Tobacco Cessation Interventions Target Pregnant Alaska Native Women

In the United States, Alaska Native women have higher rates of tobacco use before, during and after pregnancy than any other racial or ethnic group. The overall prevalence of prenatal cigarette smoking in the U.S. is 11 percent; among Alaska Natives, it’s more than twice that. Alaska Native women also report exceptionally high rates of smokeless tobacco use. Although less than 1 percent of U.S. women report using smokeless tobacco, use among pregnant women in the remote Yukon-Kuskokwim Delta (Y-K Delta) in western Alaska approaches 79 percent.

Christi A. Patten, Ph.D., a tobacco cessation researcher at Mayo Clinic’s campus in Minnesota who has worked with this population for nearly 15 years, says all forms of tobacco use are an accepted cultural norm in some rural Alaska Native communities.

“Tobacco use is socially acceptable, even among children of kindergarten age,” she says. “Furthermore, smokeless tobacco is perceived as safer to use during pregnancy than cigarettes, and there is little knowledge about its adverse effects, which may include an increased risk of preterm birth, stillbirth and low birth weight infants.”

In the Y-K Delta region, the most common form of smokeless tobacco is Iqmik — a homemade mixture of tobacco leaves and fungus ash. The combination causes rapid absorption of nicotine, making the product highly addictive — “similar to cocaine,” Dr. Patten says.

In a 2005 study published in The Journal of Maternal-Fetal & Neonatal Medicine, Dr. Patten and colleagues found significantly higher concentrations of cotinine in maternal blood and infant cord blood among women using Iqmik in the week before delivery compared with women who used other forms of tobacco or didn’t smoke.

Tobacco cessation interventions, past and present

The health and well-being of children are of paramount importance to the Alaska Native community and a national public health priority. So nearly 15 years ago, Mayo Clinic partnered with community health organizations to try to reduce tobacco use among children and pregnant women in the Y-K Delta. Although the partnership has been highly successful, tobacco cessation interventions have not; results of a pilot study of a culturally appropriate intervention delivered at the first prenatal visit were disappointing. The study, published in 2010 in Nicotine & Tobacco Research, found that the intervention produced no change in tobacco abstinence.

“We thought delivering cessation counseling within the health care system would be successful, but we found that we missed a large number of women because many don’t come to the hospital until late in their pregnancy,” Dr. Patten explains. “For the few who did participate, there was little social support — they had to return to homes where everyone was using tobacco.”

That experience led Dr. Patten and her colleagues in a new direction. They are now developing a communitywide marketing campaign that will not only target pregnant women but also every Alaska Native in the
Anxiety disorders and pediatric obsessive-compulsive disorder (OCD) can profoundly affect the social, academic and family functioning of children and adolescents. Exposure-based therapy, an evidence-based treatment that encourages the systematic confrontation of feared stimuli, is the most well-researched and effective psychosocial intervention for these disorders and is considered a first-line treatment for them.

Exposure usually follows anxiety management strategies (AMS) in standard cognitive behavioral therapy (CBT), but research suggests that delaying exposure for six or more sessions, as is commonly done in the AMS-followed-by-exposure model, may make CBT less effective and that AMS alone may not be better than placebo.

A study by Mayo Clinic researchers published in *Behavior Research and Therapy* found that using parent-coached exposure without AMS not only is safe and tolerable but also results in greater improvement in fewer sessions. Still, parent-coached exposure therapy is rarely available, according to lead study author Stephen P. Whiteside, Ph.D., L.P., director of the Pediatric Anxiety Disorders Clinic at Mayo Clinic’s campus in Minnesota.

“For the past 20 years, researchers have been developing treatments that include many different techniques and clinicians have been focusing on the other aspects instead of exposure. What we are doing at Mayo Clinic is different,” he says.

Mayo’s approach consists of approximately eight weekly sessions of parent-coached exposure therapy, although the length of treatment can vary, depending on severity of symptoms. Parents are actively involved in treatment from the beginning, so they develop the tools and confidence to support their child’s efforts between appointments.

“The hope is that if parents can help their children do more and better quality exposures between appointments, they will have to see us less often,” Dr. Whiteside explains. “We aim for one exposure a day, and families are pretty successful at achieving this.”

**Intensive treatment**

Many families aren’t able to attend weekly sessions at specialty clinics, however. One alternative is to provide intensive treatment — daily sessions over a short time frame — that allows families to travel to a specialty clinic and stay there during treatment. Although intensive protocols, which typically last three weeks, may be an option for some patients, they aren’t feasible for others.

In 2010, Mayo researchers tested the feasibility of a five-day treatment protocol and found its effectiveness was similar to standard weekly and three-week intensive treatments. A more rigorous follow-up study, published in *Psychiatry Research* in 2014, documented significant improvement with the five-day protocol in three critical areas: symptom severity, functional impairment and family accommodation. All symptom measures continued to decrease from post-treatment to follow-up, perhaps due to ongoing parent involvement as exposure coaches.

“Our protocol is shorter because we prepare families to continue exposure therapy on their own,” Dr. Whiteside says. “The work children and adolescents put into the program is inspiring, and many work up to their highest

For more information


Bariatric surgery, particularly Roux-en-Y gastric bypass (RYGB), is a major advance in obesity treatment. It produces durable weight loss and has a positive effect on mortality and comorbidities such as diabetes, hypertension and obstructive sleep apnea. According to several large studies, however, gastric bypass can also be associated with an increased risk of alcohol use disorder (AUD), although the exact subgroup of patients who develop alcohol problems is difficult to predict.

To better understand this problem, Mayo Clinic researchers sought to describe the clinical phenotype of gastric bypass patients seeking treatment for AUD. The results of their study were published in the March 2015 issue of the Journal of Psychosomatic Research.

For the study, investigators retrospectively reviewed all patients evaluated by addiction treatment programs at Mayo Clinic’s campus in Rochester, Minnesota, from 2004 to 2012. Of these, 44 had bariatric surgery, mainly gastric bypass. They were matched to 122 controls in the same treatment setting who were obese but had not undergone a weight-loss procedure.

According to study author Karen Grothe, Ph.D., L.P., a psychologist specializing in psychological aspects of obesity and bariatric surgery, the study found a significant correlation between RYGB and alcohol consumption, regardless of age or body mass index. Some patients reported consuming about 2.5 drinks per drinking day before surgery compared with more than eight drinks per drinking day in the month prior to seeking treatment for AUD. For about half the patients, the struggle with alcohol was new onset.

The time course for the progression of alcohol consumption after surgery was especially striking. Study results indicate that patients who had undergone RYGB started drinking about 17 months after surgery and by three years met the criteria for AUD, although most didn’t seek treatment until five years post-surgery.

Dr. Grothe says the reasons for the association between gastric bypass and AUD aren’t entirely clear.

“One theory is that changes in alcohol absorption after gastric bypass make alcohol more addictive,” she says. “We have had patients get DUls after one glass of wine because peak

Karen Grothe, Ph.D., L.P.
blood alcohol concentration is higher and occurs rapidly — within two to 10 minutes of consumption. Most gastric bypass patients notice an increased sensitivity to alcohol; some are adverse to that and drink less. But others may like the feeling and end up drinking more.”

Another theory is addiction transfer from food. “People may think, ‘I can’t eat the way I used to, so I’ll drink instead.’ They often have more energy and may socialize more after weight loss, which could also lead to increased alcohol use,” Dr. Grothe says.

Depression is another issue. Approximately 50 to 60 percent of people who undergo bariatric surgery are taking antidepressants at the time of the procedure. For most of them, depression improves in the first year or two after surgery, but can then trend to baseline. Not only can depression return, but surgery may also alter the absorption of antidepressant medications.

These findings, although not fully understood, have important clinical implications, calling for AUD preventive measures both before and after gastric bypass, Dr. Grothe says. “The prevalence of post-surgical AUD could be 10 to 15 percent, and we need to educate patients about the risk,” she explains. “We connect them with addiction experts before or after the procedure and enlist the support of family and friends. We are also recommending a significant lifelong reduction in alcohol or quitting completely for gastric bypass patients. We tell them we are learning about alcohol and bariatric surgery, but right now, we just don’t know what is safe. If they do choose to drink, we ask patients to limit the amount, be in a safe place and definitely not to drive.”

**For more information**