Informed public policy discussions related to reforming complex systems requires detailed analysis. This presentation will discuss the construction of models used to assess the impact of the Affordable Care Act (ACA) as well as specific analysis related to the expansion of Medicaid eligibility. Because the ACA was more than a small perturbation of existing health insurance policy, intricate models are required to understand the implications for individuals, firms, insurance providers, and both the federal and state governments. RAND has developed an agent-based model to study the implications of health care reform and has continued to develop the model as the implementation of health care reform evolves. The analysis expansion of the Medicaid program as part of the ACA shows how mathematical modeling can meaningfully inform public policy decisions. Issues related to modeling, implementation, and presentation of the ACA will be discussed. (Received September 20, 2015)