**EXAMINING VARIATIONS IN STROKE RISK FACTORS AND HOSPITAL COST BY AGE AND GENDER IN CALIFORNIA**

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**Objectives**: We examine variations in stroke risk factors and hospital costs among young, mid-age, and elderly patients by gender.

**Methods:**Discharged patients (aged 20+) from 2010 California hospital discharge data system (HDDS) were examined with a primary diagnosis of stroke (ICD-9 code 430-438; n=9,770; average age 76; females 52%) along with their demographics, co-morbidities, and hospital costs. Risk factors and hospital costs were examined by gender for three age groups: 20-50 years, 51-64, and 65+ years old.

**Results:** Prevalence of stroke increased with increasing age from 5.5% among 20-50 to 14.2% among 51-64, to 80.3% among the elderly. Stroke prevalence was significantly higher among males in the younger and mid-age groups, while it was higher among females in the elderly group (85.1% vs. 75.1%). Risk factors across all three age groups included hypertension, dyslipidemia, coronary heart disease, and atrial fibrillation. Further, diabetes mellitus emerged as a risk factor only for the elderly females. Finally, the average hospital cost per stroke patient for the entire year was $ $142,020. The cost was higher for males than females ($151,360 vs. $133,390, p<.001), and higher among younger patients (p<.001) compared to mid-age and elderly patients ($214,240 vs. $177,200 vs. $130,860). These high cost among males and younger patients were largely due to multiple re-admissions and longer hospitalization.

**Conclusion:** Stroke is more prevalent among males in the younger and mid-age while it is higher among elderly females (65+). Similarly, the higher hospital costs among males and younger patients reflect the burden of such factors as hypertension, coronary heart disease, atrial fibrillation. Prospective studies are warranted to assess whether proven preventive programs aimed at these risk factors among males and younger individuals could reduce both stroke morbidity and hospital costs.