

## Mathematics of medical science – solution or problem?

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### Viewpoint

Research and evidences have very important roles in clinical practices. Modern day practices are based on evidence based medicines. With this, medical science is getting more quantitative and specific. Disease is no more just signs and symptoms; it is now measurable in rates and ratios. Investigations are no more just a laboratory test; it has measurable sensitivity and specificity. We can now estimate mortality of morbid conditions in percentage and add up our confidence with “P value”. We have changed disease into mathematics, medicine into statistics and living into probability. “An essence of time.”

In Nepal, research is an integral part of medical learning. Some medical colleges have incorporated basic research skill in their medical schools. In post graduate medical education it is a part of their assessment to get certified. This is very important for development and understanding of clinical research. However, all post graduate doctors will not be researcher in their career. Most will be clinician and academician, only small number of post graduates will be researcher. Those who practice clinical medicine and still wants to do research in our country has to face lots of barriers. We do not have a culture of research, hospitals are not research friendly, there is less administrative effort to encourage research and provision of funding for a proper research is very difficult.

With all these situations, irony for evaluating a clinician who is involved in clinical science or medical education is by the number of publications that they have done. A very good clinician may not be a good researcher and a good researcher may not be a good clinician. Rarely do we get a combination of a good clinician and an excellent researcher. A system should not aim for the rare combination. In most of the health related academies in Nepal, one of the important criteria for promotion is by the

number of publications that they have done over the years. This is problem for a very good clinician who has spent most of their time taking care of patients. There is no time allocated for any clinician to conduct research and yet we have very necessary criteria of publication.

Publication is not very easy. It needs time and effort. It is however very important and the aim of all publication should be to add informations to medical sciences and practices. The published information should be important to the institution and the nation. It should have a capability to enlighten or change practice to improve the quality of care. But with all the list of problems stated above, are we gathering information that is not much of value? Or, are clinicians wasting their valuable time to gather information which adds to nothing?

No doubt, knowing how to read and interpret research is very important. Deep inside every clinician, there needs to be a moderate researcher. We need to realize that we live in a complex echo system where one supplements the other. A single person cannot do everything. So we need to develop an ability to recognize, interpret and apply the hard work that others have done. Medical science has grown and will grow with combined effort of scientist, clinician and academician.

A good clinician is as important as a good researcher. A good researcher should be accredited and encouraged for his research and a good clinician for his clinical work. Let us not judge everything with research. Strength of a good clinician is not directly proportional to number of publications, disease is not always mathematics and life is not always statistics.

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