

The psychiatrist facing the paradox of large databases and minimal clinical results

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Editorial

Neurosciences with clinical application are going through a period of outstanding rising, thanks to the development of surprising technologies such as the visualization of neuronal function (optical neuroscience); the analysis of the expression of genes within a single cell; cognitive neuroscience, which establishes relevant circuits of mind and brain functions (mainly by means of neuroimaging); and very clear determinants of the immunological profile in the Nervous System.¹ On the other hand, epidemiology, particularly in developed countries, in only a few years in quantifying samples, has gone from some hundreds, to thousands of persons, then hundreds of thousands and up to a million (only in meta-analysis) for mental health determinants.²⁻⁵ Many of these studies take into account biological data, such as the studies in Iceland or England, where bio-banks of relevant data concerning mental illnesses are becoming noteworthy in scientific headlines.^{2,6} Unfortunately, there is not enough impulse in Mexico to build large databases, with the exception of those collected at the "National Institute of Psychiatry Ramón de la Fuente Muñiz" (INPRFM).⁷

Notwithstanding the foregoing, in this vast ocean of novel knowledge, month after month there are new studies, in magazines like *Science* or *Nature*, which point out that thanks to "such results", there shall be significant advance regarding ailments such as depression, addictions, autism or schizophrenia. However, the advance in clinic has been minimal. On the one hand, there is an almost complete absence of "impulse" in the pharmaceutical industry for the development of new products; on the other, a minimal registry of new patents for inventions that can prove useful for improvement in psychiatric disorders. Is it a matter of time? Maybe it is: many of these discoveries need to pass the test of time in order to become "popular" in everyday practice. However, there is need of a change in the mind-set of society.

Perception of the mental illness has gradually changed. For example, old conflicts regarding how much of it is genetic or environmental when considering the cause of mental diseases is an issue of the past, due to the contributions of epigenetics. It has managed to reconcile both these per-

spectives into a single unifying theory.^{8,9} Practice of the psychiatrist as of today is that of a specialist who interacts and collaborates with the different areas of psychology (instead of trying to reach controversy), as well as with many other medical specialists. Arising from this new knowledge, some clinical fields have come to being, that partake of the practice not only of psychiatry. The question is: who is the most competent specialist? The answer is prone to a lot of debate in the fields of clinical practice, regarding who must be treating some disorders such as Alzheimer's disease, ADHD, autism, pain, eating disorders, addictions, sleep and sexuality disorders. The answer is evident: teams of interdisciplinary work, which are not always easy to conform.

Now, the future of Psychiatry, with the results of personalized medicine, has a challenge: Analyzing a way to preserve its identity while being a warm, kind and humanistic specialty and, at the same time, holding strictly scientific decisions based on had data gathered with the tools of neuroscience, genomics, pharmacology, imaging, sociology, epidemiology, and based on this cluster of information, making decisions on an individual level. This is a challenge for all of Medicine, but it will surely be greater for mental health, since many of its competence areas are just as complex as the nature that defines the Human being, and, as a consequence, will be in need of highly complex models for their execution.

We live in times of an overwhelming amount of information, when we know about geographic location, marketing consumer habits, and, increasingly, about the health of people by means of routine simple electronic measurements.^{10,11} Companies of genome sequencing are increasingly abundant, making it easier to the general public to have biological information at their disposal. Nonetheless, the direct benefit in medical decisions, regarding an improvement in the precision of diagnosis and treatment is just starting with a few diseases such as cystic fibrosis, some kinds of cancer, tobacco addiction, autism, and Alzheimer's disease. The greatest difference with the discourse of the past is that there are now numerous examples; the logical trend, and

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the one we expect, is that they will increase and be manifold in the future.

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