

ASP-CHEST FOUNDATION OF THE AMERICAN COLLEGE OF CHEST PHYSICIANS GERIATRIC DEVELOPMENT RESEARCH AWARD



AWARD RECIPIENT

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PROJECT

“AGING AND CRITICAL ILLNESS IN HIV INFECTED PATIENTS”

MENTORSHIP TEAM

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With the advent of highly-active antiretroviral therapy (HAART), HIV positive (HIV+) patients are living longer. Based on recent models and survival patterns, the average HIV+ patient is expected to live into their seventh decade. It is estimated that older HIV+ adults, defined as patients 50 years and older, comprised 25% of the HIV+ population in 2007. Some studies suggest older patients with HIV have higher mortality rates due to the faster progression of AIDS. However, most of these observations were made before the introduction of HAART.

As HIV+ patients live longer, the frequency of non-infectious complications and co-morbid illnesses has increased. Chronic medical diseases, such as chronic pulmonary disease, cardiovascular disease, and liver disease, are more prevalent among HIV+ patients. In addition, these conditions may progress more rapidly and present at earlier ages in HIV+ individuals compared to HIV negative (HIV-) individuals. These findings support the hypothesis that HIV infection results in advanced physiologic aging and progressive frailty of HIV+ patients.

The impact of aging on the development of critical illness and outcomes from intensive care unit (ICU) admission in HIV+ patients has not been investigated. With the success of HAART, the prevalence of HIV in older adults is increasing; and older HIV+ patients may be more likely to develop critical illness from general medical illness rather than from opportunistic infections. While respiratory failure remains the most common indication for ICU admission in HIV+ patients, studies suggest that ICU diagnoses have shifted to non-AIDS defining diseases including obstructive lung disease exacerbations, sepsis, and end-stage liver disease.

There has been little consideration of non-AIDS associated chronic diseases related to premature aging in HIV+ patients, such as chronic obstructive pulmonary disease, and the impact of these diseases on ICU utilization and outcomes. No studies have compared differences in functional status as a risk factor for ICU admission and poor outcomes after an ICU admission. Describing these issues for older, critically ill, HIV+ patients has been an uninvestigated area in clinical ICU research. This study will use the prospectively assembled Veterans Aging Cohort Study of nearly 3,500 HIV+ and nearly 3,500 HIV- patients, enrolled at eight different Veterans Affairs Medical Centers across the United States.

The specific aims for this project are to:

1. Determine risk factors for ICU admission in HIV+ patients.
2. Compare indications for ICU admission in older to younger HIV+ patients.
3. Determine risk factors for poor outcomes following ICU admission in HIV+ patients.

Support from the ASP-CHEST Foundation of the American College of Chest Physicians Geriatric Career Development Award will add important information regarding ICU care for an aging HIV+ population, providing a basis for future studies aimed at improving ICU-related outcomes. In addition, valuable information will be gained regarding prognosis and outcomes of older HIV+ patients. This information will be useful for medical care-givers addressing quality of life expectations after ICU care, and will inform discussions between older HIV+ patients and their care-givers regarding end-of-life decision-making. This award will provide me with the necessary training, mentorship, and protected time needed to study these issues in older critically ill HIV+ patients, and it will lay a solid foundation from which to build a career as a clinical research scientist.