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## Evaluation of a Training to Reduce Provider Bias Toward Pregnant Patients With Substance Abuse

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### Abstract

The objective of this article is not to present a scientific or systematic study, but to provide an initial framework for designing a training workshop to enhance health practitioners' (nurses, social workers, physicians, etc.) knowledge regarding substance abuse treatment and to decrease their bias toward substance-abusing women, particularly pregnant women in rural communities. We incorporated the 4 Transdisciplinary Foundations from the Substance Abuse and Mental Health Services Administration Competencies Model, with specific competencies targeted that related to provider bias. After the conference, 52 of the 70 participants completed a questionnaire to self-assess knowledge level and confidence in skill related to substance abuse management. Participant mean scores were statistically significantly higher following the conference than 1 week prior ( $p < .001$ ) in the area of "gender difference with substance abuse," moving from an average of 2.6 to 4.5 on a 5-point Likert scale. Our conference was successful in increasing attendees' knowledge about gender difference and substance abuse among pregnant patients.

### Keywords

gender difference; health practitioners; pregnancy; provider attitudes; rural health care; substance abuse; training

Care for pregnant patients with drug and alcohol use can be negatively impacted by provider bias. Previous work in addiction has noted that providers and the public tend to view substance abuse in pregnant women more harshly than in others (Corse, McHugh, & Gordon, 1995; Ginsberg, Raffeld, Alanis, & Boyce, 2006). Lefebvre et al. (2010) found that a “nonjudgmental attitude” and lack of stigmatization were important for patients to return and keep follow-up appointments for prenatal care. Hence, compliance with prenatal care among pregnant patients dealing with substance abuse depends greatly on how they perceive their health care providers see them as patients. Addicted mothers who experience a negative relationship with their providers often feel distrust, which can lead to these patients being unreceptive to the needed health care (Hill, 2013). In a study on nurses’ attitudes toward substance-abusing mothers, regardless of knowledge base and experience of the nurses, 76% felt anger toward the mother (Raeside, 2003). Others have advocated that provider bias must be addressed in any training program including the unique aspects of care of substance-abusing pregnant patients (Howell & Chasnoff, 1999). Corse et al. (1995) found significant bias among health care providers toward addicted mothers in a midwife model clinic and that education of staff on addictions and substance abuse among women, particularly pregnant women, decrease provider frustration and improved care. Karoll (2002) discussed the need for practitioners to accept their negative beliefs toward women using alcohol so that they can increase their self-awareness and for workers and agencies to stop perpetuating the stigma to which these women are subjected.

Studies have indicated that pregnant patients from rural areas have higher rates of drug dependence compared to their urban counterparts (Shannon, Havens, & Hays, 2010). Charleston Area Medical Center (CAMC), West Virginia's only free-standing Women and Children's Hospital, serves both urban and rural communities with 23.3% of obstetrical patients from rural counties. CAMC has a multidisciplinary task force, the Drug Affected Mothers and Babies (DAMB), which focuses on substance abuse in pregnancy. Members include nursing personnel from the in-patient obstetrical and neonatal intensive care unit (NICU) areas and the outpatient clinical areas, a substance abuse counselor, physicians, a nursing educator, and a research associate. The director of a local halfway house for women recovering from substance abuse is also included on the task force for community representation. The DAMB task force knew CAMC was providing care to around 130 babies born annually with positive substance screens (4% deliveries) when we universally screened mothers during prenatal care at our hospital clinic via urine testing. Substance screening was done in labor and delivery based on maternal risk factors such as placental abruption, vaginal bleeding, limited prenatal care, or preterm labor and in response to positive maternal screening questions for substances at the time of presentation to labor and delivery. However, this group obtained new information from a cross-sectional study with eight West Virginia hospitals that examined the prevalence of substance use in pregnant patients at delivery in West Virginia (Stitely, Calhoun, Maxwell, Nerhood, & Chaffin, 2010). Umbilical cord tissue samples were used because they are readily available and remain positive for illicit substances throughout gestation and delivery (Montgomery et al., 2006). CAMC's overall positive screening rate was a startling 16% for drugs and 8% for alcohol out of the total of 133 patients screened by cord analysis. These findings were four

times higher than our rate of 4% rate based on maternal risk factors alone. In addition, results from the study indicated that multiple drug use was common.

After significant discussion with the providers involved in care of pregnant patients with substance abuse, the DAMB task force realized the necessity to address provider bias in the context of the 16% incidence of substance abuse and 8% incidence of alcohol abuse. However, we found no studies that specifically addressed the issue of provider bias in rural pregnant patients. Conversations among nurses in the NICU, obstetric and gynecology residents, nurses in the obstetric and gynecology clinics, and nurses in labor and delivery revealed they experienced frustration and anger at the pregnant patients at their use of substances and the grave effects on the babies.

The DAMB task force believed that provider bias against pregnant women was affecting our ability to engage and offer treatment to pregnant women with substance abuse. The objective of this article is to summarize our conference intervention that addresses provider bias and to evaluate whether we improved attitudes and increased knowledge about substance abuse of health care providers working with substance-abusing pregnant patients. Although previous studies have addressed the issue of provider bias in working with substance-abusing pregnant patients, we hope this article will provide the beginning framework for designing a training workshop to enhance health practitioners' knowledge about substance abuse treatment and to decrease practitioners' bias toward substance-abusing women, particularly pregnant women in rural communities.

## MATERIAL AND METHODS

To educate and better prepare health care providers to care for pregnant patients dealing with substance abuse, the DAMB task force developed and held a conference entitled "Identifying and Intervening Effectively with Patients Who Are Using Drugs and Alcohol: A Multidisciplinary Conference for Healthcare Providers" in March 2010. The design of this conference was based on the Competencies Model developed by the National Addiction Technology Transfer Center (ATTC) Curriculum Committee consisting of four transdisciplinary foundations or discrete building blocks: (a) understanding addiction, (b) treatment knowledge, (c) application to practice, and (d) professional readiness (Addiction Counseling Competencies, 2011). This model was chosen as a workshop format because participants were from several different disciplines (social work, nursing, etc.), not necessarily specializing in addiction counseling.

The Competencies Model includes 23 distinct competencies. A few of these were addressed in the workshop as they relate to provider bias. To lay the foundation of Understanding Addiction, our addiction counselor provided education on the disease concept of addiction and differences in how men and women cope with and get help with this disease, highlighting the fact that women become addicted more quickly than men, are less likely to seek treatment, and are judged more harshly. One of the competencies included was to help participants recognize that addiction and substance abuse is experienced by women in a social, political, economic, and cultural context. A panel of women who had abused drugs during pregnancy but were presently drug free shared their personal struggles with addiction

and often how poorly providers treated them when they found out they were addicted to substances.

For the second foundation, Treatment Knowledge, our fetal-medicine specialist described current strategies and scientifically supported models of treatment including pharmacological interventions. He also explained contingency management care and shared present addictions care programs including our program's attempts with an abstinence approach and outcome data. Data from several areas of West Virginia including rural areas were compared. The goal of this session was to help participants understand their importance to improving the delivery of addiction treatment and that all kinds of data—epidemiological, etiological, and those addressing treatment efficacy—were important in better understanding addiction treatment in general, and that of the local context specifically.

For the third foundation, Application to Practice, we addressed the competency to provide treatment services appropriate to the personal and cultural identity and to the language of the client. There was an emphasis on developing a rapport with the patient that was based on a nonjudgmental and respectful view of the individual and on the importance of nonverbal communication. This was accomplished through a typical scenario of the clinician's role playing both the health care providers and the patients. We presented one that had a negative experience for the patient because it reflected the clinician's negative judgment and frustration with a pregnant patient's abuse of a substance and how it could harm the baby. The second scenario demonstrated how a nonjudgmental approach and sensitivity toward the same patient resulted in trust that led to a more positive experience for both the patient and the provider and a better treatment outcome.

The fourth foundation, Professional Readiness, was addressed with our addictions counselor-led session, "Finding Compassion in Your Frustration" in a PowerPoint format with a question-and-answer session. The goal of this session was to help providers identify their personal and professional strengths and limitations and how cultural, ethnic, and gender bias could negatively impact the care they provide to women struggling with addiction. This included a distinction between the professional and personal attitude health care providers can have with patients, including how a positive or negative judgment can lead a health care provider to think of the patient's "deservingness" of medical care and the importance of having compassion with and respect for patients. This session also included training on the gender differences in and gender bias in substance abuse treatment (Unger, Jung, Winklbauer, & Fischer, 2010). Special emphasis was placed on applying these lessons to pregnant patients in a rural setting and how to deal with provider bias.

At the end of the conference, we evaluated change in participant skills and knowledge through retrospective pretesting. With retrospective pretesting, pretest questions are asked in the same instrument after the posttest question (Campbell & Stanley, 1963). This testing accomplishes what is traditionally done in a normal pretest and posttest environment but does it contemporaneously. We chose this method because of its ease in implementation in surveying conference participants and to avoid response shift bias (Howard, 1980). In addition, the traditional pretest can be less effective if participants do not understand the concepts in the survey questions.

In our survey questionnaire, conference participants were asked to rate their knowledge level and confidence in skill related to specific topics in substance abuse management immediately after the conference's completion and, then to think back 1 week prior to the program and rate their knowledge and skills on these same topics. A 5-point Likert scale was used with 1 (*low*) and 5 (*high*) as anchors. Self-reported change in participant skills and knowledge was evaluated comparing the mean scores of the postconference and retrospective pretest using paired samples *t* tests. To compensate for the multiple comparisons, a Bonferroni correction was used with an alpha level of .05 divided by the number of tests conducted (10). It was determined that .005 would be significant. In addition, all participants were administered a separate questionnaire evaluating the conference. We reviewed all written comments participants provided on the overall program evaluation form (separate from our survey questionnaire) for any patterns or themes. Our analysis focused on two questions: (a) How would attending this conference affect your current practice? (b) What will you do differently in your practice as a result of your attendance in this program?

## RESULTS

The conference consisted of 70 participants. Most of the attendees were from Charleston and the surrounding areas, but 36% were from rural or very rural areas, more than 20 miles outside the Charleston metropolitan area. Conference participants consisted of nurses (76.4%), social workers (10.9%), clinical psychologists (5.5%), physicians (3.6%), other health care professionals (1.8%), and others who had an interest (1.8%). Following the conference, 52 of 70 (74%) participants completed a questionnaire to self-assess their knowledge and skills in substance abuse management. Although the mean posttest responses were higher than the pretest responses, several were not significant. There was a statistically significant difference ( $p < .001$ ) between the pretest and posttest mean scores on knowledge about “gender differences with substance abuse” with a mean score change from 2.6 to 4.5 (see Table 1).

The evaluation questionnaire asked about the impact the conference might have had on the participants' current practice and what they might do differently. Participant responses centered chiefly on the theme of having more compassion with their pregnant patients who suffer from substance abuse. A summary of the key concepts expressed that centered on improved compassion in substance abuse included:

- “Increase my compassion.”
- “I have so much more compassion and understanding for substance users now.”
- “Make me more compassionate toward everyone regardless of their illness.”
- “More sensitivity/compassion to complexity of addiction.”
- “I will definitely have more compassion for addicts.”
- “More compassion in my care.”

## DISCUSSION

We think this article has provided the beginning framework for designing a training workshop to enhance health practitioners' knowledge about substance abuse treatment and to decrease practitioners' bias toward substance-abusing women, particularly pregnant women. We think this workshop design could also be applied to rural areas. Access to addiction counseling might be more challenging for women living in rural areas, not only for addiction counseling, but for mental health services as well. In addition studies have indicated that pregnant patients from rural areas have higher rates of drug dependence compared to their urban counterparts. A recent study by Shannon et al. (2010) with 114 pregnant patients entering care for inpatient detoxification for opiate dependence revealed that rural women had higher rates of illicit opiate use (nonprescription), illicit sedative or benzodiazepine use, and injection drug use in the 30 days prior to admission for detoxification when compared to their urban counterparts admitted for opiate dependence. Shannon et al. found in their study that it was critically important to understand the "context of demographic, geographic, social and economic conditions of the region" (Appalachia/Kentucky) to treat substance abuse effectively. An earlier study by Heil, Sigmon, Jones, and Wagner (2008) found that rural opioid-using women had better drug treatment outcomes, including less severe drug use and greater employment.

The results of our DAMB conference retrospective pretest questionnaire support the belief that provider knowledge of substance abuse in pregnancy has the potential to directly affect delivery of care to this very difficult patient population. New data alerted our system to a much larger problem than previously suspected (Stitely et al., 2010). With high rates of positive substance screening in our patient population we must learn to care for them in a compassionate and more creative way. We have a responsibility to continue to offer education and resources for health care providers in rural settings to enhance their understanding of substance abuse and improve the opportunities for greater positive outcomes for these patients and their babies. The potential long-term impact to our community of even one woman obtaining sobriety or being abstinent through her pregnancy and subsequent delivery is immeasurable.

A theme from conference respondents was their increased compassion for women using drugs while pregnant. Because this conference was focused on pregnant patients, the focus was on women's addiction and how women going through addiction have it much harder than men as they seek treatment at lower rates and are judged more harshly not only by society, but by their health care providers. The addiction counselor's session on "Finding Compassion in Your Frustration" went to the core issue of the unfair practice of harsher judgment of women using drugs and how this alienates the patient from the provider, often resulting in poorer quality of care. The scenario in which the health care provider was respectful and compassionate toward the pregnant patient using drugs resulted in better rapport between patient and provider.

Studies show that patients have improved outcomes when compassionate care is provided. Lown (1996), in *The Lost Art of Healing*, found that when providers are compassionate, they obtain earlier and more accurate information to provide a diagnosis because patients are



better able to provide information when they are relaxed and feel that they are in a safe environment. A review by Stewart (1995) of 21 studies found that physicians' compassion increased the patients' physical functioning, improved emotional health, and decreased physical symptoms of pain. These findings point to the critical nature of compassion when dealing with the vulnerable pregnant substance abuse patient.

### Study Limitations

There are limitations to the study that need to be addressed. Because it was based on self-reported responses to survey questions, misunderstanding of questions and self-evaluation of one's skills or attitude can contribute to possible inaccuracies in these findings due to threats of validity. The possibility of the "Hawthorne effect" (Landsberger, 1958) might also explain the changes in the attendees' self-assessment because survey respondents might state improved attitude and skill sets simply in response to the fact that they know they are being observed. In addition, there is the possibility of a "good subject effect" (Orne, 1962) if the respondents try to answer in a way that they think pleases the conference organizers. Finally, participants might suffer from simple recall bias and their responses might not truly reflect their knowledge prior to the conference simply due to inability to recall information.

We hope we mitigated some potential bias by making the retrospective pretesting instrument anonymous, and keeping the program evaluation form, which had written prose, separated. In addition, evaluating the effect of the training is limited as we did not measure actual change in behavior. Finally, among the five areas of knowledge, only one area (gender difference with addiction) had a significant difference between its pre- and posttest mean. More research would be needed to ascertain whether one would need to provide only the area of "gender difference with addiction" alone to future participants or if one would need to provide the other areas of the workshop for improvement in the area of "gender difference with addiction."

### CONCLUSION

The content of the conference focused on educating health care providers about basic intervention techniques in substance abuse, and provided training on the gender differences and gender bias in substance abuse addressing competencies related to provider bias found in the Substance Abuse and Mental Health Services Administration's competencies model: Transdisciplinary Foundations. With this foundation, attendees were able to examine their own biases, as we had numerous formats of education, including role-play scenarios and women from the community who formerly abused substances speak to attendees directly from their perspective. This format helped sensitize health care providers to the realities of the socioeconomic context in which women with substance abuse might find themselves with limited power, addressing issues of mental health, domestic violence, and limited access to health care. Our conference was successful in increasing attendees' knowledge about gender difference and substance abuse in the context of pregnant patients and rural health care. It is the hope that by offering such a conference, this might transform into better care for this often marginalized population.

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TABLE 1

Likert (1–5 Scale) Mean Values for the Retrospective Pretest Measures

	Pretest <i>M</i>	Posttest <i>M</i>	Mean Difference [95% CI]*	<i>p</i> Value
<i>Knowledge related to the following items</i>				
Basic understanding of addiction as a disease (e.g., it is preventable, treatable)	3.2	4.4	1.2 [.8, 1.5]	<i>ns</i>
Gender difference with addiction (e.g., women are less likely to seek drug treatment than men, women respond better to treatment than men)	2.6	4.5	2.0 [1.4, 2.3]	<.001 <sup>a</sup>
Basic strategies in substance abuse management	2.8	4.1	1.3 [0.9, 1.7]	<i>ns</i>
Extent of drug and alcohol addiction in West Virginia	3.1	4.4	1.3 [0.9, 1.7]	<i>ns</i>
Adverse perinatal outcomes associated with drug and alcohol dependence	3.3	4.5	1.2 [0.8, 1.3]	<i>ns</i>
<i>Confidence in the following skills</i>				
I am capable of providing the same care to my patients regardless if they use or don't use drugs and or alcohol.	3.5	4.5	1.0 [0.7, 1.3]	<i>ns</i>
I can effectively intervene with a patient who is using drugs and or alcohol.	3.1	4.2	1.1 [0.8, 1.4]	<i>ns</i>
When caring for a patient who is using drugs and or alcohol, I am able to control my tone of voice and body language.	3.5	4.5	1.0 [0.7, 1.3]	<i>ns</i>
I can talk about drug use without being judgmental.	3.6	4.5	1.0 [0.7, 1.3]	<i>ns</i>
My assessment skills enable me to refer patients using drugs and or alcohol to a substance abuse counselor.	3.5	4.3	0.9 [0.5, 1.2]	<i>ns</i>

<sup>a</sup>Bonferroni correction was used for multiple comparisons.