end of the interview the clinicians met and agreed on a list of diagnoses. Cloninger's Temperament and Character Inventory (TCI) was also used. | Level B |
| Fiscella, K., Pless, N., Meldrum, S., Fiscella, P. (2004). Alcohol and opiate withdrawal in US jails. *American Journal of Public Health*, 94 (9), 522-1524. | None | Community-specific median rates of self-reported alcohol dependency among arrestees in 1997 were 11% and 12% among men and women, respectively (Table 1). Using the methods of Hammett et al. to account for re-arrests, and based on an estimated figure of 15.2 million arrests in 1997, estimated that 11 million individuals were arrested in 1997 | Team analyzed information obtained from the Arrestee Drug Abuse Monitoring (ADAM) Program to estimate numbers of arrestees with alcohol or opiate dependency. ADAM collects annual national data on urine toxicology and self-reported alcohol and drug dependency among arrestees in the United | Level B |

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| | | and that 1.2 million of these arrestees were alcohol dependent. | States. Estimated detoxification availability in jails in 1997 using data from a federally sponsored survey, the Uniform Data and Facility Set Survey of Correctional Facilities. Specifically, administrators were asked "Does your facility currently detoxify *any* of its inmates/residents/detainees from alcohol or drugs?" Finally, we estimated numbers of arrestees at risk for alcohol or opiate withdrawal by multiplying rates of self-reported dependence by estimates of detoxification availability. | |
| Forsyth, S. J., Alati, R., Ober, C., Williams, G. M., & Kinner, S. A. (2014). Striking subgroup differences in substance-related mortality after release from prison. *Addiction*, 109(10), 1676-1683. | None | In the first year after release, Indigenous ex-prisoners were more likely to die from alcohol-related causes [hazard ratio (HR) = 1.9, 95% confidence interval (CI) = 1.1–3.1)] but less likely to die of drug-related causes (HR = 0.34, 95%CI = 0.21–0.53) than were non-Indigenous ex-prisoners. Among non-Indigenous prisoners only, the risk of substance-related death was significantly higher in the first 4 weeks [relative risk (RR) = 5.1, 95% CI = 3.7–6.9] when compared with the risk after 1 year post-release. Most evaluated risk factors for substance-related death were similar for Indigenous and non-Indigenous ex-prisoners; however, the hazard of death increased with age more for Indigenous ex-prisoners (HR = 1.7 per decade of age, 95% CI = 1.4–2.1) than for non-Indigenous ex-prisoners (HR = 1.3, 95% CI = 1.2–1.4). In Australia, patterns of substance-related death in ex-prisoners differ markedly according to Indigenous status. Efforts to prevent substance-related deaths in ex-prisoners should consider heterogeneity in the target population and tailor responses accordingly. | Cohort. Adults released from prison in Queensland, Australia from 1 January 1994 to 31 December 2007. Among this cohort of 42 015 individuals we observed 82 315 releases from prison and 2158 deaths in the community by the end of 2007, of which 661 were substance-related deaths. Incarceration data were obtained from Queensland Corrective Services and linked probabilistically with deaths recorded in the Australian National Death Index. | Level C |
| Gallagher-Ford, L., Fineout-Overholt, E. Mazurek-Melnyk, B., & Stillwell, S. (2011). Implementing an evidence-based practice change. *American Journal of Nursing*, 111 (3), 54-60. | EBP | The purpose of this article is to give nurses the knowledge and skills they need to implement EBP consistently, one step at a time. | General review. | Level D |
| Gough, E., Kempf, M., Graham, L., Manzanero, | None | Thirty-six predominantly prospective cohort studies were | Systematic review with meta-analysis. Studies describing | Level A |

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| M., Hook, E., Bartolucci, A., & Chamot, E. (2010). HIV and Hepatitis B and C incidence rates in US correctional populations and high risk groups: A systematic review and meta-analysis. BMC Public Health. | | included. Across all infection outcomes, continuously incarcerated inmates and treatment recruited IVDU showed the lowest incidence, while MSM and street recruited IVDU showed the highest. HIV incidence was highest among inmates released and re-incarcerated. Possible sources of heterogeneity identified among HIV studies were risk population and race. Although important literature gaps were found, current evidence suggests that policies and interventions for HIV prevention in correctional populations should prioritize curtailing risk of infection during the post-release period. Future research should evaluate HIV incidence rates in inmate populations, accounting for proportion of high risk sub-groups. | HIV incidence in US correctional facility residents and, for comparison, in high risk groups for HIV infection, such as non-incarcerated intravenous drug users (IVDU) and men who have sex with men (MSM) in the US. HIV incidence rates were further compared with Hepatitis B and Hepatitis C Virus rates in these same populations. | |
| Harzke, A. J., Baillargeon, J., Paar, D. P., Pulvino, J., & Murray, O. J. (2009). Chronic liver disease mortality among male prison inmates in Texas, 1989 – 2003. *American Journal of Gastroenterology*, 104(6), 1412-1419.. | None | Among male Texas prisoners from 1989 to 2003, CLD-related deaths accounted for 16% of deaths (688/4,316). CLD-related crude annual death rates were high and increased over the study period by an average of 4.5% annually, with similar rate increases across categories of race-ethnicity. CLD-related average annual death rates were higher among Hispanic prisoners than among black prisoners in each 5-year period, and were higher than those for white prisoners in the 1994-1998 and 1999-2003 periods. HBV or HCV was identified as a causal factor in more than a third (34%) of CLD-related deaths. | Prisoner decedent data were linked with Texas Vital Statistics multiple-cause-of-death data. Deaths were considered CLD-related if CLD or common sequel were recorded as the underlying, intervening, or contributing causes of death. CLD-related crude annual death rates, 5-year average annual death rates, and average annual percentage changes were estimated. | Level C |
| Hodgins, D. C., Lightfoot, L. O. (1988). Types of male alcohol- and drug-abusing incarcerated offenders. *British Journal of Addiction*, 83 (10), 1201-1213. | Matching hypothesis | Each of the five groups requires different interventions and treatments and matching hypothesis are highly speculative. | Cohort. Group of 269 males divided in 5 groups of inmates with different level of alcoholism. | Level C |
| Huriwai, T. (2002). Innovative alcohol and drug user treatment of inmates in New Zealand prisons. *Substance Use & Misuse*, 37 (8-10), 1035-1045. | None | Evidence suggests that the treatment program reduce the recidivism, alcohol and drug use but more research is needed. | The Kowhai Alcohol and Drug Treatment Unit at Rolleston Prison offers an innovative treatment approach for New Zealand inmates. The development of the program has involved local staff from Public Prisons, Psychological Services, and the Community Probation Service (CPS). The primary aim of the program is to reduce recidivism. This is achieved by helping inmates to | Level D |

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| | | | recognize the thoughts, emotions, and behaviors that are present in the period preceding and/or during the commission of criminal activity; particularly those that are precipitated and/or are maintained by alcohol and drugs. | |
| Johnson, J. E., Schonbrun, Y. C., & Stein, M. D. (2014). Pilot test of 12-step linkage for alcohol-abusing women in leaving jail. *Substance Abuse*, 35(1), 7-11. | None | Enhanced referral was feasible and acceptable. Many (57%) of the 14 participants who met with AA volunteers in jail were in contact with those volunteers after release from jail. Participants had significantly fewer drinking days, heavy drinking days, alcohol problems, and drug-using days during the post-release follow-up than they did before jail detention. | Cohort pilot study. Participants were 14 unsentenced female pretrial jail detainees with AUD. Intervention consisted of introducing participants detained in jail to female AA volunteers who could accompany them to an AA meeting after release. Assessments took place at baseline and 1 month after release. | Level D |
| Jones, G. Y., & Hoffmann, N. G. (2006). Alcohol dependence: international policy implications for prison Populations. *Substance Abuse Treatment, Prevention & Policy*, 33(1), 1-6. | None | Alcohol dependence emerged as the most prevalent substance use disorder in both UK prisons and in the US sample. Relative frequencies of abuse and dependence for alcohol and other drugs revealed that dependence on a given substance was more prevalent than abuse ad defined by the current diagnostic criteria. | Structured diagnostic interview with 155 new admissions to one of two prisons in the UK using the Comprehensive Addiction and Psychological Evaluation, a structured diagnostic interview, to ensure consistent assessments. The US sample consisted of 6,881 male inmates in a state prison system evaluated with an automated version of the SUDDS-IV (Substance Use Disorder Diagnostic Schedule-IV) interview. | Level C |
| Kamlesh, B., & Jaeschke, R. (2001). Evidence-based medicine. *Journal for Scientific Research*, 3(2), 105-112. | None | The goal of this paper is to familiarize the readers with the ideas and concepts associated with the phrase *Evidence-based Medicine.* | Narrative review. | Level E |
| Kim, K., & Peterson, B. (2014). *Aging behind bars.* Washington, DC: Urban Institute. | None | Federal and state prison populations increased dramatically. With the growth is a demographic shift to older prison populations. | Report on inmates aging status behind bars. | Level E |
| Kopak, A. M., & Smith-Ruiz, D. (2014). DSM-5 substance use disorders and offense types among women in the Criminal Justice System. *Journal of Offender Rehabilitation*, 53(6), 433-454. | DSM-5 criteria | Severe alcohol use disorder is significantly associated with violence offenses while drug use disorders were more likely to contribute to property and drug-related offenses. | Survey study. Data drawn from 2004 survey of inmates in State and Federal Correctional Facilities. Female inmate data (n=996) was obtained to assess the connection between DSM-5 alcohol and drug use disorders and the type of offenses for which women were incarcerated. | Level D |
| Lintonen, T. P., Vartiainen, H., Aarnio, J., Hakamääki, S., Viitanen, P., Wuolijoki, T., | None | Alcohol abuse/dependence was diagnosed in 68% (SCID-I) and 72% (ICD-10) among men and 70% (both SCID-I and ICD-10) | Survey study. Reporting substance use among Finnish prisoners using three methods and analyze these differences. | Level C |

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| Joukamaa, M. (2011). Drug use among prisoners: By any definition, it's a big problem. *Substance Use & Misuse,* 46(4), 440-451. | | among women. Drug abuse/dependence was diagnosed in 62% (SCID-I) and 69% (ICD-10) among men and 64% (SCID-I) and 70% (ICD-10) among women prisoners. Interview data revealed that the majority had at least tried most substances. Both alcohol and drug abuse/dependence were vastly more common among Finnish prisoners than reported elsewhere. The DSM-IV-based SCID-I produced slightly lower prevalence estimates than an ICD-10 clinical examination, but overall SCID/ICD agreement was very good. It seems that physicians use information other than that captured by standardized structured clinical interview when placing a diagnosis. Nonclinical interview-based prevalence figures may overestimate harmful use of drugs unless known risk patterns of use (e.g., intravenous use) are specifically addressed. | The material consisted of 610 Finnish prisoners in 2006 and represents all Finnish prisoners. The subjects participated in a comprehensive field study including a standardized psychiatric interview (SCID-I). | |
| McCrady, B. (2012). Health-care reform provides an opportunity for evidence-based alcohol treatment in the USA: the National Institute for Health and Clinical Excellence (NICE) guideline as a model. Addiction, 108, 231-232. | None | The guideline was developed to 'improve standards of care, diminish unacceptable variations in the provision and quality of care and ensure that the health services are patient centered' | The NICE guideline on the diagnosis, assessment and management of harmful drinking and alcohol dependence is about evidence-based approaches to alcohol treatment. | Level E |
| Narkauskaitë, L., Juozulynas, A.; Prapiestis, J., & Lukðienë, A. (2005). Problems of addiction among incarcerated women in Lithuania. *Acta Medica Lituanica*, 12(2), 26-30. | None | The majority of incarcerated women (55 / 82.1%) smoked tobacco, and the mean age at which they had begun to was 16.5 years. 60 (89.6%) of respondents had drunk alcohol, usually beer (47 / 78.3%), one month preceding imprisonment. Twelve (20%) respondents had used over-boiled tea and overpressed coffee. Approximately one third (21 / 31.3%) of respondents had used illicit drugs at least once. The most common response was: (by 9 / 42.9%) had first used illicit drugs at a party | A self-completed semi-structured questionnaire was modified to include questions about illicit drug, tobacco and alcohol use, social behavior, psychological environment. All prisoners filled in the questionnaire in privacy. The study was conducted in a Lithuanian prison for women in June 2003. The study sample comprised 67 women | Level C |
| Proctor, S. L. (2012). Substance Use Disorder Prevalence among Female State Prison Inmates. *American Journal of Drug & Alcohol Abuse*, 38(4), 278-285. | None. | Of the inmates, 70.0% were dependent on at least one substance, and 7.9% met criteria for substance abuse. Alcohol dependence (30.2%) and cocaine dependence (30.1%) were the two most prevalent SUDs. The remaining substance dependence diagnoses that predominated were as follows: stimulant dependence, | Data were derived from routine clinical assessments of 801 female inmates incarcerated in the Minnesota Department of Corrections state prison system. The Substance Use Disorder Diagnostic Schedule-IV (Hoffmann NG, Harrison PA. SUDDS-IV: Substance Use Disorder Diagnostic | Level B |

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| | | 24.1%; marijuana dependence, 15.6%; and heroin dependence, 9.6%. Over half (56.9%) were dependent on a substance other than alcohol. Prevalence of cocaine dependence [odds ratio (OR) = 2.83, 95% confidence interval (CI) = 1.92-4.16] was significantly higher among African Americans, whereas prevalence of stimulant dependence (OR = 9.24, 95% CI = 5.40-15.80) was significantly higher among Caucasians. Prevalence of alcohol (OR = 2.12, 95% CI = 1.38-3.25) and heroin (OR = 2.67, 95% CI = 1.50-4.77) dependence was significantly higher among Native Americans. | Schedule-IV. Smithfield, RI: Evince Clinical Assessments, 1995) was administered to all inmates as a computer-prompted interview on admission to the prison | |
| Proctor, S. L., & Hoffmann, N. G. (2012). Identifying patterns of co-occurring substance use disorders and mental illness in a jail population. *Addiction Research & Theory,* 20 (6), 492-503. | None | Cohort of 176 substance abuse male inmates incarcerated in jail. The most common substance dependence diagnoses were alcohol (81%) and cocaine ((35%). PTSD was the most co-occurring mental health condition (55%). | Randomized control trial examines prevalence and correlates of psychiatric comorbidity in incarcerated men who screened positive for a SUD and the ability of a practical structured interview to document diagnostic indications of SUDs and co-occurring disorders. Comprehensive Addictions and Psychological Evaluation (CAAPE) interview data from 176 substance-dependent male inmates incarcerated in a local jail facility were analyzed. | Level B |
| Scott, C. L., Lewis, C. F., McDermott, B. E. (2006). Dual diagnosis among incarcerated populations: Exception or rule? *Journal of Dual Diagnosis*, 3 (1), 33-58. | None | The literature reviewed indicated a high comorbidity of mental illness and substance use disorders in incarcerated individuals. Providers should be aware of issues regarding dual diagnosis in special populations among those incarcerated to include female offenders and offenders with developmental disabilities. | Reviewed of studies examining the prevalence of mental illness and substance use in jails and prisons, female inmates, and inmates with developmental disabilities. | Level C |
| Sachdeva, A., Choudhary, M., & Chandra, M. (2015). Alcohol withdrawal syndrome: Benzodiazepines and beyond. Journal of Clinical & Diagnostic Research, 9(9), 1-7. doi: 10.7860/JCDR/2015/13407.6538. | None | Alcohol withdrawal syndrome results from alcohol dependence with either stop or quickly reducing alcohol intake. This results in a shift in levels of neurotransmitters in the brain. The symptoms are generally mild to moderate and resolve within a few days. However, severe forms of may be associated with seizures, hallucinations, and delirium tremens. AWS are best monitored by regular scale based assessments such as CIWA-Ar. | Review the evidence base for appropriate clinical management of the alcohol withdrawal syndrome. Searched Pubmed for articles published in English on 'Alcohol withdrawal syndrome' in humans during the last 10 years. A total of 1182 articles came up. Articles not relevant to clinical utility and management were excluded based on the titles and abstract available. Full text articles, meta-analyses, systematic reviews and randomized controlled trials were obtained from this list and | Level C |

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| | | | were considered for review. | |
| Stein, M. D., Caviness, C. M., Anderson, B. J., Hebert, M, & Clarke, J. G. (2010). A brief alcohol intervention for hazardously drinking incarcerated women. *Addiction*, 105(3), 466-475. | | The 245 female participants averaged 34 years of age, and were 71% Caucasian. The mean percentage of alcohol use days in the 3 months prior to incarceration was 51.7% and heavy alcohol use days was 43.9%. Intervention effects on abstinent days were statistically significant at 3 months (odds ratio = 1.96, 95% confidence interval 1.17, 3.30); the percentage of days abstinent was 68% for those randomized to intervention and 57% for controls. At 6 months, the effect of the intervention was attenuated and no longer statistically significant. | Randomized controlled trial. Eligible participants endorsed hazardous alcohol consumption-four or more drinks at a time on at least 3 separate days in the previous 3 months or a score of 8 or above on the Alcohol Use Disorders Identification Test. Participants were randomized to either an assessment-only condition or to two brief motivationally focused sessions, the first delivered during incarceration, the second 1 month later after community re-entry. Participants recalled drinking behaviors at 3 and 6 months after the baseline interview using a 90-day time-line follow-back method. | Level B |
| Strong, D. R., Caviness, C., Anderson, B., Brown, R. A. & Stein, M. (2010). Assessing the severity of hazardous drinking and related consequences among incarcerated women. *Alcoholism: Clinical & Experimental Research*, 34 (5), 907-914.. | None | Analyses suggested that the 6 problems of alcohol abuse, 7 symptoms for alcohol dependence, and 14 alcohol-related social consequences loaded to a single factor (0.38 to 0.85) that formed a continuum of alcohol severity. Contrary to epidemiological studies, physical fights and being arrested were the most prevalent consequences and were associated with lower alcohol severity in this population. Three of the five items that discriminated best between higher and lower alcohol severity were related to familial and relationship consequences. | Subjects were 245 incarcerated women who met Alcohol Use Disorders Identification Test criteria for hazardous use of alcohol. Participants were recruited from a statewide adult correctional facility for an ongoing clinical trial testing the effectiveness of brief motivational interviewing on alcohol use and HIV risk behaviors. Participants ranged in age from 18 to 56 (M = 34.1, SD = 8.9), 71.4% were Caucasian, and 65.7% reported <12 years of education. | Level B |
| Stuppaeck, C. H., Barnas, M., Guenther, F., Hummer, M., Oberbauer, H., Pycha,R. . . . Fleischhacker, W.W. (1994). Assessment of the alcohol withdrawal syndrome—validity and reliability of the translated and modified Clinical Institute Withdrawal Assessment for Alcohol scale (CIWA-A). *Addiction*, 89, 1287-1292. | None | The German version appears to be a valid and reliable instrument for the assessment of alcohol withdrawal syndrome useful for clinical routine as well as treatment trials. | The most widely used instrument is the Clinical Institute Withdrawal Assessment-Alcohol (CIWA-A) and the succeeding CIWAAr. We modified the CIWA-A and translated it into German. Validity and reliability of the modified and translated scale were analysed by several psychological tests as well as different somatic measures in 31 patients. | Level C |
| Walters, G. D., Henning, C. L., Negola, T. D., & Fricke, L. (2009). The latent structure of alcohol dependence in female federal prisoners. *Addiction Research & Theory*, 17 (5), 525-537. | None | Archival data from structured interviews of 459 female prison inmates were subjected to taxometric analysis to determine the latent structure of the alcohol use disorder construct. Analyses were performed using three taxometric procedures: mean | Results obtained from a structured interview of substance abuse diagnoses were subjected to taxometric analysis in a group of 459 low and minimum-security female federal prisoners applying for admission to a comprehensive | Level C |

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| | | above minus below a cut (MAMBAC), maximum eigenvalue (MAXEIG), and latent mode factor analysis (L-Mode). | drug treatment program. Drawing indicators from a DSM-IV diagnosis of alcohol dependence (tolerance/withdrawal, loss of control, negative social/psychological consequences) the authors conducted a taxometric analysis using the following procedures: mean above minus below a cut (MAMBAC), maximum eigenvalue (MAXEIG), and latent mode factor analysis (L-Mode). Results were generally consistent with taxonic (categorical) latent structure for a DSM-IV diagnosis of alcohol dependence. | |
| Weizmann-Henelius, G., Putkonen, H., Naukkarinen, H., & Eronen, M. (2009). Intoxication and violent women. *Archives of Women's Mental Health*, 12 (1), 15-25. | None | 60 offenders participated in the study. Of these offenders 49 (81.7%) had been intoxicated at the time the of index offenses compared with 11 (18.3%) non-intoxicated offenders using a structured interview, the Structured Clinical Interview II for DSM-IV (SCID-II) and the Hare Psychopathy Checklist-Revised (PCL-R). The substance abuse or dependence prevalence was 73.3% and 0%, personality disorder 89.6% and 36.4%, particularly antisocial personality disorder 66.7% and 0%, as well as a history of criminality 69.4% and 0% were significantly higher among the intoxicated women than among the non-intoxicated. The PCL-R scores were also significantly higher among the intoxicated offenders than among non-intoxicated offenders. The victims of the intoxicated women (23.9%) were less often emotionally close to the perpetrator than were the victims of the non-intoxicated women (66.6%). | Of a nation-wide sample of 109 female offenders found guilty of homicide and other violent crimes and incarcerated in 1999-2000 in Finland, 60 offenders participated in the study. Information was gathering from permanent documents like medical record, inmates were interviewed by the first author. | Level C |