

# Alumni apply UNC training to “real world” problems at National Cancer Institute

When Deborah Winn, PhD, began her public health graduate studies in epidemiology, she had not yet identified a research area that inspired her.

“I was a graduate student shopping around for a dissertation topic,” says the 1980 University of North Carolina at Chapel Hill alumna.

When leading cancer epidemiologists at the National Cancer Institute told Winn about a “huge pocket of high mortality rates from oral cancer in the southeastern United States, especially among women,” she was intrigued enough to pursue the problem.

Finding a significant association between smokeless tobacco and oral cancer, Winn’s dissertation led to product labeling of smokeless tobacco products and put her on the path to becoming one of the nation’s top cancer epidemiologists.

Now deputy director of the Division of Cancer Control and Population Sciences (DCCPS) at NCI, Winn works to direct funding and initiatives to the most promising areas of research.

“Understanding cancer epidemiology helps me figure out where the research gaps are and where the research community needs to go,” Winn says. “It also gives me a framework to help move new findings about cancer risk factors to the next step – to inform intervention research to reduce the burden of cancer in populations.”

She and two of her colleagues in the division credit their education at UNC’s Gillings School of Global Public Health with giving them the tools they need to make an impact on cancer-control planning in the United States and around the world.

“Because of my training in the Department of Biostatistics, we bring advanced and sophisticated statistical techniques to the way

in which we measure and report data,” says Brenda K. Edwards, PhD, associate director of the Surveillance Research Program within DCCPS and 1975 graduate of the School’s biostatistics department.

Edwards’ program collects and analyzes data about cancer incidence rate, prevalence, survival rate, treatment methods, risk factors, screening exams and other measurable factors. “We try to figure out who gets cancer and what happens to them,” she says.

Eric J. “Rocky” Feuer, PhD, chief of the Statistical Research and Applications Branch of the Surveillance Research Program and also a biostatistics alumnus (1983), says the approach his professors took in analyzing data laid the foundation for his own desire to make the presentation and analysis of population-based cancer statistics more rigorous, more interesting and less confusing – so that it can make a difference in setting national priorities for the control of cancer.

“The emphasis was on developing methods that are intuitive and help clearly bring out the essence of what the data are trying to tell us,” says Feuer.

His branch supports the use of simulation modeling – synthesizing information over the course of someone’s entire life.

“We help paint a quantitative picture, characterize the issue and articulate it to policy makers,” Edwards says. For example, when the data showed a decline in breast cancer mortality rates in the 1990s, the program’s model showed that about half of the decline was due to mammography, other early detection protocols and effective treatment.



UNC public health alumni (left to right) Drs. Brenda Edwards, Deborah Winn and Eric “Rocky” Feuer

One of the challenges Edwards’ program faces is finding strong researchers like Feuer. “We were trained at UNC in an applied arena,” she states, “and it’s hard to find individuals with interdisciplinary experience and with an interest in both statistical methods and applications. Our strongest people can apply what they know to real-world, messy problems.”

“The real world is broad and messy. It changes rapidly due to social, political and economic influences,” adds Barbara K. Rimer, DrPH, dean of the School and first director of the DCCPS. “Whether developing cancer initiatives or measuring and reporting data in innovative ways, these three alumni are doing exemplary work in leading advances in the control of cancer at the national and global levels. We are proud that they represent our School. Each of them has not only made important scientific contributions, they also have fostered major research and proactive innovations at the national level.” ■

– By Chris Perry