2011-07-21

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http://hdl.handle.net/2144/1437

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Participation in Self-Collection of Maternal and Infant DNA in a Case-Control Study on Clubfoot
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Background

- An essential component in undertaking genetic studies is getting DNA samples from participants.
- It can be especially challenging in large-scale epidemiologic studies to get participants to give their DNA samples.

Objective

- To examine whether rates of providing a DNA sample differed by sociodemographic factors or maternal smoking status.
- To assess the effect of changes in recruitment methods on participation.

Data

- From an ongoing population-based case-control study of clubfoot that began in 2007.
- Cases ascertained through birth defects registry in Massachusetts, New York and North Carolina. Controls come from either birth certificates or hospital medical records.
- Telephone interviews are conducted with mothers of cases and controls within 1 year after delivery.
- $20 compensation for completed interviews.

Methods

- 1st Method
  - Kits are mailed within 1 week after the interview.
  - $20 compensation for returned kits.
- 2nd Method
  - Added a card that emphasised altruism and the importance of the study.
  - Postcard reminders were sent out after the kit.
  - A systematic routine was implemented to ensure that each participant received follow-up calls to see if they had any questions or needed assistance completing the kits.
- 3rd Method
  - Added a $2 bill to the kit.

Results

- Of the 1666 study subjects interviewed:
  - 260 (59%) returned their kits.
  - 598 (49%) returned their kits.

Saliva Kit Returns by Maternal Age, Education and Income, According to Case/Control Status

Saliva Kit Returns by Maternal Race/Ethnicity and Interview Language, According to Case/Control Status

Saliva Kit Returns by Center and Smoking Status, According to Case/Control Status

Discussion

Saliva kit return rates were higher for cases than controls. Among case mothers, rates were highest for White or Hispanics, non-English speakers, ≥20 year olds, and those with family incomes > $60,000/year. Among mothers of controls, rates were highest for Whites and those with high school education and 30-39 years of age. Twenty percent more mothers provided saliva samples after implementation of motivating tools (altruistic card and $2 bill) and attentive follow-up.

Acknowledgement

We would like to thank Lisa Crowell RN and Mary Beth Pender RN (interviewers), Michelle Heinz (research assistant), Michael Bairos (computer programmer), collaborators at the NC, NY and MA birth defects registries, and the mothers who participated in this study.