OBJECTIVE: The project will compare available diagnosis-based and function-based risk-adjustment measures and then develop comprehensive risk-adjustment models, incorporating both diagnosis and function, for three stroke rehabilitation outcomes.

METHODOLOGY: The proposed study is a secondary analysis of VA administrative data looking prospectively at outcomes for patients who have been hospitalized for stroke. The analyses will use a recently validated database called the Integrated Stroke Outcomes Database (ISOD). This database incorporates longitudinal inpatient, outpatient, and medical rehabilitation information on stroke patients from a variety of sources within the Veterans Affairs (VA). We will use the ISOD to undertake a thorough analysis of how well the leading diagnosis- and function-based risk-adjustment methods predict three important rehabilitation outcomes pertinent to stroke patients: discharge functional status, 3- and 6-month rehospitalization, and 3- and 6-month mortality. Multivariate regression models will be built using each of the diagnosis-and functional-based measures and measures of fit will be compared to assess which measure has the best predictive capability for each of the three outcomes. The measure that accounts for the most variance in the rehabilitation outcome (discharge functional status, rehospitalization, and mortality) will be used as a foundation for building a comprehensive risk-adjustment model that incorporates both diagnostic and functional information.

RESULTS: Preliminary results include: (1) a length of stay frequency distribution in ISOD indicating that nearly 85% of rehabilitation patients had 3 to 39 days of care; (2) for discharge functional status (2,474 records), we identified a mean mfs score increase of 1.12/day between the admission and discharge assessment dates during a rehabilitation stay; (3) mortality (2,545 records) at 3-months was 9.9% and at 6-months it was 12.5% after using the BIRLS and PTF databases; and (4) the rehospitalization at 3- and 6-months (2,545 records), we identified 5 groups of patients with assessments prior (1 group) and after admission (4 groups) to an acute or long-term care unit, also 67% of admission assessments were performed in acute care units and over 45% of patients had an assessment upon admission to either an acute or long-term care unit.

IMPACT: The VA has a strong interest in providing rehabilitation care for stroke patients (O'Donnell, 1997). To date, the risk-adjustment literature has focused on rehabilitation outcomes at or close to discharge. However, in order to assess the quality of rehabilitation care provided to stroke patients, it is important to examine a range of outcomes, which include long-term outcomes, such as mortality and rehospitalization.