My research interests lie broadly in applied microeconomics and specifically in the economics of health and information. My recent work, and work that I plan to continue, can be divided along two main paths. First, my research explores individual decision making in the context of health and health care markets. I am interested in the dynamics of health decisions over time and the roles that information asymmetries may play in such decisions. I am currently studying how the receipt of information, health-related or otherwise, and the resolution or lessening of uncertainty may influence individual behavior. The second path of my research focuses on empirical methodology. I am interested in the estimation of dynamic discrete choice models that are derived from theoretical models of choice. Given sufficient data, this structural approach allows the researcher to estimate the primitive parameters that describe individual preferences, expectations, and constraints. Additionally, in both a structural and reduced-form sense, I study the modeling of unobserved heterogeneity in microeconomic models. I am specifically interested in the application of less-parametric models of unobserved heterogeneity such as the discrete factor method for random effects.

My dissertation research encompasses the above interests. That research specifically models the decision to smoke cigarettes in a dynamic discrete choice framework that incorporates learning about the idiosyncratic health effects of smoking. In each period of the model, individuals make the smoking choice after undergoing a health examination. Over time, individuals learn about their own health risks from their smoking decisions in a Bayesian fashion. I estimate the model and recover the structural parameters that dictate smoking choice behavior and health transition realizations by fitting the model to data from the Framingham Heart Survey. These data follow individuals for over thirty years and thus allow for the examination of behavior at various points in the life course. Unobserved individual heterogeneity in the model is modeled using a step-function approach that approximates the heterogeneity distribution. Estimates of the model suggest that indeed there exists variation across individuals in the effects of smoking on health. Furthermore, upon smoking, the estimated parameters suggest a positive reinforcement effect and a negative withdrawal effect, both of which encourage
future smoking.
   Examples of other works in progress within the same line of dynamic health behavior research include:

   • “The Impacts of Elderly Parent Health Shocks on the Smoking Decisions of the Near-Elderly” (with Donna Gilleskie). We characterize the impact of elderly parent health shocks as a source of information for the near-elderly in their smoking decisions. Do near-elderly smokers view parental health shocks, smoking related or otherwise, as foreshadowing of the future consequences of their habit? We argue that, given the genetic link between parents and children, parental health shocks may better inform as to the ill-health effects of smoking than health shocks to others (friends, spouse, etc.). If parental smoking-related health shocks have no casual impact on the smoking decisions of middle-aged offspring, then we may question the effectiveness of even more general forms of health information (e.g., warning labels, scary commercials, etc.) in curtailing smoking.

   • “The Effects of Economic and Environmental Factors on the Body Mass of Young Children: A Nationwide Study” (with Mai Hubbard). Using United States nationally representative longitudinal data, merged with fine geographic attributes data, this research attempts to characterize the economic and environmental influences on child body mass. We include the dynamic considerations of childhood obesity as well as the interrelated nature of many obesity determinants.

   • “Medicare Advantage Plan Quality Reporting: The Relationship Between Subjective and Objective Measures of Quality”. How elderly consumers of health care learn about quality and, following learning, select a form of Medicare should be of interest to policy makers. Indeed, governments release quality “report cards” on numerous topics in an attempt to educate the public and alleviate information asymmetries. Using data on Medicare enrollees and Medicare Advantage plan quality scores, I have a study that enters the debate by investigating the correlation between subjective and objective measures of insurance plan quality. These scores were distributed to all Medicare enrollees in the publication “Medicare and You” in 2000. Preliminary findings suggest almost no correlation or a slight negative correlation between subjective and objective measures of insurance plan quality. Furthermore, Medicare enrollees appear to respond to objective reports of quality only in areas with higher than average levels of educational attainment. Finally, the value of information, as measured by the variation in quality scores with a market area, appears to be increasing over time.

   • “Alcohol Addiction and Preferences for Temptation and Self-Control” (with Arnie Aldridge).
Finally, in collaboration with colleagues at the Center for Environmental and Resource Economic Policy at North Carolina State University, our 2006 paper “Adjusting to Natural Disasters” examines the determinants of housing responses to the (at that time) largest natural disaster in United States history: Hurricane Andrew (Smith et al., 2006). We find that housing responses to this large natural disaster can overwhelmingly be attributed to households’ economic capacity.