

# Leadership in the Genomics Era: Utah's Experience

DHPE Conference 2005

“Because few in the current public health workforce have the level of understanding of genomics that is required today, major continuing education efforts must be undertaken to ready practicing public health professionals to use genomics effectively.”

Who Will Keep the Public Healthy? Educating Public Health Professionals in the 21st Century, IOM, 2003

## Purpose:

The Utah Department of Health Chronic Disease Genomics Program's goal was to prepare Utah's public health workforce for the “genomics era”. Objectives included identifying: 1) knowledge, attitudes and beliefs about genomics 2) barriers for integration of genomics and 3) educational needs and methods for delivery.

## Lessons Learned:

- Building awareness of genomics is an important first step
- Education must be directly applicable to current program activities or services
- Education should be disease-specific
- Family history may be a good starting point to generate interest about genomics
- Use a variety of teaching methods

**Target Audience:** Employees of the Utah Department of Health, Bureaus of Health Promotion and Maternal and Child Health

**Methods Used:** Face-to-face interviews were conducted with program managers in December 2003. Written surveys with their staff were conducted during program staff meetings in January 2004.

## Results (more on back):

- 111 employees participated in the assessment
- 444 professionals have received training in genomics (as of April 2005)
- The workforce currently views genomics as a low priority and doesn't understand its applicability to public health. However, most predict genomics will become increasingly important to public health in the next 5-10 years.

**Questions?** Visit <http://health.utah.gov/genomics> or contact Jenny Johnson, BS, CHES at 801-538-9416 (phone) or [jennyjohnson@utah.gov](mailto:jennyjohnson@utah.gov).

## Selected Survey Questions and Responses (111 respondents)

1. Currently how important is genomics in... a. Your program activities and services? b. Chronic disease prevention and promotion? c. Public health research? d. Public health policy?	a. Only 9% answered Very Important, 15% Somewhat Important, 25% Important, 7% Not Important, and 23% Don't Know b. 36% answered VI, 23% SI, 24% I, 2% NI, 14% DK c. 43% answered VI, 22% SI, 23% I, 2% NI, 16% DK d. 20% answered VI, 35% SI, 16% I, 9% NI, 17% DK
2. Over the next five years, how important will genomics be in... a. Your program activities and services? b. Chronic disease prevention and promotion? c. Public health research? d. Public health policy?	a. 14% answered Very Important, 25% Somewhat Important, 23% Important, 14% Not Important, and 25% Don't Know b. 41% answered VI, 20% SI, 21% I, 0% NI, 18% DK c. 48% answered VI, 18% SI, 15% I, 1% NI, 18% DK d. 29% answered VI, 23% SI, 17% I, 5% NI, 23% DK
3. What areas of genomics interest you personally?	<b>Top interests:</b> 1) Personal family history of specific diseases 2) Risk assessments and screenings for specific diseases and 3) Genetic background of specific diseases
4. What past education and/or training have you received in genomics/genetics?	<b>62% None</b> , 6% A little, 19% Schooling (high school and college levels), and 11% Prior experience
5. How would you describe your knowledge on recent advances in genomics/genetics?	2% Very knowledgeable, 14% Somewhat knowledgeable, <b>43% A little knowledgeable</b> , and 25% Not at all knowledgeable
6. What areas do you feel you need additional education or training in...?	<b>Top education needs:</b> 1) Understanding the applicability of genomics to public health 2) Understanding basic genetic concepts 3) Ethical issues and 4) Genetic testing uses
7. Where would you seek information on genomics that was relevant to your program's activities?	<b>Top sources:</b> 1) Internet 2) Journals and scientific literature and 3) Professional organizations
9. What types of training resources would be most helpful for you to begin integrating genomics-related activities into your program?	<b>Top resources:</b> 1) Summaries of the genetics of common diseases applicable to your program 2) Literature reviews of current research on genetics and your program and 3) Chronic Disease Genomics Program website
10. What types of educational opportunities would you participate in to receive additional training/experience in genomics?	<b>Top educational opportunities:</b> 1) Session at a conference or workshop 2) Web-based resources and 3) self study courses and videotapes
11. What factors would increase the likelihood of you participating in a genomics-related event?	<b>Top factors to increase participation:</b> 1) Specific topic of interest being covered 2) Convenient time and 3) Nearby location
12. What is the best way to inform you of genomic information and educational opportunities?	<b>Top methods:</b> 1) Email or list servs 2) Fact sheets and 3) Brochures, flyers or direct mailings

### Resources:

- Piper MA, Lindenmayer JM, Lengerich EJ, Pass KA, Brown WB, Crowder WB, Khoury MJ, Baker TG, Lloyd-Puryear MA, Bryan JL. The Role of State Public Health Agencies in Genetics and Disease Prevention: Results of a National Survey. Public Health Rep 2001; 116(1):22-31.
- Association of State and Territorial Health Officials. Framework for Public Health Genetics Policies and Practices in State and Local Health Agencies.
- Oregon Department of Human Services. Genetics and Public Health in Oregon: A Summary of Assessment Methods and Findings.
- North Carolina Department of Health and Human Services Division of Public Health Office of Genomics. State-Wide Needs Assessment for a Comprehensive Genetics Plan. 2003. Available at <http://www.sph.unc.edu/ncegph/assessment.pdf>.
- Centers for Disease Control and Prevention Genomic Competencies <http://www.cdc.gov/genomics/training/competencies/default.htm>
- National Coalition for Health Professional Education in Genetics <http://www.nchpeg.org/>