

Cancer Genomics for Public Health: Increasing Genomic Competency and Confidence in the Public Health Workforce

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Background and objectives: With the advent of the genomics era, public health professionals need to be aware of the role genomics plays in their program area. The Centers for Disease Control and Prevention (CDC) is promoting genomic competency for public health professionals. In 2003, the Michigan Department of Community Health (MDCH) Genomics Program and the University of Michigan Center for Public Health and Community Genomics (CPHCG) delivered an educational lecture series, entitled "Six Weeks to Genomics Awareness". After participating in the workshop sessions, Cancer Section staff identified the need for further genomics education with a cancer focus. Objectives for the cancer genomics training were:

1. To increase cancer genomics knowledge, interest, and perception of relevance among public health providers in cancer control
2. To facilitate integration of cancer genomics into public health practice, programming, policy and services
3. To foster a collaborative process between public health and genomics experts

Methods: A planning committee, comprised of MDCH staff and consultants from CPHCG, collaborated to develop a series of cancer genomic educational modules, entitled "Cancer Genomics for Public Health". A needs assessment was first completed by all Cancer Section staff, and was used to guide the course content.

Results: "Cancer Genomics for Public Health" consisted of six modules, with eleven hours of content and practical application exercises, presented over a six week time span in the Spring of 2005. The focus was on the five cancers (breast, colon, lung, prostate and cervical) addressed by the MDCH Cancer Prevention and Control Program. Each session was attended by approximately 60 invited guests. The modules were presented by twelve speakers with expertise covering different facets of cancer genetics. A pre-test was given at the beginning of the training. At each session, the audience brainstormed about implications for, and application to, public health cancer programs, policies, and services. Cancer program staff developed a Cancer Genomics Action Plan at the last session. Post-tests were given after each of the six modules and at the completion of the course to measure perceptions of knowledge, relevance and confidence. Long-term evaluation was conducted one year following the course to assess how well the plan was implemented, barriers to implementation, as well as the sustainability of genomics integration within cancer programming. Analysis of the evaluation data showed an increase in knowledge, relevance and confidence in cancer genomics immediately after the sessions as well as one year later. Curiously, interest in cancer genomics declined slightly during this time. More specific data will be presented in the poster.

Discussion/Conclusion: The MDCH Cancer Section, Genomics Program, and CPHCG worked together to create, present and evaluate "Cancer Genomics for Public Health". This is a model of an innovative process to increase genomic competency among public health professionals. Modification of the cancer genomics modules for dissemination to a wider audience is currently underway.