

## Decision Making in Medicine and Treatment Strategies

**Authors :** Kamran Yazdanbakhsh, Somayeh Mahmoudi

**Abstract :** Three reasons make good use of the decision theory in medicine: 1. Increased medical knowledge and their complexity makes it difficult treatment information effectively without resorting to sophisticated analytical methods, especially when it comes to detecting errors and identify opportunities for treatment from databases of large size. 2. There is a wide geographic variability of medical practice. In a context where medical costs are, at least in part, by the patient, these changes raise doubts about the relevance of the choices made by physicians. These differences are generally attributed to differences in estimates of probabilities of success of treatment involved, and differing assessments of the results on success or failure. Without explicit criteria for decision, it is difficult to identify precisely the sources of these variations in treatment. 3. Beyond the principle of informed consent, patients need to be involved in decision-making. For this, the decision process should be explained and broken down. A decision problem is to select the best option among a set of choices. The problem is what is meant by "best option ", or know what criteria guide the choice. The purpose of decision theory is to answer this question. The systematic use of decision models allows us to better understand the differences in medical practices, and facilitates the search for consensus. About this, there are three types of situations: situations certain, risky situations, and uncertain situations: 1. In certain situations, the consequence of each decision are certain. 2. In risky situations, every decision can have several consequences, the probability of each of these consequences is known. 3. In uncertain situations, each decision can have several consequences, the probability is not known. Our aim in this article is to show how decision theory can usefully be mobilized to meet the needs of physicians. The decision theory can make decisions more transparent: first, by clarifying the data systematically considered the problem and secondly by asking a few basic principles should guide the choice. Once the problem and clarified the decision theory provides operational tools to represent the available information and determine patient preferences, and thus assist the patient and doctor in their choices.

**Keywords :** decision making, medicine, treatment strategies, patient

**Conference Title :** ICCN 2015 : International Conference on Cognitive Neuroscience

**Conference Location :** Paris, France

**Conference Dates :** January 23-24, 2015