Pregnancy Smoking Intervention in Northeast Tennessee: Effectiveness Data from the First Two Years of the TIPS Program

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BACKGROUND
Northeast Tennessee sees rates of preterm birth and low birth weight 50-75% higher than national averages, and a pregnancy smoking rate near 40%, 4 times higher than the national average and 2.5 times higher than the average for the state. The Tennessee Intervention for Pregnant Smokers (TIPS) Program was funded by the State of Tennessee in March, 2007, to improve birth outcomes in a six county area in NE TN by reducing rates of pregnancy smoking.

OBJECTIVE
The purpose of this report was to describe the effectiveness of the TIPS Program in the first two years. The first objective was to describe changes in the pregnancy smoking behavior of participating women, and to examine characteristics of the program that predict smoking reduction, cessation, and quit attempts. The second objective was to examine the association between pregnancy smoking status and birth outcomes.

METHODS
The TIPS program began recruiting participants in June, 2007. By March, 2009, TIPS case managers worked with prenatal patients at 6 different prenatal care practices in the region. Women are eligible for the program if, at entry to prenatal care they are current smokers, have quit smoking within the last two years, or have significant second hand smoke (SHS) exposure. Eligible women are approached early in their prenatal care, given information about the program, and offered services. Women who are willing receive educational materials, a pregnancy smoking self-help book, 5 A’s counseling, referrals, assistance with life stressors, and in depth counseling as desired. Case managers are available on site at all prenatal visits. Eligible women are also invited to participate in research interviews. Detailed data collection occurs at each contact, and prenatal, delivery, and newborn medical charts are reviewed.

RESULTS
By March 2009, 1054 eligible prenatal patients had been enrolled in the TIPS program, representing approximately 50% of all prenatal patients at the participating practices. Only 8% of eligible women declined any level of participation. Of the 1054, 688 had delivered by the end of year 2 and are included in the current sample. Of the women who entered prenatal care as smokers (61% of participants), 51.3% had significantly reduced their smoking by delivery, 16.0% had at least one quit attempt, and 7.2% had quit smoking and remained smoke free. Of those with just SHS exposure, 17% had completely eliminated it, and 47% had substantially reduced their exposure. Receiving certain TIPS services predicted smoking reduction, successful cessation, and quit attempts. Women who quit smoking, and those who significantly reduced smoking, had better birth outcomes than those who continued to smoke. In addition, non-smokers who eliminated/reduced their SHS exposure had significantly better birth outcomes than those whose exposure continued through delivery.

CONCLUSIONS
To date, the TIPS Program has been moderately successful in meeting its objective to improve birth outcomes by reducing pregnancy smoking in NE TN. Findings from the current report are being used to enhance services that are effective and to eliminate those that are not

CLINICAL/COMMUNITY IMPLICATIONS
Efforts to reduce pregnancy smoking can be effective and lead to substantial improvements in birth outcomes. In order to be most successful, programs must treat smoking as an addiction and also address the environmental and lifestyle factors that contribute to its continuation.

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