Objective: High parity and short birth intervals among Hispanic women may deplete their folic-acid levels and place them at risk for neural tube defects (NTDs). The purposes of this study were to evaluate factors associated with multivitamin supplementation rates during the early (one to six weeks) postpartum period among Mexican-origin women and present their implications in preventing NTDs in subsequent pregnancies.

Design: A cross-sectional study was conducted among Hispanic mothers attending women, infant, and children (WIC) clinics in El Paso, Texas. Information was ascertained via interview on regular multivitamin use, and independent variables including sociodemographic characteristics, multivitamin knowledge, obstetric and health history, and birth control and infant feeding methods.

Results: Only 66% of 329 mothers took postpartum multivitamins. Multivitamin consumption declined by 29% for each postpartum week ($P<.0003$). Adjusted odds ratios indicated positive associations between multivitamin supplementation and prenatal care exclusively in the United States ($P=.007$), breastfeeding ($P=.071$), preconceptional ($P=.005$) and prenatal multivitamin use ($P=.0002$), and multivitamin recommendation from a healthcare provider ($P=.0001$). The majority of 247 women with multivitamin counseling (59%) were told to finish prenatal vitamins or to continue use while breastfeeding. Smokers were less likely to take multivitamins than nonsmokers ($P=.007$).

Conclusions: A provider recommendation highly motivates early postpartum women to consume multivitamins. Since most women have more than one child, this period likely represents a preconception period. In the late 1970s; from 1995 to 1998, more than two thirds of postpartum women were aware that folic acid can prevent some birth defects. Many women may be informed about the benefits of folic acid during pregnancy.

Postpartum women have not been specifically targeted for preconceptional supplementation programs; yet with a median number of births in the United States of 2.1, for more than half of women the postpartum period represents a preconception period. In addition, with >50% of US pregnancies unplanned, these subsequent conceptions may occur at a times when the mother is not intending to become pregnant.

Although the USPHS recommendation on folic acid supplementation was issued >10 years ago, a 2003 Gallup survey of childbearing-age women indicated that nearly a quarter of the women are either unaware of the recommendation or not compliant.

INTRODUCTION

Evidence consistently shows that a low folate level at the time of conception is associated with neural tube defects (NTDs) and that a daily supplement of 0.4 mg folic acid confers a protective effect against NTDs. Some studies also suggest that folic acid may protect against other types of birth defects. Consequently, in 1992 the US Public Health Service (USPHS) recommended that all women of childbearing age receive 0.4 mg folic acid daily in the form of a vitamin supplement.

Although the USPHS recommendation on folic acid supplementation was issued >10 years ago, a 2003 Gallup survey of childbearing-age women indicated that nearly a quarter of the women are either unaware of the recommendation or not compliant.

The Prenancy Risk Assessment Monitoring System (PRAMS) data suggest that folic acid awareness has improved since the late 1970s; from 1995 to 1998, more than two thirds of postpartum women were aware that folic acid can prevent some birth defects. Many women may be informed about the benefits of folic acid during pregnancy.

Postpartum women have not been specifically targeted for preconceptional supplementation programs; yet with a median number of births in the United States of 2.1, for more than half of women the postpartum period represents a preconception period. In addition, with >50% of US pregnancies unplanned, these subsequent conceptions may occur at a times when the mother is not intending to become pregnant.

Mexican-American postpartum women may be at relatively increased risk for subsequent pregnancies complicated by NTDs because of associated high rates of NTDs, high parity, and low rates of preconception vitamin consumption. A recent analysis of NHANES data found that Mexican-American women had lower plasma and red blood cell (RBC) folate (15.9 and 456 nmol/L) than non-

Kathleen M. O’Rourke, PhD; Mary E. Roddy, PhD; Darryl Williams, MD; Kristina Mena, PhD

Department of Family Practice, Texas Tech University at El Paso (DWM), El Paso, Texas.