2001 and 2005 database for virginia hospitals essay

Sociology, Population



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Statistical tests conducted examined changes in 11 variables for the years 2001-2005 occurred in Virginia's hospitals. The observations were made with the help of t-test of paired two samples for means. A t-test statistical significance indicates whether the difference between average values of the two groups reflects a difference in the populations from which the two samples were taken. A conclusion about statistical significance is made on the basement of the sample size, the size of the difference between average values of the groups, p-value, and the standard deviations of the groups. As the size of the populations is unknown, the conclusions related statistical significance of t-test will be made based on the difference between average values, the standard deviation, and p-value. Summary of statistical significance of t-tests are shown in the Table 1.

The results of t-tests conducted for total operating expense, net charity care, working hours, payroll expenses, bad debt expenses, and staffed beds appeared to be insignificant (Table 1). High levels of p-value observed for these variables means that the probability of its random emerging is relatively high that not allow a researcher to apply the results of these statistical tests to the general population. On the contrary, the results of t-tests obtained for Medicare days, Medicaid days, total surgeries, outpatients and emergency visits can be considered statistically significant taking into account low p-value. Thus, the results of t-tests conducted for these variables can be applied to the general population.

For example, the sharp increase in total operating expense in 2005 in

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comparison to 2001 does not mean the increase of operating expenses for all hospitals located in Virginia. The same implications are relevant for other variables displayed insignificance of t-test. On the contrary, increase in average number of Medicare days, Medicaid, and other variables displaying significance of t-test can be considered relevant for the general population.

References

Witte, Robert S. and Witte, John S. Statistics. 9th ed. New York: John Wiley & Sons.