

Editorial

Innovation in Research: The Value of Uncertainty

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In statistics, the uncertainty principle can be defined as “the semi-amplitude value of an interval that extends towards each side of the resulting value of a measurement, where such value is considered to be true”. In less technological terms: the security margin within which we consider something to be true or false. Generally speaking, uncertainty is associated to statistical magnitude measurements (e.g.: confidence intervals in measures of association) which allow for the identification of all the probabilities of association between a studied phenomenon and a specific event. Based on the statistical uncertainty principle for the year 2020, we came up with the proposal of “INNOVA: MÓDULOS DE INVESTIGACIÓN CLÍNICA” (INNOVA: CLINICAL RESEARCH MODULES).

This project, the backbone of which is based on the acknowledgement of clinical research as the differentiating element of biomedical research, allowed us to generate a change in our institutional research given that, for many years, “clinical epidemiology” has been the methodology structure applied to all research projects in medical education in Venezuela and, as a means of conceptualization, has not been conducive to giving answers to the common health problems in environments as complex as ours.

When asked about what the difference between clinical epidemiology and clinical research is, we have always based our answer in their origin as sciences: Epidemiology is a branch of mathematics and, therefore, an exact science while the term “clinical research” is born out of our very profession, medicine. How are we to measure with the least possible uncertainty elements characteristic of human beings such as fear, pain, or feelings in order to generate proposals and to understand environments or systems? It is there where epidemiology becomes an additional element for research and is no longer the only way to solve problems since qualitative research is incorporated as an instrument to generate ideas. The “P value” loses meaning as we begin to take into account the human value, and clinical relevance emerges as “that small difference between two study phenomena which justifies a change in clinical practice independently of its statistical power”.

The migration from the classic conception of biomedical research where the common imaginary is that of us sitting around a laboratory bench examining animals, sprouting plants, and elaborating unending Excel tables without planning or organization towards the conception of clinical research which is carried out behind our consultation desks, in a working space inside the operating room, next to our ultrasound equipment, or in the pathological anatomy labs generates a real vision of the problem which leads to research becoming part of our daily activities and no longer being just an additional task as it becomes a priority.

All the aspects mentioned above became part of our initial observation when we began our work at the Research Department of the Directorate of Education and Research of CMDLT in July of 2020, a year marked

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by the pandemic during which, without any doubt, the “uncertainty value” was so great that even the mere fear of the situation at that moment could increase the probabilities of error and place them above the confidence values. Nevertheless, said initial observation allowed us to identify voids and errors, define proposals, and generate a project which provided solutions to the current reality in the department because, while epidemiology gave us the daily number of contagions and deaths, the elements of clinical research allowed us to generate a “feasible project” today known as INNOVA.

INNOVA was born with the intention of strengthening the teaching role of research in medicine for the purpose of humanizing research processes for physicians, odontologists, bioanalysis specialists, nurses and psychologists, as well as that of giving institutional structure to methodological approaches other than those which had been applied during the more than 60 years of history of our institution and which have made it possible to build the current vision of progress used to develop this proposal filled with creativity, incorporating new learning technologies with a robust theoretical and practical load in workshops designed to generate real competences in the field of research. Upon its first year of implementation, we can proudly state that we have delivered 60 new research projects to the medical community: 19 clinical case reports, 11 review articles, 15 observational studies, 12 analytical studies/clinical tests, and 3 feasible projects that account for a total growth of 33,2% with respect to the prior year in the scientific production of our institution and which will be available to you in this special edition of “Revista Científica CMDLT” (CMDLT Scientific Journal).

This project is the result of the joint effort among the Unit of Elaboration of Projects and Biostatistics, the Unit of Researcher Support of the CMDLT Research Department, the faculty, and the resident physicians of our training programs to understand that we must no longer be seen as a document reception and bureaucratic procedures office and, instead, become an area for the expansion of knowledge and a source of constant stimulus for future innovation that will allow us to improve our own projects, contribute to high-quality medical training in our center, and transform the valuable creativity, experience, and capacity of our physicians into medical assistance of the highest quality with a deep humanistic conception of our central element of research: the patient.