women than among women of other ethnic origins, independent of age, body weight and pregestational diabetes. The prevalence of type 2 diabetes among First Nations adolescents in Manitoba and northwestern Ontario is increasing, and the poor diabetes control and poor nutrition that often occur in these young women may constitute additional risk factors for neural tube defects in future offspring.

The high rate of adolescent pregnancy and the additional risk of neural tube defects in First Nations women raise the question of whether all young First Nations women with type 2 diabetes should receive advice regarding dietary and supplemental folic acid.

Several recent clinical practice guidelines have included recommendations on folic acid supplementation for mothers at high risk for neural tube defects. In 2003 the Society of Obstetricians and Gynaecologists of Canada recommended that all "women with insulin-dependent diabetes" should be advised to take high-dose folic acid (4–5 mg, taken as a pure folic acid supplement).[2] In 2002 Health Canada recommended that "women with diabetes" reduce the risk of neural tube defects in their babies by ensuring optimal diabetes control in the periconceptional period, noting that high-dose folic acid may or may not provide added benefit.[3] The 2003 guidelines of the Canadian Diabetes Association reviewed the evidence for reduction of the risk of neural tube defects with folic acid supplementation in diabetic pregnancies but stopped short of any specific recommendation regarding folic acid.[4] A 1997 recommendation by the Canadian Paediatric Society made no special recommendation for women with diabetes,[5] but this position statement is currently under revision.

Young First Nations women with type 2 diabetes may have multiple factors putting their future offspring at high risk for neural tube defects, namely ethnicity, poor diabetes control and poor nutrition. The evidence for risk reduction with optimal preconception control of diabetes in young women with type 1 diabetes[3] is probably applicable to young First Nations women with type 2 diabetes. However, the other unique clinical features of this population necessitate the development of specific consensus guidelines for folic acid supplementation for prevention of neural tube defects.

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Joel Ray and associates[1] report a 5-fold greater risk for neural tube defects among pregnant women of First Nations origin than among women of other ethnic groups in Ontario, after adjustment for confounding factors.

Different results were obtained in a previous study from the British Columbia Health Surveillance Registry,[2] which had a much larger sample of live births and stillbirths (21 111 among First Nations mothers and 576 815 in the general population) for the 16-year period 1966 to 1981. In that study, the frequency of neural tube defects was lower in the First Nations group than the general population (1.03 v. 1.60 per 1000 total births).

In the study by Ray and associates,[1] ethnicity was self-declared; furthermore, no information is provided about

the father's ethnic background, the degree of First Nations genes or potential admixture with white genotypes. Such admixture has occurred in the past, so caution is needed in interpreting ethnicity (unless a detailed family history for at least 2 generations is obtained). Although that was not done for the BC study,[2] only subjects known to be registered under the federal *Indian Act* (1959) and known to be registered with an Indian Band (as they were then known) were considered as First Nations. Although there have been a few instances of a white person marrying a First Nations person and thus becoming registered, the number is minuscule; we are therefore confident that in our sample both parents and probably all 4 grandparents of the babies were of First Nations background. Ethnicity is extremely important in many genetic and congenital anomaly disorders, but unfortunately it has been deemed politically incorrect to obtain this information routinely on vital statistics documents. This loss of data affects not only those who are attempting to do etiologic research but also those who might benefit from such research.

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[One of the authors responds:]

We appreciate Chris Delaney's points about our study of ethnicity and neural tube defects.[1] First, we did not discuss the lower risk of neural tube defects in the group of 10 009 women categorized as "other" because of the nondescript nature of this category. Second, nondifferential misclassification of exposure (in our case, ethnicity) might be expected to bias the results toward the null. Thus, the observed effect size of the associated risk of neural tube defects among women of First Nations descent was probably an underestimation, not the false-positive result that Delaney contends. Third, we have yet to see someone perform an adjustment for multiple comparisons in a single logistic regression analysis conducted on five levels (in our case, ethnicity). By analogy, if we had examined weight as the exposure, divided into quintiles, with the risk of neural tube defects as the outcome, we would not have adjusted for multiple comparisons as Delaney suggests. The reference that Delaney cites does not support this idea either.[2] Given that neural tube defects are becoming so rare in Canada[3] and that data on maternal ethnicity is not typically recorded in large databases, we are unsure if there will be another opportunity in the near future to address the question of ethnicity and risk of neural tube defects with greater statistical power or accuracy.

Fu-Lin Wang and colleagues correctly suggest that some Ontario First Nations women may not undergo maternal serum screening and are thus underrepresented in our study. They are incorrect, however, in stating that "[f]ailure to include all pregnant First Nations women ... in the denominator for a risk calculation ... could lead to overestimation of the risk for neural tube defects." Rather, our risk estimate was calculated as all women within a given ethnic group whose children had neural tube defects and who underwent maternal serum screening (the numerator) divided by all women within the same ethnic group who underwent maternal serum screening (the denominator), which provides a valid prevalence rate ratio for those women. Because Wang and colleagues' Alberta live-birth data on neural tube defects do not capture the 50% or more of affected pregnancies that end in termination, as they admit, they are much more likely to miss a large number of First Nations women who may undergo termination in the presence of a fetal neural tube defect. For now, our "premature" conclusions are based on the some of the best available data in Canada.

We agree with Vinita Dubey that ethnicity may simply be a confounder of neural tube defects, related to poor folic acid intake. Not only might estimating periconceptional use of folic acid tablets within a maternal serum screening program improve future research, but it could also help to focus on which women are not receiving supplements.[4]

Heather Dean and coauthors are right: all women of reproductive age with type 1 or type 2 diabetes mellitus should be taking a daily folic acid supplement if a future pregnancy — planned or unplanned — is possible. Observational data strongly support both this notion and the value of multidisciplinary preconception care among women with diabetes mellitus,[5] no matter where they live in Canada.

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Does the C in CME stand for "Continuing" or "Commercial"?

The commentaries on commercial sponsorship of continuing medical education (CME) by David Davis[1] and Bernard Marlow[2] contain good recom-