

# Using BRFSS to Collect Genomics Data

## Background

In 2003, the Centers for Disease Control and Prevention funded 4 public health state agencies to incorporate genomics into public health programs. One area of successful integration has been the addition of genomic and family history questions to the Behavioral Risk Factor Surveillance System (BRFSS) in the four states.

## Results

Topics addressed in state-based 2004 and 2005 BRFSS have included provider practices regarding family history, family history information of chronic diseases, perceived risk, and behavior change. Some of the same questions were asked by multiple states, which allows for pooling of data and comparing of estimates across states. Some of the questions were asked slightly differently (such as the definition of family history), which makes pooling the data more challenging.

## State Findings

### Michigan Department of Community Health

#### 2005 BRFSS

37% of adults have actively collected family health history information from their relatives for the purposes of developing a family health history.

66% of adults thought that family health history was very important to their personal health.

7% of adults had an immediate family member (parent, sibling or child) who had been told by a doctor or health care professional that they had colon or rectal cancer.

Of those, 56% made lifestyle changes after their family member was diagnosed with colon or rectal cancer to try and prevent themselves from getting the disease, such as changing their diet, exercising more, stopping smoking, or getting more routine medical tests.

7% of adults thought their chances of getting colon or rectal cancer in their lifetime are very high or high.

Of those without a family history, 67% of adults reported they would be very likely to make lifestyle changes to try and prevent themselves from getting the disease if they learned that they had a family history of colon or rectal cancer.



### Minnesota Department of Health

#### 2004 BRFSS

50% of adults had a family history of diabetes (any blood relative, such as grandparents, parents or their siblings, or brothers or sisters).

73% of adults with diabetes had a family history of diabetes.

72% of adults with pre-diabetes had a family history of diabetes.

49% of adults without diabetes had a family history of diabetes.



### Oregon Department of Human Services

#### 2005 BRFSS

30% of adults had a family history of diabetes (parent, brother or sister, or child related by blood, who has been diagnosed with diabetes by a health care provider – does not include diabetes during pregnancy)

84% of adults had a doctor, nurse, or other health care provider ask them about their family history of illnesses or health problems.

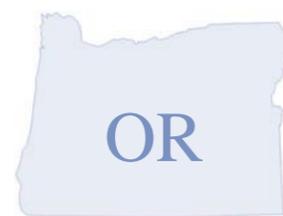
Of these, 72% had a health care provider ask them about their family history of diabetes.

28% of adults without diabetes had a health care provider discuss the chance of them getting diabetes.

37% of adults without diabetes had a health care provider recommend changes in diet or exercise to reduce their chances of getting diabetes or other illnesses like heart disease, stroke or cancer.

13% of adults without diabetes were either very worried or somewhat worried about getting diabetes in the future.

59% of those without diabetes made changes in their diet or exercise, to reduce their chances of getting diabetes or other diseases like heart disease, stroke, or cancer.



### Utah Department of Health

#### 2005 BRFSS

87% of adults reported that having a family history of a chronic disease (heart disease, stroke, diabetes or cancer) increases their risk of developing the disease.

73% of adults reported that diseases, such as heart disease, stroke, diabetes, or cancer tend to run in their family.

34% of adults had a doctor or other health care professional discuss their risk for certain diseases or other health problems based on their family history.

26% of adults had a doctor or health care professional make recommendations based on their family history

24% of adults would spend more than 30 minutes to complete a medical family history.



## Conclusions

Adding questions to public health surveillance systems demonstrates a concrete method of integrating genomics into public health programs. Data collected from the surveillance systems has identified focus areas and priorities for the states' genomics programs (e.g. provider education and identifying at risk populations using family history).

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