

search Database of 2000, which was published by Taiwan's National Health Research Institute at the end of 2001. The sampling bases of outpatient medical benefit claims and inpatient medical benefit claims were 0.2% and 5% of the entire database, respectively. The demographic characteristics of the sampled group were similar with regards to age, gender, and costs to population.

In this study, a total of 368 patients undergoing thyroidectomy without complications or comorbidities from January to December 2000 was identified on the basis of case payment code 0290A. After excluding those who had missing data and unusual cost data (over NT\$52,500), the remaining eligible sample size was 358 for the analysis. The sampled patients were discharged with a principal operational procedure of International Classification of Disease, Ninth Revision, Clinical Modification (ICD-9-CM) codes of 62, 64, or 639.

Variables

Because the purpose of this study was to explore the relationship between costs per discharge and hospital ownership, the dependent variable was costs of hospitalization for patients undergoing a thyroidectomy without complications or comorbidities, and the independent variable was hospital ownership. The costs per discharge were based on the monetary amount of medical claims made by hospitals. Hospital ownership was categorized into public, proprietary (private not-for-profit), and private (for-profit) hospital. Patient age, gender, length of stay (LOS), and discharge status, as well as hospital characteristics such as hospital level and teaching status were also included as control variables in order to adjust costs for the analysis. Patient LOS was operationalized as the time, in days, from patient admission to the hospital until discharge. Discharge status for patients undergoing a thyroidectomy without complications or comorbidities was divided into a fully recovered status and referral to ambulatory care. Hospital level was defined as medical center, regional hospital, and district hospital. The hospital teaching status was treated as a dichotomous category on the basis of whether or not a hospital was accredited as a teaching hospital by

the Department of Health in 2000 in Taiwan.

Statistical Analysis

All statistical analyses were performed with the Statistical Package for the Social Sciences (SPSS 10.0 for Windows, 1997, SPSS, Chicago, IL). Descriptive analyses included frequency, percentage, mean, and standard deviation of all identified variables. One-way analysis of variance (ANOVA) was used to examine the relationship between costs per discharge and hospital ownership. Then, a multiple regression analysis was performed to explore the relationship between costs per discharge and hospital ownership by adjusting for patient age, gender, LOS, and discharge status, as well as hospital level and teaching status. Hospital ownership, hospital level, hospital teaching status, and patient discharge status were treated as sets of dummy variables, whereas private hospital, district hospital, teaching hospital, and referral to ambulatory care were selected as reference groups, respectively. A two-sided *p* value of less than or equal to 0.05 was considered statistically significant.

RESULTS

Costs per thyroidectomy discharge ranged from NT\$17,012 to NT\$52,070, with a mean cost of NT\$31,045 (Table 1). Respondents' age ranged from 12 to 88 years, with a mean of 42.65 and a standard deviation of 14.63 years. The mean LOS for the total sample was 3.74 days, with a minimum of 1 and a maximum of 9 days.

With regard to hospital ownership, almost 1/2 of respondents (49.4%) was admitted to proprietary hospitals, 16.2% were admitted to public hospitals, and the remaining 34.4% were admitted to private hospitals. As to hospital level, the percent of patients discharged from medical centers was 40.8%, from regional hospitals was 26.8%, and from district hospitals was 32.4%. Among all sampled patients, 25.7% were treated in teaching hospitals, with the other 74.3% in non-teaching hospitals. With respect to discharge status, the overwhelming majority of the samples (83.8%) were in the category of referral to ambu-