

**ORIGINAL ARTICLE**

## **Health Communication: Applications of Artificial Intelligence in Medicine World**

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***Abstract:** Artificial intelligence technology that is increasingly used has a great influence on society, especially in the field of health, insufficient service is the focal point of this writing. By using the literature method, which is the method of critical analysis of a problematic topic. This analysis shows that public health services are improving thanks to the sophistication of artificial intelligence used in the health field. Artificial Intelligence's ability to quickly analyze the disease of patients is amazing. In addition, this paper also highlights AI ethical concerns over the years that affected different levels of abstraction including interpersonal, individual, group, institutional, societal, and sectoral.*

**Keywords:** Artificial Intelligence, Health, Technology

### **1.0 INTRODUCTION**

#### **1.1 What is Artificial Intelligence?**

Technology is a tool created by humans to complete human work. According to [2] technology is a feature of the existence of human glory, which proves that humans cannot live just to eat but need more than that.

This technology enables the non-material constituents of a life owned by humans, namely feelings, ideas, thoughts, intuition, and ideals. Technology also proves a manifestation of the intelligence of the human mind.

Artificial intelligence or AI is one of the branches of computer science that makes machines inside the computer, later this machine can do work by itself without being regulated by a programmer. The role of the programmer is indeed important if it is linked in AI where the programmer only ensures that the AI works without being continuously monitored. Computer science has many branches but is different from

AI this branch is something that can work like humans can do everything that humans do. Similar to technology, artificial intelligence is also created by humans to solve problems. Artificial intelligence or AI is one of the branches of computer science that makes machines inside the computer, later this machine can do work by itself without being regulated by a programmer. The role of the programmer is indeed important if it is linked with AI, where the programmer only ensures that the AI works without being continuously monitored. Computer science has many branches but is different from AI, this branch is something that can work like humans can do everything that humans do [28].

Artificial intelligence is the intelligence displayed by machines, as opposed to the intelligence demonstrated by humans and other animals. Some of the activities developed are knowledge of speaking, learning, planning, and problem-solving. Since robotics is a field about the connection between perception and action, intelligence must play an important role in robots for the connection to be intelligent. AI addresses these fundamental questions: what information is necessary for any type of thinking; how the experience should be represented; and how the information will be used. Robotics forces artificial intelligence to interact with real objects in the real world by forcing it.

## **1.2 Health Communication Advancing Communication Science**

Health communication, the study of communication as it relates to health [25], is a relatively new subfield but one of the fastest-growing areas of communication. A formal definition of health communication was advanced by the [27]: Health communication is the art and technique of informing, influencing, and motivating individual, institutional, and public audiences about important health issues. The scope of health communication includes disease prevention, health promotion, health care policy, and the business of health care as well as enhancement of the quality of life and health of individuals within the community.

A popular method to educate and often persuade individuals regarding health is the use of messages delivered via mass communication channels. Such efforts are known as mass communication health campaigns. Awareness and education are fundamental goals in health communication messages.

Consider an example of college students and alcohol abuse or more specifically, binge drinking. Binge drinking is defined as a male drinking 5 or more drinks and a female drinking 4 or more drinks in one episode. Binge drinking remains widespread and troublesome among college students, with a 37% rate of binge drinking in 2010, remaining almost the same as their 1993 rate [20]. Binge drinking among college students is associated with several negative outcomes, including driving under the influence, unintentional injury and death, unprotected sex, academic problems, health problems, and psychological problems [24].

The many roles that health communication can play have been highlighted by the Centers for Disease Control and Prevention. These roles include:

- Increase knowledge and awareness of a health issue, problem, or solution.
- Influence perceptions, beliefs, attitudes, and social norms.
- Prompt action.
- Demonstrate or illustrate skills.
- Show the benefit of behavior change.
- Increase demand for health services.
- Reinforce knowledge, attitudes, and behavior.
- Refute myths and misconceptions.
- Help coalesce organizational relationships.
- Advocate for a health issue or a population group

[21]

Health communication has become an accepted tool for improving public health. Health communication standards are used today in a variety of disease prevention and control strategies, including the promotion of health issues, the marketing of health and products, advice to patients on treatment or treatment options, and advice to consumers on health issues. One of the major advancements has been the “discovery” of the part that well-being communication can play (for great and bad) in deciding a person's

and community's well-being status. Well-designed health communication programs can help people better understand their own and community needs so they can take action to improve their health.

## **2.0 RESEARCH METHODOLOGY**

Research methodology is a way of describing how a researcher plans to conduct research. This is a great idea and method for solving a research problem. A method describes the researcher's approach to research to ensure that it is effective, valid, and addresses its goals and objectives.

According to [1], a literature review consists of explanations of hypotheses, findings, and other research data derived from data used to conduct research activities. The explanations in this literature review aim to develop a clear framework for solving the problems previously described in problem design. The literature review usually includes comments on the topics discussed, content, and author opinions taken from various sources (articles, books, slides, Internet resources, etc.) included in the first section. Results from studies of other researchers may also be included in comparison with the results of studies to be tested here. All statements and/or research results not belonging to the authors must be submitted and the procedures for submitting information in the library are made according to the established rules.

A literature review is all literature that has been read and analyzed in published or private manuscripts. Data analysis usually deals with the principle or theoretical foundation, i.e., the theory used to analyze the study object. Research design is a research guide to achieve research goals. Data analysis begins with defining the problem, collecting data, and analyzing the data obtained in a data list.

## **3.0 Artificial Intelligence in Medicine**

Artificial Intelligence technology or AI (Artificial Intelligence) has become a hot topic in recent years. AI is spreading across many industries, including healthcare. Artificial intelligence in health or AI for medicine offers many benefits to doctors, researchers, and patients. Here are some examples of artificial intelligence health applications:

### 3.1 Gene Therapy in Cancer

Health Communication: Treating cancer by altering the DNA of cancer cells or the immune system and for example, editing genes to slow the growth of cancer cells or improving the immune system to recognize and kill cancer cells.

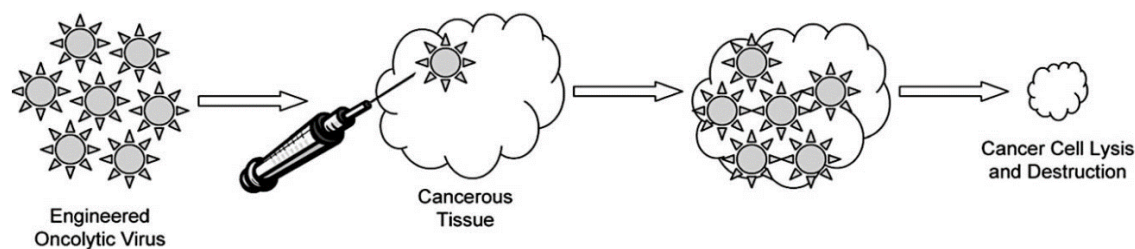


Figure 1 Gene therapy for cancer (source: <https://youtube.be/10JjRHrcNVM>)

Fortunately, in cancer therapy, several of the problems associated with transfecting normal host cells can be avoided. The constant dividing of cancer cells means that vectors limited to dividing cells can be used, and since toxic therapies are not required to be constitutively active, transient transfection is sufficient. Furthermore, in solid tumors, local injection of an agent specifically targeted for cancer is used, limiting systemic toxicity. Inducing a robust immune response is much less of a problem in cancer therapy when used locally and can aid in the destruction of cancer cells [9].

There are many strategies for using genetics to treat cancer. These AI technologies have many uses in testing and repair. Continued advances in this technology will lead to greater specificity when targeting cancers. This AI technology appears to have the greatest potential when combined with existing treatments, such as chemotherapy and radiation, to further cure them and provide more cancers. The field of gene therapy remains an exciting area of cancer treatment and research.

### 3.2 Surgical Robot

Health Communication: A robot with a robotic arm controlled by a surgeon can perform complex surgical procedures with high precision and strong stability. For example, the *Da Vinci robot* is used in prostate surgery, hysterectomy, and heart surgery.



Figure 2 Surgical robot (source: [https://youtube.be/\\_qwArCsWyIQ](https://youtube.be/_qwArCsWyIQ))

Robots have been around for a long time, but only recently have these machines entered the medical field. This change can be attributed to the recent advances in technology that have led to more reliability, and therefore wider acceptance by the general populace and the medical community. Technology has advanced to the point that the present generation expects everything at their fingertips, and medicine has not been far behind. Online doctor visits and tele-consults are the norm for most nonemergency situations. Tele surgical robots are presently being used for transcontinental surgeries as well [13].

Mechanical surgery has been around for over two decades and has been a progressive step in making strides in surgical methods. The use of mechanical autonomy in restorative strategies has become commonplace within the past decade. With the wide acknowledgment in robotic surgery, the drive to supply smaller, more effective, and less expensive gear is driving analysts to reach unheard-of heights.

Automated surgery has been effectively executed in several clinics around the globe and has gotten worldwide acceptance.

Moreover, compared to open surgery, Robotic-Assisted Surgery (RAS) is more beneficial to patients in terms of less postoperative pain, reduced blood loss, shorter hospital stays, and quicker recovery times [2]. However, adapting RAS in the operating room (OR) presents a challenge that forces changes in existing routines and processes, especially in systems-level safety analysis and physical discomfort among surgeons. Among other cited challenges were 1) RAS needed to be set properly in the OR to allow minimum movement among the OR team members, 2) well preparation needed to be done before prostatectomy procedures to decrease the number of disruptions that occur during a single procedure and in turn improve efficiency and safety, 3) OR staff performance, efficiency, and operative duration should be improved through training and effective communication and coordination among OR staff members, 4) operating surgeon are lack ergonomic training to properly practices it while using RAS, and robotic surgery was found to cause higher prevalence of eye pain and finger symptoms, more common on thumb compared to open surgery [10] [4].

On the other hand, a study demonstrated that RAS assistance did not provide a technical performance advantage nor impact subjective mental workload with novice users regardless of the level of surgery training. The study also noticed a positive impact on the cognitive performance of novice trainees with limited laparoscopic surgery (LS) experience when using Robotic-Assisted Laparoscopic Surgery (RALS). However, there's a negative impact on experienced trainees with greater LS ability and insufficient pre-study robotic training. This implies that robotic consoles could be mentally challenging for those new to robotics, emphasizing the importance of formal console training before their first clinical exposure [7].

### **3.3. Using medical imaging to diagnose disease**

Health Communication: Analyze X-rays, CT scans, MRIs, and other medical images to diagnose or diagnose diseases using artificial intelligence techniques such as machine learning. For example, lung cancer, heart disease, liver disease, etc.



Figure 3 medical imaging to diagnose disease (source: <https://youtu.be/YSQRWOy2Om4>)

Medical imaging has always been one of the most advanced areas of AI application showing remarkable accuracy and sensitivity in the identification of imaging abnormalities. In the context of COVID-19, medical imaging has facilitated incidental diagnosis, offering supporting evidence in clinical situations where false negative RT-PCR tests are suspected and helping evaluate treatment outcomes, disease progression, and anticipated prognosis [21].

In the future, medical imaging experts will have a rapidly expanding AI-enabled demonstrative toolkit at their disposal, to back with all angles of image interpretation from location, classification, and segmentation. With the restorative imaging industry at the beginning of a modern wave of AI-fueled technology innovation, and one that's set to disturb all viewpoints of the profession, presently is the time for wellbeing providers to set up an AI guide to guarantee they fully benefit and stay competitive.

### **3.4. Remotely monitor the patient's condition**

Health Communication: Monitor patients' vital signs, activities, and the environment around patients using IoT devices such as sensors, cameras, and remote monitoring. It allows a nurse to monitor a patient's condition from a hospital or clinic. It is suitable for elderly patients, chronic patients, and post-operative patients.



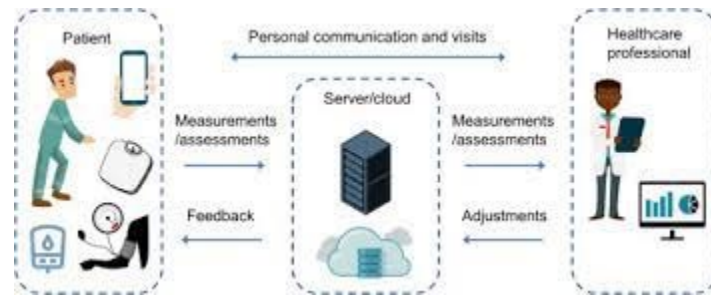


Figure 4 Patient monitoring (source: <https://youtu.be/qetKUFDDDF4A>)

Remote patient monitoring means watching or helping a patient from a distance. Most hospitals from around the world have been using remote services in day-to-day life for quite some time now. For example, banking. Work can be done using the Internet without the need to be presence in the bank. In the same way, in remote patient monitoring, the patient uses web-enabled digital devices to track vitals and the doctor gets to analyze data by logging into an App in real time. Remote Patient Monitoring is also known as Telehealth or Telemonitoring and seems like a promising tool in the management of health conditions that require constant monitoring. [22]

The latest development in this field is the remote monitoring of patients, which has many advantages in the rapidly aging world population with health problems. Artificial intelligence technology has advanced enough to allow patients to do their daily work at home while being monitored using modern communication and sensor technology, with simple apps to monitor patients in hospital wards. Sensors are now available for monitoring vital signs such as electrocardiogram readings, heart rate, respiratory rate, blood pressure, body temperature, blood sugar, and neurological activity. This new technology enables the care of patients according to their condition or condition. AI technology ranges from body-worn sensors to environmentally connected environmental sensors, and the latest to emerge shows no care, requiring the patient to be near the sensor.

### 3.5. Give the right dose to the patient

Health Communication: The patient's genetic information and health care are used to determine the appropriate medicine. The dose of the medicine can be adjusted according to the change in the patient's condition. This can reduce the side effects of the drug and increase its effectiveness.



Figure 5 Patient monitoring (source: <https://youtu.be/nEahhmk3VvM>)

The risks of unintended and negative consequences associated with AI are commensurately high, especially at scale. Most AI in health is artificial narrow intelligence, designed to accomplish a very specific task on previously curated data from one setting. In the real world, health data are unstandardized, patient populations are diverse, and biased decision-makers make mistakes that are then reflected in data. Because most AI models build on correlations, predictions could fail to generalize to different populations or settings and might exacerbate existing inequalities and biases. As the AI industry is extremely gender and race-imbalanced, and health professionals are already overwhelmed by other digital tools, there could be little capacity to catch errors and resistance from clinicians [23].

Humane doctors can provide their patients with personal trust value, which gives authenticity and meaning to the doctor-patient relationship. If patients begin to rely on artificial intelligence systems rather than human doctors for evaluation and important decisions, they may sacrifice the opportunity to build trust in medicine. To better understand the implications of this AI technology, it is necessary to think more

about the potential impact of artificial intelligence on healthcare so that it can be used for its benefits while preserving this medicine – namely trust – in particular.

### 3.6. Early detection of infectious diseases

Health Communication: Review public health records to detect early outbreaks. For example, detect flu, measles, dengue, and other infectious diseases before they spread widely. Disease prevention and control measures can be taken more quickly.

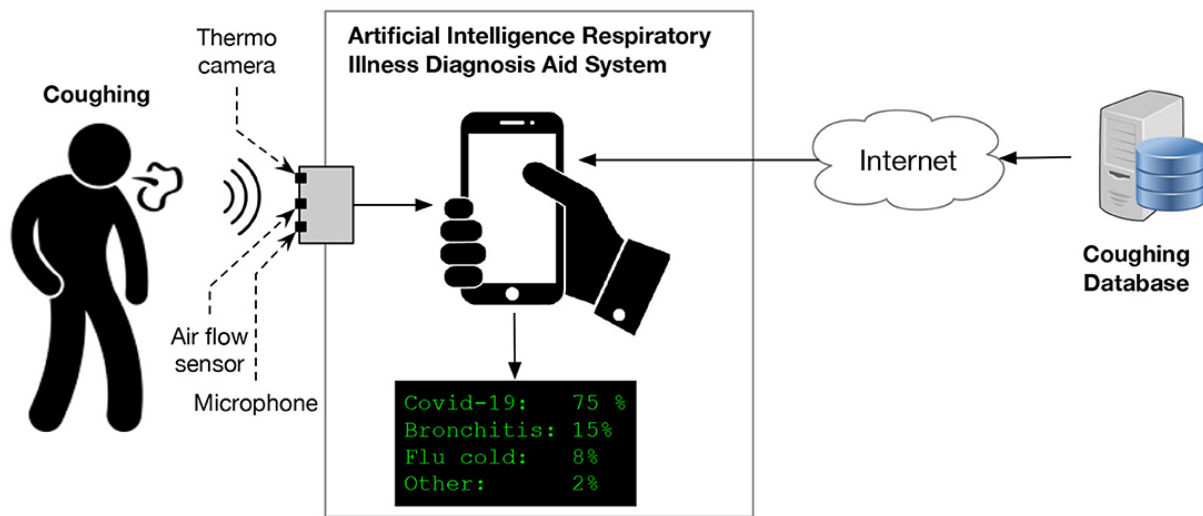


Figure 6 Patient monitoring (source: <https://youtu.be/WVxmbZJ12s0>)

The role of Artificial Intelligence in the early detection of the novel coronavirus (COVID-19) is documented in this paper through the work of two companies, BlueDot and Metabiota, and demonstrates how AI-driven algorithms can render more precise predictions and readings in the future through increased data sharing. The paper supports that an increased data-sharing practice must be enforced in the urban health sector while abiding by the dimensions of privacy and security due to the sensitive nature of information in this industry. On this, AI processes drawing from Smart data sources and Smart Cities science and their associated technological concepts, coupled with wearable technologies, can and must be encouraged, as it will render larger datasets and hence more accurate prediction and detection. For this actualization, there is a need for the standardization of protocols to encourage communication between

devices and across systems without compromising data safety and preventing data oversight. The technological revolution upon us will see an increasing use of computing processes, and as their accuracy increases better management decisions may be rendered as in the case of pandemics and will thus lead to its prominent role in urban health policy [5].

Predictive tools are increasingly used and have proven successful in providing information that can lead to better health policy. However, progress in the use of these AI technologies has been slow because they are still in their infancy and have been taken seriously at national and international levels around the world. However recent events show that the accuracy of AI-driven algorithms is improving. AI models used by companies like BlueDot and Metabiota discovered its impact and spread, predicting cases of coronavirus (COVID-19) in China before shocking the world in 2019.

### 3.7 Monitor the health of pregnant women and fetuses

Health Communication: Vital signs of pregnant women and fetuses are monitored with health monitoring devices installed for pregnant women. Pregnancy complications such as pre-eclampsia or fetal growth retardation can be detected in the early period. Timely medical assistance to improve maternal and child health.



Figure 7 Patient monitoring (source: <https://youtu.be/s4238TTyb4k>)

Artificial Intelligence has been widely applied to pregnant women and fetuses. Certain complications or disorders that can appear during pregnancy can endanger the life of both mother and fetus. There is enough scientific literature to support the idea that emotional aspects can be a relevant risk factor in pregnancy (such as anxiety, stress, or depression, for instance). Health enhancement and well-being for pregnant women can be achieved with artificial intelligence or affective computing-based devices. [11]

The main purpose of artificial intelligence technology used in the field of health and wellness in pregnancy is to predict, diagnose, or classify adverse or painful diseases and then provide treatment and health care. Thus, a review of the evidence shows that many studies have focused on model development, oversight of training, and distribution of activities, in most cases without inspection supervision. Wearables or mobile apps used directly by pregnant women are less commonly reported.

### 3. 8 Provide health advice based on personal health information

Health Communication: Analyze activity, diet, and other health information to provide healthy recommendations for everyone. For example, suggest the type of exercise, calorie count, and type of food to lose weight or control cholesterol. Recommendations are given based on each person's health and genetics.



Figure 8 Example of health advice for personal health information (source:

<https://youtu.be/j6EB9HO6acE>)

Artificial intelligence (AI) technologies increasingly enable innovations from searching the internet to voice and facial recognition, smart appliances, and even driverless cars. In the past, key limitations of AI have been the availability of sufficient data for training algorithms and the inability of AI systems to manage data in their natural form. Now, with the omnipresent digitalization of data about humans and their activities, deep learning algorithms increasingly can take advantage of stockpiles of “big data” to enhance a learning model’s performance and extend the sophistication and reach of AI applications [6].

Two primary perspectives of clinical manufactured insights are utilized for decision-making: ethical responsibility for hurt to patients; and security confirmation to ensure patients against such hurt. Manufactured intelligence-based apparatuses are challenging the standard clinical hones of allotting fault and guaranteeing security. Human clinicians and security engineers have weaker control over the choices come to by fake insights frameworks and less information and understanding of how the counterfeit insights frameworks reach their choices.

### 3.9 Mass screening for communicable diseases in the community

Health Communication: Screening a huge number of blood tests or other organic tests utilizing methods such as PCR and antigen-antibodies to distinguish irresistible maladies such as HIV, hepatitis, and other infections. Empowers the revelation of unused cases of irresistible maladies with quicker and opportune treatment.

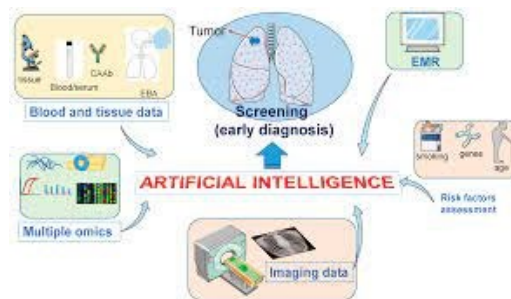


Figure 9 Example of A.I mass screening for communicable disease (source:

<https://youtu.be/yZ6cELv8OZQ>)

Evidence-based screening programs have great potential to improve public health outcomes and advance universal health coverage. When organized effectively, they can prevent disease, reduce disability, and cut mortality. Such programs are at the core of public health services, bringing together the best of science and innovation for the public good [12].

With the fast advancement of data, computer innovation has started to approach other customarily achievable areas. Besides this propensity, numerous high-tech machines have appeared. At the same time, in arranging to help specialists with the treatment, different high-tech apparatuses have shown up within the conventional therapeutic field. Among them, the emergence of shrewd picture acknowledgment innovation has decreased a huge portion of the doctor's vitality to analyze the smaller ailing cells within the human body. The plan and fabrication of illness determination hardware based on machine learning picture acknowledgment innovation are getting to be more modernized, rationalized, and clever. Within the restorative field, machine-learning-based picture acknowledgment innovation infection determination hardware employments picture collection to analyze and analyze pathology.

### **3.10 Personalized Health Education**

Health Communication: Providing health education aiming to everyone's health profile, interests, and learning style. For example, giving diet and exercise advice based on a person's health condition or providing education about chronic diseases such as diabetes or hypertension with language and methods that are easy for every individual to understand. AI technology has provided many benefits for the healthcare industry. With the continued development of AI, the role of AI in diagnosing diseases, providing personalized treatment, and assisting health professionals will be greater in the future. However, human interaction is still very important for the health and safety of patients.





Figure 10 Example of personalized health education (source: <https://youtu.be/ii-FfE-7C-k>)

Three main challenges can be envisioned:

- 1) In research: when personalized medicine approaches require drugs that act on the cellular interaction network of a given individual, and not on a specific component of this network, we must be able to build models that allow us to predict the action of the drug on a specific patient or a group of patients,
- 2) With the society and the patient associations: the targeted therapies and the therapeutic innovations must be discussed to anticipate the necessary regulations for the safe usage of those innovative therapies and their access to the whole population,
- 3) In education: the training of medical doctors but also the appreciation of new actors in the health organization that together need to change the training principles that have been applied since the time of the Ancient Greeks and the Egyptians [11].

The improvement of counterfeit insights AI has entered the arrangement of brilliant cognition. The presentation of AI in instruction has opened a modern time of computer-assisted instruction, which brought unused conceivable outcomes for instructing and learning in open well-being instruction. AI-based on huge information not as it were gives inexhaustible assets for open well-being inquiries about and administration but also brings comfort for understudies to get open well-being information and data, which is conducive to the development of basic proficiency courses for understudies. In this audit, we explained the status and impediments of open well-being instruction, summarized the application of AI in open well-being hone,



and assisted in proposing a system for how to coordinate AI into open well-being instruction educational programs. With quick mechanical progressions, we accept that AI will revolutionize the instructional worldview of open well-being and help in reacting to open well-being crises.

#### **4.0 ETHICAL CHALLENGES OF AI-DRIVEN IN MEDICINE AND HEALTHCARE**

In recent years, AI has brought tremendous changes to the medical and healthcare industries but not without ethical issues. In one study by [17] ethical issues regarding AI can be divided into three; a) epistemic, related to misguided, inconclusive, or inscrutable evidence; (b) normative, related to unfair outcomes and transformative effective; or (c) related to traceability and arise at six levels of abstraction; 1) individual, 2) interpersonal, 3) group, 4) institutional 5) societal and 6) sectoral.

The AI algorithm is assumed can make more objective, robust, and evidence-based clinical decisions that surpass human capabilities in tasks such as analyzing risk factors, predicting diseases, monitoring population health, predicting adverse effects, and analyzing electronic health records compared to human healthcare practitioners (HCPs). Ethical concerns arise at different levels of analysis (LoA), including individual, interpersonal, and institutional levels. There is a risk of misdiagnosis at the individual level, where individuals may receive inaccurate health information from wearable devices or clinical decision support software. At the interpersonal level, the emotional virtues of human HCPs, such as trust and empathy, cannot be replicated by AI-Health, leading to the potential dehumanization of care provision. At the institutional level, public health decisions based on flawed AI-health evidence could result in the waste of public funds, damage to local economies, and poorer quality healthcare provision.

Moreover, there are concerns about the quality and quantity of data required for AI health applications, as seen in controversies surrounding data sharing between public and private entities. The ultimate ambition of AI health is to create a learning healthcare system, but challenges in ensuring the accuracy and appropriateness of data sharing raise ethical and societal questions. The potential consequences include wasted funds, poorer health provision, and undue sharing of patient data with private sector entities under the guise of AI health.

When referring to the rising costs and diminishing outcomes, AI was believed to provide solutions by enhancing and leveraging AI health systems to improve patient outcomes and reduce system burden by recognizing the AI transformative effects that include coupling (patient data), re-coupling (research and practices re-joined as one), and de-coupling (presence of Healthcare Provider (HCP) and location of patient become independent because of the introduction of online consultation) different parts of the healthcare system.

Ethical concerns arise, particularly at the individual level, where increased reliance on AI Health for diagnostic and therapeutic interventions may compromise individual autonomy and meaningful involvement in shared decision-making. At the interpersonal level, healthcare practitioners may feel left out as decisions are made by patients and AI algorithms, potentially overlooking the dynamic relationship between HCP and patient. At the group level, the over-reliance on AI may overlook the expertise of HCP. Considerations need to be carefully made before making proposed clinical decision-making of AI since it may involve biased datasets, discriminatory outcomes as well as the overfitting of the system to specific values.

In addition to that, the increased use of AI introduces the concern of unfair outcomes. Among others is the lack of traceability in the AI health ecosystem making it challenging to allocate responsibility transparently. Liability results from moral obligation at the levels of interpersonal, institutional, and sectoral level. The intricate supply chain behind clinical algorithms creates concerns regarding who is responsible for what. The legislation as it stands now suggests that medical professionals may be held accountable, but this interpretation is made more difficult by the chain's complexity and lack of openness. In addition to creating a lack of distributed accountability, the ambiguity around the roles and responsibilities of hospitals, care facilities, regulators, and device commissioners exacerbates ethical concerns.

## **5.0 AI FROM THE HEALTH COMMUNICATION PERSPECTIVE**

Communication in health now plays an important role in general health. It's like health education, communication in health is an approach that tries to change the behavior of listeners towards specific health

problems in a certain period [8]. It is the art and technique of informing, influencing, and motivating individuals, institutions, and the public about the importance of health issues based on ethical and scientific considerations.

The main cause of disease transmission is due to unhealthy health practices, especially unhealthy eating practices, not doing physical activity, smoking, experiencing emotional stress, alcohol consumption, and so on [16]. This cause can be avoided if individuals have sufficient knowledge, especially regarding disease prevention and risk factors. Most individuals may be aware of the badness of their lifestyle practices, but their attitude toward improving those practices may be negative. With that, the first step in health care and disease prevention is through the input of information that will trigger knowledge to bring about changes in individual attitudes and lifestyles [18].

The part of health communication in deciding an individual's well-being status is vital. This is often because the individual's well-being status is generally decided by the behavior of physical movement, sustenance additionally the individual's way of life. Since most diseases are caused by the human way of life hones, health communication encompasses an extraordinary part of communicating different data so that people can embrace a sound way of life and along these lines have a great level of well-being.

## **6.0 RESULTS**

The word intelligence refers to the ability to acquire and use skills and knowledge in solving existing problems. Artificial intelligence or its abbreviation AI is a program that looks at the ability of machines to learn human behavior and provide human-like responses or emotions. Put that program in a piece of software, a machine, or a machine, and make it act and think like a human.

There are several key differences between human and machine intelligence. People are intelligent and problem solvers because they have knowledge and experience. The level of human intelligence also determines the quality of human thoughts and actions. As the knowledge and experience gained increase,

many problems can be solved. However, the intelligence of the human brain also has its limits. People cannot quickly find and process information such as the latest information without relying on intelligence.

The primary role of AI is to process data and display the results of data collection. However, today's technological developments have improved the intelligence ability, which can not only process information, but also give people more accurate results. This artificial intelligence technology helps to process information like humans. With this approach, it is tried to create an intelligence that can think like a human.

## 7.0 CONCLUSION

The use of artificial intelligence or professional machines is a new trend in healthcare in the intervention and management of many problems of patients, including emergency patients. The use of artificial intelligence is a new and innovative method that uses modern technology to make it easier for healthcare professionals to help. With the development of today's technology, technology that can use human thinking has also been created, which is artificial intelligence or artificial intelligence.

Artificial intelligence is the part of artificial intelligence that combines knowledge and the ability to search for information provided in so that it can solve problems that require special skills. The aim of the experts is not to change the ability or intelligence of the human brain, but to express the human thinking ability in the form of work for human use. Professionals will provide solutions tailored to the abilities of professionals. The expert system is based on certain information that predicts a person's ability in certain situations.

The application of AI techniques in medicine/health modalities such as behavioral education is important because this method voluntarily provides real teaching through knowledge steps. Artificial intelligence technology is designed to provide results for tasks performed by humans. Especially in health, the application of artificial intelligence in health can help to provide good results for people's health, such as providing information analysis of important information in this application. AI integration is a key element of continuous service improvement to be efficient and provide quality services.

Although, the integration of AI into medical and healthcare practices has brought about significant advancements, is without raising ethical concerns. The presumed capabilities of AI algorithms to make objective and evidence-based clinical decisions have led to expectations of surpassing human capacities in various healthcare tasks. Concerns about AI involved the issues of epistemic, normative, and traceability across different levels of abstraction that include individual, interpersonal, group, institutional, societal, and sectoral.

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