OBJECTIVES: To estimate the resources use and associated direct costs of hospital care for primary stroke patients in Poland. METHODS: Study design: The prospective, bottom-up, naturalistic, multicenter cost of illness study. Patients: Primary stroke patients successively admitted to three hospital centers of different institution. Data on clinical characteristics (i.e. risk factors, prestroke status, clinical state on admission and discharge) and hospital resources use (i.e. type of ward state, diagnostic and therapeutic procedures, drugs, specialists’ consultations and other medical professionals work, transport) were collected. Unit costs for all resources used were calculated using participating hospitals account systems and other available tariff tables. Extensive sensitivity analysis was performed using data on large number of stroke patients hospitalized in over 40 centers in 2001 and 2002. Values are expressed in zl (1USD = 1.95 zl; 1Euro = 2.32 purchasing power parities). RESULTS: One hundred sixty-four patients were enrolled (mean age:71.4; man:40.6%). Strokes were diagnosed as ischaemic in 85.8%, hemorrhagic in 8.02% and unclassified in 6.17%. Mean hospital stay was 12.3 days, including 1.4 days on high dependency ward, 6.9 days on stroke unit and 3.8 days on general ward. Total cost of hospital service amounted for 5258zl (95%CI: 5080 – 5680 zl) for TIA, ischemic stroke (IS) and intracerebral hemorrhage (ICH). With one-fifth due to variable costs, i.e. diagnostic and therapeutic procedures (451zl), drugs (262zl), consultations (35zl), work costs (241zl) and transport (123zl). CONCLUSIONS: The resources use and associated direct cost of hospital care for primary stroke patients in Poland are substantial, although fixed costs represent majority of it.

COSTS OF STROKE UNIT CARE IN GERMANY

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OBJECTIVES: Stroke imposes a considerable economic burden on the individual and society. Recently, the concept of an integrated stroke unit has been established in several countries to improve the outcome of patients. This study evaluates the costs of acute care of the different cerebrovascular insults on a stroke unit. METHODS: All patients included were consecutively admitted to the Department of Neurology, Philipps University Marburg, with the diagnosis of stroke or transient ischemic attacks (TIAs) between 1st January and 30th June 2000 (n = 340). Clinical status and course were evaluated by using the Barthel index and the modified Rankin scale. Employing a “bottom-up” approach, we calculated the costs from the perspective of the hospital and the third party payer using data from provider departments and other published sources. RESULTS: In-patient costs were €3020 (US-$3320), €3480 (US-$3840), €5080 (US-$5590) for TIA, ischemic stroke (IS) and intracerebral hemorrhage (ICH), respectively. Patient sub-groups ranked in the same order for average length of stay (LOS) at 9.4d for TIA, 10.2d for IS and 11.9d for ICH. Approximately, 30% of the hospital costs are due to physician charges and care. Imaging was 10% and lab investigations were 14% of total costs, independent of the diagnosis. Post-acute treatment, including inpatient rehabilitation, amounted to €9880. In all patients independent of the diagnosis a considerable clinical improvement was found at time of discharge. CONCLUSIONS: Care of patients with cerebrovascular events in a stroke unit causes a high demand of resources and has a considerable impact on healthcare expenditure. Therefore, more detailed comparative investigations are necessary to evaluate the stroke unit concept for a rationale use of available resources in patients with cerebrovascular events.

COST-EFFECTIVENESS OF THROMBOLYSIS WITH RT-PA FOR ACUTE ISCHEMIC STROKE IN TAIWAN

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OBJECTIVES: To estimate the cost-effectiveness of intravenous recombinant tissue plasminogen activator (rt-PA) therapy for acute ischemic stroke from the perspective of Taiwan National Health Insurance system. METHODS: A decision-analytic model was developed to perform the cost-effectiveness analysis of rt-PA treatment for acute ischemic stroke. We considered only costs of hospitalization (initial acute care and recurrence) because estimates of long-term care in Taiwan are not available. The estimates of efficacy of rt-PA were based on an updated Cochrane systematic review of randomized trials of thrombolysis. Data on costs, health outcomes, and utilities of disability were taken from a hospital-based study (360 first-ever ischemic stroke patients), national statistics, and literature-derived values. Costs per quality-adjusted life-year (QALY) were calculated for a hypothetical cohort of 1000 eligible patients, with starting age 65 years. RESULTS: The model suggested that over the lifetime a patient treated with rt-PA (within 3 hours of stroke onset) gained 0.21 QALYs, at a cost of NT$131,900 (US$4211) per QALY. CONCLUSIONS: Using rt-PA in treating acute ischemic stroke in Taiwan is likely to generate health benefits at modest extra costs.