

Letter to Editor

WHY BIO-STATISTICS IS REQUIRED IN MEDICINE

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From the time when baby first realizes that it has two arms, two legs and one head, it is capable of making assessment of number consciously or unconsciously. The art and science of statistics is no more than an extension of this ability. Bio-statistics is considered as a science of sciences as every science needs the use of Bio-Statistics. Medicine is an inexact science rather than an exact science. Outcomes and responses can rarely be predicted with complete certainty. Statistics underlies the methods for drawing statistical inferences in medicine. There is a feeling in medical fraternity that why do they need to know biostatistics to cure people? This concern is echoed everywhere in the world and remains an enigma for most medical students, until one faces a pharmaceutical handout that claims a drug superior to the other with $P < 0.05$, or an article published in a journal. Such questions require an understanding of uncertainties arising in medicine. Data by themselves do not lead anywhere unless they are processed and converted into information¹. We know that all medical data are always subject to some degree of variation. Medicine is notorious for enormity of such uncertainties. These throw any decision out of gear when proper care is not taken. Consequently a separate discipline has grown to manage medical uncertainties. This is called biostatistics. As a doctor you may not be interested in collecting data. But you must certainly update knowledge by reading professional journals, pharmaceutical literature etc. for this it is necessary to familiarize with the methods of statistics. Some doctors may say, what is biostatistics, if it does not help in taking valid decisions in the interest of patients and the community? Uncertainties are not just for control or for delineation, but you should be able to handle them with confidence². Only a sample of subjects that represent the inherent variation is investigated rather than the entire population. Because of these methods. In the field of medicine and public Health statistical methods are used for testing the efficacy of new medicines and methods of treatments. Human biology is largely speculative and interaction with environment is intricate. Thus, medicine has special appetite for research. But it requires additional care since medicine deals with

vitalities such as life and death. Medicine is a delicate science and brooks no error. Ironically, though, enormous variations and uncertainties require that physicians, patients and society tolerate some errors. Nonetheless, everything possible should be done to

keep such errors under control. That is where biostatistics can help. Last but not least, my aim of statistics is that medicine without statistics bears no fruit, statistics without medicine have no root.

REFERENCE

1. Abhaya Indrayan (2012). Medical Biostatistics. CRC Press. ISBN 978-1-4398-8414-0.
2. Charles T. Munger (2003-10-03). "Academic Economics: Strengths and Faults After Considering Interdisciplinary Needs"