

An excellent analysis and methods with a pulmonary disorder

[Science](#), [Statistics](#)



STAT ESSAY Respiratory therapy is a branch of science that deals with the airways malfunction and therapist help individuals with complications such as asthma, chronic obstructive pulmonary disorder among many other related cardiac and lung dysfunctions. To provide appropriate medicinal care and education to the patient and then statistical analysis of individuals has to be obtained to relate to the type of medication he/she is to be with.

Record keeping and data is very essential to assist the physician to know the progress of a particular patient with time. Data used helps to come up with charts, bars, and table plotted against time since the commencement of administration (Scanlan, p 98).

Use of histograms, correlation α -coefficients, regressions, random variables, sampling distribution, probability laws and conditional probability. In the use of histograms, some values are likely to occur more than others, therefore, provide clear information about the disease and how often it is spreading in the society. Multiple peaks show how the histogram leans to one side an interpretation of who is more vulnerable to this condition. Histograms are for prediction purposes; example is the time take for a particular condition to treat from previous samples and graphical presentations on how patients with similar conditions treatment exercise made. Important to note is that these predictions might not be accurate as those conducted step-by-step (Scanlan, p 152).

Discrete probability can be done independently or combined with histogram to provide desired frequencies and expected data is from the analysis.

Correlation is another aspect of statistics that is used to determine to varying variables. In this case, of respiratory therapy, it is used to determine

the degree to which certain pulmonary diseases vary and how they cause harm to the body. They may change positively to mean that their effect will lead to the same target or damaging the same organ example being the lungs both the x and the y variable increasing (Anthony, p 249). Negative correlation is a condition under which the x-variable is growing while the y-variable is decreasing. There is no chance of any relationship where all the variables being plotted are near zero. Values near zero will mean nonlinear relation between the variables under investigation. Perfect correlation occurs only when the data points lie on a straight line. If $r =$ negative then the slope is negative and if $r = +$ it is positive then it is positive. A correlation that is less than 0.5 is considered weak while that which is above 0.8 is as strong. A positive relationship of 0.5 implies that there is a weak correlation between the variable. On the contrary, 0.8 is an indication of strong positive relationship between the elements under investigation (Anthony, p 347). In conclusion, statistical methods are appropriate to use in therapy of the respiratory system. It gives an excellent analysis and methods to be when dealing with a particular pulmonary disorder. These data will help to give an idea to a therapist who would want to administer to a new patient on what condition is the patient likely to suffer from (Anthony, p 143).

Work cited

Scanlan, Craig L, Albert J. Heuer, and Louis M. Sinopoli. Certified Respiratory Therapist Exam Review Guide. Sudbury, Mass: Jones and Bartlett Publishers, 2010. Internet resource.

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