More than half of all deaths in the United States occur in hospitals, and half of in-hospital deaths occur in the intensive care unit, with the vast majority in patients over age 65. Despite the fact that cardiopulmonary resuscitation (CPR) was developed for specific groups of patients (those with acute myocardial infarction or with cardiac arrest in the operating room), this procedure has become default for all hospitalized patients unless a do not resuscitate order is written. Discussing end-of-life treatment preferences for in-hospital CPR with geriatric patients and their families is important so that decisions can be made about life-sustaining therapies, and it is crucial to provide accurate information on outcomes after CPR. However, data describing these outcomes are largely limited to studies examining hospital discharge survival in very small series of patients. There are few studies investigating clinical outcomes after in-hospital CPR in subgroups of patients with chronic diseases such as congestive heart failure, chronic obstructive pulmonary disease, chronic renal failure, and cancer. Additionally, there is little information about long-term survival after in-hospital CPR.

Using 10 years of national inpatient Medicare data generating a sample of over 300,000 cases of in-hospital CPR, we plan to conduct large epidemiologic investigations to try to answer some of these basic questions about outcomes. In the first aim, we will determine the incidence of in-hospital CPR in the Medicare population, examine hospital discharge survival in patients subgrouped by chronic illnesses, and compare this survival to all older patients receiving in-hospital CPR. Aim two will focus on determining long-term survival in all patients receiving CPR and in these same subgroups. And in aim three, we will investigate resource utilization after in-hospital CPR, again in all patients and in those with chronic illnesses. We hypothesize that survival to hospital discharge in older adults with chronic illnesses will be substantially lower than for all patients receiving CPR (historically approximately 15 percent) and that long-term survival one and two years after the CPR event will be less than five percent.

The ASP-CHEST Foundation of the American College of Chest Physicians Geriatric Development Research Award will provide invaluable support as I begin to answer these important questions and embark on developing into an independent investigator. In addition to continuing the pursuit of a PhD in epidemiology, the award will allow me the opportunity to educate and interact with internists, subspecialists in geriatric care, and trainees through educational initiatives and through participation in grand rounds, teaching conferences, and palliative care rounds. I fully expect that the data gathered from these research projects will lead to further grant applications. With the support of this award and the guidance of my mentoring committee (J. Randall Curtis, MD, Wayne C. McCormick, MD, Kenneth P. Steinberg, MD, and Richard A. Deyo, MD), I hope to further our knowledge of life-sustaining therapies as a step toward improving care of the geriatric population.