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Communication Between Health Care Providers and At-risk Mothers:
Perceptions and Practices

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Abstract

Background

This study examined knowledge, attitudes and opinions regarding alcohol, tobacco, and other drug (ATOD) use during pregnancy among women enrolled in drug treatment centers. It also assessed the educational and screening practices of health care professionals who care for women of child-bearing age in Utah.

Methods

The assessment of ATOD use was based on a convenience sample of women who were enrolled in drug treatment centers in Utah. The sample (n = 60) was surveyed by trained research team members. The assessment of screening practices of physicians and other medical professionals (n = 350) who deal with women's obstetric and gynecological conditions was conducted via an online survey. An in-depth interview with seven of the professionals was also conducted.

Results

Most women surveyed (72%) reported that they would follow the advice of their health care provider regarding the use of alcohol, tobacco and other drugs (ATOD). Other sources of information (e.g. TV, Internet and radio) were less trusted. The women also indicated that a major barrier to disclosing an ATOD use was fear of negative consequences, both legal and social. Analysis of data from the professionals surveyed indicated that while most do some screening, there is a significant difference in ATOD screening practices for pregnant women and for women who are of childbearing age but not pregnant. Further, while nearly all professionals reported educating women who came to their clinic, fewer than 35% indicated using written educational materials. Lack of time was indicated as the primary barrier to proper screening and education of women in health care clinics.

Conclusion

Women who have been enrolled in treatment centers for ATOD addictions are fearful of the negative legal and social repercussions as a result of their ATOD use and hence do not consistently seek prenatal care. However, when information is given, most women are willing to comply with the recommendations of their health care providers. Providers are also very interested in quality patient care, but indicate that lack of time does not allow adequate one-on-one time with each patient. Screening and educational practices are performed in most offices, but both the timing of the screening and approach to patient education may not be sufficient to ensure optimal outcomes.

Background

Health care professionals have known for decades the importance of proper health practices for pregnant women (Phelan, 2008). Care should be taken to ensure that proper education and consultation are given to women who are pregnant. Educational topics include proper diet, necessary vitamin supplements and proper exercise and activity levels. Women are also advised regarding activities or substances that can be harmful to them and the unborn child. Dew, Guillory, Okah, Cai and Hoff (2007) indicate common substances identified as potentially harmful to unborn children are alcohol, tobacco and other drugs (ATOD). These findings are supported by numerous other studies. Additionally, the use of these substances significantly increases the probability of medical complications for both mother and child during and after pregnancy.

Best practices in health care include the education of pregnant women in caring for their unborn children. Despite these efforts, the attitudes and actions of mothers who use ATODs during pregnancy have not changed significantly. In a study conducted from 1991-2005, Denny, Tsai, Floyd, and Green (2009) gathered data on the incidence of alcohol use among pregnant and non-pregnant women of childbearing age. The incidence of alcohol use among pregnant women was much lower than that of non-pregnant women (11% vs. 55% respectively in 2005). However, there was little change in the percentage of women in 2005 who consumed alcohol during pregnancy when compared to the group studied in 1991. Despite the emphasis on education of pregnant mothers, the incidence of mothers using alcohol has generally remained in the 10-12% range. Martin, et al. (2006) reported that the incidence of tobacco use among women who were pregnant was one in 10. Further, a study by the Substance Abuse and Mental Health Services Administration (SAMHSA) (2005) indicated that nearly 4% of pregnant women used illicit drugs during the term of their pregnancy. These statistics are startling, especially considering most health care professionals report educating their patients who are pregnant or planning on becoming pregnant about the dangers of alcohol, tobacco and other drugs.

Suarez et al. (2008) indicated that while not all children born to women who use alcohol, tobacco or other drugs during pregnancy will have disabilities and/or birth defects, researchers have discovered that the likelihood is much higher. Statistics from the Centers for Disease Control and Prevention (CDC) in 2006 show that about 120,000 babies (1 in 33) in the United States are born with birth defects each year. Martin et al. (2006) noted that birth defects are the number one cause of death in children during the first year of life. These children are therefore more likely to encounter early mortality or disabling conditions later in life. Because many factors contribute to birth defects in children, it is difficult to identify an exact cause, but it has been established that rates of birth defects are higher for children born to women who use alcohol, tobacco or other drugs. Nelson and Holmes (1989) indicate that 2-3% of all birth defects can be traced to drug use during pregnancy. Stratton, Howe, and Battaglia (1996) identified alcohol abuse during pregnancy as the leading preventable cause of mental retardation in offspring in the United States. Further, the most severe consequences of maternal alcohol abuse are fetal alcohol syndrome (FAS) and alcohol-related neurodevelopmental disorders (ARND).

This research project aimed to accomplish two primary purposes. The first was to obtain information regarding knowledge, attitudes and opinions about the use of ATODs during pregnancy

from mothers who were enrolled in drug or alcohol treatment centers. The second was to identify current patient ATOD screening and educational practices of physicians and other professionals who specialize in caring for women of childbearing age in the state of Utah.

Methods

Study Sample

Two separate samples were used for this research study. The first sample was comprised of women of childbearing age (with or without children) enrolled in one of three urban drug treatment centers in Utah. Two of the centers were located in Salt Lake County and the third was in Davis County. All three centers are located in urban areas. These centers were selected as they have consistently had a higher number of pregnant women enrolled in treatment programs (Utah Department of Human Services, Division of Substance Abuse and Mental Health (DSAMH) Annual Report, 2008).

The second sample consisted of physicians and other health care professionals who regularly treat pregnant women and women of childbearing age for obstetric and gynecological conditions. This sample was gathered utilizing the database of the Utah Division of Occupational and Professional Licensing (DOPL), which regulates licenses for medical and other professions in the state of Utah. Provider titles were identified and included: nurse, osteopathic physician (surgeon/controlled substance), certified nurse midwife, naturopath, physician assistant and others.

Data Collection

Survey of Women in Drug Treatment Centers

Data were collected from the women in the three treatment centers via a structured survey. This survey instrument was developed collaboratively by the Utah Department of Health and the Davis County treatment facility staff. Anonymity was ensured by excluding all personal identifiers from the responses. It was determined by the Utah Department of Health's IRB that approval was not needed when implementing a survey with no personal identifiers. The survey consisted of four open-ended questions, six questions with multiple choice answers and 10 questions based on a three-point Likert scale (Appendix 1). Basic demographic information was collected via two multiple choice questions on age and race/ethnicity. To ensure consistency in conducting the survey, training was done for the two people who conducted the survey in the treatment centers. A total of 60 surveys were completed.

Survey and Interview of Health Care Professionals

Two levels of information were gathered from the professionals. First was an online survey regarding their practice of educating women who seek their health care. The survey was developed by the Utah Department of Health with review/edits by a neonatologist and an obstetrician. A popular web-based survey tool (Zoomerang™) was used to administer the survey online. The survey URL was sent to 2,045 professionals who were listed in the DOPL database via email. In order to improve the response rate, several reminder notices were sent and the time to complete the survey was extended. A total of 350 professionals completed the online survey with a response rate of 17%. This survey consisted of 22 questions including Likert scale, multiple choice and yes/no

questions, as well as open-ended questions (see Appendix 2). There were also two questions inquiring about the participant’s interest in receiving further information on educational materials.

Telephone interviews of selected professionals were a second level of information gathering. These seven professionals had indicated a willingness to participate in the telephone survey as a part of the online survey. The purpose of the interview was to gather additional information on the methods used to educate the client. The interview included both yes/no questions as well as open-ended questions, allowing the professionals to elaborate on responses regarding their current practices (Appendix 3).

Results

Participant characteristics

Women in the study who were pregnant or of childbearing age were residents of one of three drug rehabilitation centers in Salt Lake and Davis counties. Age and race/ethnicity information was reported by 43 of 60 respondents (71.7%). Of these, 96% were over 20 years old with 49% being between ages 20-29. The majority identified themselves as White 74% (n=32) and 5% (n=2) identified themselves as Hispanic. All 60 respondents disclosed the source of their referral to the treatment center. Referral source was most often from law enforcement or courts (48.3%) or counseling/self-search (40.0%). Only 11.7% were referred by health care workers, family or friends.

Participant knowledge, attitudes and opinions related to ATOD and pregnancy

Participants’ responses revealed various attitudes, knowledge and opinions regarding the use of ATOD during pregnancy. Several questions were designed to identify the participant’s willingness to follow instructions and warnings given by common sources. The question was, “If a doctor talks to you about health information, would you follow the advice?” Similar questions were asked regarding radio, TV and online sources of information. The participant responses are shown in Table 1.

Table 1. Source of Information

Source of Information	“I would follow” % (n)	“I might follow” % (n)	“I would not follow” % (n)
Health Care Provider	72.2% (39)	27.8% (15)	0.0% (0)
Radio	9.2% (5)	77.8% (42)	13.0% (7)
TV	5.5% (3)	75.9% (41)	16.6% (9)
Online (Internet)	14.8% (8)	77.7% (42)	5.5% (3)

When researchers probed participants’ opinions regarding effective slogans and messages designed to promote awareness and prevent ATOD use during pregnancy, the respondents selected the following top three slogans and messages. More than one response was allowed.

The top three slogans were:

1. “Drugs can harm a baby before and after it is born.” (48 responses)
2. “Drinking any kind of alcohol when you are pregnant can hurt your baby.” (44 responses)
3. “Smoking can harm an unborn baby.” (42 responses)

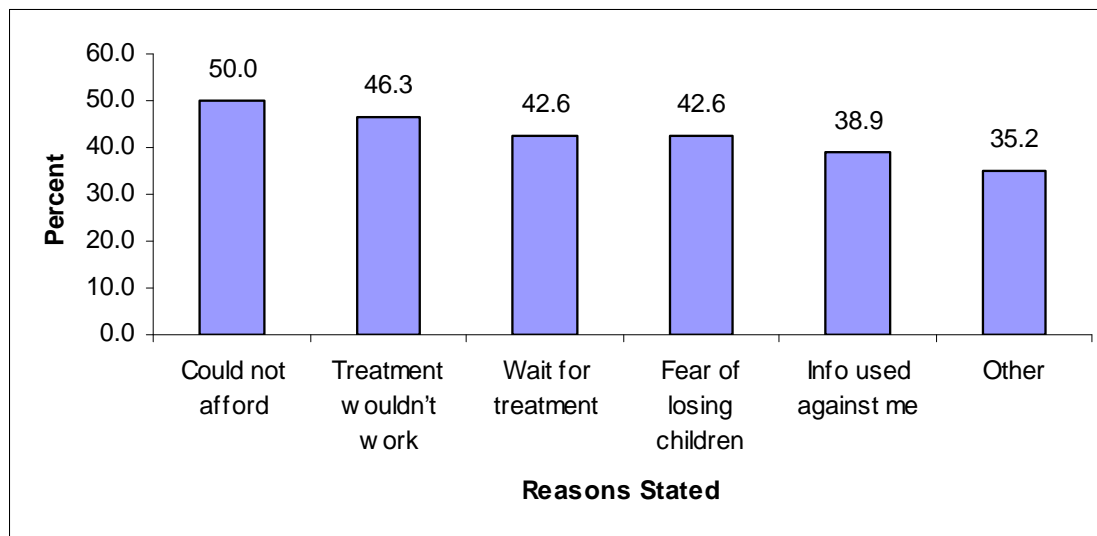
The top three positive messages of encouragement identified were:

1. “It is never too late to stop using a drug. A mother who stops using drugs at any time during pregnancy increases the chance that her baby will be born healthy.” (46 responses)
2. “Drugs and alcohol don’t have to be part of your or your baby’s life.” (45 responses)
3. “Stopping drinking can be very hard. But there are many people who will help you.” and “Even if you have tried to stop drinking before, try again. Don’t give up.” (40 responses each)

Participant barriers to obtaining appropriate treatment for ATOD problems

Participants were asked to provide the reasons for not seeking treatment for ATOD. The main reasons for not seeking treatment are displayed in Figure 1. Respondents were allowed to include more than one reason for not seeking treatment.

Figure 1. Reasons for Not Seeking Treatment



The most commonly stated reason for not seeking treatment was the inability to pay for a substance abuse program, followed closely by the belief that the treatment wouldn’t work. Responders stated that the concern that they would have to wait for treatment and the fear of losing their children tied as the third most common reason for not seeking treatment.

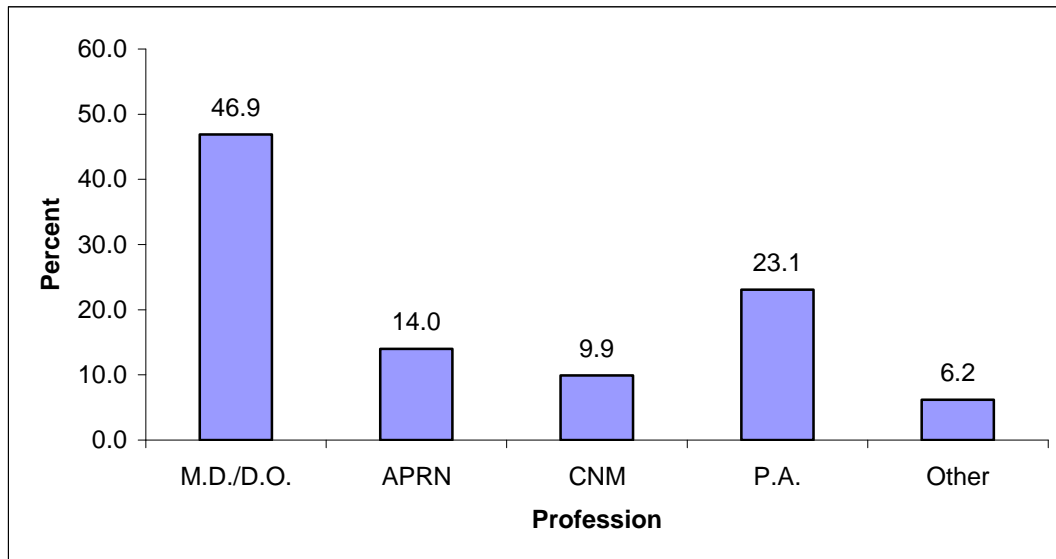
In response to the question regarding sources of health information, 43.3% indicated that they obtained their health information from their health care provider and 20.0% from the treatment centers. The remaining 36.7% of respondents indicated that they obtained health information from either friends, family, media or other sources.

Participants were also asked the question, “If you wanted help to quit drinking or using substances, where would you go for information about treatment services?” More than half (53.3%) responded that they would seek information from the treatment centers, 18.3% from the courts, probation officer or DCFS and 28.3% from either friends, family, health care provider or other sources.

Physician and health care professional participant characteristics

Physicians and other health care professionals in Utah were surveyed online regarding current educational practices in dealing with ATOD use for women during their childbearing years. These professionals were primarily physicians, with a relatively large number of licensed nurse practitioners and certified nurse-midwives. The breakdown of type of primary professions is shown in Figure 2. The majority (79.1%) of professionals reported practicing in urban locations.

Figure 2. Type of Primary Profession



Physician and health care professional screening and educational practices

Professionals were asked to respond to several questions, including how often they screened women of childbearing age and pregnant women for ATOD use and who, if anyone, performed the screening. Table 2 shows when the woman was screened and whether the patient was pregnant or of childbearing age. Data show that professionals were more likely to screen for any type of drug use in pregnant women compared to non-pregnant women of childbearing age.

Table 2. Screening Practices of Health Care Professionals

Type of patient*	Substance type	Initial visit % (n)	Every visit % (n)	Annually % (n)	When problems are suspected % (n)	Never % (n)
Pregnant	Alcohol	48.2% (121)	23.1% (58)	1.2% (3)	17.9% (45)	9.6% (24)
Pregnant	Tobacco	47.0% (118)	27.1% (68)	1.2% (3)	13.9% (35)	10.8% (27)
Pregnant	Illicit Drugs	47.4% (119)	16.7% (42)	1.2% (3)	23.9% (60)	10.8% (27)
Pregnant	Prescription Drugs	40.6% (102)	16.7% (42)	1.2% (3)	28.3% (71)	13.1% (33)
Child-bearing age	Alcohol	34.4% (94)	24.5% (67)	11.7% (32)	23.1% (63)	6.2% (17)
Child-bearing age	Tobacco	34.8% (95)	34.1% (93)	13.9% (38)	11.7% (32)	5.5% (15)
Child-bearing age	Illicit Drugs	30.4% (83)	18.0% (49)	11.4% (31)	33.7% (92)	6.6% (18)
Child-bearing age	Prescription Drugs	23.4% (64)	20.1% (55)	8.1% (22)	39.2% (107)	9.2% (25)

*Pregnant Women N=251; Women of Childbearing age N=273

Further, 74% of professionals reported that in their medical practices, either a medical doctor (M.D. or D.O.) or medically trained staff (RN, PA, NP, CNM or APRN) performed the screening. The remaining 26% responded that non-medically trained staff (e.g. hospital staff, receptionist, etc.) performed the screening.

When asked how much time was spent on the screening, the most common response was “less than five minutes” (46.3%). Nearly twenty-eight percent (27.8%) indicated they spent more than five minutes. Nearly to four percent (3.7%) reported not spending any time on ATOD education with their patients (see Table 3).

Table 3. Time Spent with Patient

Time	Percent	Number
None	3.7	9
Less than 5 minutes	46.3	113
Less than 10 minutes	13.5	33
10 to 15 minutes	9.0	22
More than 15 minutes	5.3	13
Other	22.1	54

Of the professionals who responded to questions regarding educational practices with women of childbearing age, only 34.7% indicated that they have used written ATOD educational material. The type of educational material used by professionals varied and some practices used more than one type. Providers were encouraged to indicate all types of educational formats used with patients. This allowed them to choose more than one format listed on the survey. The results indicated that 55 used a brochure, 37 used a fact sheet, 21 used a website and 13 used another format, including books, newsletters, posters or other appropriate media (see Table 4). Very few professionals indicated the origin of their media, but it was apparent that there were diverse resources, including professional associations (e.g. American Medical Association), private entities, government agencies, self-production of educational materials and various other sources.

Table 4. Education Tools Used in Health Care Provider Office

Do you use any ATOD education materials when talking to patients?	Percent	Number
Yes	34.7	85
Brochure	64.7	55
Fact sheet	43.5	37
Website	24.7	21
Other	15.3	13
No	65.3	160

When asked if they would be interested in receiving additional ATOD educational information to use with their patients, more than half (59.7%) responded affirmatively. Practitioners were encouraged to choose more than one format for information to be disseminated if desired. Of these, the preferred format was a fact sheet (114) followed by brochure (106), websites (71) and CD/DVD (24). Spanish translation of information was also requested.

Table 5. Request for Educational Tools

Would you be interested in receiving substance abuse educational material/tools?	Percent	Number
Yes	59.7	142
Brochure	74.6	106
Fact sheet	80.3	114
Website	50.0	71
CD / DVD	16.9	24
Other	7.0	10
No	40.3	96

Barriers to appropriate screening and education of patients

More than half of the health care professionals responded that they felt there were no barriers to screening or education with either group of women. While most indicated that there were sufficient resources, time was identified as the main obstacle (see Table 6).

Table 6. Barriers to Screening

Type of patient*	Substance type	Not enough time % (n)	Not enough information on effects % (n)	Not enough information on treatment % (n)	No contacts to refer patient to % (n)	No barriers % (n)	Not applicable % (n)
Pregnant	Alcohol	13.9% (35)	0.8% (2)	3.6% (9)	10.8% (27)	60.2% (151)	10.8% (27)
Pregnant	Tobacco	13.9% (35)	0.8% (2)	3.2% (8)	7.6% (19)	63.8% (160)	10.8% (27)
Pregnant	Illicit Drugs	14.7% (37)	2.0% (5)	4.8% (12)	14.7% (37)	51.8% (130)	12.0% (30)
Pregnant	Prescription Drugs	15.1% (38)	2.0% (5)	5.2% (13)	12.7% (32)	53.8% (135)	11.2% (28)
Child-bearing age	Alcohol	22.3% (61)	0.4% (1)	4.8% (13)	15.8% (43)	50.5% (138)	6.2% (17)
Child-bearing age	Tobacco	20.9% (57)	0.7% (2)	4.0% (11)	11.0% (30)	56.0% (153)	7.3% (20)
Child-bearing age	Illicit Drugs	21.6% (59)	1.1% (3)	6.6% (18)	18.7% (51)	44.7% (122)	7.6% (20)
Child-bearing age	Prescription Drugs	21.6% (59)	1.8% (5)	5.5% (15)	17.2% (47)	46.9% (128)	7.0% (19)

*Pregnant Women N=251; Women of Childbearing age N=273

Physician Interviews

Screening practices of professionals

Following the online survey, eight medical practices were chosen to complete a brief telephone interview. Seven agreed to participate. All participating professionals stated that all women who came to their practice were screened. Four of seven indicated that they screened pregnant women more often than non-pregnant women and the remaining three noted no difference. The primary reason for the difference was the increased emphasis on the harm that ATOD has on the baby for pregnant women. Additionally, six of the seven professionals reported they did not use the screening sample tools Pregnancy Risk Line (PRL) had sent to their offices (Standard Drink Card; Assess Readiness; Additional Screening and Intervention Tools and Strategies for Change created by the American College of Obstetricians and Gynecologists with support by the U.S. Department of Health and Human Services, Centers for Disease Control and Prevention). They reported that their tools were shorter and developed in their office. They noted that the information gathered by their screening tool was similar to the information on the samples that were sent.

Educational practices of professionals

Five of seven professionals mentioned that they provide ATOD education for all women of childbearing age while two responded that they provide education only for those who are pregnant. Most commented that they do emphasize the effects of ATOD more often to women who are pregnant. All seven health care provider offices responded that they used verbal communication to convey important information. Additionally, five used print media (e.g. brochures, fact sheets, etc.). One included a sheet with pertinent websites in a “pregnancy” packet given to pregnant women on their first visit. Four of the seven responded that they thought their method of sharing information

was effective while two thought it depended on the individual and one thought that it was ineffective.

The professionals were also asked several open-ended questions. They were asked why they felt that fewer than 60% of offices were interested in receiving more information regarding ATOD screening and education for patients. Responses included:

“Doctors in Utah County don’t think it is really an issue in the area. There is an overload of information coming into the clinic.”

“Doctors have a lack of knowledge about how prevalent these issues really are. There is ignorance about the scope of the problem.”

Interviewees were then asked what might help emphasize the need to screen all women for ATOD. Responses were as follows:

“Doctors need to be more aware of the prevalence of the problem and they need more statistics to educate doctors about the scope of the problem.”

“Information needs to really stand out and not just be more of the same—it’s overload. There would need to be something new and different.”

Lastly, the doctors were asked for ideas on how professionals could provide patients with more effective educational materials about the risks of ATOD and the resources available to help decrease substance abuse. The following responses were representative of the whole:

“Make sure doctors address the issue. We can do a better job of asking some of the questions. Brochures need to be placed in “first visit” bags. We need to spend the time one-on-one and be straightforward.”

“One-on-one is most effective.”

Discussion

Several themes emerged from this study. First, a large proportion of women did not seek treatment for ATOD abuse because of fear of losing their children or fear of repercussions or other legal proceedings. Many were afraid that their children would be taken because of their involvement in a treatment program or that information gathered would be used against them in court or other proceedings. Further, many were concerned about possible repercussions to self and family. In some cases, these fears originate from attitudes of others that women with ATOD addictions are bad mothers. Participants also indicated they were afraid they could not afford treatment or would have to wait long periods of time before acquiring appropriate treatment. Some even indicated a lack of confidence in the established social and legal systems. These concerns highlight the plight of a population of women who are often marginalized. Intervention is needed to increase the percentage of women in high risk groups who have knowledge of the effects of ATOD.

A second pertinent theme is women’s source of information for their health. Responses from participants show that only 43% of women obtained their health care information from their provider. The remaining 57% cited other sources of information including family, treatment centers, TV and Internet. This finding is consistent with findings in the email survey sent to the professionals, which indicated that only 37% used tangible educational material to educate patients. Most medical professionals did indicate that they verbally instructed and educated their patients.

This indicates that successful patient education may require professionals to provide materials including brochures, fact sheets or other educational aids in addition to verbal instruction.

Additionally, health care professionals may also need to consider educational materials that provide information on how to access assistance for mothers who are using or dependant on ATOD. While 72% of women indicated that they 'would follow' the advice of their health care provider, fewer than two percent obtained any information on treatment for addictions from their health care provider. In contrast, four of the 60 reported getting information from the Internet and six from TV. While ATOD treatment may not be the focus of women's health care, professionals' inclusion of tangible information on treatment and care may be a prudent step in the educational process for women who are either pregnant or of childbearing age due to the impact of ATOD on unborn children.

Health care professionals can have a profound impact on women during their childbearing years. More than 70% of women indicated they would follow the advice of their health care professional while the remaining 28% noted that they "might follow" their health care professional's advice. In contrast, when women were asked about following the advice of other sources of information (e.g., TV, Internet, or radio), positive responses decreased dramatically. Only 15% of respondents would follow the advice given on the Internet, 9% for radio information and only 5% for information found on TV. These statistics confirm the trust these women have in their health care provider. This statistic only emphasizes the need for clear and effective communication between patient and professional. While nearly all of the health care professionals reported educating their patients, only 37% reported using a tangible form of educational material. While verbal educational techniques are effective for some, a tangible form of educational material may be more appropriate for others. This suggestion is validated in a study on proper medication administration written by Brown, Wright and Christensen (1987). They note that written and verbal instruction is far superior to verbal instruction alone.

Survey results assessing screening and educational practices by professionals emphasized not only the importance of identifying the most appropriate method of conveying information but the appropriate time to convey the information. The number of professionals who screened pregnant women for ATOD use on initial visit was much higher than those who screened women of childbearing age. Across the four substances (alcohol, tobacco, illicit drugs and prescription drugs) there was a notable difference in screening practices employed when treating pregnant women versus women of childbearing age. This finding inevitably raises the question of whether prevention of ATOD abuse through appropriate screening and education is possible prior to pregnancy. Without such screening and education, a woman's first knowledge of the effects of ATOD on an unborn child may be when she seeks prenatal care after becoming pregnant. Due to the rapid development of the fetus in the first trimester, this concern should be addressed constantly by health care professionals as well other social programs that work with women of childbearing age.

While there is a significant need to decrease the number of women who abuse ATOD, especially when pregnant, there seems no easy solution. Professionals were asked what the primary barriers were to screening and educating their patients. The number one response was a lack of time. In

today's health care community, with pressure for professionals to increase productivity, time continues to be a significant factor in quality of care. Rising insurance premiums, increasing lawsuits and decreasing reimbursement have pushed health care professionals to see more patients in less time. Unfortunately, this practice often leads to less one-on-one time with patients. This time is needed to be able to discuss in depth the needs of the patient as well as to educate and screen patients. When care is rationed by time, screening and education may be the elements of the visit that are cut.

This frustration was reiterated during phone interviews with the physicians. One of the questions asked was what the doctors felt could be done to improve the effectiveness of education on the risks of ATOD use. Several responded that they (the doctors) needed to spend more "one-on-one time" with the patients. A second questioned the reason that so few doctors wanted to be sent additional information on screening and education (fewer than 60%). Several of those interviewed noted that many doctors in the geographical area of this study "don't think it is really an issue in the area". While that attitude may not be common outside of that particular area, it was noted by multiple physicians interviewed in this study. The comment may be a key to why there is a lack of effective screening of and education for women in this particular geographical area.

Future research aimed at improving ATOD education and screening for women should address several issues. First, there is a need to assess the most effective form of education for women in the study population. While it is understood that each situation will be different, knowledge of best practices for educating women in treatment centers would provide a good starting point. Second, to improve screening for all women, researchers may investigate the reasons for the differences in screening women who are pregnant and those who are not. As this study noted, women who were pregnant were much more likely to be screened on their initial visit for ATOD than were women who were not pregnant but were of childbearing age. There are several possible reasons for this difference which may lead to better screening for all women. Finally, research could be conducted into methods for professionals to overcome barriers, such as a lack of time, to screening and educating women appropriately.

This study has several limitations. The samples of women and medical professionals were done as convenience samples. These samples are representative of urban areas in Utah, but may show little resemblance to samples from rural areas of Utah. Second, generalization to other areas in the United States would be difficult due to the unique ethnic and religious demographics of Utah. Further, data were not collected on survey administration techniques. Despite the pre-administration training and small number of survey administrators, lack of inter-rater error data does not allow any statement to be made in defense of consistent administration.

Conclusion

The purposes of this study have been to look at knowledge, attitudes and opinions of women as well as screening and educational practices of professionals when dealing with ATOD use. While there is still a gap in what is ideal and what is reality, this study has presented useful data to be considered when working to improve not only knowledge of women involved in ATOD use and the screening

and educational practices of health care professionals providing services for women's obstetric and gynecological needs.

The results of this study indicate that there is a gap between what is being done to avoid ATOD-adverse birth traumas and what needs to be done. Women who were involved with treatment centers for ATOD addiction responded that one of the greatest barriers to obtaining information is fear. Proper education, regarding not only the effects of ATOD use on the unborn child but on the ramifications of revealing the ATOD use to professionals, is paramount in the fight to decrease the risk of ATOD-related birth trauma. This education may be disseminated from a number of sources including health care professionals, social service workers, school programs or religious institutions. The source may not be as important as simply ensuring that the information is presented.

Additionally, despite the efforts of professionals, screening and educational practices have been noted to be only somewhat effective. Education of professionals as to the most effective ways of informing patients involved in ATOD use is another area of concern. Current practices are only moderately effective in conveying information clearly. While women who engage in ATOD use report that they are likely to follow their health care provider's advice, relatively few report that they have received effective information regarding ATOD use. Noting the lack of time with patients as a concern expressed by many health care professionals, the effective disseminating of educational information is critical for both groups (patients and professionals).

While current practices are not as effective as would be ideal, this study indicates that both patients and practitioners are willing to work for improvement. Women enrolled in treatment centers have indicated a desire to follow instructions from health care providers. Practitioners have indicated a desire to become better at educating and screening women of child-bearing age and those who are pregnant. With important information gathered from both groups in this study it is now possible to find and implement methods of education and screening to bridge the existing gap.

Appendix 1.

Questions to Women in Treatment Centers

Please answer the following questions to help us know what works best for you.

Where do you get health information and advice that you follow?

Where would you get health information and advice if you were pregnant?

If you wanted help to quit drinking or using substances, where would you go for information about treatment services?

If you are currently in treatment, how did you find the place where you are getting help?

If a doctor talks to you about health information would you follow the advice? (Check one)

I would follow I might follow I would not follow

When a health care professional talks to you, what is the best way to give you information?
(Check all that apply to you)

A face-to-face discussion, with questions and answers Over the telephone

Face-to-face discussion with written information to read at a later date

Other: List _____

If your doctor gives you a brochure with health information would you: (Check one answer)

Read the brochure Follow the advice Throw the brochure away without reading

When you hear health information on the radio, do you believe it to be true? (Check one answer)

Information is true Information is probably true Information is not true

Would you follow the advice you heard on the radio? (Check one answer)

I would follow I might follow I would not follow

When you see health information on television, do you believe it to be true? (Check one answer)

Information is true Information is probably true Information is not true

Would you follow the advice you see on television? (Check one answer)

I would follow I might follow I would not follow

When you read health information 'on line', do you believe it to be true? (Check one answer)

Information is true Information is probably true Information is not true

Would you follow the advice you read 'on line'? (Check one answer)

I would follow I might follow I would not follow

What online website do you trust for health information? (Please list)

If warning signs about the harmful effects of drinking during pregnancy were placed where liquor is sold and served would the warnings make you think about not drinking during pregnancy? (Check one answer)

I would stop drinking I would probably stop drinking I would not stop drinking

Would you ask your doctor's advice about drinking alcohol during pregnancy because you saw information where liquor is sold and served? (Check one answer)

Yes Probably Would Not

What were your fears about getting into treatment? (Check all that apply to you)

<input type="checkbox"/> That treatment would not work for me	<input type="checkbox"/> That I could not afford to pay for the treatment
<input type="checkbox"/> That my child(ren) would be taken away from me	<input type="checkbox"/> That I did not have time to go to treatment
<input type="checkbox"/> That I would be put in jail because I was pregnant	<input type="checkbox"/> That I would have to wait to get treatment

That the information I give during treatment about my alcohol/drug use would be used against me in court

Other: Please list

What is your ethnicity? (Check one answer)

African American Asian Hispanic Native American Pacific Islander
 White

What is your age? (Check one answer)

12 years and younger 13-19 years 20-29 years 30 years and older

Please check the phrases that make the most sense to you and that send the strongest message not to use alcohol, tobacco or other drugs during pregnancy. (You may check more than one)

- Drinking any kind of alcohol when you are pregnant can hurt your baby.
- Alcohol can hurt an unborn baby.
- During pregnancy there is no safe amount of alcohol.
- Did you know that if you drink alcohol when you are pregnant, you can hurt your unborn baby?
- Smoking can harm an unborn baby.
- Smoking can harm babies before they are born.
- Stop and think. If you're pregnant don't drink.
- Using any drug when you are pregnant is risky.
- Drugs can harm a baby before and after it is born.
- Don't take any drug without your health care provider's advice.

Please check the phrases that you feel would have encouraged you to seek help. (You may check more than one)

- A pregnant woman who stops drinking as soon as possible can improve her chances of having a healthy baby.

- The best way to make sure your baby isn't harmed by smoking is to quit.
- There are many ways to stop smoking. Check with your doctor for ideas to help you quit.
- Fetal Alcohol Spectrum Disorders are 100% preventable if a woman does not drink alcohol during pregnancy.
- The best choice is not to drink at all when you are pregnant.
- Stopping drinking can be very hard. But there are many people who will help you.
- Even if you have tried to stop drinking before, try again. Don't give up.
- When a pregnant woman uses alcohol, her baby does too. That's why not drinking alcohol throughout pregnancy and breastfeeding is the best gift a mother can give her child—it is a gift that lasts a lifetime.
- Drugs and alcohol don't have to be part of your or your baby's life.
- It is never too late to stop using a drug. A mother who stops using drugs at any time during pregnancy increases the chance that her baby will be born healthy.
- Alcohol can harm your baby: Be an alcohol free mother-to-be.

Health Care Provider Survey



Background

In 2008, the Utah Legislation passed H.B. 38 directing the Utah Department of Health to implement a social-marketing program to educate women of childbearing age about fetal effects from alcohol, tobacco and other drugs (ATOD).

As part of this project, women in substance abuse treatment centers were interviewed and 100% of the women surveyed said that if a doctor talked to them about health information, they would probably follow the advice given.

The majority (87%) of the respondents said the best way to receive information about ATOD is in a face-to-face discussion with their doctor and to have adequate time for questions and answers. They also requested written information to take home to read at a later time.

Your responses will help us meet the needs of women at risk of ATOD abuse.

Please click the "submit" button below to continue.

Did you know?

- * More than one-third (34%) of pregnancies in Utah are unplanned¹.
- * There were over 6,500 Utah women entering substance abuse treatment centers in 2007 and of these, 6.2% were pregnant².
- * Binge drinking among Utah women ages 18-34 years is reported to be 6.8%. For women younger than 18, the rate is 7.3%. Hispanic women have an even higher bingeing rate at 9.2%¹.
- * Close to half (44%) of Utah women mentioned that their doctors did not ask how much alcohol they drink³.
- * Half (50%) of Utah women reported that their doctor did not talk to them about how alcohol, tobacco and other drugs affect a fetus³.
- * A study published in the American Journal of Preventive Medicine reported that a focused alcohol discussion reduced problem drinking by an average of 17%. This article also suggested that alcohol screening was as cost effective as Pap smears or bowel-cancer screenings⁴.

1. Utah Behavioral Risk Factor Surveillance System (BRFSS) 2005-2007.

2. 2007 Division of Substance Abuse and Mental Health (DSAMH) Annual Report.

3. Pregnancy Risk Assessment Monitoring System (PRAMS) 2005 Report.

4. Solberg LI, Maciosek MV, Edwards NM. Primary Care Intervention to Reduce Alcohol Misuse: Ranking Its Health Impact and Cost Effectiveness. Am J Prev Med 34(2), 2008.

Questions about women of childbearing age
 [Questions with an asterisk (*) require input]

Question 1

[Mandatory]

How often do you screen women of childbearing age for possible drug and alcohol abuse?

	At initial visit	At each visit	Annually	When suspect a problem	Never
Alcohol	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tobacco	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Methamphetamines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cocaine	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heroin	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dependence on prescription pain medication	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Question 2

[Mandatory]

What is the most significant barrier to screening women of childbearing age for possible drug and alcohol abuse?

	Not enough time	Not enough knowledge about the effects of abuse	Not enough information about treatment for abuse	No contacts to refer to treatment	No barriers	N/A
Alcohol	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tobacco	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Methamphetamines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cocaine	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heroin	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prescription pain medication	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Questions about pregnant women

[Questions with an asterisk (*) requires input]

Question 3

[Mandatory]

How often do you screen pregnant women for possible drug and alcohol abuse?

	At initial visit	At each visit	Annually	When suspect a problem	Never
Alcohol	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tobacco	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Methamphetamines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cocaine	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heroin	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dependence on prescription pain medication	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Question 4

[Mandatory]

What is the most significant barrier to screening pregnant women for possible drug and alcohol abuse?

	Not enough time	Not enough knowledge about the effects of abuse	Not enough information about treatment for this type of abuse	Not contacts to refer for treatment	No barriers	N/A
Alcohol	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tobacco	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Methamphetamines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cocaine	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heroin	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prescription pain medication	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Question 5

Who does the screening at your clinic?

Question 6

How much time do you or your staff spend with patients on these issues?

- None
- Less than 5 minutes
- Less than 10 minutes
- 10 to 15 minutes
- More than 15 minutes
- Other, please specify

Question 7

[Mandatory]

Do you use any educational materials when talking to women of childbearing age and / or pregnant women about alcohol, tobacco, and drugs (ATOD)?

- Yes
- No
- Additional Comment

Question 8

If yes, what type of educational materials do you use when talking to women of childbearing age and / or pregnant women about alcohol, tobacco, and drugs? (Please check all that apply)

- Brochure
- Fact sheet
- Website
- Other, please specify

Question 9

Based on above question, please indicate from which agency you get the following information:

- Brochure
- Fact sheet
- Website
- Other

Question 10

What other educational materials or assessment tools would help you talk with your patients about alcohol, tobacco, and drugs (ATOD)?

Question 11

Would you be interested in receiving substance abuse educational materials or assessment tools to assist you with screening patients or patient education?

(If you answer "no", please skip to question # 14)

- Yes
- No

Question 12

In what format would you like these materials?
(Please check all that apply)

- Brochure
- Fact sheet
- Website
- CD/DVD
- Other, please specify

Question 13

What is your preferred method to receive such materials? (Please check all that apply)

- Mail
- Email
- Website
- Conference
- Podcast
- CD / DVD
- Other, please specify

Question 14

Are you aware of the legal protections provided by law or court rule for your patients that prohibit the release of information relating to treatment without patient consent?

- Yes
- No

Question 15

Would you be interested in receiving more information about the law?

- Yes
- No

Question 16

If yes, what is your preferred method for receiving more information about the law? (Please check all that apply)

- Mail
 - Email
 - Website
 - Conference
 - Podcast
 - CD / DVD
 - Other, please specify
-

This section is to obtain basic demographic information about you.

[Questions with an asterisk (*) require input]

Question 17

[Mandatory]

Please describe your primary profession:

- Physician
 - Osteopathic physician
 - Nurse
 - APRN
 - CNM
 - Physician assistant
 - Other, please specify
-

Question 18

Please indicate your practice location:
(Please select from the drop down list)

- Urban
- Rural

Question 19

Please indicate your gender:

- Male
- Female

Question 20

If you indicated that you would be interested in receiving ATOD educational materials and assessment tools, please provide your contact information below:

- Name
- Company
- Address
- City
- State
- Zip

Question 21

Please provide your email address (optional):

Question 22

Please list any comments or suggestions you may have to improve the services for women of childbearing age in Utah.

Thank you for your participation!

Questions/comments should be directed to:

Julia Robertson
Utah Department of Health
1-800-822-2229
jrobertson@utah.gov

Thank you for your valuable time and feedback!

Please click this link to visit the Pregnancy Risk Line website. <http://health.utah.gov/prl>

Appendix 3.

Questions from the phone interview with physicians

Part I—Screening Practices

1. Do you screen all pregnant women at your clinic for alcohol, tobacco, and other drug use?
2. Do you typically screen women of childbearing age at your clinic for alcohol, tobacco, and other drug use?
3. Is the screening you do different for women who are pregnant vs. those who are of childbearing age but not pregnant.
4. If you answered yes to question #1 and/or #2, do the sample screening tools we sent look like the screenings that you typically use in your office?

Part II—Materials

1. Do you provide information to educate your patients as to the effects of alcohol, drugs, and tobacco on unborn children?
- 2a. What format do you usually use to provide this information?
- 2b. Do you think that the way you share information is effective for patients after the initial visit where the material is introduced (i.e. Do you think they ever look at it again?)
3. Do you attempt to educate ALL women of childbearing age or only those who are pregnant?

Part III. Additional Information

1. As a medical practitioner, why do you think that there were only 40% who requested additional info? (Lack of interest, already have info and don't want to see additional info, overload, lack of time, etc.)
2. What might be done to better meet the needs of both patients and medical professionals regarding the need to screen pregnant women and women of child-bearing age for alcohol, tobacco, and other drugs?
3. Do you have any ideas about how medical professionals can more effectively provide patients with educational materials about both the risks of alcohol, tobacco, and other drug use and the resources available to help individuals quite using these substances?

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