Impact of Artificial Intelligence Based on Big Data on Medical Care

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Abstract. In the era of big data, artificial intelligence has also undergone considerable development, and gradually shows its strong influence in all walks of life. The medical industry is also inevitably affected by it. From voice input, medical image analysis, personalized health data analysis to independent drug research and development, artificial intelligence has been widely used in the medical field. Therefore, this article analyzes the positive effects of artificial intelligence to accelerate the medical industry's work efficiency, promoting the development of the medical cause, a series of medical ethical issues caused by the application of artificial intelligence in the medical industry, and a series of problems for the medical industry staff. Three suggestions are given for the negative effects of artificial intelligence in the medical field. It is hoped that it can promote the objective evaluation of the impact and challenges brought by artificial intelligence to a certain extent.

Keywords: Medical Industry, Artificial Intelligence, Negative Impact, Positive Impact, Solution Advice

1. Introduction

Artificial intelligence refers to objects with "wisdom" created by humans. Here, "wisdom" refers to the ability to quickly and accurately complete a specific task according to a set program. The concept of artificial intelligence was born in 1956 and is a branch of computer science. However, artificial intelligence has widely entered people's horizons after the artificial intelligence developed by Google in 2016 defeated the top Go Master Li Shishi. Through the real-time mastery of big data and the high efficiency of deep learning, artificial intelligence has had a wide-reaching and profound impact on human life. Artificial intelligence is expected to change the clinical decision-making process in the future, as it has a huge impact on the entire health care system, potentially using a large amount of genomic, biomarker and phenotype data generated throughout health to improve safety and care quality [1].

The widespread use in the medical industry is that in 2017, artificial intelligence—iFlytek Medical Assistant passed the National Medical Licensing Examination for the first time. The success of this artificial intelligence has set off a wave of the use of artificial intelligence in the medical industry. Nowadays, most of the research on artificial intelligence in the medical field is in the technical level, but neglects the real influence of artificial intelligence on human life at the realistic level.
The scarcity of medical resource solved urgently further promotes the application of artificial intelligence. Artificial intelligence quickly and efficiently uses big data to deepen the knowledge of the medical industry, which affects all aspects of the medical industry. While saving human resources and working time, reducing communication costs and accurately helping doctors solve various problems, it has also caused a series of ethical issues in the medical industry. After analyzing the positive and negative effects of artificial intelligence on the medical industry, this article finds that it should be calm and restrained when it comes to the use of artificial intelligence in the medical industry.

2. Positive impact of artificial intelligence on the medical industry

2.1 Speeding up the scientific and intelligent development of the medical industry

Artificial intelligence is widely used in various fields that were previously only completed by human experts [2]. In the era of big data, the development of intelligence is an inevitable direction, and the application of artificial intelligence technology in the drug development of the medical industry has broadened the path of medical drug development and more quickly adapted to the needs of medical drugs in the world. From the drug discovery stage to the clinical experiment stage, conventional drug development has to go through tens of thousands of experiments. The process is slow and complicated, and the manpower and material resources are extremely expensive. This is a process of continuous trial and error. Artificial intelligence joins pharmaceutical research and development, with the support of big data, yielding twice the result with the half the report, greatly shorten the process of drug development, improving work efficiency, and saving research and development costs.

2.2 Improving the efficiency and quality of health care workers

Artificial intelligence as an assistant doctor with the addition of large data can quickly enter data, simplify the patient matching process greatly saving labor and time costs, and improve productivity. Such as online appointment registration, independent document printer, can be quick and convenient business to save patients and doctors workers a lot of time.

With the development of science and technology, patients are demanding more and more doctors. And the advantages of artificial intelligence is, just the shortcomings of doctors. For example, here will be no fatigue, decreased concentration problems, being long-term continuous work and learning. Medical data is huge, doctors often process data is due to their own factors. And processing of data will cause deviations and artificial intelligence under set conditions of independent processing of medical data, greatly ensuring the accuracy of the data. Health care workers are limited by the amount of human knowledge and their own factors, so there will be timely or diagnostic errors, and artificial intelligence can use a large historical data, equivalent to having this knowledge reserve, very conducive to help analyze patient symptoms, improving the accuracy of medical staff diagnosis of patients. When analyzing a patient's data image, artificial intelligence can often detect subtle differences and analyze the patient's condition more accurately, because the findings cannot detect with the doctor's naked eye.

2.3 Improving the overall quality of medical industry personnel

The combination of "artificial intelligence and medical" provides a powerful intelligent brain for healthcare professionals. In the medical industry, there is a lot of waste of unnecessary labor. But artificial intelligence into the medical industry, the medical industry basic, repetitive work is replaced by artificial intelligence to complete. Staff can save time to deal with the difficulty of higher levels of work. It is inevitable that artificial intelligence will have a profound impact on primary care in the future, and the potential of artificial intelligence is infinite [3]. Workers in the medical industry can use artificial intelligence to help complete tasks and save time and improve their capabilities based on a strong data knowledge of artificial intelligence. The working environment of the fittest can
encourage medical workers to continuously strengthen their knowledge level and business ability, and enhance the professional quality of the overall medical team.

The emergence of artificial intelligence has upended the original technology model, and the use of artificial intelligence in the medical industry has greatly broadened the scope of the medical industry. Artificial intelligence in the medical industry has many applications, such as health management, auxiliary medical research platform, disease risk prediction, auxiliary diagnosis, medical imaging analysis, drug mining, etc. The application of artificial intelligence is in all aspects of the medical industry, reasonable use of its powerful data reserves and processing capacity, drug research and development, data processing, simplifying the process of medical workers saving great human and material resources [4]. In the era of big data, the application of artificial intelligence in the medical industry makes the medical industry more scientific and intelligent.

3. The Negative Impact of Artificial Intelligence on Medical Services

3.1 The use of artificial intelligence has problems with patient privacy protection
Artificial intelligence has a large number of patients' privacy data, artificial intelligence-assisted medical care through a large number of data accumulation, including disease diagnosis records, patient drug effects, genetic data, family history, behavioral data and even social and environmental conditions data. Once used with ulterior motives, it will cause damage to the interests of patients. The data is stored as data in artificial intelligence. In the transmission process of data, the data is tampered with, downloaded as an illegal use of the possibility being very widely.

3.2 The application of artificial intelligence makes it difficult for medical owners to pursue
Limited by the background of the times, artificial intelligence technology being not mature, the technology itself has many defects, and this defect is not effectively solved today. The presence of many patients is personalized, artificial intelligence having more early learning data input, in dealing with this personalized disease leading to misjudgment. Artificial intelligence technology is still an unknown area, many of which have not yet been identified in the inevitable existence of loopholes that, if present, can cause injury or death to patients. When a medical accident occurs, the person responsible for such an accident is difficult to pursue, the research and development, operation of artificial intelligence technology being the technical personnel rather than a specific doctor. Therefore, medical responsibility is difficult to divide. The responsibility is unclear, which leads to medical accidents.

3.3 The application of artificial intelligence has a crowding-out effect on health care workers
Artificial intelligence is itself an alternative to junior health care workers in helping health care workers deal with repetitive, simple work, and other applications of artificial intelligence in the medical field, such as medical research and development, clinical diagnosis, are an alternative to senior health care workers. A large number of health care workers face unemployment, and health care workers' employment prospects are not optimistic further lead to the decline of the competitive advantage of health care workers, gradually reduce the number of pre-prepared health care workers and thus the overall quality of damage.

However, whether artificial intelligence can completely replace the human dominance in the medical field, there is a great deal of controversy in the province. Artificial intelligence has the advantage that human beings can't match, but human has intuition, emotion, experience and other spiritual characteristics which is also lacking in artificial intelligence. The medical field for health care worker to mastering what characteristics are the most beneficial to patients not coming to a consistent answer. The author thinks that the application of artificial intelligence in the medical field greatly broadens the field of view of the medical field and helps to solve some difficult problems that the medical profession can't solve, but the absolute replacement of artificial intelligence for medical personnel is impossible and undesirable. Although artificial intelligence is necessary as a tool to assist
doctors, face-to-face communication between healthcare professionals and patients is beneficial to the patient.

Artificial intelligence has been resisted to a certain extent in many areas, and there is much debate because the pros and cons of the application of artificial intelligence are not very clear, and the two factions that support and oppose it are the same. Much of the opposition involves artificial intelligence raising ethical questions, particularly in the medical field.

4. Solutions

4.1 Strengthening legislation in the area of medical data security
The right to privacy is one of the inviolable rights of human beings, especially the health and privacy of patients in the medical field being more important. The application of artificial intelligence in the medical field is the trend. Health privacy is the part that patients should be reasonably and legally protected, so it is necessary to strengthen the security legislation in the field of medical data for the leakage of patient data privacy by artificial intelligence. In order to make artificial intelligence legally and reasonably handle, transmit and use patient health data, to make a series of medical data in the field of security legislation, the behavior of artificial intelligence into the legal framework, thereby curbing the illegal use of artificial intelligence illegal activities. At the beginning of the design of artificial intelligence, we should set up the encryption protection of the patient's health and privacy, and minimize the ability of privacy leakage.

4.2 Establishment a clear accountability system
Practice has proved that the application of artificial intelligence in the medical field, because of the complexity of artificial intelligence, resulting in diagnosis or surgery of medical accidents is inevitable. In the medical field, the establishment of a clear accountability system is the first consideration for the difficult division of medical responsibilities due to the involvement of artificial intelligence [5]. In our country artificial intelligence belonging to the mechanical class can not traditionally become the main body of responsibility, then for the artificial intelligence caused by medical accidents, who should pay the bill, the accountability system should be given a full explanation. The author thinks that artificial intelligence, because of its complex structure, leads to the unpredictability of mistakes, and the responsible subjects related to artificial intelligence are the three kinds of developers, users and sellers. Different decisions should be made for different situations.

4.3 Balancing the relationship between artificial intelligence and health care workers
Artificial intelligence and medical staff are not completely complementary relationship, the current application of artificial intelligence in the medical field is still in the auxiliary stage, even with the development of science and technology Artificial intelligence into the advanced stage, the doctors are mainly playing the role of auxiliary partner. Artificial intelligence is not the main body of active and dominant medical diagnosis and treatment to a large extent, so medical staff is still the main person in the medical field. In view of the extrusion effect of artificial intelligence on health care workers, this is an inevitable phenomenon of technological development and industrial upgrading, and in other areas of artificial intelligence application, such as education, there is also such a phenomenon. What needs to be done now is to adapt health care workers to the existence of artificial intelligence, and there should be more training in learning and use [6]. The author believes that artificial intelligence for the primary work of the alternative, so that human beings exempt from tedious, redundant labor, can put more time on the promotion of self-worth, for the development of mankind is more beneficial than harmful.

5. Conclusion
In the age of big data, the development of artificial intelligence is unstoppable. Artificial intelligence in the medical field has also been widely used to the medical field to the positive benefits. At the same
time, there is a negative effect, but the author believes that the development of science and technology. The emergence of artificial intelligence is the symbol of human social progress, self-proclaimed, daring not to longer unknown areas of exploration will being abandoned in the trend of the times. Artificial intelligence is designed to consider whether the results are ethical or whether it may put people from a particular socio-demographic background at a disadvantage [7]. In general, the application of artificial intelligence in the medical field is more beneficial than harmful. On the basis of grasping this main argument, we should be on the basis of solving known problems in the face of the upgrading of artificial intelligence in the field of medical care. The development of artificial intelligence should give confidence but not venture

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