

Family History of diabetes: Incorporating genomics data into the BRFSS

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Background and objectives: Given the increasing prevalence rate of diabetes, prevention of the disease among high-risk individuals could substantially reduce the burden of diabetes and its complications. Evidence has revealed that individuals with a family history of diabetes are at increased risk of developing diabetes themselves, and behavior changes are associated with a reduction in risk.

Methods: The authors used data from the 2005 Oregon Behavioral Risk Factor Surveillance System (BRFSS) (N=6560) to evaluate: the association between familial risk of diabetes and the development of diabetes, providers' use of family history information, perceived risk of developing diabetes, and the predictive power of family history as a potential screening tool for diabetes. Logistic regression was used to calculate adjusted odds ratios (ORs) and 95% confidence intervals (CIs).

Results: Individuals with a strong family history of diabetes (two or more first degree relatives with diabetes) were 4.7 times more likely (95% CI: 3.4, 6.6) to develop diabetes compared to individuals without a family history. Those with a positive family history of diabetes were more likely to report that their health care provider: collects family history information, discusses risk of developing diabetes, and makes recommendations to engage in lifestyle changes. People with a strong family history of diabetes were twice as likely (OR = 2.1, 95% CI: 1.7, 2.5) to be obese.

Discussion/Conclusion: Family history in addition to other risk factors (e.g. age, obesity) can help health care providers target high-risk patients in early detection and disease prevention efforts.