OBJECTIVE: To develop two comorbidity indexes constructed from the Minimum Dataset (MDS) disease information predictive of 18-month mortality and >2 hospitalizations in a prevalence cohort of 1424 white, female nursing-home residents that could be used as part of a risk adjustment method for quality-of-care outcomes.

METHODS: A split-sample approach was taken for development and cross-validation of the indexes. Multivariate logistic regression techniques were employed to identify the MDS diseases most likely to predict each outcome after controlling for age in the development sample. Weights equal to the parameter estimates were assigned to each disease retained in the multivariate model to create a single comorbidity index variable for each outcome. Using the validation samples, the predictive validity of the MDS-based comorbidity indexes was determined and compared to other measures of comorbidity (Charlson Index [ChI], Chronic Disease Score [CDS], count of diseases) as well as to Morris’ activities of daily living (ADL) index for each outcome.

RESULTS: The MDS-based mortality index included weighted variables for atherosclerotic heart disease (ASHD), dysrhythmias, congestive heart failure (CHF), respiratory disease and depression and had a c-statistic of 0.62 in the development sample, and 0.60 in both validation samples. Similar c-statistics were found for the comparison of comorbidity and functional status measures. The c-statistics for the MDS-based hospitalization index (with weighted variables for hemiplegia, glaucoma, peripheral vascular disease [PVD], CHF, diabetes and hypertension) were 0.66 and 0.59 for the development sample and validation sample respectively and were similar to those found for the other measures.

CONCLUSIONS: Presence or absence of diseases measured at baseline are weakly predictive of subsequent hospitalization or mortality in this cohort. Additional patient risk factors such as disease severity, or change in functional status should be investigated in future research aimed at defining risk adjustment methods in this population.

TRANSITION IN HEALTH-RELATED QUALITY OF LIFE IN U.S. ELDERLY
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OBJECTIVE: Health-related quality of life (HRQOLs) are important health-status indicators. The longitudinal aspect of transitions in HRQOL is not well known. This study examines how HRQOL changes over time using a Markov probability model.

METHOD: We analyzed 10,492 elderly persons aged 65 years or older and followed from 1991 to 1994 in MCBS, a nationally representative sample of the US elderly population. We measured HRQOL by global health perception, Katz Index of Activities of Daily Living (ADL), and Instrumental Activities of Daily Living (IADL). We estimated the probability of transition from one state of HRQOL to another using a Markov probability model. We investigated the transition matrix of HRQOL by incorporating the competing risk of death and socio-demographic variables including age, race, gender and the interaction terms among them.

RESULTS: Including death as a worst outcome, 1411 persons (13%) had a steady deterioration in global health perception in the four-year time period. One thousand one hundred six (1106) (11%) had steady improvement of health perception, 1047 (10%) had a constant state, and 6928 (66%) experienced fluctuations in health perception. Similar patterns were found in ADL and IADL measures. The transition probabilities for a female with a base age of 70 indicated that one had 34% to 44% chance of remaining in the same state of general health, while the probability steadily decreases as the health perception decreases. A male aged 70 years has a probability of 32% to 53% to remain at the same state. As HRQOL decreases by one unit, the probability of death increases steadily from less than 1% to 12% for a female and from 5% to 21% for a male across all HRQOL measures.

CONCLUSION: The study shows the patterns in transition of HRQOL in the elderly population. The probabilities of transition in three measures of HRQOL are generally consistent and interpretable.

TRENDS IN POPULATION-BASED HEALTH-RELATED QUALITY OF LIFE: IMPLICATIONS FOR INTERPRETATION OF CHANGE
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OBJECTIVES: This analysis presents trends in the health-related quality of life of the US population from 1984 to 1994 and examines the hypothesis that fluctuations in population health levels are related to changes in economic status.

METHODS: Data on health status and quality of life as well as personal and household characteristics are from the US National Health Interview Survey and the US Vital and Health Statistics System. To examine the relationship between health and economic well being, these data are linked to economic data, including medical care inputs.

RESULTS: Health-related quality of life and quality-adjusted life years rose from 1984 to 1990 and declined after this period. Specifically, for the total population, quality-adjusted life years rose from 63.4 in 1984 to 64.5 years in 1990 and declined to 64.0 in 1994. Similar patterns were observed across genders and ethnic subgroups. The changes in quality of life and mortality coincided with periods of economic growth and recession over the same interval. Regression analyses indicate that per capita income levels and unemployment rates are important...