



# How characteristics of prenatal care providers in Colombia affect smoking cessation counseling with pregnant patients

Danielle Babbel<sup>1</sup>, Britt Severson MD MPH<sup>1</sup>, Bernardo Agudelo Jaramillo MD<sup>2,5</sup>, Luis Echavarría Restrepo MD<sup>3</sup>, Clara Mesa Restrepo MD<sup>4</sup>, Jeong Youn Lim PhD<sup>1</sup>, Jorge E. Tolosa MD MSCE<sup>1,6</sup>

<sup>1</sup>Oregon Health and Sciences University, Portland, Oregon, USA, <sup>2</sup>Universidad de Antioquia & Grupo NACER, <sup>3</sup>Universidad Pontificia Bolivariana, <sup>4</sup>Instituto de Ciencias de la Salud, <sup>5</sup>MetroSalud, Medellín, Colombia, <sup>6</sup>Global Network for Perinatal & Reproductive Health, FUNDARED-MATERNA, Colombia

## Background

Smoking during pregnancy has been shown to contribute to a variety of adverse health outcomes such as fetal growth restriction, placenta previa, abruption, preterm delivery, low birth weight, SIDS, decreased lung capacity and possibly behavioral disorders in childhood<sup>1,2,3,4</sup>. There is a lack of data on smoking in pregnancy and cessation counseling in Latin America. Our objective was to investigate if prenatal care providers' perceptions and training in smoking cessation counseling as well as personal tobacco use are predictive of their counseling efforts with pregnant smokers in Medellín, Colombia.

## Methods

Cross-sectional study. Anonymous surveys emailed to 136 prenatal care physicians at 3 academic centers and 1 public health center. Smoking status, training in cessation, and perceptions about pregnant smokers was compared with provision of smoking cessation counseling. A convenience sample of 59 pregnant patients was surveyed in person to assess rates of smoking, counseling received, and perceptions about smoking in pregnancy. Patients were either pre- or post-partum, and were interviewed at the above institutions. Data was analyzed with univariate logistic regression.

## Results

- Of the 48 physicians who completed the survey, most (89%) had never been trained in a specific method of tobacco cessation counseling
- 40.4% of providers reported rarely or never using an established method for counseling
- 64.6% of providers reported that they had little knowledge or did not feel prepared to counsel pregnant patients to quit smoking
- Of the physicians surveyed about half (51.1%) had ever smoked and 18.8% reported smoking in the past month
- All providers who did not always counsel patient were active smokers, though this was not statistically significant
- The best predictor for always counseling patients to quit smoking was how often participants asked patients if they smoke (Fisher's exact test p=0.01)
- Most patients reported that the preferred way to receive information about the harms of smoking in pregnancy was from their doctor
- There was no significant difference in likelihood of counseling to quit smoking by physician gender, age, hours of training, confidence, or perceptions of smoking during pregnancy as a public health problem

## Discussion

Most physicians report counseling pregnant smokers to quit but few have training in or use an evidence based method. A surprisingly high number of physicians reported smoking within the past month, nearly one-fifth of respondents. Though not statistically significant, all providers who reported smoking also reported not always counseling patients who smoke about tobacco cessation. Efforts to help providers quit should be a focus of research. To improve tobacco cessation counseling and ESE avoidance counseling in pregnancy, training of providers is urgently needed.

## Conclusions

- Improving physician training on how to counsel pregnant patients to quit tobacco use needs to be standardized and implemented into practice
- Smoking by physicians is a public health problem
- Highest rate of smoking in pregnancy reported to Colombia to date

## Logistic regression predicting always counseling on smoking cessation

	Odds Ratio (CI 95%)	p value
Believe smoking in pregnancy is public health concern	3 (0.3, 31.1)	0.36
Always ask pregnant patients if smoke	23.4 (2.0, 270.4)	0.01
Use established cessation counseling method	0.65 (0.1, 5.1)	0.69
Confidence in smoking cessation counseling	1.61 (0.2, 16.8)	0.69
Training on tobacco cessation counseling	0.13 (0.1, 1.4)	0.09
Physician smoking	0.54 (0.1, 4.0)	0.58

## References

1. Centers for Disease Control and Prevention. The health consequences of smoking: a report of the Surgeon General. Atlanta, GA: US Department of Health and Human Services, 2004.
2. Cnattingius, S. The epidemiology of smoking during pregnancy: smoking prevalence, maternal characteristics, and pregnancy outcomes. *Nicotine Tob Res.* 2004;6(2):125-40.
3. Gilliland, F.D., Berhane, K., McConnell, R., Gauderman, W.J., Vora, H., Rappaport, E.B., Avol, E., Peters, J.M. Maternal smoking during pregnancy, environmental tobacco exposure and childhood lung function. *Thorax.* 2000;55:271-276.
4. Velez-Gomez, M.P., Barros, F.C., Echavarría-Restrepo, L.G., Hormaza-Angel, M.P. Prevalence of low birth weight and associated maternal factors: Care and Protection Unit Maternal and Infant Clinic Bolivarian University, Medellín, Colombia. *Colombian Journal of Obstetrics and Gynecology.* 2006; 57(4).

## Acknowledgements

OHSU Global Health Center, OHSU Department of Ob/ Gyn, NACER, Global Network for Perinatal and Reproductive Health, FUNDARED-MATERNA, Saint Joseph Hospital

