

# Scientific Research in Clinical Practice

## Editorial

Technological advancement provides a growing increase in the formulation, reproduction and dissemination of new research methods and techniques in Health clinical practice, making it difficult to keep up to date in this immense universe of information currently available. However, certain clinical procedures are only recognized and valued by the public through scientific research publications, which verify their effectiveness, specificity and viability.

Currently, as a result of a generation of new knowledge, a growing number of publications are available to guide medical practice, incorporating them into clinical routine. It is essential that doctors keep up to date and understand different scientific production processes to ensure the quality of assistance, to critically analyze reference materials and rationally apply scientific

information in their practice. Surely, experienced professionals have a greater ability in correctly interpreting literary data and thus, choosing the best treatment for their patients. They also feel a greater need to develop new practices, therapies and preventive methods even if this implies modifying their own practices when necessary.

It is a common agreement amongst health professionals that understanding scientific principles and interpreting articles are essential factors in the training of any doctor or specialist. However, subsequently to the emergence of evidence-based medicine-EBM, much has been discussed concerning the complex relationship amongst medical practices; in particular, there have been some disagreements regarding the fact that many consider clinical practices a non-scientific practice. Despite this, it is important to highlight that the use of EBM establishes a link between scientific research and clinical practice through mechanisms that generate useful knowledge for medical practice, as well as for the decision-making process.

The decision-making process in clinical practice is mechanics applied by doctors in order to solve a problem based on their practical and theoretical knowledge. When applying EBM in this practice, this process must start with the elaboration of a problem of clinical interest, in this case the clinician should be able to establish the main problem of the patient, convert it into a scientific question, carry out research on it, evaluate the quality of the information provided by decision-making support systems and arrive at a conclusion that is applicable to the issue in question.

Another relationship in scientific research and clinical practice is Expertise. An Expert is a professional who harmoniously combines practice and theory. In this case, the clinician can assume this role when he is equipped with recognized skills and scientific knowledge of a particular field for decision making in experience-based medicine. This is a very common procedure which consists of applying or assembling studies or theoretically absorbed information and enhances them in clinical practice. Currently, this might be the most common way to use and relate to scientific research, especially in cases where it is required to

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form new work teams in certain medical areas.

A third relationship with scientific research in clinical practice, yet less known, is preference-based medicine or shared decision. This one generally occurs in conditions of extreme uncertainty in which there is no effective or qualitative decision to be taken. Such situations can be exemplified in the case of terminally ill patients in palliative care. In this case, when the patient demonstrates a suitable level of education and an interest in participating in the decision, presenting a preserved mental and psychological state, the clinician explains the clinical diagnostic and therapeutic probabilities to the patient and the decision shall be made together. Otherwise, the patient's family may assume this role. However, even in this practice the use of scientific research is required to analyze and share the feasibility of what has been concluded, as well as to take into consideration the possibilities of treatments in order to apply the best one.

Audiology is a valuable field for scientific research given that it studies hearing, balance and related disorders, also the means to prevent, identify, evaluate, diagnose and intervene in hearing deficiencies and balance disorders. Therefore, it is impossible to think of its practice without scientific research as a guide to new discoveries and conduct, and in some cases for the resolution of problems that constantly affect the assisted population, regardless of their age. It is clear that scientific improvements are directly related to clinical practice, most often they also assist in the development of public policies which meet the needs of the population as well as generating new knowledge.

It is clear that the relationship between Scientific Research and Clinical Practice in health, may it be through Evidence, Experience or Preference-Based Medicine, is practically inseparable, regardless of how it's applied. However, what one should bear in mind is to be sure to apply what is concluded to be the best, the most reliable and more appropriate therapeutic method for the patient's needs and circumstances.

Surely, good clinical practice will always be the result of experience, information, responsibility, commitment, competence and respect for the dignity of the assisted.