Risk assessment and intervention programs that target treated but uncontrolled hypertensives can be expected to yield substantial economic benefits in addition to preventing cardiovascular morbidity and mortality.

**ASSESSING THE BURDEN OF ILLNESS IN ELDERLY VERSUS YOUNGER ACUTE CORONARY SYNDROME PATIENTS**

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**OBJECTIVES:** To compare the long-term clinical and economic outcomes of elderly (75 years) versus younger acute coronary syndrome patients. **METHODS:** We used the Duke Cardiovascular Databank to identify patients with a recent (<6 weeks) myocardial infarction or unstable angina, index cardiac cath between 1986 and 1997, significant coronary artery disease (CAD), and no previous cardiac procedures. Follow-up extended through 1998. We modeled clinical events (death, MI, coronary artery bypass graft surgery (CABG), percutaneous coronary intervention (PCI), and other rehospitalizations) to 12 years for pts with censored follow-up. We modeled inpatient and outpatient medical costs for all patients using inpatient costs from the GUSTO IIb clinical trial and other secondary data sources. **RESULTS:** Elderly (n = 1401) vs. younger (n = 8475) patients were more likely female (58% vs. 32%) and non-smokers (41% vs. 69%), had greater history of congestive heart failure (25% vs. 14%) and cerebral vascular disease (17% vs. 9%), less single vessel disease (30% vs. 46%) and more three vessel disease (43% vs. 26%), and greater 30-day mortality (9.8% vs. 3.2%). While median 12-year medical costs were greater for younger ($57,475) than for elderly ($3,431) patients, mean survival was less for elderly patients (6.4 vs. 9.3 years) yielding greater costs per year of survival ($8075 vs. $6037) for the elderly. **CONCLUSIONS:** CAD patients undergoing an initial cardiac cath after age 75 represent a high-risk group undetected by current CAD screening algorithms. These findings point to the need for improved screening tools and disease management strategies in high-risk, pre-CAD populations.

**INCIDENCE, UTILIZATION OF HEALTH CARE AND COSTS OF STROKE**

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**OBJECTIVES:** Stroke is the third leading cause of death and a leading cause of disability. We determined incidence, and total direct costs of stroke by stroke type, age group, gender and race. **METHODS:** We used an incidence approach and aggregate national data sources to determine 1998 US direct medical cost of stroke from a societal perspective. We modeled the disease from first hospitalization to end of first year. A sensitivity analysis varied prevalence and utilization of each cost factor around a base case. **RESULTS:** The incidence of first stroke is 232/100,000 population of which 82% are ischemic strokes. The total annual costs of a first time stroke are $25.2 billion. The first hospitalization accounts for 20% of costs but all hospitalizations together in the first year account for the highest proportion of costs (65%, $15.9 billion). Those with subarachnoid hemorrhagic stroke ($18,461) had first hospitalization costs per stay more than three times higher than ischemic stroke ($5,417) and more than two times higher than intracerebral hemorrhagic stroke ($7,709). Also high are costs for chronic disability care, which are $5.5 billion, primarily home care ($3.9 billion). Sensitivity analysis showed a maximum variation in cost from $15.8 to $35.8 billion when varying incidence estimates. **CONCLUSION:** The societal cost burden is quite high and caused primarily by disability factors. Although ischemic stroke accounts for the highest total costs due to its higher incidence, subarachnoid hemorrhagic stroke accounts for more deaths and much higher first hospitalization costs. This study demonstrates a high combined acute and chronic care burden for stroke patients.

**THE IMPACT OF SECONDARY EVENTS ON THE COST OF ACUTE MYOCARDIAL INFARCTION**

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**OBJECTIVES:** The importance of subsequent events on health care costs following acute myocardial infarction (AMI). **METHODS:** Patients with AMI (first admission = index) were identified from Massachusetts (MA) 1996/1997 patient-level discharge databases. Secondary events (i.e., AMI, angina, CABG, PTCA, coronary angiography, ischemic stroke, TIA, other related cardiovascular conditions) occurring within 12 months were assessed in terms of hospital costs, length of stay, discharge disposition and post-acute care costs. These data were supplemented by five additional state databases, fee schedules, other agency and survey data, and the literature. All costs are reported in 1998 US dollars adjusted for medical inflation and cost-to-charge ratios. Log transformation was used to address highly skewed distributions. **RESULTS:** Of the 8,037 MA AMI patients, 86% were discharged alive, and 54% of them were readmitted for another event, 49% more than once. Of those readmitted, 8.9% were hospitalized for a second AMI, 1.4% for a stroke. A second AMI increases the use of post-discharge formal health care services (e.g., skilled nursing facility, rehabilitation, home health care) by 19% and a stroke by 32%.