U07d1 statistics and information

Running Head: U07D1 STATISTICS AND INFORMATION u07d1 Statistics and Information Submitted by: XXXXXX Number: XXXXX XXXXXXX University of XXXXXX

There are a number of statistical models and methods that are present which can be used effectively in the health care operations. This paper aims at discussing five such methods and providing the meaning and brief use of these methods in the health care operations.

Regression analysis: Regression analysis involves modeling and analyzing the relationship between a dependent variable and one or more independent variables. Regression modeling and analysis is primarily conducted to observe or forecast the change in the dependent variable when one or more of the independent variables are changed (Chatterjee & Hadi, 2006). Regression differs from correlation - which establishes whether there is any association between two variables (Chatterjee and Hadi, p. 24). In the case of health care industry, this analysis has a major role and is used in several different aspects like the study of diabetic indicators. This method has been used in order to examine the relationships between different medical issues like blood pressure and diabetes and other possible issues.

Correlation analysis: Correlation refers to the degree of association between two variables. When two variables are said to be correlated, it indicates that there is a relationship or a pattern in the movement of the two variables. However, correlation does not indicate causation, i. e., the cause of movement of the variable. In other words, when two variables of correlated, it does not necessarily mean that the change in one variable is responsible or is the cause of change in the other variable (Downing and Clark, 178). In the case of health care industry, correlation analysis can be used to learn the

differences between the percentage change of the visceral AT and also the changes in terms of the changes in the AT (Cowel, 2007).

T-tests: This is a test that helps in addressing the issues of credibility. Here the process is very simple where the mean values for the groups are divided by the dispersion of the differences and the results are the T – Test ratio. Considering the health care industry, it is important to note that this method has a major role in the health care and is one of the best ways to bring out the incorrect and wrong claims (Downing & Clark, 2010). For instance the claims that a certain food or medicine brings down the blood sugar of a person. This can be tested by the t tests and helps attain a truthful response of the effectiveness of the food or drug. (Horton, 2009)

Analysis of variance: This is one of the statistical methods to calculate how a variable relates to another and what impact it has on the other. In the case of health care industry, this method is most effective for studying the disability of people and to learn how they act and react to certain aspects of life. This is a very effective method and is one which is considered to be very reliable specially in the case of people with disabilities as it helps gain a complete knowledge about the people (Spiegelhalter, Abrams, & Myles, 2004).

Stochastic analysis: Stochastic analysis is a probability based method and here random sequences of observation are chosen and each of these are considered to be a sample and are considered to be an element of the probability distribution (Walters, 2009). This method is very common in terms of the health care industry and is one which is used for the employment opportunities for the veterans especially in the case of those with the spinal cord injuries (Spiegelhalter, Abrams, & Myles, 2004). This is a

very cost effect method which is based a lot on the cost effectiveness rations and is also based out of the costs and the actual results that are found from the study (Horton, 2009).

References

Chatterjee, S., & Hadi, A. S. (2006). Regression Analysis by Example. Wiley-Interscience.

Cowel, J. K. (2007). Statistics Basics: A Resource Guide for Healthcare Managers. HCPro Inc.

Downing, D., & Clark, J. (2010). Business Statistics. Barrons Educational Series.

Horton, L. (2009). Calculating and Reporting Healthcare Statistics, 3rd Edition . Ahima.

Spiegelhalter, D. J., Abrams, K. R., & Myles, J. P. (2004). Bayesian Approaches to Clinical Trials and Health-Care Evaluation (Statistics in Practice). Wiley.

Walters, S. J. (2009). Quality of Life Outcomes in Clinical Trials and Health-Care Evaluation: A Practical Guide to analysis and interpretation (Statistics in Practice). Wiley.