The development of applications oriented to the medical field that implement artificial intelligence is wide and growing. This is because heuristics as a scientific methodology is extremely efficient in identifying the symptoms of a large catalog of diseases and, and in this way, proposing possible diagnoses.

Thanks to the constant research and medical renovation on diseases, it is possible to determine the ontological principles necessary to model applications that allow generating effective diagnoses. In this way, we clarify that medicine, due to its rigorous scientific aspect, is adapted to the design of artificial intelligence models for most of the cases.

On the other hand, among the methods frequently applied in the development of this type of applications are the analysis of photographic patterns, the reduction of problems to find an adequate diagnosis and the constant monitoring of the patient's mood values. It should also be noted that almost all the cases in which this type of application is developed are not intended to replace the work of the specialist, but only serve as a support in the prevention and care of the health of people. [7]

However, there are areas of medicine, more specialized in human behavior, which are not suited to the heuristic as a scientific methodology. Cases in which determining ontological principles or reducing problems do not allow us to reach the most appropriate solution, this is because the analysis of human behavior can not easily reduce to a number of variables, nor is it possible to replicate with accuracy the current human behavior. Among the areas that should be mentioned are psychology and psychiatry. For these cases, it is necessary for the patient to undergo a more rigorous and personal evaluation by a specialist. [8]

Currently IBM is developing an application called Predictive mind that aims to diagnose and effectively predict the psychoses and psychopathies of a person with a single evaluation. [9] This has generated some controversy among the medical community, due to the fundamental absence of a specialist to make this type of assertions and questions whether it is correct to apply drugs under the criteria of an artificial intelligence of this type.

However, artificial intelligence technologies, such as IBM Watson, are used in oncological, pharmacological, and genomic studies to support diagnosis and create management plans for patients. Watson manages to create these plans by analyzing thousands of medical reports, patient records, clinical trials and medical journals.

Among the softwares offered by IBM are Watson for Clinical Trial Matching, which makes it easy for doctors to find lists of clinical trials for a quickly eligible patient, and helps clinical trial coordinators find qualified patients; IBM Watson for Oncology, which combines the deep experience of oncologists in cancer care and helps doctors consider individualized cancer treatments for their patients.[X]

Finally, it is important to emphasize that the implementation of a heuristic model as a scientific methodology simplifies reality to arrive at adequate but approximate solutions. Through these solutions, it efficients the number of treated patients; whereas, it is clear that the implementation of heuristics different from the scientific ones, which are more suitable for the modeling of medical systems, will be able to reach better quality solutions. Despite all this, areas such as medicine can be adapted to some extent, but since it is a delicate subject such as health, it is important to emphasize that the participation of a specialist in the assertion of a final diagnosis is necessary.

[X] Ibm.com. (2019). Artificial Intelligence in Medicine | Machine Learning. [online] Available at: https://www.ibm.com/watson-health/learn/artificial-intelligence-medicine [Accessed 6 May 2019].