Public Health Genomics Surveillance: Using Alternative Data Sources
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Utah Youth Risk Behavior Survey:
The Youth Risk Behavior Survey (YRBS) is comprised of national and state school-based surveys of 9–12th grade Public high school students and is designed to monitor health risk behaviors among youth in the US. The YRBS is conducted every two years. The Chronic Disease Genomics Program (CDGP) developed four genomics questions for inclusion on the 2005 and 2007 Utah YRBS.

Utah Cancer Control Program:
An analysis of the Utah Cancer Control Program’s UC3P database was conducted by the CDGP to identify family history data sources:

1. Women’s Health Survey 2007:
   - Genetic information from women residing in Utah ages 18 to 70 reporting
     cancer and other health outcomes.
   - 1974 women with colon or breast cancer.

2. Enrollment forms:
   - Multiple tumor and examination forms are available,
   - Multiple healthy family history respondents.

Utah Population Database:
The Utah Population Database (UPDB) contains genotypical information on more than 15 million individuals through Utah birth and death, marriage, divorce, cancer and driver license records (Idaho cancer records also included). The CDGP formed a strong academic-practice relationship with genetic epidemiologists and researchers at the University of Utah and conducted an analysis of colorectal cancer and asthma data available in the UPDB.

Results:
- Pedigree analysis was conducted to determine the genetic disease load for the rate for those at risk for development of colon cancer and asthma due to family history.
- Of the 10,112 patients with diagnosis of colorectal cancer before age 40, the relative risk of first-degree relative was 3.85.
- Of 14,454 patients with asthma, the relative risk for first-degree relatives was 3.24.

Utah Chronic Disease Genomics Program

Percentage of Pediatric Patients With and Without Family History of Diabetes, 2003 (n=146)

Results:
Nearly three-fourths of the pediatric patients had a family history of diabetes.