

# CHEST FOUNDATION OF THE AMERICAN COLLEGE OF CHEST PHYSICIANS—HARTFORD—ASP GERIATRIC DEVELOPMENT INITIATIVE (GDI) AWARD

## *Award Recipient:*



MARGARET PISANI, MD  
YALE UNIVERSITY SCHOOL OF MEDICINE

### PROJECT:

THE CONTRIBUTION OF PSYCHOACTIVE DRUG USE IN POOR OUTCOMES IN OLDER ICU PATIENTS

### MENTORSHIP TEAM:

E. WESLEY ELY, MD	SHARON INOUYE, MD
GUISEPPI PIZZORNO, MD	CARRIE REDLICH, MD
MARY E. TINETTI, MD	

Psychoactive drugs represent a leading iatrogenic contributor to poor outcomes in hospitalized older patients. The elderly constitute an increasing proportion of patients in intensive care units (ICUs). In the United States, patients aged 65 and older currently comprise 42 to 52 percent of ICU admissions, and this number is likely to rise in the future. Older patients have a greater likelihood of having sensory, functional, and cognitive impairments that can compound alterations in health and functioning during critical illness. An accurate assessment of how critical illness and the treatment and interventions involved in the ICU impact outcomes of older patients is greatly needed. To explore this area, I have designed a study to examine modifiable risk factors for poor outcomes in older ICU patients, specifically focusing on the use of sedative-hypnotic, narcotic, anticholinergic, and other psychoactive drugs.

The specific objectives of my T. Franklin Williams Scholars award are:

1. To identify baseline cognitive, psychological, physical, social, and medical (e.g., severity of illness, underlying diseases) factors related to adverse ICU outcomes—including lasting cognitive and physical functional decline, mortality, and institutionalization. The hypothesis is that the greater the number and severity of baseline predisposing factors present, the greater the risk of poor ICU outcomes.
2. To examine the contribution of the use of sedative-hypnotic, narcotic, anticholinergic, and other psychoactive drugs to adverse ICU outcomes. The following primary outcomes will be examined: a) persistent cognitive impairment; b) length of ICU stay; and c) institutionalization. The hypothesis is that psychoactive drug use will contribute independently to adverse ICU outcomes in older patients.

3. To examine the interrelationship between preexisting risk factors (e.g., preexisting cognitive impairment, functional impairment, and medical comorbidities) and sedative-hypnotic, narcotic, anticholinergic, and other psychoactive drugs on adverse ICU outcomes among older ICU patients. The hypothesis is that psychoactive drug use will exert greater adverse impact on older patients with preexisting cognitive impairment, functional impairment, or medical co-morbidities.

The major career objectives of the T. Franklin Williams Scholar Award are to allow me to further develop my research skills under the mentorship of Sharon Inouye, MD, and my research team and to design and conduct studies aimed at improving independence and outcomes in older persons in the ICU setting. Under the mentorship of Dr. Inouye, I am receiving training in the evaluation of patients with delirium and dementia. I am also receiving continued research training through courses on research methods and approaches in the Investigative Medicine Program at Yale University School of Medicine.

My long-term goals are to have a career as a successful independent academic investigator in pulmonary-critical care medicine with a focus on aging research, specifically improving outcomes and processes of care for older persons through a multifactorial and multidisciplinary approach involving patients, physicians, nurses, and families. I plan to conduct ongoing studies that apply rigorous clinical epidemiologic and clinical trial methods to address the complex multifactorial health conditions of older patients in the ICU, particularly examining risk factors, prognosis, and management strategies for improving ICU care.

