# SCREENING AND BRIEF INTERVENTION FOR 12-25 YEAR OLDS IN PRIMARY CARE

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Nathan George Tiedeman

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The Supervisory Committee certifies that this ***disquisition*** complies with North Dakota State University's regulations and meets the accepted standards for the degree of

**DOCTOR OF NURSING PRACTICE**

SUPERVISORY COMMITTEE:

Dr. Dean Gross
Chair

Dr. Molly Secor-Turner

Judy Beumer MD

Dr. Daniel Friesner

Approved:

| 04/04/2016 | Carla Gross |
|---|---|
| Date | Department Chair |

## ABSTRACT

Alcohol is a widely enjoyed, misused, and abused legal substance consumed in the United States. Although alcohol is a legal substance in the United States, the consumptions does not come without risks. Alcohol is known to contribute to 60 known and preventable diseases. Adolescents socialize by using alcohol in their family lives, social gatherings, and among their own peer groups; they observe television programming and commercials, as well as social media, that feature alcohol. Adolescents do not have the experience or knowledge to understand the long-term physical and mental strain that alcohol puts on a person's body. In South Dakota, 75% of teens have consumed alcohol prior to the ninth grade (Prairie View Prevention Services, 2014). Chronic and heavy drinking during adolescence has been linked to cognitive deficits and alterations in the brain's activity and structure. Adolescents who begin drinking before the age of 15 are five times more likely to develop alcohol abuse than individuals who start at the legal age of 21 (NIAAA, 2015b).

The project's purpose was to implement a practice-improvement change in the primary-clinic at Coteau des Prairie Health Care System in Sisseton, SD. Through evidence-based screening tools, the Alcohol Use Disorder Identification Tool (for ages 18-26) and the Alcohol Screening and Brief Interventions for Youths (for ages 12-17), providers were given tools to appropriately screen patients in the selected age range for the presence of alcohol use and/or abuse. A quick-reference guide was developed for the providers; the guide contained age-specific brief interventions and a referral list of alcohol-specialty facilities in the region; the guide was an attempt to curb patients' present and future alcohol use and misuse. After the implementation, medical providers were surveyed about the project's effectiveness or efficacy at the clinic. The medical providers agreed or strongly agreed the project increased the prevalence

of screening practices, improved clinical practice with brief interventions, and assisted with identification of referral services to match the specific needs of each individual. Screening and education about the risks of alcohol and early intervention strategies were successfully implemented into the project setting, improving clinical practice in Sisseton, SD.

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# CHAPTER 1. INTRODUCTION

## Background and Significance

The prevalence, as well as the associated short and long-term implications of binge drinking alcohol has become a great concern for many communities, locally, regionally, and nationwide. Excessive alcohol use contributes to over 60 known and preventable disease processes, including cardiovascular disease, hypertension, stroke, and certain types of cancer (U.S. Preventative Services Task Force [USPSTF], 2013). Excessive alcohol consumption causes approximately 88,000 deaths nationally every year and is the third leading cause of preventable deaths in the United States (Centers for Disease Control and Prevention [CDC], 2014). The overutilization of emergency services due to alcohol misuse costs the American economy $185 billion in financial burdens (CDC, 2012b). Binge drinking can affect an individual's mood and memory; long term, the behavior can lead to social isolation or antisocial, aggressive, and or violent behavior (CDC, 2012b). Alcohol is a factor in 30% of sexual offenses, 33% of burglaries, and 50% of street crimes (National Institute on Alcohol Abuse and Alcoholism [NIAAA], 2015a).

Alcohol misuse describes a risky level of alcohol consumption that ranges from hazardous drinking to alcohol addiction or dependence (CDC, 2013). The usual drink size, as defined by the CDC and the World Health Organization, is considered to be 14 grams of alcohol. The definition of consumption for non-risky alcohol behaviors is the intake of two or fewer standard drinks per day for men and one or fewer drinks per day for women, on no more than five days per week (CDC, 2013). Binge drinking is most common among 18 to 36 year olds and is more common among men than women. In 1998, the prevalence of binge drinking was 17.7%, which increased to 24.1% in 2013 (CDC, 2014). CDC (2012b) notes that more than 38 million

U.S. adults binge drink, on average, four times a month, and the largest number of drinks, on average, is eight per binge. Ninety percent of the alcohol consumed by adolescents is drunk while binge drinking (U.S. Department of Justice, 2014). Over time, excessive alcohol consumption can lead to preventable diseases. More than half of the alcohol consumed by adults is consumed while binge drinking (NIAAA, 2015b).

Every day, approximately 30 people in the United States die in a motor-vehicle crashes that involve an alcohol-impaired driver (CDC, 2015a). The motor vehicle deaths amount to one death every 51 minutes (U.S. Department of Transportation, 2014). In 2013, 10,076 people were killed in an alcohol related motor vehicle crash, accounting for 31% of all traffic related deaths in the US (National Highway Traffic Safety Administration, 2015). The annual cost burden from alcohol-related crashes totals more than $59 billion (Blincoe, Miller, Zaloshnja, & Lawrence, 2015). Alcohol has been identified as the most widely misused and abused substance with 50.9% of individuals who are 18 years or older engaging in alcohol consumption (Summary Health Statistics, 2010). The U.S. Preventive Services Task Force (2013) recommends that clinicians screen adults, 18 years of age and older, for alcohol misuse and provide these individuals with brief behavioral counseling interventions to reduce future alcohol misuse. Referring to Figure 1 the medical community should implement alcohol screening before the age of 18. Clinicians could be missing a vital window to identify at-risk youth if screening is not done before age 18. In 2013, there were 4.6 million persons aged 12 or older, which had consumed alcohol for the first time within the past 12 months, accounting for 12,500 alcohol initiates per day (Substance Abuse and Mental Health Services Administration [SAMHSA], 2014). SAMHSA (2014) reports that in 2014, 16.5 million adolescents reported engaging in heavy drinking during the past month. Chronic heavy drinking during adolescence has been linked to cognitive deficits and

alterations in brain activity and structure. Adolescents who begin drinking before the age of 15 are 5 times more likely to develop alcohol abuse than individuals who start drinking at the age of 21(NIAAA,2015b).

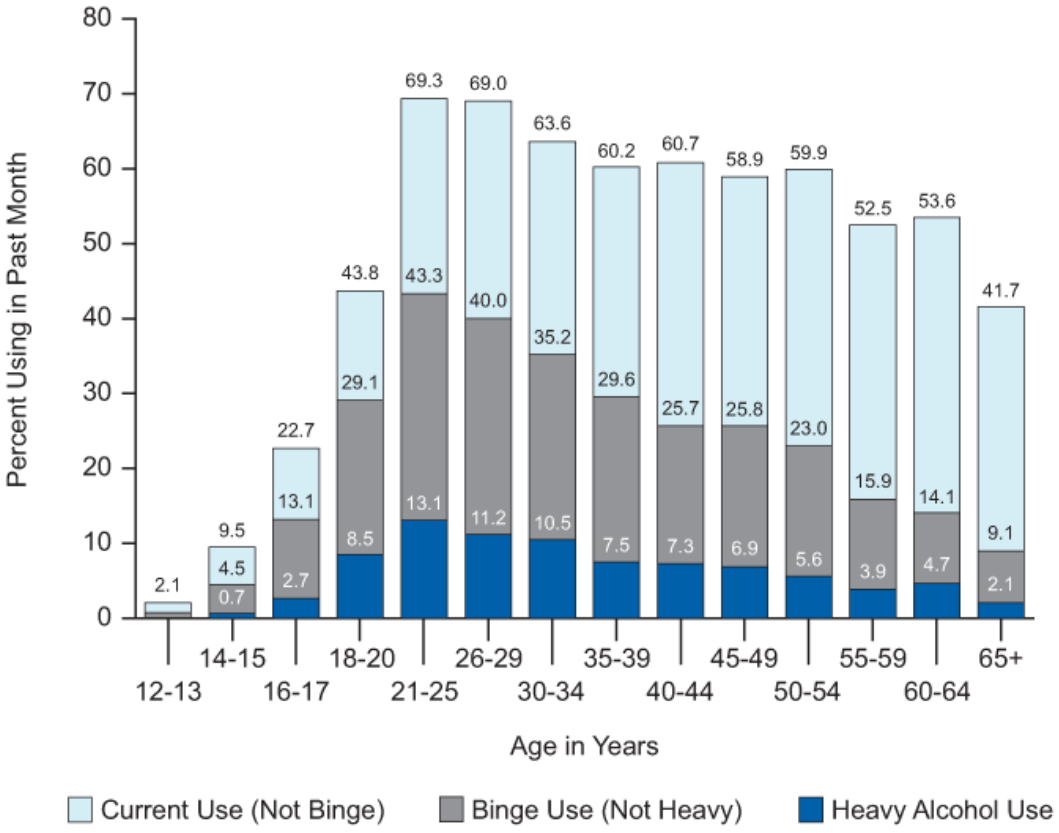


*Figure 1*. Alcohol Consumption by Age.
(Substance Abuse and Mental Health Services Administration, 2014)

In South Dakota, 64% of high school students have consumed one or more drinks of alcohol on one or more days during their lifetime (CDC, 2013). Nearly 75% of South Dakota teens who live in permissive households say that they drank heavily during or before the ninth grade. Unfortunately, research suggests that young people who begin drinking before the age of 15 are 5 times more likely to develop alcohol dependence and are 2.5 times more likely to become alcohol abusers than people who begin drinking at age 21 (Office of Applied Studies, Substance Abuse and Mental Health Administration, 2013). The social and communal harm has

been linked to youth and alcohol consumption in South Dakota. The CDC (2014) found that underage drinking leads to traffic crashes, violent crime, property crime, unintentional injury, and high-risk sex behaviors. In 2012, four traffic fatalities and 131 nonfatal traffic injuries were attributed to underage drinking and driving on the roads and highways of South Dakota. One homicide and 1,900 nonfatal violent crimes (such as rape, robbery, and assault) were documented in South Dakota in 2012. Property crimes that included vandalism, disorderly conduct, loitering, and curfew violations and related to underage drinking accounted for 1,600 crimes in South Dakota. In 2013, an estimated 80 teen pregnancies and 2,031 teens who had high-risk sex were associated with underage drinking in South Dakota (CDC, 2013). The previously outlined information paints a clear picture of alcohol abuse, not only in South Dakota, but also across the United States. The implications of alcohol abuse are affecting communities, businesses, and health care, with an overall cost burden for the people of South Dakota. There is a high prevalence of alcohol abuse in South Dakota, affording medical providers with the opportunity to promote preventative services such as alcohol screening. The practice-improvement project will focus on alcohol screening and a brief intervention in the primary care setting for patients who are 14-26 years of age and who come to the Coteau des Prairie clinic for an office visit. The project will identify patients at risk for alcohol misuse and supply an opportunity for healthcare providers to offer brief interventions to decrease lifelong disease burden from alcohol misuse. By decreasing the disease burden, long term healthcare cost associated with alcohol misuse can be decreased. The project will not only identify patients at risk for alcohol misuse but also for patients that are currently not consuming alcohol. The alcohol abstainers will receive brief interventions to educate patients on the risks of initiation of alcohol

consumption to hopefully motivate patients to continue the current behavior of alcohol abstinence.

**Problem Statement**

Alcohol misuse often starts during adolescence, and many of these behaviors continue through adulthood. Adolescents are more likely to engage in risk-taking behaviors during this age, which has been attributed to immaturity with cognitive capacities and the ability to inhibit behavioral responses (Silveri, 2012). National research has shown that among alcohol-dependent patients in primary care, only 10% of patients nationally receive any form of alcohol assessment or referral (Gold & Aronson, 2011). The USPSTF (2013) recommends alcohol screening be completed for patients in primary care annually starting at age 18. Many providers may not even know that their patients are at risk for risky alcohol behavior due to the lack of screening practices. The lack of screening places the patient at a higher risk, and may directly affect the providers due to reimbursements correlating with patients' health outcomes (Brown, 2013). Due to the absence of appropriate screenings, primary care providers may be missing vital health promotion and disease prevention opportunities for their patients. Health professionals face major challenges with patients due to the lack of access and monetary concerns. Appropriate screening and intervention increases the healthy behaviors, and decreases the risky or self-damaging behaviors (Pender, Murdaugh, & Parsons, 2015).

**Purpose of the Project**

The purpose of the project is to implement a practice-improvement initiative using an evidence-based screening tool to detect alcohol use and to guide brief interventions. The main goal is to increase the prevalence of alcohol screening and brief interventions for a primary care setting that serves rural South Dakota. The community is primarily a farming area on a Native

American reservation. The Alcohol Use Disorders Identification Test (AUDIT) tool for adults and the Alcohol Screening and Brief Interventions in Youth (ASBIY) for children in conjunction with provider friendly algorithms to plan appropriate brief interventions will be introduced to the providers. The use of an established screening and brief-intervention process has been thoroughly validated by the World Health Organization (WHO) and the National Institute on Alcohol Abuse and Alcoholism (NIAAA) to ensure that harmful patterns of alcohol use are identified and that individual risk levels are matched with the most appropriate health care interventions (Babor & Higgins-Biddle, 2001; USPSTF, 2013). With project-provided guidance, another goal is to improve clinical practice by increasing provider comfort and the ease of administering an evidence-based screening tool for alcohol use. For patients that require specialized alcohol treatment as identified by the screening process, a regional alcohol resource guide will be developed. The guide will be a quick reference for the healthcare providers to ensure the referral is appropriate for each patients' requirements, such as inpatient versus outpatient. The guide will also entail the types of payments accepted at the facility, and general information on the location in proximity from Sisseton, and the specialties available at each specific referral site. Ultimately, the project seeks to improve patient care through screening, a brief intervention, appropriate referral, and education regarding alcohol cessation and health promotion.

**Project Goals**

- Implement a standardized screening process for 14 to 26 year old patients. The process will help identify alcohol misuse or risky alcohol behaviors in the Coteau des Prairie Health Care System's patients.

- Improve patient care and clinical practice through screenings (AUDIT or ASBIY), brief interventions, appropriate referrals, adolescent friendly communication, and education regarding alcohol cessation.
- Develop an informational binder with resources for alcohol-related referrals, available locally, as a resource for the health care providers.

# CHAPTER 2. REVIEW OF LITERATURE

## Alcohol-Related Social Problems

Excessive drinking in the United States contributes significantly to approximately 35,000 motor-vehicle crash (MVC) fatalities annually. A third of all fatalities in the US involve alcohol (CDC, 2012a). In South Dakota during 2011, one in ten students over the age of 16 admitted to drinking and driving within the past 30 days. Most of these students drove after an episode of binge drinking (CDC, 2012a). Nationwide, the blood alcohol content (BAC) for drivers of fatal crashes was higher than 0.08 g/ml, which is over the legal limit for adult drivers (CDC, 2012a). South Dakota has the fourth-highest reported rate of binge drinking for persons who were 12 years of age or older. In 2014, the CDC found between the years 2003 and 2012, there were 537 people who died in South Dakota MVCs involving an intoxicated driver. The average BAC of those drivers was greater than 0.08 g/ml. The national average for MVC-related deaths per 100,000 people was 3.3, compared to the 5.7 per 100,000 in South Dakota. Nationally, deaths for male occupants was 5.2 per 100,000, compared to the number in South Dakota being 7.4 male deaths per 100,000 residents (CDC, 2014). South Dakota was in the top tier for the percentage of high-school teens 16 years of age or older who reported drinking alcohol and driving at 12.6%; Louisiana, North Dakota, Iowa, and Montana were the only states with higher percentages (CDC, 2013).

## Alcohol Consumption in South Dakota

Alcohol is a legal substance in our society. The ease of access to alcohol may lead to abuse that has been previously identified. The national per capita for gallons of alcohol consumed for people over 14 years of age was 2.30, compared to South Dakota which was 2.62 (NIAAA, 2015b). The national average for gallons of beer consumed by an individual is 28.2

gallons per year, and South Dakota reported 38.9 gallons per person per year (NIAAA, 2015b). Alcohol comes not only with detrimental effects to the human body, but it is also a very expensive form of substance abuse which leads to an increased cost due to the long-term social, physical, and psychological effects. In South Dakota, underage drinking cost the state's citizens an estimated $200 million in 2013. Figure 1 displays the cost burden's distribution to the citizens of South Dakota. The cost translates to $2,894 per year for each adolescent in the state and equates to $5.98 per drink consumed while underage (Prairie View Prevention Services, 2014). The cost burden is laid upon all adolescents in South Dakota, not just the ones who are partaking in the underage drinking. Adolescents' alcohol abuse leads to secondary costs, which are not included with the previous numbers.

Underage drinking is widespread in South Dakota where approximately 27,000 underage youth drink each year. In 2013, South Dakota students in grades 9-12 reported the following information: 64% had consumed at least one drink of alcohol on one or more days during their life; 17.2% consumed their first drink of alcohol, other than a few sips, before age 13; 30.8% consumed at least one drink of alcohol on one or more occasions in the past 30 days; and 17.2% had five or more consecutive alcoholic drinks (binge drinking) in the past 30 days (CDC, 2013). Underage consumers accounted for 8.3% of all alcohol sold in South Dakota in 2012, totaling $34 million in sales. The sale of alcohol led to a $16-million-dollar profit for the alcohol industry (CDC, 2013). The younger a person is when he/she starts drinking alcohol, the more likely he/she is to misuse or abuse alcohol as he/she grows older (*Parents Matter-Underage Drinking and Driving in South Dakota*, 2014).

**Screening and Brief Interventions in the Primary-Care Setting**

Reducing the prevalence of risky behaviors and increasing compliance with healthy behaviors are the primary roadblocks facing health care professionals (Pender, Murdaugh, & Parsons, 2015). Primary care is tasked with three types of health prevention: primary, secondary, and tertiary prevention. The Institute of Work and Health (2015) states that primary prevention aims to prevent disease or injury before an event or the presence occurs. For example, a vaccination for the early influenza season would be a primary-prevention strategy. Secondary prevention is reducing the impact of a disease or injury that has already occurred. Using a daily low-dose aspirin to prevent further heart attacks or strokes is an example of secondary prevention. Tertiary prevention is focused on lessening the long-term effects caused by a disease. The importance of cardiac-rehabilitation programs after an acute cardiac event is a prime example.

Screening for the presence of alcohol misuse would fall under the secondary-prevention definition. Identifying alcohol misuse with an early intervention can lessen the disease burden to the patient. Screening and Brief Interventions (SBI) for alcohol should be part of routine patient care and screening, similar to checking for hypertension or hyperlipidemia (CDC, 2013). In primary-care settings, the U.S. Preventative Services Task Force (USPSTF) recommends that all adult patients over 18 years of age be screened for alcohol misuse (USPSTF, 2013). With the current atmosphere at most medical offices, providers may have little time to screen every person as recommend by the USPSTF. Factors such as a lack of confidence or experience with the screening and alcohol-intervention techniques can lead to under-screening practices. Limited patient access or the lack of specialized alcohol-referral programs may lead to a lack of screening (Gold & Aronson, 2011). A system wide lack of organizational approaches may lead to

inappropriate screening practices in the primary care setting (Johnson, Jackson, Guillaume, Meier, & Goyder, 2011). Gold and Aronson (2011) argue that the decision to screen is based on the circumstances of the patient and the situation. Providers may choose any of the techniques guided by protocols, evidence-based practice, or a provider's preference. The standard of care, as recommended by the USPSTF, is using the SBI. The process includes a short screening tool, completed with minimal training in order to identify at-risk persons, helping patients to recognize and possibly change their behaviors. Studies have shown that raising the topic of alcohol use within routine practice is shown to lower the risky drinking behaviors in a similar degree as SBI (Clossick & Woodward, 2014).

**The Alcohol Use Disorders Identification Test (AUDIT)**

One well tested and used approach for alcohol screening is the AUDIT with SBI techniques. The AUDIT was developed in 1989 and is supported by the WHO as a screening tool to detect excessive drinking behaviors and as a guide for brief interventions that reduce patients' risks. Using the AUDIT with SBI is well proven internationally as an effective and appropriate tool for the assessment and intervention of alcohol misuse (Fahy, Croton, & Voogt, 2011). The AUDIT has been widely validated in a variety of settings and populations, including primary-care patients and general-population samples in the United States, Belgium, Spain, Germany, Brazil, and Taiwan (Delaney et al., 2014). Placing the intervention within routine primary care yields many advantages that include intervening before referral for secondary care enables a preventative approach (Clossic & Woodward, 2014). One study completed in England found that 89% of primary-care providers agreed that the early assessment and intervention for risky alcohol behaviors made a difference in patients' outcomes when providers are supplied with the correct tools, such as the AUDIT (Clossic & Woodward, 2014). The AUDIT tool assists with the

identification of alcohol dependence, which is defined as the excessive use affiliated with a minimum of three of the following characteristics: evidence of tolerance that requires increased doses of alcohol to reach a desired effect, strong compulsion to drink, a physiological withdrawal state when alcohol use has ceased, difficulties controlling the levels of use, progressive neglect of interests, and continued use despite clear evidence of harmful consequences (Babor & Higgns-Biddle, 2001). The AUDIT alcohol screening tool has a total of ten questions and the entire tool can be viewed in Appendix F.

The first three listed questions are utilized for the AUDIT-C, a shorter tool that is used in the clinical setting. Each question has five responses that range from 0-4 on a Likert scale. The sum of the first three responses is calculated. The provider can stop the screening process if men score less than 4 or if women score less than 3; otherwise, the screening is continued with the remaining seven questions. The seven questions have the same 0-4 Likert scale. Final summation for the screening tool places the patient within 1 of the 4 possible zones of alcohol risk; the maximum score is 40. Zone 1 (low risk) is a score of 0-7 and is considered to be a low risk for alcohol-related consequences. Low risk means that the individual likely abstains from alcohol use or otherwise adheres to the current recommendations for safe use levels. Zone 2 (increasing risk) is a score of 8-15. At this level, there is an increased risk for adverse alcohol-related outcomes, such as a myocardial infarction, cerebral vascular accident, or suffering from accidental trauma. Zone 3 (higher risk) is 16-19; which describes harmful drinking and higher-risk behaviors. Zone 4 (possible dependence) is greater than 20 and is strongly indicative of alcohol dependence (Babor, Higgins-Biddle, Saunders, & Monteiro, 2004).

The AUDIT tool has been criticized due to the amount of time that is required to complete the tool. The AUDIT may add additional time constraints for an already busy primary-

care provider (Meneses-Gaya et al., 2010). There are shorter or quicker screening tools available to primary-care providers. The Cut-down, Annoyed, Guilt, Eye-opener (CAGE), AUDIT-3 (AUDIT-item 3 only), AUDIT-C (AUDIT items 1, 2, and 3), and AUDIT-PC (AUDIT items 1, 2, 4, 5, and 10) all of these tools have been studied as a comparison to the complete AUDIT screening tool. The CAGE and brief versions of the AUDIT only had partial effectiveness in limited scenarios when compared to the full AUDIT (Kim et al., 2013). Kim et al. (2011) found that the AUDIT had the highest internal consistency (0.918) when compared to the AUDIT-C (0.874), AUDIT-5 (0.818), and CAGE (0.698).

**Alcohol Screening and Brief Interventions for Youths**

Adolescents are sometimes overlooked as an important population for alcohol screening and intervention. The onset of substance misuse typically occurs during adolescence (SAMHSA, 2014). The U.S. surgeon general has called for all health care professionals to screen and identify adolescents who use alcohol; to provide specialized, expanded services for the adolescents; and to develop referral networks for the specialized treatment of alcohol disorders. Despite these efforts, few health care professionals have implemented such clinical practice changes. The barriers identified by health care providers include time constraints, concerns causing alienation of the patient and family, inadequate training, inadequate reimbursement, and a lack of intervention resources (Clark, Gordon, Ettaro, Owens, & Moss, 2010). With providers facing the identified challenges, the NIAAA and the American Academy of Pediatrics developed the ASBIY to supply providers with fast, effective alcohol-screening tools as well as age-specific brief interventions for the identification and intervention of youth at risk for alcohol-related problems. The guide was designed as a tool for any medical provider who cares for adolescents' age 9-18 years old. Although the primary burden of chronic alcohol-related diseases manifest in

adults, the foundations of the behavior often lie in adolescence (Patton et al., 2014). The universality of the tool is key, which makes the tool easily applied as part of an annual examination, part of an acute care/emergency department visit, or part of a trip to an urgent-care center (National Institute on Alcohol Abuse and Alcoholism [U.S], & American Academy of Pediatrics [AAP], 2011). Because adolescents have minimal contact with medical providers, the guide has been designed for screening and intervention of underage drinking, an important, vital task to be completed in virtually any health care setting (Clark et al., 2010).

The ASBIY guide is a quick two-question screening tool tailored to each age group in order to give providers a good idea about the patients' level of alcohol-related risk (NIAAA & AAP, 2011). The guide highlights screening questions worded differently for age-specific patients in order to assist the provider with appropriate wording while screening. The guide continues to entail different levels of intervention with tips for topics to cover. An overview about brief motivational interviewing (MI), an interactive, youth-friendly intervention, is included for providers; this technique is considered to have the most conceivable effectiveness for the adolescent population (NIAAA & AAP, 2011).

Dependent upon the patient's age, the questions are asked in a different order, or worded in a more age-appropriate manor to ensure age-specific interaction/communication. One question is "Do you have any friends who drank beer, wine, or any drink containing alcohol in the past year?" The design of the question is to allow for a nonthreatening side-door access for the providers to begin talking about alcohol with younger patients (NIAAA & AAP, 2011). If patients screen positive for having friends who drink alcohol, the positive findings leads to an early warning signal that strongly predicts the patient's future drinking levels (Brown et al., 2010). The other question for screening is as follows: *"*How about you-have you ever had more

than a few sips of any drink containing alcohol?" The question focuses on the frequency of alcohol use, which is the best predictor about the current risk for alcohol-related harm for adolescents who are already drinking (Chung et al., 2011). The NIAAA & AAP also developed a pocket-sized, quick-reference guideline so that providers can carry the reference with them to have for any interaction with an adolescent (Appendix I).

Appropriate age-specific and risk-specific intervention is key to ensure the best effectiveness of the brief intervention. By utilizing (MI, a patient-centered line of communication style can be developed to enhance a patient's motivation to change (NIAAA & AAP, 2011). MI is best described as a dynamic state of "readiness to change" which can be influential towards interpersonal interactions, with confrontation leading to resistance, and with understanding and empathy leading to a change in one's behavior (Clark et al., 2010). The broad goal of MI is to elicit motivation within the patient, not to force change outside the patient. At the base of MI is the task to help patients examine their own reasons for and against making a change, and then to guide the patients towards a resolution that initiates change towards a healthy lifestyle (NIAAA & AAP, 2011).

Not one type or style of intervention is appropriate for every situation and individual. Therefore, the guide provides four basic principles for the approach:

- **Express Empathy:** Take a warm, nonjudgmental stance; listen actively and reflect back on what is said to help the patient feel heard.
- **Develop Discrepancy:** Raise awareness of the patient's personal consequences of drinking; ask how his or her goals, values, or beliefs could be hindered or compromised by drinking.

- **Roll with Resistance:** Acknowledge the patient's beliefs and feelings; avoid lecturing or debating; change gears and affirm autonomy if the patient shows resistance.
- **Support Self-efficacy:** Express confidence in the patient's ability to make a change; point to a patient's strengths and other successes as examples. (Miller, Zweben, DiClemente, & Rychtarik, 1992, p. 8).

By using the core principles, MI has been shown to be more successful than other types of interventions in the clinical setting; a single session can have positive longstanding effects (Wachtel & Staniford, 2010). The success of MI is further supported by a meta-analysis that highlights the effectiveness of MI interventions for adolescent substance use (Jensen et al., 2011). MI is, arguably, the most reasonable, as well as the most feasible, practice approach to recommend for brief interventions with adolescents (Clark et al., 2010).

The guide assists providers with overcoming barriers through the development of a process to develop action plans for youths who engage in risky alcohol behaviors:

- **Abstinence challenge:** Ask permission from the adolescent to make a contract for 4-8 weeks of abstinence to help the two of you determine the severity of the problem. Discuss ways to successfully avoid drinking. At follow-up, reinforce success and discuss referral for more extensive assessment for those who failed the challenge or found it very stressful.
- **Cut back:** For those who refuse to abstain, ask permission to negotiate and contract for drinking limits based on the patient's history. In general, advise no substance use on weeknights, reducing quantity, and avoiding dangerous situations, such as drinking and driving. Elicit feedback from patients about your

suggestions. At follow-up, continue to develop discrepancies and ask what additional steps they wish to take to reach their goals, building on prior successes.

- **Contingency:** For more challenging or resistant patients who refuse even to cut back, see treatment as a process and accept any progress, such as discussing perspective on their drinking, as partial success. Create a list of contingencies that indicate that a problem exists, and ask patients to agree to come see you if they occur. Avoid arguments, roll with resistance, and encourage them to continue thinking about their drinking and continue self-monitoring (Levy, Vaughan, & Knight, 2002, p. 4).

Previously highlighted was the fact that adolescents have a minimal numbers of interactions with health professionals. Every interaction is a chance to screen, to intervene, and to create a plan. Part of the plan is ensuring follow up as determined by the medical providers. To counteract the fact that there is little health care interaction, the guide has techniques to ensure that patients return for follow up, beginning with negotiating a time frame for the follow up. By negotiating, the medical provider may enhance the likelihood that the patient returns as directed. The AAP recommends utilizing a medical "hook" to assist patients with returning to the office (AAP Adolescent Health Update Editorial Board, 2007). Previous studies have shown that even one additional clinic visit can significantly improve the intervention's effectiveness (Rubak, Sandbaek, Lauritzen, & Christensen, 2011).

**Brief Interventions**

Brief interventions (BI) encompasses a range of therapeutic processes from advice to extended counselling, and primarily used in short sessions on one or more visits. The intervention is intended as a secondary prevention strategy for alcohol-related problems in

general health care settings. The BIs are short sessions (5-15 minutes) of information and advice given to at-risk drinkers in order to reduce risky alcohol behaviors (Clossick & Woodward, 2014). The integration of a BI delivered in the primary-care population has reduced alcohol intake by up to six drinks per week (Kaner et al., 2013). The BI offers drinkers a personalized feedback avenue of communication with structured advice about how to reduce their alcohol use (Cheal, McKnight-Eily, & Weber, 2014). Previous studies have shown that BIs, over a 12-month time period with multiple sessions, are effective. Twelve controlled trials found that, after a BI, patients reduced their average number of consumed drinks per week by 13-34% when compared to the controls (Agerwala & McCance-Katz, 2012).

Brief interventions are classified into two main types: structured, brief advice and extended, brief intervention. Short conversations that are held between the provider and the patient may include visual aids (how a patient's drinking compares with the rest of the population) or may include visual and practical advice about how to reduce alcohol consumption (National Institute for Health and Care Excellence [NICE], 2010). The delivery of BI resulted in a 12.3% reduction in alcohol consumptions (NICE, 2010). Purshouse et al. (2012) continued the BI process and found that the effectiveness of a short, abbreviated intervention, with an increase of 1 minute for BI time, was associated with a 1-gram per week reduction in alcohol consumption; the authors estimated that a 5.9% reduction following a 5-minute intervention.

However, there are concerns about the ability and a lack of confidence with the appropriate methods for the BIs or screening. Providers are concerned with their confidence and anxiety about their own ability to ask questions relating to alcohol, despite knowing that BIs have a real chance to change behaviors (Clossick & Woodward, 2014). In order for BI to be an effective public-health strategy, the BI must be widely implemented at a health care setting

(Nilsen, 2010). Because health care facilities are slowly joining forces due to budget concerns, larger health care organizations are being developed. Larger health care corporations will be challenged to make corporate wide changes, resulting in research, education for providers and support staff, and policy revisions which can be a large task to tackle. Therefore, providers need to keep their own practice more evidence based in order to ensure best practices and continually educate themselves. One group of researchers attempted to improve providers' lack of confidence with patients when BI are employed. Clossick and Woodward (2014) developed two guidelines that, when utilized in conjunction with screening, decrease the difficulty that providers have with implementing and using a BI. The content of BI is structured by six core principles:

> 1) **Feedback:** Feedback on the client's risk of alcohol problems; 2) **Responsibility:** Highlight that the individual should take responsibility for change; 3) **Advice:** Explicitly advice reduction; 4) **Menu:** Outline options for change; 5) **Empathy:** Offer a warm, reflective and understanding approach; 6) **Self-efficacy:** Encourage optimism about behavior change (Clossick & Woodward, 2014, p. 574).

Early intervention and support can greatly impact a patient's pattern of problem drinking in a significant manor if the health care professional is given the necessary skills (Funderburk, Maisto, Wade, Kenneson, & Campbell, 2014).

The use of screening and brief intervention is a plan not only for the patient, but also for the health care provider and the clinic to appropriately bill and receive reimbursement for the specialized care for risky alcohol behavior. Current Procedure Code (CPT) 99408: alcohol and/or substance abuse structured screening and brief-intervention services, 15-30 mins, fee schedule of $33.41 under commercial insurance and Medicaid (Screening, Brief Intervention and Referral to

Treatment SBIRT, Coding, Billing and Reimbursement Manual, 2010). The CPT code 99409 is the same as the previous definition with the increased amount of time to be greater than 30 minutes; the fee schedule for the appropriate time and documentation is $65.51. For Medicare code G0396: alcohol and/or substance abuse structured screening and brief intervention services, 15-30 minutes, the rate of reimbursement is $29.42, and the rate increases to $57.69 when a time allotment that is greater than 30 minutes is appropriately met and documented. Patients who need more than one BI session can be billed under CPT H0050, for the cost of $48.00 for each 15-minute session (Stagg-Elliot, 2011).

**Theoretical Framework: Iowa Model of Evidence-Based Practice**

The Iowa Model of Evidence-Based Practiced was developed by Marita Titler, Ph.D., to describe knowledge transformation and to guide the implementation of research into clinical practice (Titler, 2006). Nursing practice has a rich history of utilizing research to change or pioneer practice. Florence Nightingale initiated research to contribute to the sanitary history of the British Army. In most recent times, changes to patient care, treatment, and policies are guided by evidence-based practice (EBP). Titler (2006) describes EBP as the conscientious and judicious use of the current best evidence in conjunction with clinical expertise and patient values to guide health care decisions. Evidenced based practice is information generated from randomized, controlled trials and findings from other scientific methods, scientific principles, case reports, and expert opinion. The practice should be guided by research evidence in conjunction with clinical expertise and patient values once enough research information has been obtained. In some instances, when there is insufficient research, health care decisions are derived from non-research evidence sources such as expert opinion and scientific principles.

**Knowledge-Focused Trigger**

The first step in the Iowa Model of EBP is to identify a problem-focused or knowledge-focused trigger that will initiate the need for change. South Dakota has consistently been in the top four U.S. states for underage alcohol abuse (CDC, 2013). During his time with the Coteau des Prairie Health Care System, the project co-investigator noted the absence of a consistent alcohol screening practice. There was no standardized screening process set forth by the clinic administration, and practice inconsistencies noted among all the medical providers at the clinic. The lack of standardized or consistent screening practices concerned the clinical director because the USPSTF priority topic has been annual alcohol screenings on anyone over the age of 18. Nationally, there is a very notable lack of alcohol screening with primary care, and screening has only been noted to be completed in 10% of the primary-care settings (Gold & Aronson, 2011). The Coteau des Prairie Health Care System lies within one of the most prevalent alcohol-abused populations identified in South Dakota. Primary-care providers need to take every opportunity to screen for and to intervene with the presence of risky alcohol behaviors.

**Organization Support and the Project's Congruence to the Strategic Goals**

Evidence-based practice goes beyond the scope of a nurse practitioner and the patient. Organizations also need to foster the growth of EBP at their facilities in order to have better outcomes for their patients. The patient is always the center of focus. Screening for alcohol misuse is one of the Physician Quality Reporting Initiatives, which has been implemented by the Center for Medicare and Medicaid Services. Health care corporations have to ensure that they are not only giving the best practice, but also that they are being reimbursed appropriately so that they can continue to provide optimal care. The Coteau des Prairie Health Care System implemented a process for alcohol screening to ensure best practices in the future as well as to

increase reimbursement rates for the system because alcohol screening is a Physician Quality Reporting Initiative.

**Team Formation**

The Iowa model leads towards the development of a team approach to appropriately support the practice-improvement project and a desired change in practice. Major stakeholders, such as medical providers, nurses, administration, legal counsel, and ancillary staff, should all be involved with this process. The plan was to make a change at the organizational level; therefore, all sections of the organization should be involved. For the purpose of practice change, the project co-investigator performed an in-depth review of the EBP literature, looking for screening tools as well as interventions for patients who are screened to have risky alcohol behaviors. The team included the student co-investigator, clinic staff, three physicians, two nurse practitioners, two physician assistants, the office support staff, nurses, clinical administration, and the NDSU clinical dissertation project committee members. Letters of support were provided by the Coteau des Prairie Health Care System administration approving the implementation of the project in the clinic.

**Research and Supporting Evidence**

The Review of Literature and the supporting evidence were completed by the student co-investigator. The review included electronic database searches (Cumulative Index to Nursing and Allied Health Literature [CINAHL], EBSCO, Medline, and PubMed). Key terms that were used to complete the search were as follows: South Dakota, underage drinking, alcohol, screening tools, prevalence, incidence, and health effects. After reviewing the literature and information, alcohol misuse and the lack of screenings are very prevalent problems in South Dakota and the

United States. Alcohol abuse when identified early in patients' leads to better outcomes (less alcohol dependence and fewer adverse physical effects) for patients.

**Pilot the Change in Practice**

Once the NDSU committee approved the project and NDSU Internal Review Board (IRB) approval attained, the project was implemented at the clinic. Screening and brief interventions were done in two ways based on an age grouping. Adults (ages 18-26) were given the SBI with the AUDIT, and adolescents (ages 14-18) completed the ASBIY. Evidence was presented to the medical community as well as the clinic administration and nursing staff. The project participants were the medical providers. After explanation and dissemination of the project, the providers were given an informed consent form to participate in the research project. During the project-implementation timeframe, any patient age who was 14-26 years old and who came to the Coteau des Prairie clinic in South Dakota was informed about the research project and its questions. The co-investigator provided each patient with provided the age-appropriate screening tool (AUDIT or ASBIY) during the initial patient interview. To ensure privacy, the patient completed the screening form after the nurse left. The co-investigator stayed in the room as the patient filled out the screening form and was present for any questions or concerns that arose. The provider reviewed the screening results to determine the presence of risky alcohol behavior. The providers had the option to use the supplied age-specific, brief-intervention reference forms as a replacement for prior practice or as an augmentation to current practice. If the providers determined that specialized referral for alcohol treatment was needed, the developed regional resource guide for services was available in the reference folder.

**Project Implementation**

The practice-improvement project was implemented at the Coteau des Prairie clinic in Sisseton, SD. After NDSU and Coteau des Prairie Health Care System Clinic IRB approvals were attained, the co-investigator conducted the screening of the selected patients (14-26 year olds). The medical providers were given information handouts on appropriate techniques for communicating with adolescent prior to seeing any of the patient (Appendix M). The scoring of the screening tests were completed by the co-investigator and the results were shared with the medical provider for that clinic visit. An appropriate referral and brief interventions were determined by guidelines from the WHO and NIAAA SBI manuals as well as quick-reference sheets entailing specifics for each level of alcohol use, were supplied by the co-investigator. Providers were able to quickly reference the folder for appropriate brief interventions after a patient was identified as having risky alcohol behaviors during the screening process. The medical provider's decision about treatment was guided by either the age specific, alcohol abuse category quick reference guide developed for the project from SBI guidebook (Appendix G & J), or the medical provider's own judgment and expertise. The staff utilized the informational binder created for this project as a reference when developing standards of care. Patients for the practice-improvement project were based on a convenience sample of patients who were 14-26 years of age and came to the primary-care clinic in Sisseton, SD. Patients were informed about the project and the process and all verbally agreed to fill out the screening tools. The actual participants in the projects were the medical providers that will see the patients in the clinic. The co-investigator was always present and available for the medical providers in order to answer questions and/or to offer assistance with the reference materials.

## CHAPTER 3. PROJECT DESIGN

The practice-improvement project was implemented into the clinical practice at the Coteau des Prairie clinic in Sisseton, SD. After NDSU and the Coteau des Prairie Health Care System IRB approval was attained, the co-investigator conducted the screening of selected patients (14-26 year olds). The ages of 14-26 were chosen due to the knowledge obtained from the literature review: the earlier risky alcohol behaviors were identified, the more likely, in the long term, that patients and providers can decrease the disease's burden.

Prior to screening the patients, the co-investigator explained the project's process and reasoning, ensuring that all information was kept confidential as any other health care interaction would be treated. Informed consent was supplied to the medical providers, detailing the purpose, scope, and implications of consenting to be part of the practice-improvement project as well as any risk and/or benefits from participating in the project. After obtaining informed consent from all the medical providers, the project began.

The co-investigator did the scoring, and the results shared with the medical provider for that clinic visit. An appropriate referral and brief intervention were determined by the guidelines from the WHO and NIAAA SBI manuals that were supplied by the co-investigator. Providers were able to quickly reference a developed folder, which had specific reference sheets for age appropriate patients and the zone of alcohol risk/behavior. The reference material had specifics for age-appropriate questions, brief-intervention statements, tips on communication with adolescents and strategies as a guide to help ensure best practice during the process; the referral reference guide ensured appropriate referral recommendations. The folder also had handouts collected from the National Institute on Alcohol Abuse and Alcoholism; the handouts were given to all patients and described the effects of alcohol on one's health, social life, and economics as

well as the treatment of alcohol-related problems. The medical provider's decision about treatment was guided by the SBI guidebooks and the medical provider's judgment and/or expertise. The staff used the informational binder created for this project as a reference when developing standards of care. The sample of medical providers used for this practice-improvement project were the medical providers at the Coteau des Prairie Health Care System in Sisseton, SD, who had patients who met the age criteria of 14-26 years old during the project's timeframe. The providers were chosen as the project participants because the medical professionals could assess the usefulness, applicability, and feasibility of such a process for their clinic patients.

**Resources**

The cost of the resources needed to implement and develop this project was approximately $50 and provided by the co-investigator. The AUDIT and ASBIY tools, as well as the WHO and NIAAA SBI manuals, were available free of charge, and permission emails (Appendix E) were received to use the AUDIT as well as the Screening and Brief Intervention guidelines. The ASBIY tool was developed by the National Institute on Alcohol Abuse and Alcoholism (NIAAA); the NIAAA supplied an email that granted permission to utilize the guideline (Appendix H). The project co-director completed the organization and critical analysis of the information. The Coteau des Prairie Health Care System in Sisseton, SD, provided a letter of support for this project (Appendix A). Once completed, the brief interventions were determined by the provider who was the primary caregiver for that visit. Intervention plans were based on the WHO and NIAAA SBI manuals or on the medical provider's choice.

**Protection of Human Rights/Subjects**

The initial process for the protection of human rights began with submitting the proposal to the IRB at the Coteau des Prairie Health Care System. When Coteau des Prairie Health Care Systems IRB approved this proposal, the proposal was given to the NDSU IRB for review. The medical providers consented to the project after they were given the informed consent document. The providers were assured that no patient confidential information would be kept for the purposes of the project. Patients who qualified for the study were informed about the research, including the project's reasoning; the project's process, how the project may affect their care during that current clinic visit, and how confidentiality would be keep at the highest level as would be with any other medical interaction. The patients' screening results were given to the medical provider for review, and the decision about whether to use the results was determined by each individual medical provider. At the conclusion of the project, the medical providers completed a survey to evaluate the study. The surveys did not contain any patient-identifying questions or material; the questions were based on the overall project's effectiveness of meeting the three main goals.

**Potential Risks**

The importance of patient privacy, protected by Health Insurance Portability and Accountability Act (HIPAA) regulations must be ensured during the entire project. Privacy protection was included with the informed-consent section of the survey. Other potential risks included psychological stressors for a patient who was unaware of current, risky alcohol behavior and the fear associated with the stigma of alcohol abuse. Patients were reassured that their privacy was paramount for the project and that, by completing the process, their medical provider could offer them a more comprehensive health exam, appropriate interventions, and

health management which might decrease the health consequences related to risky alcohol behavior. With the chosen age group of 14-26 years old, there was a high likelihood to identify underage drinking and associated concerns that were raised by the participants. The legal age of alcohol consumption in the United States is 21 years old. Assurance was given to the patient and his/her family that HIPAA protects all information, regardless of its inclusion with the study. Women, minorities, and children were part of this project because alcohol use does not discriminate from these groups of society. Medical-provider risks were minimal. The tools and interventions supplied were evidence-based material that was researched, studied, and widely used around the world.

**Potential Benefits**

In the primary-care setting, nurse practitioners have the potential to encounter alcohol misuse with nearly 30-50% of their patients (Hiese, 2010). The project helped to screen for and to identify risky behaviors by implementing a standardized alcohol-screening tool for the medical providers at the Coteau des Prairie Health Care System. When the project began, there was no formal screening tool being utilized in the primary-care setting, and there was no evidence-based practice tool to treat risky alcohol behavior when identified. With the implementation of screening, as well as utilizing a well-recognized and tested alcohol-screening tool such as the AUDIT, clinic providers had higher awareness of problematic alcohol consumption. A thorough reference guide was developed for the primary-care providers; the guide had an evidence-based algorithm for brief intervention and a referral to an addiction counselor as needed. One major goal was to help the clinic be compliant with practice standards and to ensure that primary-care providers were following the appropriate screening practices for their patients' alcohol use. Early recognition of the target population who is at risk for hazardous

or harmful behavior was a primary goal (Ballesteros et al., 2004). Clinics and health care providers may have a higher reimbursement rate when patients have higher performance outcomes. Long-term benefits for the individuals and society were the decreased societal and health care costs from less alcohol-related disease. There was also improved awareness about alcohol-related illnesses, which may change a patient's current risky alcohol behavior. Society could also benefit from a decreased number of people who drive while intoxicated and could lessen problematic situations for law enforcement. Patients may have a decreased propensity of self-harm due to the high probability of falls, assaults, and violence while engaging in risky alcohol behaviors.

**Timeline**

- January-June 2015: Conduct the literature review and synthesis
- January-June 2015: Develop the proposal document
- August 2015: Propose the project to the committee
- August 2015: Obtain IRB approval
- September 2015: Launch the project at the clinic
- September-December 2015: Evaluate and complete the practice-improvement project
- February-March 2016: Submit the dissertation to the committee
- March 2016: Defend
- March 2016: Submit the dissertation to the nursing program chair and The Graduate School

## CHAPTER 4. EVALUATION

The goal of this project was to implement an alcohol-screening tool (AUDIT) or ASBIY and brief interventions for the clinic's 14-26 year old patient population. No formal alcohol-screening tool was used for the patient population when the project began. The AUDIT and ASBIY tools supplied a standard of care for screening and provided appropriate interventions that were set forth by the clinic. Once the time period for the pilot project ended, the providers were qualitatively surveyed about the project's usefulness and effectiveness.

### First Goal

The practice-improvement project first goal was aimed towards the implementation of a standardized alcohol-screening process for all 14-26 year olds at the Coteau des Prairie Health Care System in Sisseton, S.D. The screening process was guided by the WHO's evidence-based Alcohol Use Disorders Identification Tool (AUDIT) for 18-26 year olds as well as the National Institute for Alcohol Abuse and Addiction's Alcohol Screening and Brief Interventions for Youth (ASBIY) for the 14-17 year olds. The objective was achieved by implementing the practice improvement project at the Sisseton, SD, clinic on October 20-23 and 27-30 of 2015. During that time period, all patients who met the age-range criterion of 14-26 years old were evaluated with the age-appropriate alcohol-screening tool.

### Second Goal

The second goal was to improve patient care and clinical practice through screenings (AUDIT and ASBIY), brief interventions, appropriate referrals, adolescent friendly communication techniques, and education regarding alcohol cessation. Previously, research has found that providers are concerned with their confidence, awkwardness of the situation, and one's own anxiety about their ability to ask questions relating to alcohol (Clossick & Woodward,

2014). The second goal was fulfilled with many different aspects of the project. Developing a "canned" response; question-and-answer sheet; and predetermined, age-specific statements for each level of alcohol use (Appendixes G & J), the providers had appropriate responses, age specific questions, and BIs for each age group as well as for each identified risky alcohol-behavior level as determined by the screening tools. Providers were also given an information sheet on adolescent friendly environment, and tips on communication techniques when working with adolescent (Appendix M). Each patient that screened positive for the use of alcohol was given an educational flyer, which was obtained from the National Institute of Alcohol Abuse and Alcoholism, *Treatment for Alcohol Problems: Finding and Getting Help, or Beyond Hangovers understanding alcohol's impact on your health.* U Can Stop Drinking, *Alcohol Effects on the Body.* ; the flyer corresponded to the patient's level of risky alcohol behaviors (Appendix K). All patients, regardless of the alcohol risk assessment, received an educational handout about the *Alcohol Effects on the Body,* to convey the physiologic changes that patients may experience with risky alcohol behaviors (Appendix K). The appropriate referrals for this objective were met by the developing the "Regional Alcohol Resources available near Sisseton, S.D." (Appendix L) so that the providers and the patients could decide what facility offered the needed services as well as the feasibility of the facility for specific patient requirements and needs.

**Third Goal**

The purpose of the third goal was to develop an information binder, with resources for alcohol-related referrals that are available locally, as a resource for the health care providers. The outcome was met by developing the "Regional Alcohol Resources available near Sisseton S.D." (Appendix L) which was placed in the quick-reference informational binder for the providers to

have on hand during clinical visits. Evaluation of the information binder and associated resources were completed by the medical providers when question 12 of the survey was answered.

# CHAPTER 5. RESULTS

During the identified time period, five of the eight healthcare providers were present in the clinic and had patients who fell within the project's age range. The remaining three healthcare providers were either not present in the clinic during the screening period or did not have patients that met the age qualifying range. Furthermore, only providers with qualifying patients completed the post-implementation survey. In total, 39 patients were in the project's age range, and they were all screened with the age-appropriate screening tool, thereby meeting the outcome to increase the prevalence of alcohol screening by utilizing standardized evidence-based screening tools. From the provider surveys, questions two, three, and four all pertained to improving patient care, clinical practice, and consistent screening. The responses for these questions were either *agree* or *strongly agree*, leading to the successful achievement of the project's primary objective: increasing the presence of a standardized alcohol screening/intervention that would be used systematically in conjunction with the medical provider's treatment augmented or assisted by brief interventions and/or the medical provider's preferential practice. At the time of the pilot project's completion, the clinic was interested in implementing the process as is, although there will be a delay until July due to an electronic health record software change. All materials and project design materials were given to the clinic coordinator for reference when and if the clinic decides to implement this process. The co-investigator anticipates employment as a provider and can assist with implementation and logistics.

## Sample Demographics

The practice-improvement project (PIP) was implemented and conducted October 20-23, 2015, and October 27-30, 2015, at the main clinic Coteau des Prairie Health Care System in

Sisseton, SD. During the identified time period, 39 patients were identified within the age range (14-26 years old) for the screening to be completed. OB patients were 18 of the 39 total patients and all identified as females. Of the remaining patients, 6 were males between the ages of 14-20, and 15 were females between the ages of 16-25. Of the total participants, five identified themselves as Caucasian, and 34 identified themselves as Native American.

After the time period expired, the medical providers who consented to participate in the PIP were asked to evaluate the screening tools and reference material supplied by the project. Of the eight medical providers at the main clinic, only five of them had patients who matched the PIP's age criteria. The medical providers were identified as three physicians, one physician assistant, and one nurse practitioner. Three providers had only ever worked for CDP, and of the remaining providers, two had worked previously at an independent clinic group that was owned and operated personally by the physician in the same region where he currently practices. The providers' years of practice ranged from six months to 44 years in primary care.

**Data Results**

The PIP's success was determined by meeting the project's three goals. The determination was made from taking information from specific questions results in the survey to assess the success of the goal. The first goal, implementing a standardized alcohol-screening process, was met by the PIP being successfully implemented in the clinic practice.

The second goal improving patient care, improving clinical practice for alcohol screening was done by utilizing standardized screening tools (AUDIT and ASBIY). An information binder with evidence-based quick-reference materials for the appropriate alcohol screening, brief interventions, and information indicating when to refer to a specialist for the patients in a primary-care setting was provided. Adolescent friendly environment and communication

information and handouts were given as a reference guide, including tips for effective adolescent and provider communication. To evaluate the second goal, questions 2, 3, 4, and 5 of the survey were geared to evaluate the success of the goal. The providers' survey responses pertaining to the second goal (Questions 2, 3, 4, and 5) all reported as either *agree* or *strongly agree*. With the results, the medical providers/participants' either agreed or strongly agreed the implementation of the AUDIT and ASBIY was advantageous to the practice. Providers either agreed or strongly agreed the PIP improved clinical practice for patients 14-26 years of age by ensuring the usage of an evidenced-based alcohol screening tool was used for the determination of alcohol risk. Prior to the project, the clinic did not have a standardized process for the screening, intervention or patient specific referral in place to ensure best practice, and to meet national requirements of at minimum an annual alcohol screening for the patients served at the clinic. All providers responded with strongly agree that the information binder was helpful and easy to use. Due to the short duration of the project, evaluation of patient outcomes and specifics of interventions were not evaluated nor determined.

Third, the development of a regional referral guide, detailing the service capabilities, payment options, and contact information, of the alcohol treatment facilities in the region of Sisseton, S.D. The reference guide provided information to assist the medical providers to ensure an appropriate referral. The responses from the survey pertaining to the third goal (Question 12) were unanimously "yes" that the developed guide made decision for follow up easier for the medical providers.

The results of the post-PIP medical evaluation survey are as follows:

Questions 1-6 were based on a five-point Likert scale with response options of 0 (*Strongly Disagree*), 1 (*Disagree*), 2 (*Neutral*), 3 (*Agree*), and 4 (*Strongly Agree*). Figure 2

displays the results of questions 1-6 with respective responses from the healthcare providers. Following the table are the subsequent individual questions with graphs denoting responses from the healthcare providers.

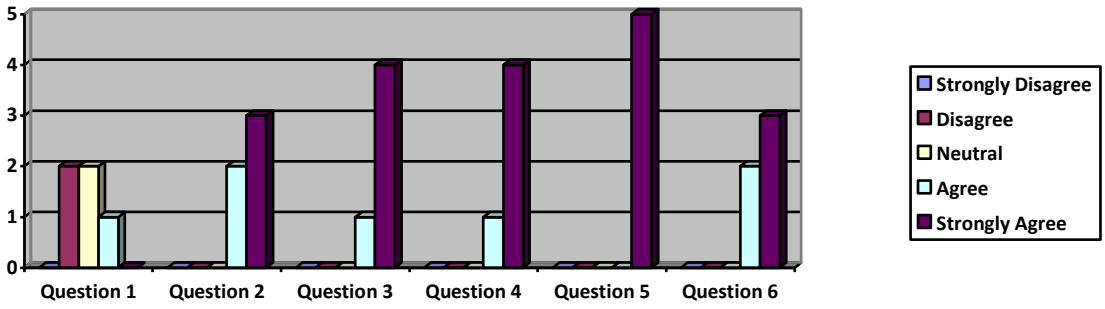


*Figure 2*. Medical Provider Evaluation Survey, responses for questions 1-6.

**Question 1.** *Prior to the project, patients were being regularly and consistently screened for the presence of risky alcohol behaviors.* The five providers' results consisted of two disagrees, two neutrals, and one agree.

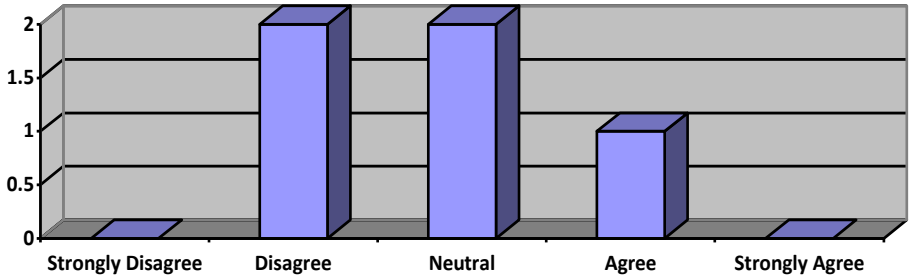


*Figure 3*. Medical Provider Evaluation Survey, responses for question 1.

Three providers added additional comments. The first comment was as follows: "Some [patients] yes [were screened regularly] and some no. Depends on the provider of the patient (some screen regularly and some don't) and the patient themselves." The next provider was an OB provider who added, "All my pregnant patients are screened regularly, hit and miss on my non-OB." The last comment asked if the question pertained to her as a provider or to the clinic as

a whole: “Question one, is that in general or as a clinic or provider? I [the provider] screen consistently but not the clinic [clinic as a practice environment does not have a standard screening process].”

**Question 2.** *The use of the Alcohol Screening and Brief Intervention for Youths screening tool for 14-18 year olds was advantageous to your practice? If so, in what way?* Two medical providers *agreed*, and three medical providers *strongly agreed*.

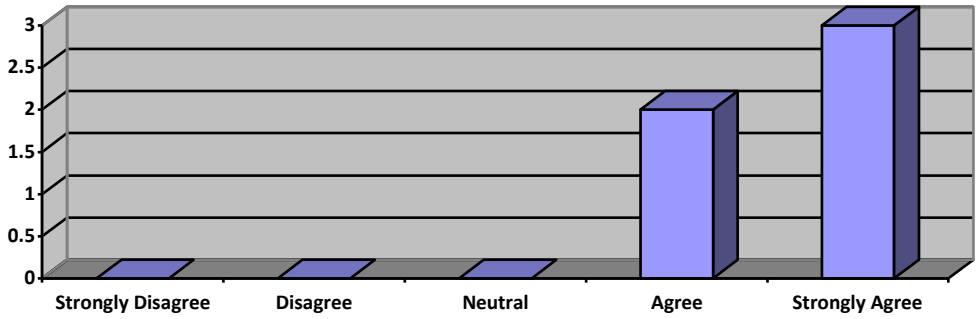


*Figure 4*. Medical Provider Evaluation Survey, responses for question 2.

Some comments about how the ASBIY was advantageous for use in practice were supplied: “*Quick easy (the screening), (guidance) to the point age appropriate; “(assessment was) Quick evaluation done before my visit, could create a plan prior to entering the room.”; and “Gave structure (the tool) and done prior to my visit time which allowed for preparation and planning for treatment.”* Two providers did not give a response for the second part of the question: “If so, in what way?”

**Question 3.** *The use of the Alcohol Use Disorders Identification screening tool for 18-26 year olds was advantageous to your practice? If so, in what way?* One provider responded with *agree* while the other four circled *strongly agree*.

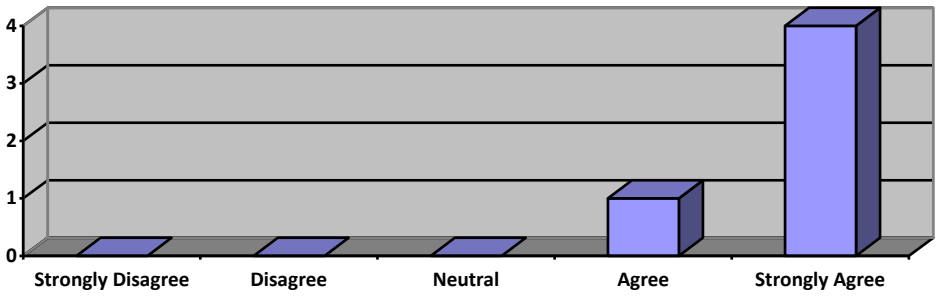


*Figure 5*. Medical Provider Evaluation Survey, responses for question 3.

Comments were supplied to describe how the AUDIT was advantageous in practice: "Done prior (screening done prior to the visit) allowing for preparation."; "Same as above" (*"Gave structure (the tool) and done prior to my visit time which allowed for preparation and planning for treatment.");* and *"(The screening) can be quickly done completed by nursing staff, which gives a value and also a reference for BI in the binder."* Two providers did not give a response for the second part of the question: *"*If so, in what way?"

**Question 4.** *The practice improvement project improved patient care and clinical practice for 14-26 year-olds, from previous processes?* One provider responded with *agree*, and the other four *strongly agreed*.

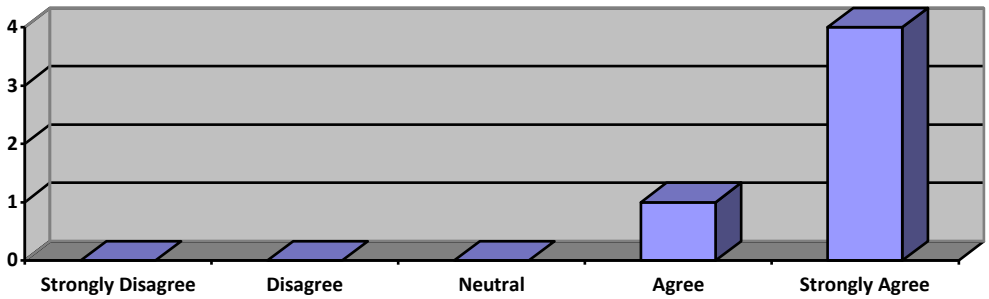


*Figure 6*. Medical Provider Evaluation Survey, responses for question 4.

One provider added an additional comment: "(the project) made a standardized process."

**Question 5.** *The informational binder which included the brief intervention strategies and referral resources, was easy to use and helpful?* All providers responded with *strongly agree*.

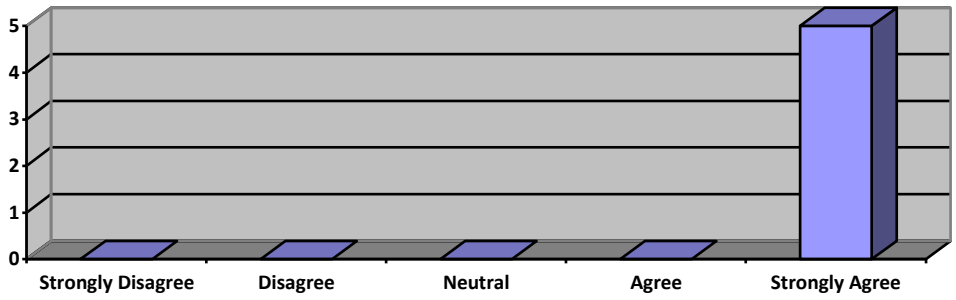


*Figure 7*. Medical Provider Evaluation Survey, responses for question 5.

One provided commented, "(The packet/binder has) specific wording, and age specific references."

**Question 6.** *The project developed a standardized process for which could lead to systematic changes easily in your organization or practice?* Two providers responded with *agree* and three with *strongly agree*.

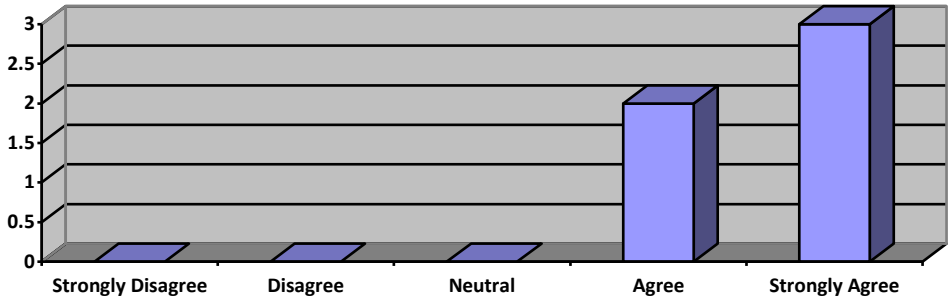


*Figure 8*. Medical Provider Evaluation Survey, responses for question 6.

Questions 7-13 consisted of open-ended questions that allowed for providers' feedback about the process and how the procedure can either be improved or implemented with the clinic's current practice.

**Question 7.** *Did you use the process as a replacement for past practice or as an augmentation to current practice?* Three providers responded that the project was used to replace previous practice. Two of the providers utilized the project as an augmentation to their current practice.

**Question 8.** *Following the PIP, do you is a medical provider feel that the AUDIT with brief intervention should be instituted as regular practice in your clinical setting? If so, what alterations or changes would you feel need to happen to assist Coteau des Prairie for the implementation of the process? If not, what prevents AUDIT with SBI from being a standardized process for your clinical setting?* The providers gave several comments: "Yes, social worker/social group should be involved as well as the local tribe for insurance of follow-up and assistance."; "No, it is my decision on management not a guidelines decision."; "Yes, training for nursing staff to do evaluation, have referral contact cards (business cards) to hand out to patients as a resource for follow-up."; "Yes, no alterations."; and "Yes, no changes."

**Question 9.** *What barriers, if any, were encountered when using the brief intervention guide?* The following comments were obtained: "Not all inclusive for all patients."; "None."; and "Needed more information, provided sheets didn't pertain to every person specifically." Two providers did not answer the question.

**Question 10.** *What barriers, if any, were encountered when using the AUDIT?* Only one provider commented directly to this question: "Patients felt [the AUDIT] was lengthy to answer, patients were concerned they thought we assumed they had a problem since they are being screened today and never before." The other four providers' responses were as follows: "Nate did the screening," suggesting that the provider did not do the screening and that he/she received the results after the co-investigator did the patient screening with the tools.

**Question 11.** *What barriers, if any, were encountered when using the ASBIY?* The responses were the same as above. Only one provider directly answered this question. The response was as follows: "Patients felt [the AUDIT] was lengthy to answer, patients were concerned they thought we assumed they had a problem since they are being screened today and never before." The other four providers' responses were as follows: "Nate did the screening," suggesting that the provider did not do the screening and that he/she received the results after the co-investigator did the patient screening with the tools.

**Question 12.** *Did the developed referral guide make follow up easier to determine?* Responses from the providers were five yeses. Two providers also gave comments: "Federal/county/state/tribe social services should be available as well for follow-up." and "Didn't know all the resources in our community. (as supplied by the referral document)".

**Question 13.** *Additional comments:* "Many scored at no risk or low risk in the OB clinic for alcohol use currently and even prior to pregnancy. Although during the two-week period of the survey done in the clinic 80% of the OB patients were found + (positive) for some type of controlled substances."; "Easy to use, appropriate and thorough."; and "[The project] should of been done on controlled substance screening we have more problems with that [substance abuse]."

**Field Observations**

During the implementation of the project, the co-investigator witnessed multiple verbal responses from the patients while the patients were filling out the alcohol screening tools. Patients stated their concerns for why the patients were being screened for alcohol at the current visit. At the beginning of the interview with the patient, the co-investigator explained the process of the project and the reasoning behind the implementation of the alcohol screening. Patients

were aware that the project was a pilot practice change within the clinic and all patients ages 14-26 years of age were going to be screened for the presence of alcohol use and misuse. One patient stated that "You're just asking me because I'm Native [American]". Prior to the previous statement the patient was smiling, friendly and spoke in a normal tone, volume and rate. Although once the screening tool was initiated, the volume of his voice increased, his tone got very stern, and the rate increased dramatically. The co-investigator witnessed other verbal and non-verbal communication in the form of a change in posture which was more threatening and closed-off than previously. During the duration of the project, the co-investigator noted multiple times a change in verbal and non-verbal communication as the projects focus, goals, and processes were explained to the patients. Further concerning observations were witnessed as one patient stated his concerns that his family has a history of alcohol misuse and he wondered if that was the reason why he was being screened for alcohol use or misuse during the current visit. OB patients were conveyed confusion of appropriate responses for the screening tool when the questions were concerning alcohol intake for the past one year. Three of the OB patients verbally conveyed that due to their current pregnancy status the results or responses would be different than if they were not pregnant.

# CHAPTER 6. DISCUSSION

## Interpretation of Results

The projects results indicated that developing and implementing an alcohol screening and referral process would improve clinical practice at the clinical site. Before the implementation of the project, the clinic had no formal evidenced base alcohol-screening tool, process, or standard within the clinic. Each of the health care providers completed alcohol screening in the manor of how the individual provider felt was most appropriate. The co-investigator did not imply that previous practices were inappropriate. The process of alcohol screening remains difficult one that if not done on a daily basis, aspects of the screening may be inadvertently omitted. A chemical dependency counselor may do alcohol screening on patients on a daily basis, and even the specialist (chemical dependency counselors) are human and can miss aspects of the screening process. In view of the medical provider survey, the results point directly to an improved rate of alcohol screening, as well as improved clinical practice. The improvement was primarily made by the scoring of the alcohol-screening tool. Providers with the assistance of the tool, and the tool results, were now able to tailor an intervention for each individual. The patient specific intervention, guided by evidence base practice guidelines to ensure best practice was implemented. One medical provider had a comment that "it is my decision on the management of patients and not a guidelines decision". The guidelines are just as the name implied, a guideline. The guidelines were intended to provide the health care provider with guidance from evidenced based practice. Although the medical providers still have to use their own judgement and clinical expertise to ensure the intervention or treatment is a possibility.

Adolescents are a different discussion altogether. The health care providers did agree or strongly agree the implementation of the ASBIY was advantageous to the clinical practice of the

facility and the health care providers. Providers have to take into account each stage of adolescents and for providers to consider every subtle difference is difficult to attain. Through the use of the ASBIY, the guess work of questions or communication techniques, was left out on the providers' behalf. The providers had an evidenced based screening and brief intervention strategies that were available as a quick reference as well a resource for interventions. Each and every patient encounter can and most likely will be different. With the development of the referral quick reference guide the providers were provided the necessary tools to ensure the recommended referral is a possibly for the specific situation. The providers had the chance to share options with the patients to ensure the referral was not only meeting the needs for medical treatment but also a feasible option. Patients may be geographically isolated from referral centers, or may not have the funds to pay for certain treatment at referral centers.

The co-investigator does believe the results reflected the success of the project. A standardized screening, treatment, and referral process was developed for the Coteau des Prairie Health Care System in Sisseton S.D. The providers not only agreed the project improved processes in the clinic, the providers also realized the usefulness of evidenced based guidelines, as the providers would like to implement a similar process for illicit drug use as well in the clinic.

**Project Limitations**

One project limitation was the predominance of the OB patients among the patients who were screened. The project had 39 participants; 18 of them were from the OB clinic (currently pregnant). Many OB patients reported little-to-no current alcohol use and qualified such comments with similar statements of "Well I'm pregnant now, so results may be different". As a result, the co-investigator was concerned about the validity of the results. The OB patients were

at different stages for their pregnancies, ranging from 12-weeks of gestation to 38-weeks of gestation. There was concern about the answers given by some patients because of the previously quoted statement about being pregnant. Five questions on the AUDIT include the base of "How often during the last year have you . . ." with question-specific information added at the end. The co-investigator was concerned about these statements because the patients may have altered their responses due to the fact that they were pregnant and not consuming alcohol. Boniface and Shelton (2013) reported that individuals tend to under-report current and past alcohol consumption by up to 40% to 60% of the time; still, providers have to take the patients' words/responses as the facts for alcohol-screening questions and evaluation. Patients who are only at 12 weeks for their baby's gestation still have 40 weeks of not being pregnant for which the patient should account for in their responses. The topic was crucial, because as the project was designed, the providers took the alcohol-screening tool score and made a decision about a patient's treatment and plan. The co-investigator relayed this information to the medical providers so that they could take the statements into consideration for the care plan. The ultimate decision was made by the specific provider who determined the treatment plan based on the alcohol-screening tool's results. The decisions made by the providers were not evaluated for the purpose of the study.

As the medical provider evaluation survey illustrated, patients were concerned about why they were being screened for alcohol during the visit. One patient even asked if the clinic had a concern about his/her drinking or the history of his/her family's drinking behaviors; the patient was concerned that these reasons affected why he/she was being screened for alcohol use. The reasoning for the screening was explained, again, that all patients in a certain age range were being screened for alcohol behaviors, despite the clinic's past concerns or knowledge. The

patient highlighted the very sensitive nature of the alcohol-use topic. The patient mentioned concerns about stigma ("You're just asking me because I'm Native [American]") and shame with the voiced concerns. The patient was informed that the confidentiality of the assessment was the same as any other interaction at a health care facility. In order to mitigate these concerns, redirection was attempted by explaining that the process was developed to prevent future health problems. Early identification of any health problems can decrease the disease's burden later in life. Diabetic screening, hypertension screening, vascular screening, and tobacco screening all have the same purpose: to identify diseases/behaviors early in the development in order to stop or prevent any long-term disease burdens or effects. Despite the concerns about stigma and shame, providers will have to confidentially and tactfully complete the screening and management, a goal for the project.

The next limitation was identified while writing the evaluation. After the closure of the project, the co-investigator in retrospect, felt that by having the screening process completed without the medical provider in the room, pertinent nonverbal, para-verbal, or verbal information was not observed by the medical provider. The information was noted by the co-investigator and relayed to the medical provider. The co-investigator believes that for true evaluation/definition of the nonverbal and verbal information, the data should be assessed by the medical provider. Three medical providers said that, by having the screening done prior to their visit, providers would have more time to develop a plan for each individual patient. The plan may have changed if the medical provider were present while the alcohol-assessment tool was being administered, as the provider may of witnessed the verbal and non-verbal information display or portrait by the patient. The previous mentioned methodology would increase the visit time, although the assessment, plan, and follow through may have been more appropriate and/or precise.

**Recommendations to Project Site**

The screenings should be continued at the clinic since the overall project goals were met and the responses of the medical providers that the project improved clinical practice for the clinic. Before project implementation, a team should be developed within the organization to review the current findings, evaluate the information and process to develop an implementation strategy. Representatives from administration, nursing, and medical providers should be a part of the team to ensure all aspects of the clinic are represented. A time period should be developed by the projects team of when to evaluate and or review the process to assess the need for any changes needed in the project and the futility of the current process.

Prior to the initiation of the project in the clinic, the co-investigator met with all the medical staff to convey the projects details. After the project was implemented the medical providers through the survey relayed a need for the process of alcohol screening along with a screening technique that was universal for all controlled substances. The co-investigator conducted an additional review of literature and found that the WHO has developed and validated an Alcohol, Smoking and Substance Involvement Screening Test (ASSIST). The ASSIST classifies patients into low, moderate and high-risk categories to guide clinical intervention. The ASSIST instrument provides substance-specific risk score for alcohol, tobacco, cannabis, cocaine, amphetamine-type stimulants, inhalants, sedatives, hallucinogens and opioids based on responses to several screening questions about substance use and associated problems (Gryczynski et al., 2015). The WHO initially had initially approved the use of the ASSIST for patients between the ages of 18 and 45. Although recent studies conducted by Grycynski et al. (2015) have shown the ability of the ASSIST to be used for adolescents as well. The study found that in adolescents', the ASSIST had significantly greater reduction in substance abuse than other

delayed intervention conditions. The ASSIST has also shown that during a randomized control trial conducted internationally, two thirds of the participants' felt that the BI offered by the ASSIST led to a positive modification of one's substance use behavior (Gryczynski et al., 2015). The ASSIST has not only been shown to be a valuable and specific screening tool, but also as a research instrument for gauging changes in substance use risks following intervention (Humeniuk et al., 2012). The implementation of a new screening tool that encompasses all substance abuse potential would be quite beneficial to ensure patients can be screened appropriately. The process would be very much the same as the AUDIT, with the addition of interventions specific to the other substances, tobacco, and illicit drug use. The quick reference referral guide would require an update to ensure all off the needs of the patients are available to ensure appropriate specialist substance abuse referral.

The practice improvement project or the ASSIST project as discussed previously could be easily applied to other primary care clinical settings. The resources are available free of charge from the WHO, NIAAA, AAP, and the resources are open to the public to use without written permission. Each facility can decide who would do the screening to ensure the most appropriate application of the guideline. The screening should be consistently done by the same personal to ensure accuracy and be comfortable with the use of the tool. Providers will still have the resources available to them, although a thorough review/study of the material should be completed prior to the implementation of the guideline into the clinic to ensure providers have some familiarity with the guideline and the recommendations of the guideline.

**Implications for Practice**

The government, insurance companies, corporations, certifying bodies, and specialty associations are evolving and changing the requirements and practice recommendations for the

health care community. As the new requirements and recommendations are disseminated, every provider and medical community needs to ensure that the new standards are not only met for the providers and the health care communities, but that the decisions and implications of the changes also must fit the geographic, cultural, and economic aspects of the practice setting. The USPSTF recommends that every patient be screened annually for alcohol behaviors/uses starting at the age of 18. Many providers may not have the tools to appropriately and effectively screen patients in order to meet the requirements set forth by the agencies. The USPSTF (2014) supplied neither a screening tool nor a treatment recommendation that was all encompassing of the alcohol spectrum, cultural differences, geographic, and economic differences. The WHO developed the Screening and Brief Interventions (SBI) guideline to assist medical providers with developing a process to meet the recommendations. Not all providers are experts on motivational interviewing, brief interventions to curb risky alcohol behaviors, or ensuring appropriate referral to a specialist when necessary. The project and the SBI has created the foundation for a clinical setting/medical provider to start molding a process that will work best for all parties involved and that will still be tailored to the needs of the patient, clinic, culture, or medical setting. What has worked previously for a situation does not always pertain to, or even fit, with the next possibly very different situation. The supplied project resources are a starting point, a guide for the available requirements and opinions that can be tailored for each setting. The Coteau des Prairie Health Care System can take the project as is and implement the process throughout the networks of clinics in the organization. Brief training for the medical providers and the nursing staff can be completed during a one to two-hour session. The resources as a step-by-step guide for the project. Walking the clinical staff through the process and supplying the necessary

references would make the implementation process easy, as the project design has already been proven to work in the primary clinic of the Coteau des Prairie Health Care System.

**Implications for Future Research**

Future research has many implications for the Coteau des Prairie Health Care System and any other facilities that are looking for an evidence-based, standardized process to screen patients for risky alcohol behaviors. The USPSTF does not recommend screening patients in primary care under the age of 18, the reasoning "The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening and behavioral counseling interventions in primary care settings to reduce alcohol misuse in adolescents" (Moyer, 2013, p 1). Currently the USPSTF does not screen patients younger than 18, although the NIAAA & AAP (2011) recommend to start screening patients at the age of nine. The statement by the NIAAA & AAP is supported by research showing, adolescents who begin drinking alcohol before the age of 15 are 5 times more likely to develop alcohol abuse than individuals who started drinking alcohol at the legal age of 21 (NIAAA, 2015a). The NIAAA & AAP are also supported by the Substance Abuse and Mental Health Services Administration (SAMHSA; 2014) which found that in 2013, there were 4.6 million persons' age 12 or older who had consumed alcohol for the first time within the past 12 months. The information relayed by SAMHSA (2014) alcohol screening should possibly start at an earlier age because, if 12-year-olds had their first alcoholic drink 12 months ago, they were 11 years old at that time. Furthermore, if there were 4.6 million adolescents over the age of 12 who had started consuming alcohol, the co-investigator wondered how many 9 or 10 year old adolescents have experimented with alcohol. The number may not be 4.6 million adolescents, although the 9 and 10 year olds deserve the same, appropriate alcohol screening and education as individuals who are 12 years

and older. The first step would be to screen all patients on a yearly basis starting at the age of 9 as recommended by the NIAAA & AAP 2011. The current project focused solely on detecting risky alcohol behaviors as soon as possible in order to decrease the disease's burden for life. The co-investigator does not see why the USPSTF does not recommend earlier screen as the USPSTF recommends earlier screening is needed to prevent long-term effects of alcohol consumption (Moyer, 2014). The USPSTF does not recommend decreasing the screening age as by doing so is not cost benefit feasible (Moyer, 2014). Although screening has demonstrated the cost effectiveness of the process, through the reduction of excess morbidity and mortality of screening (Willenbring, 2012). All the resources and tools used during the project are free online or from the entities that developed the resources, therefore the only upfront cost is the money spent on preparing an implementation process. Facilities themselves must decide with the current geographical considerations such as patient population, patient trends in the practices service area, available resources in the communities, and the experience/expertise of the medical providers to determine at what age alcohol screening should be implemented.

The concerns about stigma, shame, and accusations must be addressed with greater clarity in future projects. The project's patients were minimally informed about the reasoning and purpose for the alcohol screening during their clinic visit; they were informed that a graduate-student nurse was doing a practice improvement project that screened patients who were ages 14-26. Further implementation or projects should ensure that all patients are aware that every patient is being screened, despite any previous information, for the presence of risky alcohol behaviors. Providers need to explain that the reason for the screening is to identify and to prevent risky alcohol behaviors. Clinical practices following the USPSTF annual recommendations to make alcohol screening a part of primary practice, would reduce the stigma

associated with alcohol screening and treatment as all patients would be assessed and screened the same (The National Academies of Science, Engineering, and Mathematics, 2012).

Future projects should also determine if having the provider or a designee using the screening tool changed the responses and/or treatment plan. Vital verbal or non-verbal communication during the screening may be lost or missed when the screening is not completed directly by the medical provider. Patients may not have the same comfort/rapport with a designee as they have with a primary provider, which may lead to altered responses to protect oneself from others who an established relationship has yet to develop. Intimate conversations and topics may be easier to discuss when patients and medical providers have an established rapport/comfort/understanding.

As the health care providers reported in the surveys, there are not only concerns about the people's alcohol use, but also an illegal-drug, most notably prescription drugs, abuse problem. SAMHSA (2014a) defined prescription drug abuse as the nonmedical recreational use of a substance, as consuming a drug without a prescription or using the drug for the purposes of intoxication, an experience, or the feelings elicited. The providers' concerns are highlighted because young adults who maintain friendships with alcohol-, marijuana-, and tobacco-using peers are more likely to use prescription drugs (Taylor, 2015). Risky alcohol behaviors clearly do not happen alone; therefore, future research should include the use of an evidence-based screening tool for illegal and prescription drug abuse among all patients.

The projects' framework was developed from the Iowa Model of Evidence-Based Practice, which provided an excellent platform for the project. Each step of the model built on the previous step, leading to a well-organized successful project. The co-investigator would

recommend the use of the Iowa Model of Evidence-Based Practice for any further projects as the model was successfully implemented and used for the PIP.

**Application to other DNP Roles**

The Doctor of Nursing Practice professionals can operate in almost all areas of the health care realm. Administrative DNPs have to ensure the current facility is meeting national standards of care. Education DNPs must also be aware of the national standards of care to ensure the up and coming graduates are prepared to practice appropriate evidenced based clinical practice. Research DNPs must ensure the new guidelines are evidenced-based, conducted, and tested to ensure best clinical practice. Each one of the previous roles all have input for health care as a whole. DNPs that are in direct practice must also ensure the care given and recommended remains evidenced based. The project entailed all of the above. The DNP is educated, well prepared, and in a unique position throughout the health care process to ensure best evidenced based clinical practice.

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# APPENDIX A. IRB APPROVAL

NDSU NORTH DAKOTA STATE UNIVERSITY

September 29, 2015

Dr. Dean Gross
Nursing

Re: IRB Certification of Exempt Human Subjects Research:
Protocol #PH16054 , "Alcohol Screening and Brief Intervention for 14-26 year olds in primary care"

Co-investigator(s) and research team: Nathan Tiedeman

Certification Date: 9/29/2015 Expiration Date: 9/28/2018
Study site(s): Coteau de Prairie Medical Center, Sisseton, SD
Sponsor: n/a

The above referenced human subjects research project has been certified as exempt (category # 2) in accordance with federal regulations (Code of Federal Regulations, Title 45, Part 46, Protection of Human Subjects). This determination is based on the revised protocol submission (rec'd 9/18/2015) and questionnaire (received 9/29/2015).

Please also note the following:
- If you wish to continue the research after the expiration, submit a request for recertification several weeks prior to the expiration.
- The study must be conducted as described in the approved protocol. Changes to this protocol must be approved prior to initiating, unless the changes are necessary to eliminate an immediate hazard to subjects.
- Notify the IRB promptly of any adverse events, complaints, or unanticipated problems involving risks to subjects or others related to this project.
- Report any significant new findings that may affect the risks and benefits to the participants and the IRB.

Research records may be subject to a random or directed audit at any time to verify compliance with IRB standard operating procedures.

Thank you for your cooperation with NDSU IRB procedures. Best wishes for a successful study.
Sincerely,

Kristy Shirley Digitally signed by Kristy Shirley
DN: cn=KristyShirley, o=NDSU, ou=InstitutionalReviewBoard, email=kristy.shirley@ndsu.edu, c=US
Date: 2015.09.29 14:36:08 -05'00'

Kristy Shirley, CIP, Research Compliance Administrator

For more information regarding IRB Office submissions and guidelines, please consult http://www.ndsu.edu/research/integrity_compliance/irb/. This Institution has an approved FederalWide Assurance with the Department of Health and Human Services: FWA00002439.

INSTITUTIONAL REVIEW BOARD
NDSU Dept 4000 | PO Box 6050 | Fargo ND 58108-6050 | 701.231.8995 | Fax 701.231.8098 | ndsu.edu/irb

Shipping address: Research 1, 1735 NDSU Research Park Drive, Fargo ND 58102

07-21-15;09:32AM;

Coteau des Prairies
HEALTH CARE SYSTEM

200 Orchard Drive
Sisseton, SD 57262

Hospital phone
(605) 698-7647

Clinic phone
(605) 698-7681

July 20, 2015

NDSU Institutional Review Board
NDSU Department 4000
PO BOX 6050
Fargo, ND 58108-6050

To whom it may concern:

This letter is to indicate the intent of the Coteau de Prairie Health System to collaborate in Nathan Tiedeman's doctoral practice improvement project, "ALCOHOL SCREENING AND BRIEF INTERVENTION FOR 13-25 YEAR OLDS IN PRIMARY CARE." In this research, Coteau de Prairie Health System, will supply the clinic setting for which the practice improvement project will take place. The co-investigator will be present for all of the project actions during the screening of the patients. Informed consent will be obtained in writing from the patient or the guardian once the informed consent form has been reviewed and questions answered. Once the screening has been completed the results will be given to the medical provider and it is the choice of the medical provider to use the provided Brief Intervention guidelines from the World Health Organization as well as the referral resource folder as a means for appropriate specialty referral to an alcohol treatment facility. The co-investigator, Nathan Tiedeman has been trained in the protection of human subjects, and the approved NDSU IRB protocol will be followed when conducting the research. The project will also be put through the IRB process at North Dakota State University.

If you have any concerns or questions, please contact me at: (605) 698-7647.

Sincerely,

Dr. Stanley Gallagher, D.O.
Medical Director
Coteau de Prairie Health System
Sisseton, SD

## APPENDIX B. PROVIDER INFORMED CONSENT

North Dakota State University
Nursing Department
1919 N University Dr. D102
Dept. #2670
Fargo, ND 58108-6050
(701) 231-8355

**Title of Research Study:**
Alcohol Screening and Brief Interventions for 14-26 years olds in primary care.

**This study is being conducted by:**
Dean Gross, Ph.D., FNP, (701) 231-8355, primary researcher.
Nathan Tiedeman, RN, BAN, DNP-S, (701) 261-2139, co-investigator

**Why am I being asked to take part in this research study?**
The medical providers are being asked to participate in a research project to improve clinical practices at the Coteau de Prairie Medical Center. Medical providers that have a clear comprehension of English, and are present during the project window of time will be asked to be participants in the project.

**What is the reason for doing the study?**
The purpose of the project is to implement an alcohol screening and brief intervention technique into the health system of Coteau de Prairie Health System. Currently in the clinic there is no consistent process of screening for the presence of alcohol abuse. Implementation of the project will equip the medical providers and possibly the clinic with an evidenced based alcohol screening tool, and a guide for the appropriate management of alcohol abuse.

**What will I be asked to do?**
Patients will be asked to fill out an alcohol screening tool upon presentation to the clinic or the emergency department. The results of the screening tools will place a patient in a zone/risk category of alcohol abuse. The zone of alcohol abuse has a corresponding treatment strategy in the brief intervention guidelines that will be provided to the medical provider. The decision to use the provided guidelines as a primary therapy or to augment current treatment practices is totally at the discretion of the provider. Once the time period has been met, all the medical providers that were involved will be asked to take an anonymous survey to evaluate the project.

**What information will be collected about me?**
The only information that will be obtained from the medical providers will be from the survey which is the evaluation of the practice improvement project. The survey is a qualitative measure of the practice improvement project and will be completed anonymously.

**Where is the study going to take place, and how long will it take?**
The project will take place at the primary clinic of the Coteau de Prairie Health Center in Sisseton S.D. The project will be set in place for 2 weeks. During the project window providers will be given the screening results for their patients along with the appropriate brief intervention. The providers can chose to discard the information or use the information as an assessment and treatment tool for the clinic visit. A survey after the project will be asked to be

completed evaluating the project. The survey should take no longer than 5 minutes to complete.

**What are the risks and discomforts?** Common risks in research include loss of confidentiality, emotional, psychological stress, and or social implications. It is not possible to identify all potential risks in research processes; therefore the researchers will make every attempt to minimize the risk to you. The project design leads to minimal or no risk to the providers' as participation is voluntary, providers can at anytime refuse to be part of the study.

**Are their benefits to me?**
Medical providers will be offered a process of evidenced based alcohol screening and brief interventions, to ensure best practice. The clinic will have a chance to have a trial run of screening for alcohol misuse, prior to the mandated Meaningful Use is set by the federal government.

**What are the benefits to other people?**
Through the implementation of the project the clinic could have a standardized alcohol screening and intervention process. Screening for alcohol use is recommended by the U.S. Preventative Services Task Force at minimum on a yearly basis. Some providers may feel that alcohol screening and intervention is something that provider feels not competent in doing. The project will help those providers by implementing a standardized well tested and evidenced based screening and brief intervention strategy.

**Do I have to participate in the study?**
The choice to be in the project is totally voluntarily. The results of the screening tool and the recommendations for brief interventions are not required to be used or implemented **The completion of the post project survey by a medical provider, will be giving implied consent to be in the practice improvement project.**

**What are the alternatives to being in this research study?**
Instead of being in the research study, you may choose not to participate.

**Who will have access to any information obtained during the project?**
The surveys will be filled out anonymously. The results will be kept in a locked drawer of the primary investigator Dr. Dean Gross for a period of no less than 3 years.

**What if I have questions?**
Before you decide whether to accept this invitation to take part in the research study, please ask any questions that might come to mind now. Later, if you have any questions about the study, you can contact the investigator, Dean Gross, PhD, FNP at (701)231-8355 dean.gross@ndsu.edu, or the co-investigator Nate Tiedeman, RN, BAN, DNP-S at (701)261-2139, nathan.tiedeman@ndsu.edu.

**What are my rights as a research participant?**

You have rights as a participant in research. If you have questions about your rights, or complaints about this research, you may talk to the researcher or contact the NDSU Human Research Protection Program by:

- Telephone: 701.231.8995 or toll-free 1.855.800.6717
- Email: ndsu.irb@ndsu.edu
- Mail: NDSU HRPP Office, NDSU Dept. 4000, PO Box 6050, Fargo, ND 58108-6050.

The role of the Human Research Protection Program is to see that your rights are protected in this research; more information about your rights can be found at: www.ndsu.edu/irb .

**Documentation of Informed Consent:**
You are freely making a decision whether to be in this research study. Signing this form means that

1. you have read and understood this consent form
2. you have had your questions answered

You will be given a copy of this form to keep.

**The completion of the post project survey by a medical provider, will be giving implied consent to be in the practice improvement project.**



Revised: July 2014

# APPENDIX C. PROVIDER EVALUATION SURVEY

**Medical PROVIDER EVALUATION SURVEY**

PRACTICE IMPROVEMENT PROJECT EVALUATION:
ALCOHOL SCREENING AND BRIEF INTERVENTION FOR 14-26 YEAR OLDS IN PRIMARY CARE

Purpose of the Project:

1) The primary objective for the practice improvement project was aimed towards the implementation of a standardized alcohol screening process for all 14-26 year olds at the Coteau des Prairie Health Center in Sisseton South Dakota. The screening process was guided by the evidenced-based Alcohol Use Disorders Identification Tool (AUDIT) developed by the World health Organization for 18-26 year olds, and the Alcohol Screening and Brief Interventions for Youth (ASBIY) by the National Institute for Alcohol Abuse and Addiction for the 14-26 year olds. The implementation of the two processes is aimed towards standardization program of alcohol screening and medical provider led brief interventions if the presence of alcohol abuse was identified. The primary outcome for the practice improvement project was to increase the presence of a standardized alcohol screening/intervention that would be used systematically in conjunction with medical provider treatment led by brief interventions or the medical provider's preferential practice.

2) Secondary Objectives:

    a. Outcome One: Improve patient care and clinical practice through screenings (AUDIT, ASBIY), brief interventions, and appropriate referrals, and provisions of education regarding alcohol cessation.

    b. Outcome Two: Develop an information binder with resources for alcohol related referrals as a resource for the healthcare providers that are available locally.

Evaluation Process: The AUDIT with brief interventions has been previously tested and evaluated. The evaluation of the practice improvement will be solely based on the qualitative assessment after the implementation of the process, no quantitative data or analysis will need to be determined. The appropriateness feasibility and effectiveness will be evaluated by the medical providers through a qualitative evaluation survey post implementation. Due to the nature of this project, quantitative or statistical analysis is not necessary. I am honored that the medical providers of the Coteau de Prairie Health System allowed my practice improvement project to be completed. Please take some time to evaluate the process, and also give recommendations to improve the process.

Informed Consent Signature, _____

Name printed please, _____

Evaluation Questions:

The first five questions are based on a Likert scale, please chose one of the options and add narrative as you deem necessary.

1) Prior to the project, patients were being regularly and consistently screened for the presence of risky alcohol behaviors.

| 0 | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |

2) The use of the Alcohol Screening and Brief Intervention for Youths screening tool for 14-18 year olds was advantageous to your practice? If so, in what way?

| 0 | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |

3) The use of the Alcohol Use Disorders Identification screening tool for 18-26 year olds was advantageous to your practice? If so, in what way?

| 0 | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |

4) The practice improvement process improved patient care and clinical practice for 14-26 year olds, from previous processes?

| 0 | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |

5) The informational binder which included the brief intervention strategies and referral resources, was easy to use and helpful?

| 0 | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |

6) The project developed a standardized process for which could lead to systematic changes easily in your organization or practice?

| 0 | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |

7) Did you use the process as a replacement for past practice or as an augmentation to current practice?

8) Following the PIP, do you as a medical provider feel that the AUDIT with brief interventions should be instituted as regular practice in your clinical setting? If so, what alterations or changes would you feel need to happen to assist Coteau de Prairie for the implementation of the process? If not, what prevents AUDIT with SBI from being a standardized process for your clinical setting?

9) What barriers, if any, were encountered when using the brief intervention guide?

10) What barriers, if any, were encountered when using the AUDIT?

11) What barriers, if any, were encountered when using the ASBIY?

12) Did the developed referral guide make follow up easier to determine?

13) Additional comments:

# APPENDIX D. IOWA MODEL PERMISSION EMAIL

Permission to Use and/or Reproduce The Iowa Model
Delete Reply Reply all Forward
Mark as unread

Kimberly Jordan - University of Iowa Hospitals and Clinics <noreply@qemailserver.com>
Mon 6/8/2015 10:52 AM

To help protect your privacy, some content in this message has been blocked. To re-enable the blocked features, click here.
To always show content from this sender, click here.

Get more add-ins
Action Items

You have permission, as requested today, to review/use *The Iowa Model of Evidence-Based Practice to Promote Quality Care (Titler et al., 2001).* Click the link below to open the model.

Copyright of the Iowa Model of Evidence-Based Practice to Promote Quality Care will be retained by The University of Iowa Hospitals and Clinics.

**Permission is not granted for placing the Iowa Model on the internet.**

The Iowa Model

In written material, please add the following statement:

- *Used/Reprinted with permission from the University of Iowa Hospitals and Clinics and Marita G. Titler, PhD, RN, FAAN. Copyright 1998. For permission to use or reproduce the model, please contact the University of Iowa Hospitals and Clinics at (319)384-9098 .*

If you have questions, please contact Kimberly Jordan at 319-384-9098 or kimberly-jordan@uiowa.edu.

## APPENDIX E WORLD HEALTH ORGANIZATION PERMISSION EMAIL

Dear Mr Tiedeman,

Thank you for your response. I think that we are now coming closer to the solution for your request.

If you wish to use the extract of a WHO publications for research, private study or in a non-commercial document with limited circulation (such as an academic thesis or dissertation), you may do so without seeking permission. Our only requirement is that the WHO source should be appropriately acknowledged. (Example Source: © World Health Organization, TITLE, YEAR)

The complete collection of WHO materials on AUDIT can be found on the following page:
http://www.who.int/substance_abuse/activities/sbi/en/

I hope that you could find materials for your research and thesis in these WHO publications.

Please let me know if you have additional questions.

With kind regards,
Tatiana Titova

World Health Organization Press
(Permissions Management, Licensing and Reprint Rights)
20 Avenue Appia, CH-1211 Genève 27,
Switzerland

PERMISSION TEAM: permissions@who.int

# APPENDIX F. ALCOHOL USE DISORDER IDENTIFICATION TOOL (AUDIT)

As part of our health service it is important to examine lifestyle issues likely to affect the health of our patients. This information will assist in giving you the best treatment and highest possible standard of care. Therefore, we ask that you complete this questionnaire that asks about your use of alcoholic beverages during the past year. Please answer as accurately and honestly as possible. Your health care provider will discuss this issue with you. All information will be treated in strict confidence.

| **Questions** | **Scoring system** | | | | | **Your score** |
|---|---|---|---|---|---|---|
| | **0** | **1** | **2** | **3** | **4** | |
| How often do you have a drink containing alcohol? | Never | Monthly or less | 2 - 4 times per month | 2 - 3 times per week | 4+ times per week | |
| How many units of alcohol do you drink on a typical day when you are drinking? | 1 -2 | 3 - 4 | 5 - 6 | 7 - 9 | 10+ | |
| How often have you had 6 or more drinks if female, or 8 or more if male, on a single occasion in the last year? | Never | Less than monthly | Monthly | Weekly | Daily or almost daily | |
| **Add the score for questions 1,2, and 3. If men score less than 4 or women score less than 3, STOP here. Otherwise, proceed by filling out questions 4-10.** | | | | | | AUDITC TOTAL |
| How often during the last year have you found that you were not able to stop drinking once you had started? | Never | Less than monthly | Monthly | Weekly | Daily or almost daily | |
| How often during the last year have you failed to do what was normally expected from you because of your drinking? | Never | Less than monthly | Monthly | Weekly | Daily or almost daily | |
| How often during the last year have you needed an alcoholic drink in the morning to get yourself going after a heavy drinking session? | Never | Less than monthly | Monthly | Weekly | Daily or almost daily | |
| How often during the last year have you had a feeling of guilt or remorse after drinking? | Never | Less than monthly | Monthly | Weekly | Daily or almost daily | |
| How often during the last year have you been unable to remember what happened the night before because you had been drinking? | Never | Less than monthly | Monthly | Weekly | Daily or almost daily | |
| Have you or somebody else been injured as a result of your drinking? | No | | Yes, but not in the last year | | Yes, during the last year | |
| Has a relative or friend, doctor or other health worker been concerned about your drinking or suggested that you cut down? | No | | Yes, but not in the last year | | Yes, during the last year | |
| **Scoring:** 0 – 7 (Zone1/Lower risk), 8 – 15 (Zone 2/Increasing risk), 16 – 19(Zone 3/Higher risk), 20+(Zone 4/Possible dependence) **TOTAL SCORE** | | | | | | |

## APPENDIX G. ADULT BRIEF INTERVENTION REFERENCE FOR PROVIDERS

# AUDIT Zone I : Abstainer 0

## Alcohol education:

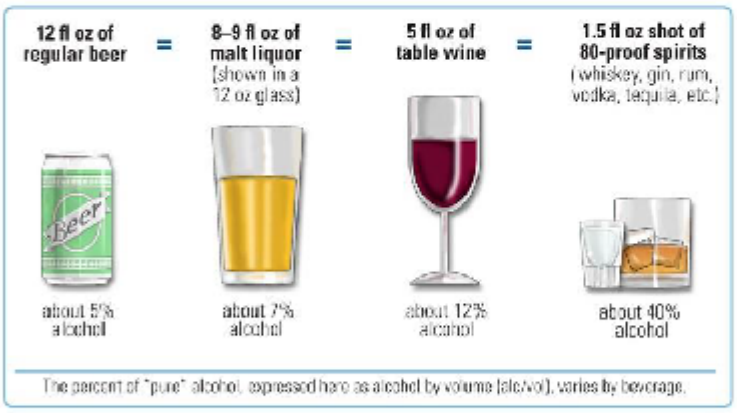
- **Use the opportunity to congratulate patient.**

***"So keep up the good work and always try to keep your alcohol consumption below or within the low-risk guidelines."***

- **Especially if problems with Alcohol in the past.**
- **Talk about (Prevention) the improved health benefits they may have due to any co morbidities. i.e. HTN, DM etc.**

**"it appears that you are at low risk of experiencing alcohol-related problems if you continue to drink moderately (abstain)."**

## Educate proper alcohol consumption.





## Rescreen in 1 yr.

# AUDIT Zone II: Low Risk 1-7

**Alcohol education:**
*"CDP is now offering preventive advice about alcohol use to all patients who drink regularly. Would you mind if I provided some information on healthy alcohol use?"*

*"Alcohol use while you take naproxen can cause stomach irritation and ulcers."*

**Educate proper alcohol consumption (SEE provided Handout On the back of the Alcohol effects diagram.**

*"If you do drink, please do not consume more than two drinks per day, and always make sure that you avoid drinking at least two days of the week, even in small amounts.*

*People who exceed these levels increase their chances of alcohol-related health problems like accidents, injuries, high blood pressure, liver disease, cancer, and heart disease."*

*"So keep up the good work and always try to keep your alcohol consumption below or within the low-risk guidelines."*

**Give, Beyond Hangovers, understanding alcohol's impact on your health.**
**Rescreen in 1 yr.**

# AUDIT Zone III: High Risk 8-19

**Alcohol education:**

*"Your answers from the screening test suggest that you might be at risk for adverse health effects of drinking"*

*"What do you make of this information? Is decreasing your drinking something you would consider?"*

*"I am concerned that your drinking might be contributing to _____ (HIGH BP etc). I know that you don't like to take medication—would you be willing to try reducing your drinking to see if we can avoid using blood pressure medication?"*

*"This choice is up to you. I know a decision to cut down can be difficult. We can support you when you are ready. Counseling, medications, special addiction treatment are all options available if you want help stopping."*

**Educate proper alcohol consumption (SEE provided Handout On the back of the Alcohol effects diagram.**

*"Please do not consume more than two drinks per day, and always make sure that you avoid drinking at least two days of the week, even in small amounts."*

*"People who exceed these levels increase their chances of alcohol-related health problems like accidents, injuries, high blood pressure, liver disease, cancer, and heart disease."*

**Treatment ideas**

*"Options that some patients have found helpful are monitoring your drinking, cutting down by ____, buying a limited amount, and alternating alcoholic drinks with non-alcoholic drinks."*

*"Has there been a time in the past where you were successful at cutting down or did not drink at all? Can you tell me about that time? What helped you succeed?"*

**Give Copy of Beyond Hangovers.**

**Give referral reference. Referral if patients wants.**

**Recheck 2-3 weeks. Contact clinic for questions**

# AUDIT Zone IV: Dependence 20+

**Alcohol education:**

*"Your answers from the screening test suggest that you might be at risk for adverse health effects of drinking and possibly dependence."*

*"I am concerned that your drinking is a serious medical condition and warrants prompt intervention, to prevent long term effects such as their chances of alcohol-related health problems like accidents, injuries, high blood pressure, liver disease, cancer, and heart disease."*

*"What do you make of this information? Is decreasing your drinking something you would consider?"*

*"How important is it to you to change? 0-10, 10 being most confident"?*

*"Have you ever tried to make a change in your drinking? If yes, what worked and didn't work for you?"*

*"Has there been a time in the past where you were successful at cutting down or did not drink at all? Can you tell me about that time? What helped you succeed?"*

*"This choice is up to you.*
*I'm confident that you can change when you are ready!!!*
*We are available for support when you are ready. Counseling, medications, special addiction treatment are all options available if you want help stopping."*

**Educate proper alcohol consumption (SEE provided Handout On the back of the Alcohol effects diagram.**

**Treatment ideas**

*"Options that some patients have found helpful are monitoring your drinking, cutting down by ____, buying a limited amount, and alternating alcoholic drinks with non-alcoholic drinks."*

**Give Copy of Beyond Hangovers/ Treatment for Alcohol Problems. Give Copy of Referral Sources: Make a referral Recheck 2-3 weeks. Contact clinic for questions**

## APPENDIX H. ASBIY PERMISSION EMAIL

NIAAA Webmaster <niaaaweb-r@exchange.nih.gov>
Wed 9/2/2015 10:03 AM

To help protect your privacy, some content in this message has been blocked. To re-enable the blocked features, click here.
To always show content from this sender, click here.

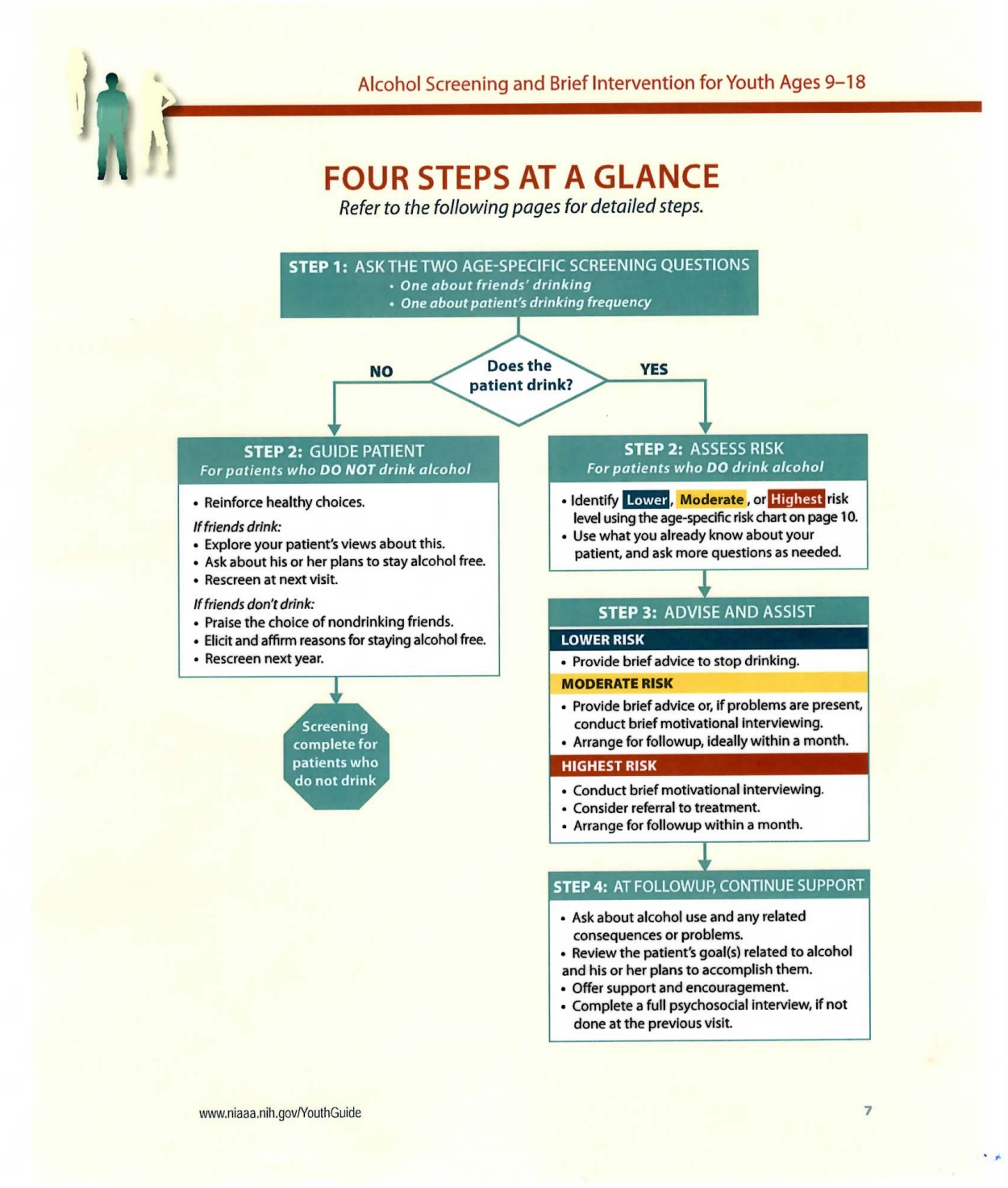
Dear Mr. Tiedeman:

Thank you for your inquiry below. This email is to inform you that the publication cited below is a U.S. Government publication and is in the public domain, so you are free to republish the sections that you need. We ask that you cite NIAAA as the source and do not make any changes to the text.

Please feel free to contact me if you have any additional questions.

**NIAAA Webmaster**
National Institute on Alcohol Abuse and Alcoholism
National Institutes of Health
5635 Fishers Lane,Bethesda, MD 20852-1705
Phone: 301-443-3860 | Fax:301-480-1726
Web: www.niaaa.nih.gov

## APPENDIX I. ASBIY SCREENING TOOL



## STEP 1: ASK THE TWO SCREENING QUESTIONS

Research indicates that the two age-specific screening questions (about friends' and patient's drinking) are powerful predictors of current and future alcohol problems in youth. Fit them into your office practice in whatever way works best for you, whether by adding them to a pre-visit screening tool or weaving them into your clinical interview. In either case, take steps to protect patient privacy and, if at all possible, conduct an in-person alcohol screen when you are alone with your patient. See page 25 for more information about confidentiality.

**Guidelines for asking the screening questions:** (1) For elementary and middle school patients, start with the friends question, a less threatening, side-door opener to the topic of drinking. (2) Because transitions to middle or high school increase risk, choose the question set that aligns with a patient's school level, as opposed to age, for patients aged 11 or 14. (3) Exclude alcohol use for religious purposes.

**Elementary School (ages 9–11)**
*Ask the **friends question** first.*

**Friends: Any drinking?**
"Do you have any friends who drank beer, wine, or any drink containing alcohol in the ***past year?***"
**ANY drinking by friends heightens concern.**

**Patient: Any drinking?**
"How about you—have you ***ever*** had more than a few sips of beer, wine, or any drink containing alcohol?"
**ANY drinking:**
**Highest Risk**

**Middle School (ages 11–14)**
*Ask the **friends question** first.*

**Friends: Any drinking?**
"Do you have any friends who drank beer, wine, or any drink containing alcohol in the ***past year?***"
**ANY drinking by friends heightens concern.**

**Patient: How many days?**
"How about you—in the ***past year***, **on how many days** have you had more than a few sips of beer, wine, or any drink containing alcohol?"
**ANY drinking:**
**Moderate** or **Highest Risk**
*(see chart on page 10)*

**High School (ages 14–18)**
*Ask the **patient question** first.*

**Patient: How many days?**
"In the ***past year***, **on how many days** have you had more than a few sips of beer, wine, or any drink containing alcohol?"
**Lower**, **Moderate**, or **Highest Risk**
*(see chart on page 10)*

**Friends: How much?**
"If your friends drink, **how many drinks** do they usually drink on an occasion?"
**Binge drinking by friends heightens concern.**
*(3 to 5+ drinks; see page 15)*

**Does the patient drink?**

**NO** → **GO TO STEP 2: GUIDE**

**YES** → **GO TO STEP 2: ASSESS RISK**

## STEP 2: GUIDE PATIENT

*For patients who **DO NOT** drink*

#2 no drink

**Do friends drink?**

**NO**

**Neither patient nor patient's friends drink**

- **Praise choices** of not drinking and of having nondrinking friends.

**YES**

**Patient does not drink, but friends do**

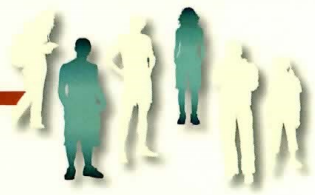
- **Praise choice** of not drinking.
- **Consider probing a little** using a neutral tone: "When your friends were drinking, you didn't drink. Tell me a little more about that." If the patient admits to drinking, go to Step 2 for Patients Who Do Drink; otherwise, continue below.

- **Reinforce healthy choices with praise and encouragement:** *"You've made a smart decision not to use alcohol."*
- **Elicit and affirm reasons to stay alcohol free:** *"So, what led you to the decision to stay away from alcohol?"* If friends drink, add, *"... especially when your friends have chosen to drink?"* Possible followup: *"Those are great reasons and show you really care about yourself and your future."*
- **Educate:** If your patient is open to input, you may want to help him or her understand, for example, that (1) alcohol can affect brain development, which continues into a person's twenties; and (2) drinking at an early age increases the risk for serious alcohol problems later in life.

- **Rescreen next year** at the latest.

- **Explore how your patient plans to stay alcohol free when friends drink:** Ask patients for their ideas on handling situations where they may feel pressure to drink. You can let them know that often the best response to a drink offer is a simple "No, thanks"; that, if pressured, an effective response is "I don't want to"; and that they don't have to give a reason.
- **Advise against riding in a car with a driver who has been drinking or using other drugs.**
- **Rescreen at next visit.**

**Screening complete for nondrinkers**

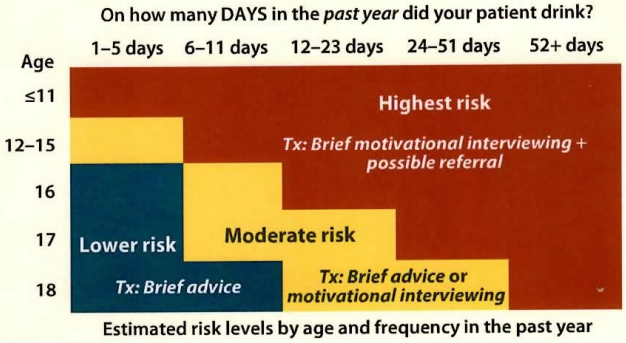


#2 does drink

## STEP 2: ASSESS RISK

*For patients who **DO** drink ...*

For a broad indicator of your patient's level of risk, start with the chart below, which provides empirically derived population-based estimates. Then factor in what you know about friends' drinking and other risk factors, ask more questions as needed, and apply your clinical judgment to gauge the level of risk.




Estimated risk levels by age and frequency in the past year

**In the chart, see where your patient's age and drinking frequency intersect:** If your patient responds to the screening question with a per-month or per-week frequency, convert the answer to days per year to see where the drinking falls on the risk chart. As an example, a 15-year-old who reports drinking about twice a month, or 24 days in the past year, is at "highest risk" for adverse consequences. (This chart is also in the Pocket Guide; see page 19 for tips on remembering the risk level cut points.)

**Factor in friends:**

- **For elementary and middle school students:** Having friends who drink heightens concern. Because having more drinking friends means more risk, ask how many friends drink, if your patient didn't offer this detail when answering the screening question.
- **For high school students:** Having friends who binge drink heightens concern. Recent research estimates that binge drinking levels for youth start at 3 to 5 drinks, depending on age and gender (see page 15).

**Include what you already know** about the patient's physical and psychosocial development in your risk evaluation, along with other relevant factors such as the level of family support, drinking and smoking habits of parents and siblings, school functioning, or trouble with authority figures.

**For moderate and highest risk patients:**

- **Ask about their drinking pattern:** *"How much do you usually have? What's the most you've had at any one time?"* If the patient reports bingeing (see page 15), ask: *"How often do you drink that much?"*
- **Ask about problems experienced or risks taken:** *"Some people your age who drink have school problems like lower grades or missed classes. Some do things and feel bad about them later, like damaging or stealing property, getting into fights, getting sexually involved, or driving or riding in a car driven by someone who has been drinking. Others get injured, have memory blackouts, or pass out. What not-so-good things related to drinking, if any, have you experienced?"*
- **Ask about other substance use** *("Have you used anything else to get high in the past year?")* **and consider using other formal tools to help gauge risk** (see page 32). The majority of your lower risk patients will not have used illicit drugs (NIAAA, 2011), but ask them, too, about past-year use, time permitting.

*After you assess risk ...*
**GO TO STEP 3**

#3



## STEP 3: ADVISE AND ASSIST

*For patients who **DO** drink...*

In this step, conduct a brief intervention for your patients who drink, based on the risk levels identified during Step 2. See the appendix for additional information on confidentiality (page 25) and conducting brief motivational interviewing (page 29).

### Lower Risk

- **Provide brief advice:** *"I recommend that you stop drinking, and now is the best time. Your brain is still developing, and alcohol can affect that. Alcohol can also keep you from making good decisions and make you do things you'll regret later. I would hate to see alcohol interfere with your future."*
- **Notice the good:** Reinforce any strengths and healthy decisions.
- **Explore and troubleshoot** the potential influence of friends who drink or binge drink.

### Moderate Risk

- **Does the patient have alcohol-related problems?**
  - **If no, provide beefed-up brief advice:** Start with the brief advice for Lower Risk patients (at left) and add your concern about the frequency of drinking.
  - **If yes, conduct brief motivational interviewing** to elicit a decision and commitment to change (see page 29).
- **Ask if parents know:** See suggestions for Highest Risk patients (at right).
- **Arrange for followup,** ideally within a month.

### Highest Risk

- **Conduct brief motivational interviewing** to elicit a decision and commitment to change, whether or not you plan to refer (see page 29).
- **Ask if parents know:** If so, ask patient permission to share recommendations with them. If not, take into account the patient's age, the degree of acute risk posed, and other circumstances, and consider breaking confidentiality to engage parent(s) in follow-through.
- **Consider referral for further evaluation or treatment** based on your estimate of severity (see page 23).
- **Arrange for followup** within a month.

### FOR ALL PATIENTS WHO DRINK

- **Collaborate on a personal goal and action plan** for your patient. Refer to page 31 for sample abstinence, cutting back, and contingency plans. For some patients, the goal will be accepting a referral to specialized treatment.
- **Advise your patient not to drink and drive or ride in a car with an impaired driver.**
- **Plan a full psychosocial interview** for the next visit if needed.

**If you observe signs of acute danger, such as drinking and driving, high intake levels per occasion, or use of alcohol with other drugs, take immediate steps to ensure safety (see page 21).**

*After intervention...*
**GO TO STEP 4**

## STEP 4: AT FOLLOWUP, CONTINUE SUPPORT

*For patients who **DID** drink ...*

It may be uncommon for patients to return for an alcohol-specific followup. Still, when patients with whom you've conducted an alcohol intervention return for any reason, you'll have an opportunity to strengthen the effects of the previous visit. Start by asking about current alcohol use and any associated problems. Then review the patient's goal(s) and assess whether he or she was able to meet and sustain them.


**Patient *was not* able to meet and sustain goal(s):**

- **Reassess** the risk level (see Step 2 for drinkers).
- **Acknowledge** that change is difficult; that it's normal not to succeed on the first try; and that reaching a goal is a learning process.
- **Notice the good by:**
  - **praising** honesty and efforts.
  - **reinforcing** strengths.
  - **supporting** any positive change.
- **Relate drinking to associated consequences or problems** to enhance motivation.
- **Identify and address challenges and opportunities** in reaching the goal.
- If the following measures are not already under way, **consider**:
  - **engaging** the parents.
  - **referring** the patient for further evaluation. -
- **Reinforce** the importance of the goal(s) and plan and **renegotiate** specific steps, as needed.
- **Conduct, complete, or update** the comprehensive psychosocial interview.

**Patient *was* able to meet and sustain goal(s):**

- **Reinforce and support** continued adherence to recommendations.
- **Notice the good:** Praise progress and reinforce strengths and healthy decisions.
- **Elicit future goal(s)** to build on prior ones.
- **Conduct, complete, or update** the comprehensive psychosocial interview.
- **Rescreen** at least annually.

**APPENDIX J. YOUTH BRIEF INTERVENTION REFERENCE FOR PROVIDERS**

# Drinker 14-18: Lower Risk

Provide brief advice:

- ***"I recommend that you stop drinking, and now is the best time."***
- ***"Your brain is still developing, and alcohol can affect that."***
- ***"Alcohol can also keep you from making good decisions and make you do things you'll regret later."***
- ***"I would hate to see alcohol interfere with your future."***

Notice the good:

- **Reinforce any strengths and health decisions.**

Explore and troubleshoot:

- **The Potential influences of friends who drink or binge drink.**

FOR ALL PATIENTS WHO DRINK

Collaborate on a personal goal and action plan.

- Abstinence Challenge/ Cut back/ Contingency
  May even be just accepting a referral to a specialist.
- Advise patient to not drink and drive or ride in a care with an impaired Driver
- SEE REFERENCE PAGE: FOR ALL PATIENTS WHO DRINK

# Drinker 14-18: Moderate Risk

Does the patient have alcohol related problems?

- **No, provide beefed-up brief advice: Start with the brief advice for lower risk patients and add your concern about the frequency of drinking.**
- **Yes, conduct brief motivational interviewing to elicit a decision and commitment to change.**

Ask if the parents know:

- **If so, ask patient permission to share recommendations with parents. If not, take into account the patient's age, the degree of acute risk posed, and other circumstances, and consider breaking confidentiality to engage parents in following through.**

Consider referral for further evaluation or treatment based upon your estimate of severity.

Arrange for follow-up:

- **Ideally within a month.**

FOR ALL PATIENTS WHO DRINK

Collaborate on a personal goal and action plan.

- Abstinence Challenge/ Cut back/ Contingency
- May even be just accepting a referral to a specialist.
- Advise patient to not drink and drive or ride in a care with an impaired Driver
- SEE REFERENCE PAGE: FOR ALL PATIENTS WHO DRINK

# Drinker 14-18: Highest Risk

- **Conduct brief motivation interviewing to elicit a decision and commitment to change, whether or not you plan to refer**

Ask if the parents know:

- **If so, ask patient permission to share recommendations with parents. If not, take into account the patient's age, the degree of acute risk posed, and other circumstances, and consider breaking confidentiality to engage parents in following through.**

Consider referral for further evaluation or treatment based upon your estimate of severity.

Arrange for follow-up:

- **Within a month.**


If you observe signs of acute danger, such as drinking and driving, high intake levels for occasion, or use of alcohol with other drugs, take immediate steps to ensure safety.

FOR ALL PATIENTS WHO DRINK: Goal and Action Plan

- Abstinence Challenge/ Cut back/ Contingency
- May even be just accepting a referral to a specialist.
- SEE REFERENCE PAGE: FOR ALL PATIENTS WHO DRINK

# Individual Goals and Action Plans

**Abstinence challenge:**

Ask permission from the adolescent to develop a contract for four – eight weeks of abstinence to help the two of you determine the severity of the problem. Discuss ways to successfully avoid drinking.

Follow up, reinforce success and discuss referral for more extensive assessment for those who failed the challenge or found it very stressful.

**Cut back:**

Patients, who refused to abstain from alcohol, ask their permission to negotiate and contract for drinking limits based on the patient's history. Advise no substance use on week nights reducing quantity and avoiding dangerous situations, such as drinking and driving. Elicit feedback from patients about your suggestions.

Follow up, continue to develop discrepancies and ask what additional steps they wish to take to reach their goals, building on prior successes.

**Contingency:**

More challenging or resistant patients refuse even to cut back, see treatment as a process and accept any progress, such as disgusting perspectives on their drinking, as partial success. Create a list the contingencies that indicate that a problem exists, and patient has to agree to come and see you if they occur. Avoid arguments, roll with resistance, and encourage them to continue thinking about their drinking and continue self-monitoring.

## APPENDIX K. EDUCATION MATERIALS/HANDOUTS USED

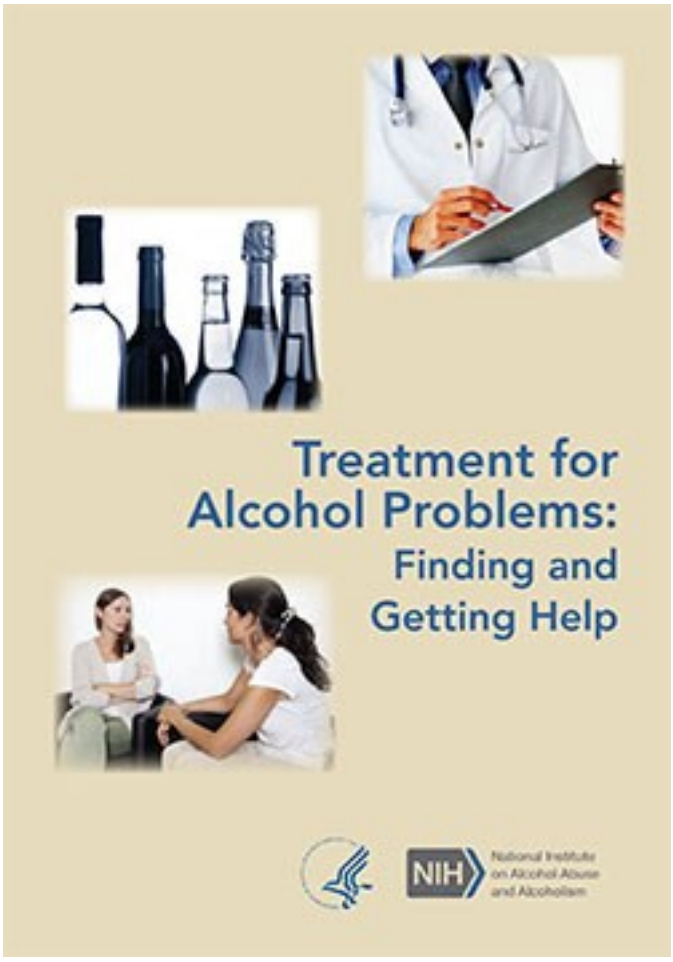



*Figure K.1*. National Institute on Alcohol Abuse and Alcoholism, *Treatment for Alcohol Problems: Finding and Getting Help.*
Retrieved from http://pubs.niaaa.nih.gov/publications/Treatment/treatment.htm

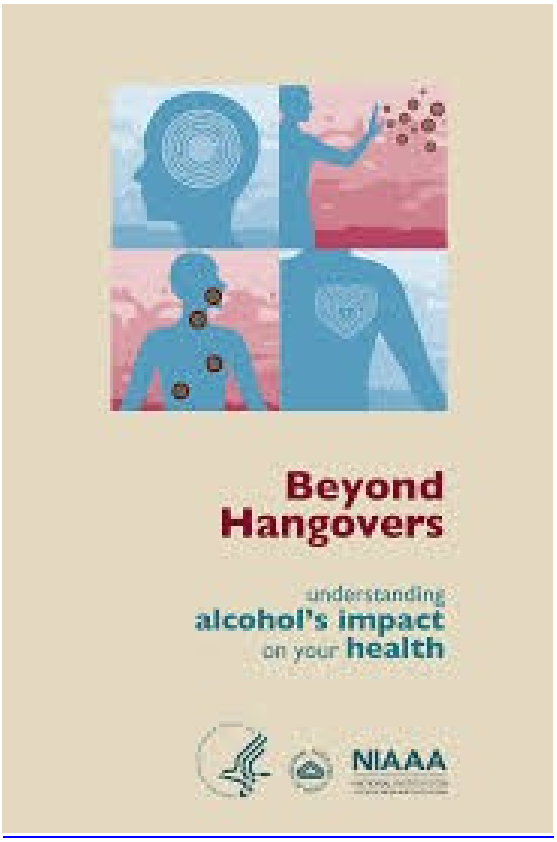



*Figure K.2*. National Institute on Alcohol Abuse and Alcoholism, *Beyond Hangovers – understanding alcohol's impact on your health.*
Retrieved from http://pubs.niaaa.nih.gov/publications/Hangovers/beyondHangovers.htm

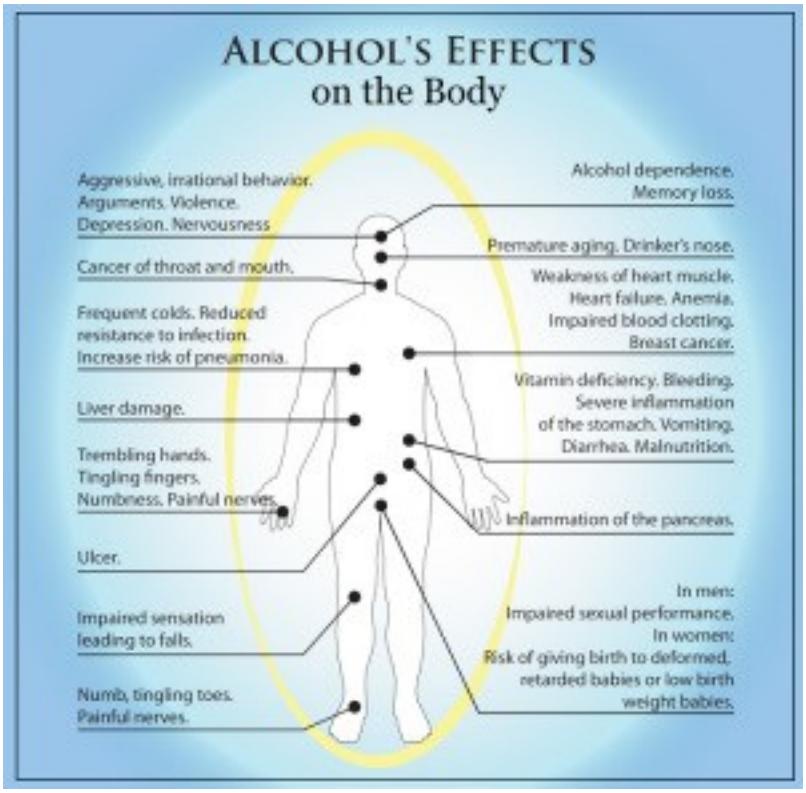



*Figure K.3*. U Can Stop Drinking (2014). Alcohol's Effects on the body. Retrieved from http://ucanstopdrinking.com/effects-of-alcoholism/

# APPENDIX L. REGIONAL ALCOHOL RESOURCES NEAR SISSETON S.D.

| Regional Alcohol Resources available near Sisseton S.D. | | | |
|---|---|---|---|
| **Facility** | **Address and Contact Information** | **Services** | **Payment Options** |
| Woodrow Wilson Keeble Memorial Health Care Center | 100 Lake Traverse Drive Sisseton, SD 57262 605-698-7606 | Adult persons with co-occurring mental and substance abuse disorders Outpatient only | Medicaid/Medicare, Private health insurance, Military insurance, IHS contract funds |
| Woodrow Wilson Keeble Memorial Health Care Center | 100 Lake Traverse Drive Sisseton, SD 57262 605-698-7606 | Children/adolescents, Adults; substance abuse treatment, halfway house, persons with co–occurring mental and substance abuse disorders | Sliding fee scale, State financed health insurance plan (other than Medicaid), Private health insurance, IHS contract care funds |
| Sisseton Wahpeton Sioux Tribe Dakota Pride Treatment Center | 388 Dakota Avenue Sisseton, SD 57262 605-698-3917 | Persons with co-occurring mental and substance abuse disorders; Adolescents; Adult women; Adult men Outpatient, Partial, Inpatient | Sliding fee scale, Cash, State financial health insurance plan , |
| Community Add Recovery Enterprise Valley Lake Boys Home Site | 3850 200th Avenue Breckenridge, MN 56520 218-736-1800 | Children/adolescent substance abuse treatment, outpatient treatment | Cash, Private health insurance, Military insurance, State financial health plan |
| Saint Francis Healthcare Campus Hope Unit | 2400 Saint Francis Drive Breckenridge, MN 56520 218-643-0499 | Children/adolescents; Adults, outpatient substance abuse treatment | Cash, sliding fee scale, Medicaid/Medicare, sSate financed health insurance, private insurance, Military insurance |
| HSA Behavioral Health | 123 19th Street NE Watertown, SD 57201 605-886-0123 | Children/adolescents, adults, seniors. | Cash, Medicare/Medicaid, State financial health insurance, Private health insurance, military insurance |
| Mark Bontreger Inc | 525 5th Street SE Watertown, SD 57201 | Young adults; Adults, outpatient; intensive, persons with co-occurring mental and substance abuse disorders | Cash, Medicaid/Medicare, Private health insurance, Military insurance |
| Lutheran Social Services of SD Watertown Area Counseling Center | 1424 9th Avenue SE Watertown, SD 57201 605-882-2740 | Children/adolescents, adults, seniors outpatient treatment for patients with CO – occurring mental and substance abuse disorders LGBT clients, | Cash, Medicaid/Medicare, State financial insurance plan, Private insurance, Military insurance, IHS, VA funds |
| New Visions Center of Morris | 712 Atlantic Avenue Morris, MN 56267 320-585-6180 | Children/adolescents; adults outpatient substance abuse treatment | Cash, State financial health insurance plan, Private health insurance |

# APPENDIX M. ADOLESCENT FRIENDLY OFFICE AND COMMUNICATION

Quick reference for providers, on tips for making an adolescent friendly clinic environment.

Neinstein, L.S. (2013). Adolescent Health Curriculum. Retrieved from https://www.usc.edu/student-affairs/Health_Center/adolhealth/info/contact.php

***GENERAL GUIDELINES FOR THE OFFICE VISIT***

There are a few important guidelines in working with teens:

**Liking the Adolescent** - Important for the clinician working with adolescent to like adolescents. If the clinician has an aversion to adolescents and their problems, it is likely best to refer this age group to another colleague.

**Involving the family** - The family is a critical component in the care of an adolescent and it is important for the clinician to introduce himself or herself to the family. It is also important to spend time discussing the concerns of the parents. While more of the visit may be spent with the adolescent alone, it is important for the parents, in most cases, to be included at some point in the visit. This might be at the beginning, end or both depending on the age of the adolescent and the complexity of the problem. At the end of the visit, the clinician should summarize the findings and plan with the teen and if the parents or guardians are involved, summarize issues that can or must be discussed with family members. Although the adolescent may be the primary patient, the parents cannot be overlooked. Parents' input and insight are crucial, for in a real sense the family is the patient.

It is also important to consider that the definition of a family has changed and there may be many possible family constellations including blended families, stepfamilies, adoptive families and foster families. Family cultural and ethnic backgrounds are also critical to helping to understand the teen and their family.

**Establishing rapport** - It is important but not always easy to establish rapport with an adolescent during the first visit or several visits. Helpful suggestions include:

- Introducing yourself to the teen and parents or guardians.
- Chatting for brief period about the teens outside activities including hobbies or school.
- Letting the teen talk for awhile on topics or areas they feel like talking about.
- Treating the adolescent's comments seriously
- Moving from less threatening health subjects such as review of systems to more difficult topics such as sexuality and drugs.
- Exploring the issues that concern the teen - not only those concerns of the parents.

**Ensuring confidentiality** - It is critical to insure a sense of confidentiality with the teen. In this regard the health care practitioner should be familiar with those laws and regulations that cover consent and confidentiality among minors in their particular country, state, province or other

locality. The limits of confidentiality should also be discussed. Parents should also be aware of these confidentiality guidelines.

**Acting as an advocate** - Since the adolescent may have had encounters with some adults who have been non-supportive, this is an opportunity for the clinician to stress the teen's positive attributes, characteristics and abilities. This is not the same as supporting high-risk behaviors.

**Listening and displaying interest** - Listening closely to the teen can be a key to developing rapport. This can include being cautious in giving advice when asked, trying to understand the teen's perspective and staying focused on what the teen is telling you. Demonstrating concern and interest is also helpful in establishing rapport.

**Discovering the hidden agenda** - It is very common for an adolescent to present with a complaint that does not represent the major issues that the teen is concerned about. It is also common that parents may present concerns that are not the major issue for the teen. For example, a teen may come in complaining of a headache or acne, but is really concerned about being pregnant or having a sexually transmitted infection. It is critical for the clinician to be aware of these other issues that may be more threatening to the teen's health then their chief complaint. A review of the HEADSS assessment below can help elicit this information.

**Using a developmentally oriented approach** - While it is important to cover areas of sex, family, peer group, and drug use, the clinician must keep in mind the developmental state of the adolescent. A 12 year old pre-pubertal male would not be asked the same questions in the same manner as would be asked a 18 year old fully mature male.

**Information gathering** - There are several methods that might be used to elicit both health information and psychosocial information. Traditionally this is through one and one interviews. Another method is a health assessment form. Examples for adolescents from the AMA Guidelines for Adolescent Preventive Services (GAPS) are at http://www.ama-assn.org/ama/pub/physician-resources/public-health/promoting-healthy-lifestyles/adolescent-health/guidelines-adolescent-preventive-services.shtml . There has been a growing interest in using computerized techniques to help assess health status in both teens and adults. In some studies, this may even be preferred by many teens. One approach that was developed at Childrens Hospital of Los Angeles is to obtain psychosocial information using the HEADSS interview. This includes the topics of Home, Education, Activities, Drugs, Sex (activity, orientation, and sexual abuse), and Suicide. This includes questions such as:

***Home*** Where is the teen living? Who lives with the teen? How is the teen getting along with parents and siblings?

***Education*** Is the teen in school? What classes is he or she doing well in? What goals does the teen have when he or she finishes school? If the teen is older out of school, the practitioner should ask about employment.

***Activities*** What does the teen do after school? What does the teen do to have fun and with whom? Does the teen participate in any sports activities? Community or Church activities? What

are the teen's hobbies? This may be an opportunity to explore issues of seat belt safety or bicycle helmet safety.

It is useful to reassure confidentiality again before questions about drugs and sexuality.

***Drugs*** What types of drugs are used by the teen's peers or family members use? What types of drugs does the teen use and what amount and frequency and is there intravenous use? This includes both alcohol and tobacco. It can be useful to begin questioning with a less invasive approach such as: "I know that drugs are fairly common on school campuses. What drugs are common on your campus?" and "It is not uncommon for some teens to try some of these drugs. Have any of your friends tried them? and "How do you handle the situation when your friends are using drugs? Do you ever try?

***Sexuality*** Is the teen dating and what are the degree and types of sexual experience? Is the teen involved with another individual in a sexual relationship? Does the teen prefer sex with the same, opposite, or both sex (es)? Has the teen had sexual intercourse? This is also to find out how many partners the teen may have and also a history of both sexually transmitted infections and contraceptive use.

An approach might be to ask something like: "Laurie, I mentioned that I might be asking some questions that were personal but very important to your health. Again, this is information that I will be keeping confidential. The area I want to discuss has to do with relationships. Are you going out with anyone right now?" and something like: " As you know, there are many teens who are sexually active. By that I mean that they have had sexual intercourse. There are also many teens who have chosen not to have sexual intercourse. How have you handled this part of your relationship with Bill or with other boys you have dated?

***Suicide*** Has the teen had any prior suicide attempts? Does the teen have any current suicidal ideation?

***Sexual Abuse or Physical Abuse*** These can be critical areas to ask about particularly in adolescents with any significant problems in the areas listed above such as family dysfunction, change in school grades, lack of friends, substance abuse, early onset of sexual activity, history of suicide attempts or runaway behavior.

**Interview tips**: Help interview tips with adolescents include:

- Shaking hands with the adolescent first.
- Avoiding lecturing and admonishing.
- Focusing on the initial history taking on the presenting complaints/problems.
- Having a positive attitude towards the adolescent
- Avoiding judgmental responses - taking a neutral stance
- Avoiding medical jargon
- Being attentive, genuine and empathic

- Identifying who has the problem (i.e., is this problem the teen's concern or the parents').
- Avoiding writing during the interview, especially during sensitive questions.
- Criticizing the activity, not the adolescent and highlighting the positive.

**Physical examination** : The physical examination may provide another opportunity to teach the adolescent about their changing body. Reassurance about normal findings may also be helpful. Sometimes the true chief complaint is disclosed during the examination.

**Closure**: When the history and physical assessment are complete, the clinician should give the teen a brief summary of the proposed diagnosis and treatment. Issues that should be discussed with the family should also be addressed at this time. Also at this time resources should be discussed and a follow-up appointment made as needed. The adolescent should also have time to ask final questions.

*OFFICE SETUP*

The space that adolescents are seen for their care can also be helpful in their overall care.

**Space**: Adolescents prefer not to be treated as children and the more private their space and waiting area the better. Materials in the waiting area and clinical offices appropriate for their age group is helpful. The examination table should not face the door and curtain should be available for privacy. If possible the desk in the office should be oriented so that the health-care provider sits beside the desk, not behind it.

**Appointments** : Time can be a problem with the adolescent visit particularly for the first visit. More time should be allotted for this visit to allow for discussing their past medical and psychosocial history. If the clinician is pressed for time, doing the history at the first visit and the physical examination on another day is a reasonable approach.

**Billing** : In regions where teens may be required to pay for their visit or the parents will receive a bill, arrangements should be discussed early. Confidentiality can become a problem in certain billing situations and may require special arrangements. The adolescent must realize that an insurance payment may result in parents finding out about visits and the diagnosis; however, a neutral diagnosis can be used in most situations.

**Availability of educational materials** : It is helpful to place books, pamphlets, hot line numbers and reliable web site information in the waiting room or office on topics such as puberty, sexually transmitted diseases, sexuality, and contraception.

**Note taking**: The practitioner should take as few notes as possible during the interview.

## APPENDIX N. EXECUTIVE SUMMARY

### Project Summary

The practice-improvement projects first goal was aimed towards the implementation of a standardized alcohol-screening process for all 14-26 year old patients at the Coteau des Prairie Health Care System in Sisseton, S.D. The screening process was guided by the World Health Organization's evidence-based Alcohol Use Disorders Identification Tool (AUDIT) for 18-26 year olds as well as the National Institute for Alcohol Abuse and Addiction's Alcohol Screening and Brief Interventions for Youth (ASBIY) for the 14-17 year olds. The second goals target was to improve patient care and clinical practice through screenings (AUDIT and ASBIY), brief interventions, appropriate referrals, adolescent friendly communication techniques, and education regarding alcohol cessation. The third and final was of the project was to develop an information binder, with resources for alcohol-related referrals that are available locally, as a resource for the health care providers.

### Background

The decision was made by the co-investigator after multiple recent news reports of the prevalence of alcohol misuse and abuse in the Midwest (Minnesota, South Dakota, North Dakota, and Wisconsin). The co-investigator also identified a lack of standardized alcohol screening in the health system after the co-investigator began clinical rotation at the Coteau des Prairie Health Care System in Sisseton S.D. Research has also shown that only 10% of primary care patients received evidenced based screening and referral for the treatment of alcohol misuse or abuse.

- Excessive alcohol use contributes to over 60 known and preventable disease processes, including cardiovascular disease, hypertension, stroke, and certain types of cancer (U.S. Preventative Services Task Force [USPSTF], 2013).
- Excessive alcohol consumption causes approximately 88,000 deaths nationally every year and is the third leading cause of preventable deaths in the United States (Centers for Disease Control and Prevention [CDC], 2014).
- In 1998, the prevalence of binge drinking was 17.7% which increased to 24.1% in 2013 (CDC, 2014).
- The U.S. Preventive Services Task Force (2013) recommends that clinicians screen adults, 18 years of age and older, for alcohol misuse and provide these individuals with brief counseling interventions to reduce alcohol misuse.
- In 2013, there were 4.6 million persons aged 12 or older which had consumed alcohol for the first time within the past 12 months, accounting for 12,500 alcohol initiates per day (Substance Abuse and Mental Health Services Administration [SAMHSA], 2014).
- Adolescents who begin drinking before the age of 15 are 5 times more likely to develop alcohol abuse than individuals who start drinking at the legal age of 21 (NIAAA, 2015b).
- The ages of 14-26 were chosen due to the knowledge obtained from the literature review: the earlier risky alcohol behaviors are identified, the more likely, in the long term, that patients and providers can decrease the disease's burden.
- South Dakota students in grades 9-12 reported the following information: 64% had consumed at least one drink of alcohol on one or more days during their life; 17.2% consumed their first drink of alcohol, other than a few sips, before age 13; 30.8% consumed at least one drink of alcohol on one or more occasions in the past 30 days;

17.2% had five or more consecutive alcoholic drinks (binge drinking) in the past 30 days (CDC, 2013).

- Twelve controlled trials found that, after a Brief Interventions (BI), patients reduced their average number of consumed drinks per week by 13-34% when compared to the controls (Agerwala & McCance-Katz, 2012).
- After the delivering of BI resulted showed a 12.3% reduction in alcohol consumptions (NICE, 2010).
- Research on BI effectiveness as a short, abbreviated intervention, has shown with an increase of 1 minute for BI time, was associated with a 1-gram per week reduction in alcohol consumption; the authors estimated that a 5.9% reduction would be achieved following a 5-minute intervention (Purshouse et al. 2012).

**Process**

- Patients aged 14-17 were screened for risky alcohol behaviors with the ASBIY.
- Patients aged 18-26 were screened for risky alcohol behaviors with the AUDIT.
- The project developed reference material for each level of identified alcohol risk, which had specifics for age-appropriate questions, brief-intervention statements, tips on communication with adolescents and strategies as a guide to help ensure best practice during the process.
- An appropriate referral and brief interventions were determined by guidelines from the WHO and NIAAA SBI manuals as well as quick-reference sheets entailing specifics for each level of alcohol use, was supplied by the co-investigator. Providers were able to quickly reference the folder for appropriate brief interventions after a patient was identified as having risky alcohol behaviors during the screening process.

- The medical provider's decision about treatment was guided by the SBI guidebook as well as the medical provider's judgment or expertise.
- The medical providers were given information handouts on appropriate techniques for communicating with adolescent prior to seeing any of the patient.
- Each patient that screened positive for the use of alcohol was given an educational flyer, which was obtained from the National Institute of Alcohol Abuse and Alcoholism, *Treatment for Alcohol Problems: Finding and Getting Help, or Beyond Hangovers understanding alcohol's impact on your health.* U Can Stop Drinking, *Alcohol Effects on the Body.* post BI; the flyer corresponded to the patient's level of risky alcohol behaviors
- All patients, regardless of the alcohol risk assessment, received an educational handout about the *Alcohol Effects on the Body.*
- The project was in place during the time period October 20-23 and 27-30 of 2015.
- After the conclusion of the project, the medical staff had the opportunity to evaluate the process through a qualitative survey with open-ended questions as well as a Likert-scale to assess the projects performance. Only the medical providers which had patients that met the age requirement during the time period were included in the surveys.

**Findings and Conclusions**

The project implementation and the three objectives were achieved during the time period of October 20-23, and October 27-30. A total of 39 patients met the age requirement and all were screened with the appropriate age related tool. Of the eight medical providers in the practice, only five had patients which fell into the age requirement. After the PIP, a post implementation survey consisting of a five-point qualitative Likert scale, as well as open-ended questions, for analysis of the success of the project was completed by the medical providers'. The survey was

to determine the feasibility of the project in daily primary-care practice in the clinical setting of Coteau des Prairie Health Care System in Sisseton S.D.

- The first goal, implementing a standardized alcohol-screening process, was met by the PIP being successfully implemented in the clinic practice. With the results from the survey, the medical providers/participants' either agreed or strongly agreed the implementation of the AUDIT and ASBIY was advantageous to the practice.
- Second goal, improving patient care, improving clinical practice for alcohol screening through the utilization of standardized evidenced-based screening tools (AUDIT and ASBIY). An information binder that had evidence-based, quick-reference materials for the appropriate alcohol screening, brief interventions, when to refer to a specialist for the patients in a primary-care setting. Providers either agreed or strongly agreed the PIP improved patient care and clinical practice for patients 14-26 years of age.
- Third goal, the development of a regional referral guide, detailing the service capabilities, payment options, and contact information, of the alcohol treatment facilities in the region of Sisseton, S.D. All providers responded with strongly agree that the developed of the regional referral guide was helpful and easy to use.
- Adolescent friending environment and communication was given as a reference handout, including tips for effective adolescent and provider communication, and adolescent friendly environment.

**Recommendations for Action**

Several recommendations for future projects were identified.

- Clinical practices need to develop a standard process for the evaluation of all patients between the age of 10-26 to be screened for the presence of risky alcohol behavior at minimum of annually.
- Dependent upon each individual/situation, healthcare providers should screen earlier than 10 years of age decided upon by clinical judgement and assessment of the patient.
- Clinical practices need to supply healthcare providers with education, training sessions, and resource material entailing the proper use of BI for age specific treatment of alcohol misuse or abuse.
- Risky alcohol behaviors clearly do not happen alone; therefore, future research should include the use of an evidence-based screening tool for illegal and prescription drug abuse among all patients. The Alcohol, Smoking and Substance Involvement Screening Test (ASSIST) is recommended by the WHO.
- Providers that routinely work with adolescents must have the knowledge and skills to communicate appropriately with adolescent. Education and exposure to such techniques should be a part of regular training.
- Healthcare providers should complete the screening tool with the patient, to ensure all information from the patients is received by the healthcare provider.
- Development of a referral resource guide to assist providers with appropriate referral to specialized treatment facilities.