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An Environmental Scan of the Role of Nurses in Preventing Fetal Alcohol Spectrum Disorders

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ABSTRACT

Nurses are in an ideal position to talk to their patients of reproductive age about alcohol use and encourage the prevention of alcohol-exposed pregnancies. Effective conversations can be efficiently included in the clinical encounter to identify alcohol misuse and offer appropriate follow-up. This report presents results of an environmental scan of resources relevant to nursing professionals and nurses' role in addressing alcohol misuse. Gaps in nursing education and practice guidelines with regard to defining the nursing role in preventing alcohol-exposed pregnancies were revealed. Findings identified a need to promote adoption among nurses of evidence-based preventive practices to prevent alcohol misuse.

Introduction

Alcohol use during pregnancy is a major public health issue (Green, McKnight-Eily, Tan, Mejia, & Denny, 2016). As the largest and most trusted health profession (Gallup, 2016), nursing professionals are ideally positioned to address the prevention of alcohol-exposed pregnancies. However, the extent to which nurses are prepared to take on this role is unclear.

The purpose of this report is to document the results of an environmental scan of the literature, resources, and policies relevant to nursing professionals and their role in preventing alcohol-exposed pregnancies (AEPs) and fetal alcohol spectrum disorders (FASDs). The environmental scan is operationalized as a review of relevant resources in the literature, professional association websites, and position statements relative to nursing professionals' knowledge, skills, attitudes, and acceptance of their role in preventing at-risk alcohol use, AEPs and FASDs. The environmental scan was conducted by a workgroup of experts from nursing, research, and education. The expert workgroup agreed on the relevant search terms and an iterative resource review process that resulted in the identification of five categories which were then sorted into four themes. The methods section of this paper details the environmental scan process.

The goals of the environmental scan were to: (1) describe the current status of the knowledge, skills, attitudes, and acceptance of all nurses' role in preventing at-risk alcohol use; and (2)

identify gaps and opportunities for improving nursing practice with regard to preventing AEPs and FASDs.

Alcohol is the sole cause of fasds

The consumption of alcohol, a known teratogen, during pregnancy is the leading cause of preventable, lifelong birth defects and disabilities, and can lead to the development of FASDs (NIAAA, 2015). Some diagnoses that fall along the FASD spectrum include: fetal alcohol syndrome (FAS), partial fetal alcohol syndrome (p-FAS), alcohol-related birth defects (ARBD), and alcohol-related neurodevelopmental disorders (ARND). Neurobehavioral disorder associated with prenatal alcohol exposure (ND-PAE) was recently added as a condition for further study in the Diagnostic and Statistical Manual of Mental Disorders Fifth Edition (DSM-V). Conditions across the FASD spectrum range in severity with regard to behavioral, cognitive, and physical impairments. Unfortunately, symptoms associated with FASDs often remain undetected until children enter the school system, when executive function and attention deficits become more apparent (Kingdon, Cardoso, & McGrath, 2016), thus delaying earlier access to assessment and treatment options.

While the prevalence of FASDs is difficult to determine, the Centers for Disease Control and Prevention (CDC) estimates that 1 in every 1,000 live births in the United States meet

diagnostic criteria for FAS alone (CDC, 2015). Based on prevalence studies of school-aged children, experts estimate the full range of FASDs in the United States to be 2%–5% of the population (May et al., 2014). **According to the CDC and the U.S. Surgeon General, there is no known safe amount of alcohol, safe type of alcohol, or safe time to drink alcohol during pregnancy** (CDC, 2016). Despite this evidence, 7.6% of pregnant women and 51.5% of non-pregnant women of reproductive age report alcohol use within the last 30 days (Finer & Zolna, 2016). Non-pregnant women represent a large demographic in need of education, as prenatal alcohol exposure may be detrimental to the fetus even in the earliest weeks of pregnancy, before a woman is aware of her pregnancy status. Because 45.0% of U.S. pregnancies were unplanned (Finer & Zolna, 2016), and because the number of women who binge drink has increased significantly in the last 10 years (Slade et al., 2016), all women of reproductive age must be educated and counseled on alcohol use and/or adequate contraceptive measures in order to prevent AEPs and subsequent FASDs.

Nurses are well-suited to identify and address at-risk alcohol use and prevent AEPs

The nursing role has a history of preventing disease by encouraging patients to change their behavior in ways that will improve their health and the health of their families (Kempainen, Tossavainen, & Turunen, 2012; Platt et al., 2016). In addition, given the presence of nurses in nearly every type of healthcare practice, they are ideally positioned to identify at-risk women and deliver evidence-based advice and interventions to promote an alcohol-free pregnancy. In order for identification, intervention, and education to become standards of nursing care, adequate and readily-available resources are needed to ensure nurse proficiency in standardized implementation practices in addressing alcohol use, AEPs and FASDs.

In 2014, the CDC funded a grant initiative that brought together universities and national health professional organizations to form discipline-specific workgroups to address AEP and FASD prevention through dissemination of evidence-informed training and practice-based interventions. The Nursing Workgroup consists of researchers from the University of Alaska Anchorage, the University of California San Diego, and the University of Pittsburgh School of Nursing. The goal of the Nursing Workgroup is that **nurses will routinely use evidence-based/evidence-informed strategies with all patients, including women of childbearing age, to identify and address alcohol use to prevent negative health consequences, including AEPs and FASDs**. The environmental scan presented in this report was a preliminary step for the Nursing Workgroup to review the research on nursing knowledge, skills, and attitudes related to alcohol use and prevention of AEPs, identify available resources to promote adoption of evidence-based interventions, and understand the gaps. By understanding the current environment, the Nursing Workgroup is better positioned to recommend strategies to address barriers to, and promote the adoption of, a standard of nursing care to address at-risk alcohol use and prevent AEPs.

Methods

The environmental scan was conducted over a four-month period (from December 2014 through March 2015) by expert members of the Nursing Workgroup. Team members included representatives from the following disciplines: nursing, psychology, education, and epidemiology. An initial set of relevant search terms was agreed upon, and additional terms were added throughout the iterative search process to ensure an exhaustive review of the evidence-based practices to prevent alcohol misuse and AEPs (Substance Abuse and Mental Health Administration [SAMHSA], 2013; U.S. Preventive Services Task Force [USPSTF], 2013; Velasquez et al., 2010), as well as the broader topic of nursing and alcohol use. Search terms included: nursing/nurse; screening and brief intervention (SBI); screening, brief intervention, and referral to treatment (SBIRT); Project CHOICES (a CDC-developed program formerly referred to as the Changing High-Risk Alcohol Use and Increasing Contraception Effectiveness Study); brief intervention; lifestyle counseling; alcohol; practice change; FASD; provider attitude; bias; stigma; and stereotypes toward alcohol. Published literature was retrieved through searches of CINAHL, PubMed, and Academic Search Premier.

Existing practice guidelines, policy statements, and position statements related to alcohol use/misuse, pregnancy, and/or nursing were identified by direct contact with national nursing organizations involved in women's health as well as other nursing organizations. Search terms were applied to organizational websites to identify relevant training recommendations, educational materials or training resources. EndNote[®] X7 (Clarivate Analytics, 2016) was utilized in addition to a secure "cloud" platform to facilitate ease of resource sharing among the Workgroup partners and eliminate physical distance barriers.

Once resources were identified, they were sorted into five categories: journal articles ($n = 92$); conference presentations, workshops, or posters ($n = 32$); existing courses or materials ($n = 35$); practice guidelines ($n = 6$); and nursing organization position papers ($n = 7$). Fourteen national organizations' websites were reviewed for applicable policy or position statements (13 nursing, 1 public health). All materials were evaluated by one Nursing Workgroup team member on their relevance to the Workgroup's stated goal and reviewed by a second team member to ensure inter-rater consistency. Discrepancies in ratings were noted and further discussed with the entire Nursing Workgroup on conference calls to reach consensus regarding ratings. A compilation of all dually-reviewed and accepted materials was then entered into a Microsoft Excel (2010) spreadsheet and redistributed to the Workgroup for secondary analysis. Secondary rating criteria included determining the extent that the materials were likely to be: (a) effective for patients who could benefit from alcohol screening, education, intervention, and/or referral; (b) adopted by nursing professionals; (c) accessible and feasible for nurses in practice settings to implement with fidelity (i.e., considering format, adaptation requirements, staff burden, and costs); and (d) sustainable (i.e., continue to influence practice behaviors and patient outcomes over the long-term). Table 1 provides detail on the variables reviewed and the ratings applied to each resource.

Table 1. Resource Review, Inclusion/Exclusion Criteria.

Variable Name	Initial Review and Inclusion (Exclusion) Criteria	Secondary Review and Inclusion Criteria
Year	2010–2015	Earlier articles considered
Resource Type	Journal articles, existing trainings, practice guidelines, policy or position statements, conference presentations, other	–
Nurse Specific	Yes (No)	–
Alcohol Specific	Yes (No)	–
Prevention Specific	Yes (No)	–
FASD Competencies 1–7 ^a	Yes (No)	–
Target Audience for the Resource	Lists healthcare provider disciplines that resource targeted as their users	Identify practice settings (potential adopters); implementation feasibility; acceptability/burden to providers
Hierarchy	Meta-analysis; systematic review; RCT; cohort longitudinal studies; case control studies; cross-sectional or observational studies; single descriptive and/or qualitative studies; editorials, opinions; other	External validity of studies conducted: i.e., effectiveness or implementation studies reporting on adoption, implementation, maintenance, and outcomes
Reach Potential (Patients)	Universal; Selected; Indicated	Number and representativeness of patients reached (and groups not reached); effectiveness of resource to change patient behavior
Sustainability Potential	Present/Absent	Cost, potential to be used by nurses with continued fidelity and to influence their practice behaviors long-term
Endorsed or Recommended	List agency or professional organizations	–
Relevance to Goal	Directly – resource meets 3 criteria: nurse-specific, alcohol, and prevention-specific; Somewhat – resource meets 2 of the above; (Not Directly – resource meets 1 or none of the above)	Extent that the resource reflects current U.S. health recommendations for alcohol; is high quality; practical and relevant to nursing professionals; and usable as is (i.e., or would it require costly adaptation; user testing)

Abbreviations: FASD, fetal alcohol spectrum disorders; RCT, randomized controlled trial;

^a FASD Competencies 1–7 cover standardized content recommended by the Centers for Disease Control and Prevention (CDC, 2017).

Results

Four themes emerged from the secondary analysis of the materials: (1) evidence for nurse intervention effectiveness; (2) nursing professionals' knowledge, skills, and attitudes (KSAs); (3) barriers to nursing professionals addressing at-risk alcohol use; and (4) identified gaps, opportunities, and implications for practice. A discussion of each theme follows:

Theme 1: Evidence for effectiveness of nursing interventions

Relevant materials were examined and assessed to determine the effectiveness of alcohol interventions conducted by nursing and other healthcare professionals. Most studies were cross-sectional or single-site evaluations, with very few experimental designs reported in the literature. A review of eleven brief intervention studies found significant reductions in drinking among patients who had received brief interventions (Clossick & Woodward, 2014). A randomized clinical trial conducted in South Africa determined that nurse practitioner-led motivational interviewing resulted in significantly lower scores on the Alcohol, Smoking, and Substance Involvement Screening Test (ASSIST) (Mertens, Ward, Bresick, Broder, & Weisner, 2014). Another study from an emergency department in Poland identified that significant reductions in number of drinking days per week were sustained at a one-year follow up (Cherpitel et al., 2010). Finally, Platt et al. (2016) found that alcohol education interventions delivered by nurses had the most positive effect on reducing quantity of alcohol consumption.

Theme 2: Nursing professionals' knowledge, skills, and attitudes (KSAs)

Nineteen of the articles examined included information regarding nursing KSAs and challenges to facilitating brief

intervention for alcohol use. Studies included baccalaureate nursing students, emergency department nurses, inpatient medical-surgical nurses, nurse practitioners, and nurse midwives. Across all specialties and credential levels, providing education and training in conducting alcohol SBI had a positive impact on both nursing attitudes and self-efficacy (Braxter et al., 2014; Broyles et al., 2013), suggesting that alcohol SBI education is critical in both undergraduate education and continuing education for nursing professionals (Burns et al., 2012; Finnell, 2012; Groves et al., 2010; Kane et al., 2014). Nursing students also indicated that training is “definitively relevant” to their career (Mitchell et al., 2013; Puskar et al., 2013), demonstrating that engagement of nursing students is not a barrier for education on this topic. Training included in-person and online didactic sessions, simulations, and clinical experiences. Articles highlighted the benefit of tailoring trainings to the nursing role while promoting inter-professional education (Broyles et al., 2013; Finnell, 2012; Gill & O'May, 2011; Johnson et al., 2010; Tanner, Wilhelm, Rossie, & Metcalf, 2012).

Of the 35 training resources identified, 11 were determined to be “directly” or “somewhat relevant” to the goal of the Nursing Workgroup. Trainings differed in emphasis, modality, length, and competency level. Relevant trainings were categorized as follows: General FASD and CHOICES trainings and SBI/SBIRT trainings. The FASD trainings were primarily focused on women and alcohol use, FASD description/diagnosis, and prevention strategies (brief screening and intervention activities). None were specifically tailored to nursing or nurse practice settings. CHOICES trainings were focused on reducing drinking among women of childbearing age and/or promoting the utilization of effective and safe contraception in order to prevent AEPs. Specialized CHOICES trainings exist and are ideal for school nurses as well as community-based nurse providers (Adams, 2014; Gillen, Stevens, Bird, & Langland, 2013; Wilton, 2014).

SBI/SBIRT trainings focused on the identification of patients at-risk for substance misuse, implementation of brief

intervention techniques, and the utilization of referrals when applicable. The target audience of most of the SBI/SBIRT trainings reviewed were nurses, specifically both undergraduate and graduate nursing students, nurse anesthetists, and emergency department registered nurses (ENA, 2014; Hagle, Mitchell, Lindsay, & Talcott, 2014; University of Pittsburgh School of Nursing, 2014). In addition, the Association of Women's Health, Obstetric, and Neonatal Nurses (AWHONN) and the FASD Prevention Project offer training tools and a webinar regarding alcohol use during pregnancy (AWHONN, 2014).

Theme 3: Nursing professionals' barriers to addressing at-risk alcohol use

Although many of the aforementioned studies reflect commendable FASD prevention efforts and strategies, barriers to the provision of alcohol SBI still persist. One study completed at a San Francisco medical center identified limited time, inadequate training, and lack of provider confidence as barriers to implementation (Satre et al., 2012). Another study completed in the U.K. identified the same barriers, in addition to system-barriers and patient-barriers, such as time constraints and defensive reactions, respectively (Groves et al., 2010). The environmental scan identified six practice guidelines related to addressing alcohol use and pregnancy, yet none were nurse-specific guidelines. Additionally, general FASD trainings presented an overview of FASD, but once more, none of the identified resources were specifically targeted toward nurse education. Clearly, the paucity of clinical and practical guidelines regarding alcohol SBI and FASDs highlights the need for more resources on this subject.

Theme 4: Identified gaps, opportunities, and implications for practice

Research

Effectiveness research of nurse-delivered alcohol SBI in the U.S. is limited, especially with respect to primary care settings. General practice nurses working in the U.K. were studied with inconclusive outcomes (i.e., no differences between treatment and usual care (Kaner, Lock, Heather, McNamee, & Bond, 2003; Lock & Kaner, 2004; Lock et al., 2006). In addition, there are limited studies of SBI/SBIRT effectiveness that exist for diverse patient groups. One study discussed the use of focus groups to adapt web-based version of SBIRT to be culturally-appropriate for American Indian and Alaska Native women (Gorman et al., 2013). Studies of other groups (e.g., ethnic/racial minorities, adolescents, older patients) and their reactions to screening and/or intervention are missing in the nursing literature.

Training

The environmental scan identified several important knowledge gaps related to alcohol use and healthy pregnancies (Gill & O'May, 2011). Because nurses are in a key position to screen and intervene for alcohol use, SBI education and training should be included in nursing student curricula (Braxter et al., 2014) and continuing education for nursing professionals (Finnell, 2012; Groves et al., 2010). While our scan identified a number of trainings in FASDs as well as evidence-based prevention strategies,

such as alcohol SBI/SBIRT and CHOICES, few were targeted to nursing professionals or students; and nurses continue to indicate a lack of confidence in intervening to prevent alcohol misuse (Johnson et al., 2010; Payne et al., 2014). Thus, training and opportunities to acquire experience are important for encouraging counseling in practice (Chun, Spirito, Rakowski, D'Onofrio, & Woolard, 2011).

Practice guidelines

While education and training are paramount to facilitate nurses' knowledge, confidence, and delivery of alcohol SBI, systems-level facilitators such as practice guidelines can be very helpful in promoting practice change among healthcare professionals (Sciarra, 2012). The scan identified that nursing practice guidelines related to what nurses should tell their patients about alcohol use and its relationship to prenatal health were extremely limited. One example identified was the Alcohol Use and Pregnancy Consensus Clinical Guidelines, which was published by the Journal of Obstetrics and Gynaecology Canada and endorsed by the Canadian Association of Midwives and the Canadian Association of Perinatal and Women's Health Nurses (Carson et al., 2010). The goal of these clinical practice guidelines was to establish national standards of care for screening and recording alcohol use, and for counseling all women of child-bearing age and pregnant women on alcohol use.

FASD prevention requires clear messaging regarding alcohol abstinence among women who are sexually active and not using contraception, women who are trying to conceive and throughout pregnancy (Kesmodel & Kesmodel, 2011; American College of Nurse-Midwives (ACNM), 2015). While recommendations from federal agencies such as the CDC, NIAAA, and other national health agencies clearly state that given alcohol's teratogenic properties there is no known safe amount or safe time to drink during pregnancy (CDC, 2016; NIAAA, 2015; USDHHS and USDA, 2015); these recommendations have not been sufficient to change knowledge or behavior among nursing professionals.

In addition, our scan found inconsistent recommendations in the nursing literature with regard to abstaining from alcohol use during pregnancy. Guideline inconsistencies on drinking and pregnancy were particularly an issue in the international literature, with conflicting recommendations noted between, as well as within, countries (Bratherton, 2014; MIDIRS, 2011; O'Mallory, 2010). For example, three articles based in the U.K. advised alcohol abstinence only during the first trimester followed by limiting drinking to moderate consumption during the second and third trimesters (Bratherton, 2014; MIDIRS, 2011; O'Mallory, 2010). Specific, evidence-based nursing practice guidelines, which convey that there is no known safe amount of alcohol, safe type, or safe time to drink during pregnancy, are necessary to provide the foundation for acquiring related knowledge and skills (Finnell, 2012). Thus, there is an opportunity for developing nursing-specific guidelines for messaging and patient education.

Policy and position statements

There is also a gap with regard to policy and position statements that recommend adoption of SBI for prevention purposes. While recommendations exist for primary care clinicians

(USPSTF, 2013), few nursing-specific practice guidelines have been developed. For example, the American Nurses Association (ANA, 2011) developed a position statement regarding substance use during pregnancy and, in 2015, AWHONN opposed punitive actions against pregnant women who use substances; however, neither of these organizations have clear policies regarding alcohol SBI implementation or FASD prevention (ANA, 2011; AWHONN, 2014; AWHONN 2015). Of the national nursing organizations reviewed in our scan, only three, the Emergency Nurses Association (ENA), the International Nurses Society on Addiction (IntNSA), and the American Psychiatric Nurses Association (APNA), endorsed SBIRT in published position papers (APNA, 2012; ENA, 2009; Strobbe & Broyles, 2012, 2013). This dearth of policy statements in the nursing community highlights opportunities for the expansion of knowledge on both alcohol SBI and FASD prevention, particularly as policy or best practice statements have been found to be a useful tool in the promotion of evidence-based practices (Ring, Malcom, Coull, Murphy-Black, & Watterson, 2005).

Systems change

To ensure implementation of alcohol SBI, healthcare systems should establish mandatory, universal screening with access to validated screening tools, utilization of performance measures, and identification of in-house content experts for alcohol SBI quality monitoring (Bratherton, 2014; Fleisher, 2011; Groves et al., 2010; Jones, Telenta, Shorten, & Johnson, 2011; Miller, Lanham, Welsh, Ramanadhan, & Terplan, 2014; O'Brien, 2014; O'Brien, Leonard, & Deering, 2012; Payne et al., 2011). Furthermore, our scan provided encouraging evidence that the utilization of alcohol SBI is not limited to any particular nurse specialty or setting. In-patient hospital units (Broyles, Kraemer, Kengor, & Gordon, 2013; Broyles, Rosenberger, Hanusa, Kraemer, & Gordon, 2012; Groves et al., 2010; Knopf, 2012), emergency departments (O'Brien et al., 2012; Slain et al., 2014), antenatal/prenatal care settings (Fleisher, 2011; Krans, Moloci, Housey, & Davis, 2014; Li et al., 2012; Skagerstrom, Johansson, Holmqvist, Envall, & Nilsen, 2012), and primary care settings (Baird, 2012; Klimas et al., 2014; Tanner et al., 2012) were all identified as potential locations for the successful implementation of alcohol SBI. However, competing demands faced by healthcare organizations, concerns about reimbursement, difficulties related to modifying electronic health records to support SBI, and other constraints must be addressed for implementation to be sustained.

The Nursing Workgroup promotes alcohol SBI toward the goal that it becomes the standard of practice for *all* practicing registered and advanced practice nurses. Additionally, current and upcoming policies may provide motivation for healthcare providers to begin consistent implementation of alcohol SBI. For example, the Joint Commission requires that SBIRT be implemented with psychiatric inpatient units (Broyles & Gordon, 2010) while the World Health Organization (WHO) promotes the utilization of the Alcohol Use Disorders Identification Test (AUDIT), a validated alcohol screening tool (Obot, 2003).

Recommendations

The environmental scan identified existing literature and resources for nurses, gaps, and opportunities for promoting the

role of nurses in preventing AEPs and FASDs. Specific strategies for addressing implementation barriers were beyond the scope of this environmental scan (Johnson, Jackson, Guillaume, Meier, & Goyder, 2011). However, several activities that nurses could support were identified. Nurses could serve as champions within healthcare systems; therefore, partnering with professional nursing associations may promote broader adoption of alcohol SBI/SBIRT and/or CHOICES within healthcare practices and for future research (Holleman, Eliens, Van Vliet, & Van Achterberg, 2006; Shaw et al., 2012). Specific recommendations include: (1) disseminate clear nursing practice guidelines with evidence-based recommendations for patients that promote alcohol abstinence during pregnancy; (2) encourage national nursing organizations to develop position statements or endorse existing statements regarding prevention of AEPs as appropriate to their practice area (e.g., national nursing organizations related to psychiatric nursing could sign on to the existing APNA statement); (3) encourage adoption of evidence-based practices with customization of materials so that they are appropriate for identified target populations and nursing settings; (4) provide training and practice-based implementation approaches to develop brief intervention skills among nurses; and (5) develop and encourage distribution of fact sheets and patient education materials pertaining to alcohol use and health, reducing risks for AEPs, and information on FASDs that nurses can use with their patients in numerous, diverse settings.

Discussion

The purpose of this project was to document the current environment relevant to nursing professionals' knowledge, skills, attitudes, and acceptance of their role in preventing at-risk alcohol use, AEPs, and FASDs. Findings from the environmental scan suggest that nursing practice guidelines, education, and adoption of evidence-based practices, such as alcohol SBI/SBIRT and/or CHOICES are opportunities for increased focus. Since conducting the environmental scan, the Nursing Workgroup has begun taking strategic steps to facilitate the above recommendations derived from the environmental scan by partnering with national nursing organizations, local nursing coalitions, and universities to reach nursing professionals and students, develop a champion's network, and address the identified gaps. One example outcome from this work was the recent publication of two position statements on Prevention of Alcohol-Exposed Pregnancies, one issued by the National Association of Nurse Practitioners in Women's Health (NPWH, 2016) and another by the American College of Nurse-Midwives (ACNM, 2017). These professional nursing organizations plan to offer additional resources and trainings to their members. We believe that collaborations with the nursing profession to increase knowledge and skills, and changes within healthcare systems to adopt evidence-based interventions, such as alcohol SBI/SBIRT, is a path towards sustainable practice change (Platt et al., 2016).

Declaration of interest

The authors have no conflicts of interest to disclose.

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References

- Adams, S. (2014). *Fetal alcohol spectrum disorders: An opportunity for health promotion and disease prevention*. Nashville, TN: Vanderbilt University School of Nursing.
- American College of Nurse-Midwives (ACNM). (2015). Alcohol and pregnancy: Tips on why and how to stop drinking alcohol. Retrieved from <http://www.midwife.org/Alcohol-and-Pregnancy>
- American College of Nurse-Midwives (ACNM). (2017). Screening and brief intervention to prevent alcohol-exposed pregnancy. Retrieved from http://www.midwife.org/ACNM/files/ACNMLibraryData/UPLOAD_FILENAME/000000000309/ScreeningBriefInterventionPreventAlcoholExposedPregnancyMay2017.pdf
- American Nurses Association Center for Ethnic and Human Rights (ANA). (2011). *Non-punitive alcohol and drug treatment for pregnant and breast-feeding women and their exposed children*. Silver Spring, MD: American Nurses Association.
- American Psychiatric Nurses Association (APNA). (2012). *The adoption of SBIRT in the psychiatric-mental health nursing practice*. Falls Church, VA: American Psychiatric Nurses Association.
- Association of Women's Health Obstetrics Neonatal Nurses (AWHONN). (2014). Fetal alcohol spectrum disorder. *Education and Resources*. Retrieved from www.awhonn.org/page/FASD.
- Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN). (2015). Criminalization of pregnant women with substance use disorders. *Journal of Obstetric, Gynecologic, & Neonatal Nursing*, 44(1), 155–157. doi:10.1111/1552-6909.12531
- Baird, C. (2012). Screening, brief intervention, and referral to treatment: Nurses do it best. *Journal of Addictions Nursing*, 23(4), 276–278. doi:10.1097/JAN.0b013e3182799ba7
- Bratherton, C. (2014). Alcohol in pregnancy: A new approach for identifying women at risk of increased alcohol consumption. *Essential MIDIRS*, 5(8), 35–38.
- Braxter, B. J., Puskar, K., Mitchell, A. M., Hagle, H., Gotham, H., & Terry, M. A. (2014). Nursing students' experiences with screening, brief intervention, and referral to treatment for substance use in the clinical/hospital setting. *Journal of Addictions Nursing*, 25(3), 122–129. doi:10.1097/JAN.0000000000000037
- Broyles, L. M., & Gordon, A. J. (2010). SBIRT implementation: Moving beyond the interdisciplinary rhetoric. *Substance Abuse*, 31(4), 221–223. doi:10.1080/08897077.2010.514238
- Broyles, L. M., Gordon, A. J., Rodriguez, K. L., Hanusa, B. H., Kengor, C., & Kraemer, K. L. (2013). Evaluation of a pilot training program in alcohol screening, brief intervention, and referral to treatment for nurses in inpatient settings. *Journal of Addictions Nursing*, 24(1), 8–19. doi:10.1097/JAN.0b013e31828767ef
- Broyles, L. M., Kraemer, K. L., Kengor, C., & Gordon, A. J. (2013). A tailored curriculum of alcohol screening, brief intervention, and referral to treatment (SBIRT) for nurses in inpatient settings. *Journal of Addictions Nursing*, 24(3), 130–141. doi:10.1097/JAN.0b013e3182a4cb0b
- Broyles, L. M., Rosenberger, E., Hanusa, B. H., Kraemer, K. L., & Gordon, A. J. (2012). Hospitalized patients' acceptability of nurse-delivered screening, brief intervention, and referral to treatment. *Alcoholism: Clinical and Experimental Research*, 36(4), 725–731. doi:10.1111/j.1530-0277.2011.01651.x
- Burns, H. K., Puskar, K., Flaherty, M. T., Mitchell, A. M., Hagle, H., Braxter, B., & Woome, G. R. (2012). Addiction training for undergraduate nurses using screening, brief intervention, and referral to treatment. *Journal of Nursing Education and Practice*, 2(4), 167–177. doi:10.5430/jnep.v2n4p167
- Carson, G., Cox, L. V., Crane, J., Croteau, P., Graves, L., Kluka, S., & Wood, R. (2010). Alcohol use and pregnancy consensus clinical guidelines. *Journal of Obstetrics and Gynaecology Canada*, 32(8), S1–31. doi:10.1016/S1701-2163(16)34633-3
- Centers for Disease Control and Prevention (CDC). (2015). Data & statistics. Retrieved from <https://www.cdc.gov/ncbddd/fasd/data.html>
- Centers for Disease Control and Prevention (CDC). (2016). Alcohol use in pregnancy. Retrieved from <http://www.cdc.gov/ncbddd/fasd/alcohol-use.html>
- Centers for Disease Control and Prevention (CDC). (2017). The FASD competency-based curriculum development guide for medical and allied health education and practice. Retrieved from <https://www.cdc.gov/ncbddd/fasd/curriculum/index.html>
- Cheripitel, C. J., Korcha, R. A., Moskalewicz, J., Swiatkiewicz, G., Ye, Y., & Bond, J. (2010). Screening, brief intervention, and referral to treatment (SBIRT): 12-month outcomes of a randomized controlled clinical trial in a Polish emergency department. *Alcoholism: Clinical and Experimental Research*, 34(11), 1922–1928. doi:10.1111/j.1530-0277.2010.01281.x
- Chun, T. H., Spirito, A., Rakowski, W., D'Onofrio, G., & Woolard, R. H. (2011). Beliefs and practices of pediatric emergency physicians and nurses regarding counseling alcohol-using adolescents: Can counseling practice be predicted? *Pediatric Emergency Care*, 27(9), 812–825. doi:10.1097/PEC.0b013e31822c1343
- Clarivate Analytics: EndNote X7. (2016). The research medical library at MD anderson cancer center pickens academic tower, 1400 Pressler St. Houston, TX 77030. Clarivate Analytics (US) LLC: EndNote X7. (2016). PA, United States. Retrieved from <https://www.bloomberg.com/profiles/companies/1513925D:US-clarivate-analytics-us-llc>
- Clossick, E., & Woodward, S. (2014). Effectiveness of alcohol brief interventions in general practice. *British Journal of Nursing*, 23(11), 574–580. doi:10.12968/bjon.2014.23.11.574
- Emergency Nurses Association (ENA). (2009). Alcohol screening, brief interventions, and referral to treatment. Emergency Nurses Association. Retrieved from www.ena.org/SiteCollectionDocuments/Position%20Statements/Archived/Alcohol_Screening_and_Brief_Intervention_-_ENA_PS.pdf
- Emergency Nurses Association (ENA). (2014). Alcohol screening, brief intervention and referral to treatment: Nurse-led SBIRT practice with emergency department patients. Retrieved from www.ena.org/practice-research/Practice/Safety/Injury%20Prevention/SBIRT/toolkit/www/sbirt-nurses4/story.html
- Finer, L. B., & Zolna, M. R. (2016). Declines in unintended pregnancy in the United States, 2008–2011. *New England Journal of Medicine*, 374, 843–852. doi:10.1056/NEJMsa1506575
- Finnell, D. S. (2012). A clarion call for nurse-led SBIRT across the continuum of care. *Alcoholism: Clinical and Experimental Research*, 36(7), 1134–1138. doi:10.1111/j.1530-0277.2012.01870.x
- Fleisher, S. (2011). Alcohol and pregnancy: Advising women not to take risks. *British Journal of Midwifery*, 19(6), 396–397. doi:10.12968/bjom.2011.19.6.396
- Gallup. (2016). Honesty/ethics in professions. Retrieved from <http://www.gallup.com/poll/1654/honesty-ethics-professions.aspx>
- Gill, J. S., & O'May, F. P. (2011). Is it my job? Alcohol brief interventions: Knowledge and attitudes among future health-care professionals in Scotland. *Alcohol and Alcoholism*, 46(4), 441–450. doi:10.1093/alcalc/agr049
- Gillen, P., Stevens, R., Bird, B., & Langland, K. (2013). *CHOICES: A program for women about choosing health behaviors to avoid alcohol-exposed pregnancies*. Denver, CO: Colorado Department of Public Health and Environment and Denver Metro Clinic.
- Gorman, J. R., Clapp, J. D., Calac, D., Kolander, C., Nyquist, C., & Chambers, C. D. (2013). Creating a culturally appropriate web-based behavioral intervention for American Indian/Alaska Native women in Southern California: The healthy women healthy native nation study.

- American Indian and Alaska Native Mental Health Research*, 20(1), 1–15. doi:10.5820/aian.2001.2013.1
- Green, P. P., McKnight-Eily, L. R., Tan, C. H., Mejia, R., & Denny, C. H. (2016). Vital Signs: Alcohol-exposed pregnancies—United States, 2011–2013. *MMWR Morbidity and Mortality Weekly Report*, 65, 91–97. doi:10.15585/mmwr.mm6504a6
- Groves, P., Pick, S., Davis, P., Cloudeley, R., Cooke, R., Forsythe, M., & Pilling, S. (2010). Routine alcohol screening and brief interventions in general hospital inpatients wards: Acceptability and barriers. *Drugs: Education, Prevention, and Policy*, 17(1), 55–71.
- Hagle, H., Mitchell, A. M., Lindsay, D., & Talcott, K. (2014). SBIRT the nitty gritty: Implementing SBIRT in multiple nursing settings. Retrieved from my.ireta.org/12_17_14webinar
- Holleman, G., Eliens, A., Van Vliet, M., & Van Achterberg, T. (2006). Promotion of evidence-based practice by professional nursing associations: Literature review. *Journal of Advanced Nursing*, 53(6), 702–709. doi:10.1111/j.1365-2648.2006.03776.x
- Johnson, M., Jackson, R., Guillaume, L., Meier, P., & Goyder, E. (2011). Barriers and facilitators to implementing screening and brief intervention for alcohol misuse: A systematic review of qualitative evidence. *Journal of Public Health*, 33(3), 412–421. doi:10.1093/pubmed/fdq095
- Johnson, M. E., Robinson, R. V., Corey, S., Dewane, S. L., Brems, C., & Casto, D. (2010). Knowledge, attitudes, and behaviors of health, education, and services professionals as related to fetal alcohol spectrum disorders. *International Journal of Public Health*, 55(6), 627–635. doi:10.1007/s00038-010-0186-8
- Jones, S. C., Telenta, J., Shorten, A., & Johnson, K. (2011). Midwives and pregnant women talk about alcohol: What advice do we give and what do they receive? *Midwifery*, 27(4), 489–496. doi:10.1016/j.midw.2010.03.009
- Kane, I., Mitchell, A. M., Puskar, K. R., Hagle, H., Talcott, K., Fioravanti, M., & Lindsay, D. (2014). Identifying at-risk individuals for drug and alcohol dependence. *Nurse Educator*, 39(3), 126–134. doi:10.1097/NNE.0000000000000035
- Kaner, E., Lock, C., Heather, N., McNamee, P., & Bond, S. (2003). Promoting brief alcohol intervention by nurses in primary care: A cluster randomised controlled trial. *Patient Education and Counseling*, 51(3), 277–284. doi:10.1016/S0738-3991(02)00242-2
- Kemppainen, V., Tossavainen, K., & Turunen, H. (2012). Nurses' roles in health promotion practice: An integrative review. *Health Promotion International*, 28(4), 490–501. doi:10.1093/heapro/das034
- Kesmodel, U. S., & Kesmodel, P. S. (2011). Alcohol in pregnancy: Attitudes, knowledge, and information practice among midwives in Denmark 2000 to 2009. *Alcoholism: Clinical and Experimental Research*, 35(12), 2226–2230. doi:10.1111/j.1530-0277.2011.01572.x
- Kingdon, D., Cardoso, C., & McGrath, J. J. (2016). Research review: Executive function deficits in fetal alcohol spectrum disorders and attention-deficit/hyperactivity disorder – a meta-analysis. *Journal of Child Psychology and Psychiatry*, 57(2), 116–131. doi:10.1111/jcpp.12451
- Klimas, J., Lally, K., Murphy, L., Crowley, L., Anderson, R., Meagher, D., & Cullen, W. (2014). Development and process evaluation of an educational intervention to support primary care of problem alcohol among drug users. *Drugs and Alcohol Today*, 14(2), 76–80. doi:10.1108/DAT-11-2013-0049
- Knopf, A. (2012). 80 percent of hospitalized patients accept nurse-delivered SBIRT. *Alcoholism and Drug Abuse Weekly*, 24, 7–8.
- Krans, E. E., Moloci, N. M., Housey, M. T., & Davis, M. M. (2014). Impact of psychosocial risk factors on prenatal care delivery: A national provider survey. *Maternal and Child Health Journal*, 18(10), 2362–2370. doi:10.1007/s10995-014-1476-1
- Li, Q., Hankin, J., Wilsnack, S. C., Abel, E. L., Kirby, R. S., Keith, L. G., & Obican, S. G. (2012). Detection of alcohol use in the second trimester among low-income pregnant women in the prenatal care settings in Jefferson County, Alabama. *Alcoholism: Clinical and Experimental Research*, 36(8), 1449–1455. doi:10.1111/j.1530-0277.2012.01745.x
- Lock, C. A., & Kaner, E. F. (2004). Implementation of brief alcohol interventions by nurses in primary care: Do non-clinical factors influence practice? *Family Practice*, 21(3), 270–275. doi:10.1093/fampra/cmh310
- Lock, C. A., Kaner, E., Heather, N., Doughty, J., Crawshaw, A., McNamee, P., & Pearson, P. (2006). Effectiveness of nurse-led brief alcohol intervention: A cluster randomized controlled trial. *Journal of Advanced Nursing*, 54(4), 426–439. doi:10.1111/j.1365-2648.2006.03836.x
- May, P. A., Baete, A., Russo, J., Elliott, A. J., Blankenship, J., Kalberg, W. O., & Hoyme, H. E. (2014). Prevalence and characteristics of fetal alcohol spectrum disorders. *Pediatrics*, 134(5), 855–866. doi:10.1542/peds.2013-3319
- Mertens, J. R., Ward, C. L., Bresick, G. F., Broder, T., & Weisner, C. M. (2014). Effectiveness of nurse-practitioner-delivered brief motivational intervention for young adult alcohol and drug use in primary care in South Africa: A randomized clinical trial. *Alcohol & Alcoholism*, 49(4), 430–438. doi:10.1093/alcal/agu030
- Microsoft Excel. (2010). Microsoft Corporation, 30 Isabella Street Alcoa Business Services Ctr, Pittsburgh, PA 15212. Retrieved from [https://www.bing.com/search?q=Microsoft+Excel.++\(2010\).+Microsoft+Corporation,+30+Isabella+Street+Alcoa+Business+Services+Ctr,+Pittsburgh,+PA+15212&FORM=EDGNDT&ref=62fb6c9911204e778835dd20610b986a](https://www.bing.com/search?q=Microsoft+Excel.++(2010).+Microsoft+Corporation,+30+Isabella+Street+Alcoa+Business+Services+Ctr,+Pittsburgh,+PA+15212&FORM=EDGNDT&ref=62fb6c9911204e778835dd20610b986a)
- MIDIRS. (2011). Update on: Alcohol and pregnancy. *Essentially MIDIRS*, 2, 38–43.
- Miller, C., Lanham, A., Welsh, C., Ramanadhan, S., & Terplan, M. (2014). Screening, testing, and reporting for drug and alcohol use on labor and delivery: A survey of Maryland birthing hospitals. *Social Work in Health Care*, 5(73), 659–669. doi:10.1080/00981389.2014.916375
- Mitchell, A. M., Puskar, K., Hagle, H., Gotham, H. J., Talcott, K. S., Terhorst, L., & Burns, H. K. (2013). Screening, brief intervention, and referral to treatment: Overview of and student satisfaction with an undergraduate addiction training program for nurses. *Journal of Psychosocial Nursing and Mental Health Services*, 51(10), 29–37. doi:10.3928/02793695-20130628-01
- National Association of Nurse Practitioners in Women's Health (NPWH). (2016). NPWH Position Statement: Prevention of alcohol-exposed pregnancies. *Women's Healthcare*, 4(4), 16–18.
- National Institute on Alcohol Abuse and Alcoholism (NIAAA). (2015). Fetal alcohol exposure. Retrieved from <https://www.niaaa.nih.gov/alcohol-health/fetal-alcohol-exposure>
- Obot, I. (2003). *Management of substance use dependence: Screening and brief intervention*. Geneva, Switzerland: World Health Organization.
- O'Brien, P. L. (2014). Performance measurement: A proposal to increase use of SBIRT and decrease alcohol consumption during pregnancy. *Maternal and Child Health Journal*, 18(1), 1–9. doi:10.1007/s10995-013-1257-2
- O'Brien, A., Leonard, L., & Deering, D. (2012). Could an advance practice nurse improve detection of alcohol misuse in the emergency department? *International Journal of Mental Health Nursing*, 21(4), 340–348. doi:10.1111/j.1447-0349.2011.00797.x
- O'Mallory, M. (2010). Mixing alcohol and pregnancy. *Midwives*, April–May 14–15
- Payne, J. M., France, K., Henley, N., D'Antoine, H., Bartu, A., O'Leary, C., & Bower, C. (2011). Changes in health professionals' knowledge, attitudes and practice following provision of educational resources about prevention of prenatal alcohol exposure and fetal alcohol spectrum disorder. *Paediatric & Perinatal Epidemiology*, 25(4), 316–327. doi:10.1111/j.1365-3016.2011.01197.x
- Payne, J. M., Watkins, R. E., Jones, H. M., Reibel, T., Mutch, R., Wilkins, A., & Bower, C. (2014). Midwives' knowledge, attitudes and practice about alcohol exposure and the risk of fetal alcohol spectrum disorder. *BMC Pregnancy and Childbirth*, 14, 377. doi:10.1186/s12884-014-0377-z
- Platt, L., Melendez-Torres, G. J., O'Donnell, A., Bradley, J., Newbury-Birch, D., Kaner, E., & Ashton, C. (2016). How effective are brief interventions in reducing alcohol consumption: Do the setting, practitioner group and content matter? Findings from a systematic review and meta-regression analysis. *BMJ Open*, 6(8), e011473. doi:10.1136/bmjopen-2016-011473
- Puskar, K., Gotham, H. J., Terhorst, L., Hagle, H., Mitchell, A. M., Braxter, B., & Burns, H. K. (2013). Effects of screening, brief intervention, and referral to treatment (SBIRT) education and training on nursing students' attitudes toward working with patients

- who use alcohol and drugs. *Substance Abuse*, 34(2), 122–128. doi:10.1080/08897077.2012.715621
- Ring, N., Malcom, C., Coull, A., Murphy-Black, T., & Watterson, A. (2005). Nursing best practice statements: An exploration of their implementation in clinical practice. *Journal of Clinical Nursing*, 14(9), 1048–1058. doi:10.1111/j.1365-2702.2005.01225.x
- Satre, D. D., McCance-Katz, E. F., Moreno-John, G., Julian, K. A., O'Sullivan, P. S., & Satterfield, J. M. (2012). Using needs assessment to develop curricula for screening, brief intervention, and referral to treatment (SBIRT) in academic and community health settings. *Substance Abuse*, 33(3), 298–302. doi:10.1080/08897077.2011.640100
- Sciarra, E. (2012). The importance of practice guidelines in clinical care. *Dimensions of Critical Care Nursing*, 31(2), 84–85. doi:10.1097/DCC.0b013e3182445f62
- Shaw, E. K., Howard, J., West, D. R., Crabtree, B. F., Nease, D. E., Tutt, B., & Nutting, P. A. (2012). The role of the champion in primary care change efforts. *Journal of the American Board of Family Medicine*, 25(25), 676–685. doi:10.3122/jabfm.2012.05.110281
- Skagerstrom, J., Johansson, A. L., Holmqvist, M., Envall, E. K., & Nilsson, P. (2012). Towards improved alcohol prevention in Swedish antenatal care? *Midwifery*, 28(3), 314–320. doi:10.1016/j.midw.2011.04.008
- Slade, T., Chapman, C., Swift, W., Keyes, K., Tonks, Z., & Teesson, M. (2016). Birth cohort trends in the global epidemiology of alcohol use and alcohol-related harms in men and women: Systematic review and meta-regression. *BMJ Open*, 6(10). doi:10.1136/bmjopen-2016-011827
- Slain, T., Rickard-Aasen, S., Pringle, J. L., Hegde, G. G., Shang, J., John-Julio, W., & Venkat, A. (2014). Incorporating screening, brief intervention, and referral to treatment into emergency nursing workflow using an existing computerized physician order entry/clinical decision support system. *Journal of Emergency Nursing*, 40(6), 568–574. doi:10.1016/j.jen.2013.10.007
- Strobbe, S., & Broyles, L. M. (2012). *Joint position statement: Expanded roles and responsibilities for nurses in screening, brief intervention, and referral to treatment (SBIRT) for alcohol use*. Des Plaines, IL: Emergency Nurses Association.
- Strobbe, S., & Broyles, L. M. (2013). *Joint position statement: Expanded roles and responsibilities for nurses in screening brief intervention, and referral to treatment (SBIRT) for alcohol use*. Birmingham, AL: International Nurses Society on Addictions.
- Substance Abuse and Mental Health Services Administration (SAMHSA). (2013). *Screening, brief intervention, and referral to treatment training programs: Implementation guide*. Rockville, MD: SAMHSA.
- Tanner, T. B., Wilhelm, S. E., Rossie, K. M., & Metcalf, M. P. (2012). Web-based SBIRT skills training for health professional students and primary care providers. *Substance Abuse*, 33(3), 316–320. doi:10.1080/08897077.2011.640151
- University of Pittsburgh School of Nursing. (2014). *Substance use education for nurses*. Pittsburgh, PA: University of Pittsburgh School of Nursing. Retrieved from www.nursing.pitt.edu/sites/default/files/Review_refresher_Handout.pdf
- U.S. Department of Health and Human Services (USDHHS) and U.S. Department of Agriculture (USDA). (2015). *2015 – 2020 Dietary Guidelines for Americans*. 8th Edition, Washington, DC.
- U.S. Preventive Services Task Force (USPSTF). (2013). Alcohol misuse: Screening and behavioral counseling interventions in primary care. Retrieved from www.uspreventiveservicestaskforce.org/Page/Topic/recommendation-summary/alcohol-misuse-screening-and-behavioral-counseling-interventions-in-primary-care
- Velasquez, M. M., Ingersoll, K. S., Sobell, M. B., Floyd, R. L., Sobell, L. C., & von Sternberg, K. (2010). A dual-focus motivational intervention to reduce the risk of alcohol-exposed pregnancy. *Cognitive and Behavioral Practice*, 17(2), 203–212. doi:10.1016/j.cbpra.2009.02.004
- Wilton, G. (2014). *Booshke Giin – “It's your choice.”* Red Cliff, WI: Red Cliff Community Health Center.