Cyber Medicine: An Ethical Evaluation

- CAJETAN OKECHUKWU NDUKWE -
  Master’s Thesis in Applied Ethics
  Centre for Applied Ethics
  Linköpings universitet
  Presented May 31st 2005

Supervisor: Prof. Göran Collste, Linköpings universitet
## Abstract

It is self evident that our society is an information one. This is true from the things we see around us. The world is now a global village. It just take seconds for communication to be established from one part of the globe to another. What a tremendous achievement for information technology. Among the recent developments of information technology is the scientific wizardry of cyber medicine. The internet has definitely revolutionised the healthcare industry. Many people in developed countries of the world seek medical information, advice or even buy drugs via the internet. So many websites rise every now and then claiming to provide various medical assistance to patients. But the application of information technology to medicine poses some ethical problems today. It is because of this that cyber medicine attracts my attention in this research. With this research, I hope to offer some recommendations for a morally acceptable cyber medicine. This will help to some extent in solving this all important problem of cyber medicine for the good of the health care industry and the society at large.

## Nyckelord

- CYBER MEDICINE
- MEDICAL ETHICS
- AUTONOMY
- RESPONSIBILITY
- PRIVACY
- TRUST
- AND CARING.
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May 31st 2005.

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DEDICATION

TO

MONICA NLEMCHUKWU NDUKWE

AND

PLACID ONYEWUCHUKWU NDUKWE

Gratitude is the memory of the heart

(Jean Baptiste Massieu)
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1.0 GENERAL INTRODUCTION: THE INTERNET AND CYBER MEDICINE.

Information technology is changing the way we communicate, the way we write, the way we collect information, the way we organise and the way we make decisions. Inshort IT is changing the world. Is it a change for better or worse? Modern health care can no longer be practised without computers and electronic transportations.

How are we to understand this influence of technology on medicine? There has been few contributions on this. I will argue that cyber medicine remains a unique achievement of information technology and should be seen as such. At the same time, cyber medicine creates some moral problems that need to be addressed before it gets off hand. Therefore, cyber medicine should be re-orientated and re-directed. The ethical issues connected with cyber medicine becomes more burging when one realizes the amount of individuals seeking medical information via the net today. Currently there are about 15000 to 100000 health related sites in Great Britain and they have been visited by approximately 30 million people (Parker and Gray 2000). A swedish survey showed that about 20% of all who viewed the internet had been looking for health related information (Garpenby and Husberg, 2000). This is just a tip of the iceberg. Nancy Calabretta quoting Pastore M. maintained that Cyber-Dialogue Study THE FUTURE OF E-HEALTH estimates that 88.5 million adults will use the internet for health information by 2005. More than 100 million Americans have gone online to search for health information at least once as noted by

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2 Bemmel, J. B. Protection of Medical Data in Collste G. (ed) op. Cit. p.145.
3 Collste, G. The internet doctor and Medical Ethics in Medicine healthcare and philosophy, 2002 p121.
4 Calabretta, N. Consumer-driven , patient centred healthcare in pubmedcentral.gov.
Taylor H. Internet users have a great need of information about health care, illness, treatment, approximately one-fourth of all web users is searching at least once a month for medical information (Paris, 2000). If this is so, who knows what will happen in the future given the rate at which we are moving. There are a number of reasons that may lead patients to the use of the internet in search of medical care. Cyber medicine may serve as a second opinion, or even a second doctor especially for patients who may have lost confidence in their ordinary doctor, or for patients who have heard the story of some specialist in the particular disease they are suffering from, they find themselves in a desperate situation. Again, medication via the net give patients a wider variety of knowledge about their problems and the variety of drugs that can lead to their cure. However, medication via the internet raises a number of ethical questions for health care in general. Though, for Deborah Johnson these ethical issues are not unique, because they are old questions that are reformulated in a new way.

Some of the ethical problems posed by the use of information technology in health care include, the problem of responsibility, the problem of privacy, the problem of validation, the problem of reliability, the doctor-patient relationship, the problem of autonomy, etc. These are great ethical problems today. The status quo today with regard to cyber medicine was related to the ones that existed at the early beginings of medicine with particular reference to medical information by Henk A.M.J. Ten Have. He has this to say about cyber medicine,

Similar questions can be raised nowadays in regard to cyber medicine. Concerning the provided information, it is unclear how to make a distinction between “gems” and “junks”. The problem is not so much how to find information, but to assess its reliability and relevancy. Apparently, the internate generates a continuous production of information

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5 Ibid.
that is incomplete, misleading and inaccurate.\textsuperscript{9}

This is why cyber medicine remains a vital ethical problem that needs urgent attainment today. As it was observed "the internet looks set to radically change the healthcare industry".\textsuperscript{10}

1.1 WHY CYBER MEDICINE

It was rightly observed that the single most important force over the coming decade will be the convergence of healthcare and the internet.\textsuperscript{11} Given the amount of ethical problems arising from this convergence of healthcare and the internet as we have discussed above, and also that few write ups have been made on this topic, it becomes urgent and necessary that a research of this nature be carried out on the ethical implications of cyber medicine today. This is very important in order to expose the situation at hand to both patients and all stakeholders in the healthcare industry for the betterment of all. It is as a result of this that I wish to deliberate on cyber medicine in this research.

1.2 THE RESEARCH QUESTIONS

In carrying out this research, I am going to examine the general question, "WHAT ARE THE CONDITIONS NECESSARY FOR A MORALLY ACCEPTABLE CYBER MEDICINE ?"? Answering this general question requires that I answer other analytical questions which will include,

\textsuperscript{8} Johnson, D. Computer Ethics,(3rd ed)p.15.


\textsuperscript{11} Ibid.
what is cyber medicine?

what are the ethical implications of cyber medicine to medicine and health care in general?

Is cyber medicine for the good and betterment of patients or...

what checks and balances should be put in place in order to checkmate the excesses of cyber medicine?

what is the way forward for cyber medicine?

I am going to do an extensive analysis of the situation at hand, which will enable me to thematise the conditions that are necessary for a morally acceptable cyber medicine today. Then I will give the way forward.

1.3 THE AIM OF THE RESEARCH

With these analytic questions at the back of my mind, the research aims at reviewing the merits and demerits of cyber medicine from a moral perspective. I am going to do this by discussing the ethical implications of the three different cyber medicine websites, namely the information giving sites, the consultation sites and the e-pharmacy sites, using some ethical principles that are necessary as my ideal. This will aid me in giving certain recommendations for a morally acceptable cyber medicine today. Then, I will posit proper orientation as the way forward for cyber medicine.

1.4 THE STRUCTURE OF THE RESEARCH

The general structure of my work is,
Chapter one is emphasizing the general introduction which will be sub-divided into
the following sub-headings, the internet and cyber medicine, why cyber medicine, the research questions, the aim of the research, the structure of the research, what is cyber medicine and types of cyber medicine.

In chapter two I analyze critically cyber medicine vis-a-vis some ethical principles. Some of the ethical principles that were considered include, the principle of autonomy, the principle of responsibility, privacy, trust, validity, reliability, etc and the doctor-patient relationship, which is not an ethical principle but an important relationship in healthcare. All these will help me in making my recommendations for a morally acceptable cyber medicine.

Chapter three, is dealing with the arguments for and against cyber medicine. Here, I am going to present the views of scholars who are for cyber medicine as against the views of those that oppose cyber medicine. I am going to compare and contrast the two views using the ethical principles in chapter two and take a stand. Generally, the arguments will be revolving around confidentiality, validity, alternative care, access to information, quality health care, etc.

Chapter Four layed out some conditions that are necessary for a morally acceptable cyber medicine today. Some of the conditions as noted by Health On The Net Foundation include, authority, complementarity, confidentiality, attribution, justifiability, transparency of authorship, transparency of sponsorship, honesty in advertising and editorial policy, etc. I am going to critically evaluate them with regard to cyber medicine.

Finally, chapter five thematised critically an evaluation and conclusion. In doing this I critically reviewed cyber medicine and gave some concluding remarks. I posited proper orientation as the way forward for cyber medicine.

1.5 EXPLANATION OF TERMS

1.5.1 CYBER MEDICINE.

There has been various meanings and understandings of Cyber Medicine today which have informed various definitions of the concept. Cyber Medicine may be defined as the discipline of applying the internet and information technology to medicine which
encompasses the use of global networking technologies to educate and communcate in ways that promote medical practice, commerce, scholarship, and empowerment.\textsuperscript{12} It could also be seen as the internet driven practice of medicine where patients communicate with physicians through electronic mail.\textsuperscript{13} But cyber medicine could be an instrument for "do it yourself healthcare", as noted by Goran Collste.\textsuperscript{14} However, Keith Bauer in his own definition of cyber medicine said,

\begin{quote}
Cyber medicine in simple terms is the practice of medicine within cyberspace,...cyber medicine can also be defined more expansively to include other forms of distance medicine ( telemedicine ) that are not limited to the use of computers and the internet. In particular, cyber medicine can go beyond electronic patient record system to information management and communication technologies ( telephono )to mediate physician – patient communications.\textsuperscript{15}
\end{quote}

However, for the purpose of this research, I am going to define cyber medicine as all medications via the internet, whether in the form of doctors consultation or in the form of seeking medical information via an internet web site or the ordering or buying of drugs via an internet pharmacy. The exchange of emails between a doctor and a patient will not necessarily be considered as cyber medicine in this research.

\subsection*{1.6. TYPES OF CYBER MEDICINE}

Generally, there are three major types of cyber medicine today. They include, the consultation sites, the information giving sites and the e-pharmacy sites

\begin{footnotes}
\item[12] Owen J. D. Et al. Information –Seeking Behaviour in www.pubmed.com
\end{footnotes}
1.6.1 The consultation sites-

These are sites that offer medical advise by the use of a doctor or a pharmacist. This is what Goran Collste called "the internet doctor". On this, David Mills said,

usually the prescribing based sites will provide an online doctor visit either through a medical questionnaire or a simultaneous video conference between the doctor and patient. For this consultation a fee is charged that can be ranging from $30 - $150. After the patient enters the information and the doctor reviews it, a prescription may be issued which is then processed at an online pharmacy. Some prescribing based sites are comprised exclusively of physicians who, upon issuing a prescription, contract with an online pharmacy to actually dispense the medicine. In many cases, the doctor, pharmacy and patient are located in different states.

This type of cyber medicine gives a direct communication between the cyber doctors and their patients. Patients have benefited a lot from this type of cyber medicine.

1.6.2 The Pharmacy Sites or Drug shops-

These are sites that engage in the sale of Drugs. They are of two types, those that do not require a prescription from a doctor before they sell drugs to patients and those that require a prescription from a doctor before selling drugs to patients. On those that need a prescription from a doctor before they sell drugs, David Mills quoting supra notes 6, maintained that they will only dispense medicine to consumers that have first obtained prescriptions from a doctor and submitted to them online. However,

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16 Ibid., p.119.
17 Mills D. Cyber medicine: The Benefits and Risks of ... in http://www.grove.ufl.edu.
18 Ibid.
there are others that only engage in the sale of drugs. As David Mills puts it, "here essentially all a consumer needs to do in order to obtain a controlled substance or any other prescription drug, is simply go to the site, pick out the drug of choice, and make the purchase with a credit card."19

1.6.3 The Information Giving Sites-

These are websites that give medical information about some sickness or drugs which patients log in and read up. So many people make use of this type of cyber medicine sites in knowing more about their illness. Also patients make use of the information gotten from these web sites in the treatment of their various sicknesses. These information giving sites may contain variety of information concerning various sicknesses and the ways of treating them. It may also contain healing claims. Patients see the information in these website as being relevant to them.

1.7 SUMMARY OF THE CHAPTER

In this chapter, I tried to bring out the general outline of the entire work which could also be seen as the summary of the work. I presented the introduction, the reason for my embarking on the research, my research questions, the aim of my research, the structure of my research, the explanation of what cyber medicine is and finally the types of cyber medicine. However, I maintained that there are three types of cyber medicine that elicit various ethical reactions. They are the information giving sites, the consultation sites and the e-pharmacy sites. Let me view this cyber medicine sites via the ethical principles.
2.0 CYBERMEDICINE AND ETHICAL PRINCIPLES

2.1 INTRODUCTION TO THE CHAPTER

Ethical principles according to Beauchamp and Childress, are set of principles in a moral account that function as an analytical framework that expresses the general values underlying rules in the common morality. They went further to say that ethical principles function as guidelines for professional ethics. Ethical principles may also be seen as statements concerning moral human obligations that are generally accepted and are the expression of normative ethical system. Ethical principles are part of a normative theory that gives justification to a moral rule judgement. However, ethical principles give footing, justify and ground morality. They are the roots upon which morality is based.

Beauchamp and Childress outlined four ethical principles namely,

- The principle of nonmaleficence, which is a norm of avoiding the causation of harm.
- The principle of beneficence, which is a group of norms for providing benefits and balancing benefits against risks and costs.
- The principle of justice, which is a group of norms for distributing benefits, risks and costs fairly.
- The principle of respect for autonomy, which is a norm of respecting the decision-making capacities of autonomous persons.

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21 www.stedwards.edu/ursery/norm.htm
22 Beauchamp & Childress, op. Cit. p. 12.
These are the principles that are the pillars upon which contemporary bio-medical ethical principles are based. Despite these principles, I am presenting additional ethical principles which include the principles of responsibility, privacy, and trust and caring. I will also in this chapter view cyber medicine and the doctor-patient relationship not as an ethical principle but as an important relationship in healthcare that aids the healing of patients hence has a value.

2.2 THE PRINCIPLE OF RESPECT FOR AUTONOMY

Autonomy as a concept comes from two Greek words – autos which means self and nomos which means rule, governance or law. Formally autonomy referred to the self rule or self governance of independent city states. The concept was later extended to mean self governance, liberty rights, privacy, individual choice, freedom of the will, causing one’s own behaviour and being one’s own person. However, Raanan Gillon made three different distinctions of autonomy. They include the autonomy of will, autonomy of thought and autonomy of action.

Autonomy of the will is the power to take decision to do a particular thing based on a person’s deliberations. Autonomy of thought is a broad range of intellectual activities that is made up of decision making, moral assessment ability, aesthetic preference ability and the ability to believe in things. Autonomy of action is the freedom or ability to perform an act. Though Beauchamp and Childress did not make this distinctions but they are in agreement that every theory of autonomy maintain that liberty and agency as necessary conditions for autonomy. However, autonomy in healthcare could be generally seen as the duty to maximise a person’s right to make his or her own decisions in medical issues that concern the individual. Beauchamp and Childress saw it as” a norm of respecting the decision-making capacities of autonomous persons”. In cyber medicine the individual that is refered to is the patient.

23 Beauchamp & Childress, Principles of Biomedical Ethics (5th ed) pp57-58.
For a proper autonomy, there must be alternatives from which the particular individual will choose from. Again there must be no pressure in the process of decision making by the individual. The person taking the decision must be informed. This is very important today because cyber medicine whether in the form of the information giving sites, the consultation sites and pharmacy sites enhance the autonomy of patients in the sense that patients make decision on how they want their sickness to be cured. The patient who is affected by the treatment should make the decision for his or her treatment or influence the treatment. Good information giving sites as I will argue later could help them do this. As Goran Collste puts it,

when applied to healthcare, the principle implies that the patient should be empowered to play a more active role in her own care. one way to do this is that the patient has the opportunity to give her informed consent to the decisions that concern her own treatment.26

This is a new development in healthcare. Nancy Calabretta commenting on this said,

The paradigm in healthcare seems to be shifting toward a cultural belief in personal responsibility for one's health and away from the attitude that physicians can use pharmaceutical therapy, advanced surgical technique, or modern technology to fix any health problems that arise...consumers and physicians alike will need to espouse a partnership model rather than the passive, submissive patient model of the past, where patients depend upon physicians to repair their health much as they depend upon mechanics to repair their cars 27

This new development enhances autonomy and affects the doctor-patient relationship as I will discuss later.

Interestingly, there are strong basic requirements that needs to be fulfilled for the

26Collste G. The Internet Doctor and Medical Ethics op.cit. p.123.
27Calabretta, N. op. Cit.
realization of the principle of autonomy. These include that there must be access to necessary information, there must be alternatives from which the individual chooses from, and then the person in question must be competent. Competence according to Goran Collste implies understanding and processing information and forming decisions based on the information gathered and the information gathered must of necessity be reliable and relevant.

The information gotten by the patients from the information giving sites will enable them to make decisions about their own treatment thereby enhancing their autonomy. When a patient seeks medical information via an internet website how is the patient sure that the information is reliable and should be trusted? This is because there are no ways of distinguishing today between the correct websites and the incorrect ones. There are so many websites claiming to give solutions to various diseases. Though we may argue that the information in these websites are accurate and should be trusted but in reality, this is not always the case. It was noted thus,

The status and quality of information provided by health websites is unclear. The availability of this enormous wealth of information does not imply that internet facilitates or promotes the autonomy of individual patients.

If the status and quality of the information provided is unclear and one condition for the realization of the principle of autonomy is that there must be access to necessary information, then in this case the principle of autonomy is not realised. Therefore, the various information on the net will not be facilitating autonomy when often times the principle of autonomy is not realised.

On the consultation sites, the patient is not sure that the person giving medical advice is a genuine doctor. The credentials of such a cyber doctor cannot be verified on the net. Pharmaceutical companies sponsor some of the e-pharmacy

29Ten Have, A.M.J. op.cit. p.118.
sites for commercial purposes though they may be of high standard. If the patient in question is not a trained medical personnel taking decisions on ones treatment based on the information gathered from the cyber medicine websites in its three forms does not enhance autonomy because the basic condition for the realization of the principle of autonomy which is competence of the patient is not realised therefore there was no autonomy.

Cyber medicine sites of necessity may be of help to patients who want to know more about their sickness. Therefore medical information on the net remains beneficial to patients who are interested in knowing more about their diseases if and only if there are ways of distinguishing genuine sites from quack sites so as not to deceive the patients who make use of the information .When this is done, cyber medicine will help in no small measure the taking root of autonomy in medicine and healthcare in general provided the basic conditions for the realization of the principle of autonomy is reached.

2.3 CYBERMEDICINE AND RESPONSIBILITY

Responsibility as an ethical principle maintains that a person should be accountable for his or her moral actions. In other words, if a person has an intention which is put into an action, and it brings out a consequence, then he or she should be praised or blamed for this consequence. The need to address the question of responsibility as a delicate problem in information technology applications in healthcare especially with particular reference to the ethical implications that are associated with the three cyber medicine sites is urgent. Before I proceed, let me attempt a description of the meaning of responsibility. As Goran Collste puts it, “we say that some person "P" is responsible for the outcome "O" of an action " A" when " P " has intentionally caused " A" in order to achieve "O"."P" who is responsible must be able to answer questions like ;why did you do "A"? Why did you want " O"? As a result of being responsible, if "O" is a bad outcome, " P" can be blamed or punished”.

Responsibility can be moral or legal. Moral responsibility is evaluated by the ethos

of the society while in legal responsibility a sovereign legislator formally decides the criteria for evaluation. In both moral and legal responsibility sanctions and praise are given adequately.

There is also a type of responsibility called professional responsibility. Goran Collste accurately maintained that professional responsibility is similar to legal responsibility when the professional organization has agreed on some sanctions. For Goran Collste, professional responsibility is a combination of the traits of both legal and moral responsibilities traits. However, there are professional ethical codes that guide professional responsibility. For some body to be held responsible for a particular action certain conditions have to be fulfilled. Responsibility presupposes that the decision maker is autonomous and it is possible for the decision maker to see the consequences of his or her actions.

How is responsibility to be resolved and evaluated for the internet based decisions in healthcare? This is a major question in cyber medicine today. In the case of the information giving sites, if a patient uses the information contained there in and it fails the patient, who will be held responsible? But this is a problem that the internet lunchers should have forseen hence they should be held responsible. What if the patient that made use of the information happens to come from Amankuta Mbieri Imo State, Nigeria while the internet was lunched in South Carolina, America, which law will be used to try the people who lunched the internet? I argue that it is the law of the place where the internet was launched because the internet lunchers should obey the law of the place before launching the internet. Generally speaking there may be not enough information given on the net about a patients' sickness.

On the consultation sites, even if the internet doctor has the medical history of the patient through the questionnaire, the doctor is lacking information of a physical examination which is very important. Again, the internet doctor is not sure that the patient will follow adequately the recommendations that were given by him or

32 Collste G. The internet Doctor and Medical Ethics op. cit p.124
33 Ibid.
The internet doctor should not be held responsible since the patient may not have followed the recommendations adequately. Goran Collste maintained thus,

...But it is a risk that the internet doctor ought to be conscious about and, thus, she is morally responsible for the possible maltreatment.  

In case of a problem that needs compensation by the insurance company, in which country will the insurance be paid? I am of the opinion that the insurance should be paid in the country where the internet was launched because the launchers of the internet should obey the insurance law of the land before launching the internet website. When it comes to professional responsibility, I argue that it could be applied to the cyber doctor if he or she belongs to the World Medical Association but the problem I foresee is how to determine the real identity of the cyber doctor and if he or she is a real medical practisioner or just a quack whose motive is just to make money and deceive people. Hence, responsibility remains a problem in cyber medicine and it affects the morality of cyber medicine as I will demonstrate in chapter three in the argument on bridging of gap in healthcare and the fact of confidentiality. But there is an urgent need to bring out ways of dictating the identities of the launchers and operators of cyber medicine websites. When this is done, it will go along way in solving the problem of responsibility in cyber medicine.

2.4 THE PRINCIPLE OF PRIVACY

The web dictionary.com defined privacy basically from two perspectives. Firstly it maintained that privacy is the quality or condition of being secluded from the presence or view of others. Secondly, privacy was defined as the state of being free from unsanctioned intrusion: a person’s right to privacy. It is this second definition of privacy that captures my idea of privacy in this work very well. By the principle of privacy it is meant the right not to intrude into the information concerning a person or a group that the individual or group do not want the public or any person to have access to. Privacy has been a moral problem in information technology as well as in

34Ibid. p. 124.
healthcare in general. As it was observed by Jan Bemmel, "the most frequently implemented applications of IT in healthcare are system for the storage and retrieval of patient data at any place and time for which a user is authorised. This has very many ethical implications on the right to privacy of the patients more especially in cyber medicine.

However, the principle of privacy implies that everyone is entitled to decide how and when and to what degree others may dispose of his or her medical data. Most importantly, the patient's privacy is guaranteed by the professional secrecy of the physician which is simultaneously a right of the patient. In cyber medicine, patients reveal some information on the net which risks privacy especially in the consultation sites and e-pharmacy sites where patients fill some questionnaire for medication to be given. The underlying moral question is what amount of information about oneself can one reveal to others and with what conditions and under what safeguards? This is very difficult to determine in cyber medicine. Most especially, the cyber doctor cannot guarantee that the medical data of patients are not used for other purposes. Even at that, we know that it is possible for others to get to information that are given on the net via other means. Commenting on patient's privacy in cyber medicine, Richard O. Mason maintained;

Two forces threaten our privacy, one is the growth of information technology, with its enhanced capacity for surveillance, communication, computation, storage and retrieval...

This is a serious problem in cyber medicine today. Even if the patient uses the workplace computer, his or her own computer or the cyber cafe for communications with the cyber doctor, given the intensity of monitoring, there is no guarantee to privacy of the information sent. With particular reference to the use of personal computers, John J. Paris said,
Even on personal computers one's privacy is no way to secure medical records from the perusal of the technician called to fix a personal computer. Further, there is no professional obligation that binds the computer technician to confidentiality.

As a follow up from this, is there any contract binding the cyber doctor not to reveal the medical data of patients? For now there is no such contract. However, the Oath of Secrecy taken by medical doctors binds the cyber doctor if he or she is a true doctor. Even if a contract exist between the cyber doctor and the patient, the experience of privacy invasion and hacking have shown that information can be distorted in the net.

As it was noted,

What guarantee of privacy is valid when such companies as Double click assign a specific identifier on your computer to track your surname, record the sites you visit and direct user specific advertisement to your monitor.

However, to guard against misuse of medical data of patients with regard to privacy, various regulations have been put in place. Example is the smart like card that patients carry. Here, the information is protected by encoding the data in a way that only by introducing additional information on the patient, can it be deciphered. But it has been noticed that both the restrictive and the permissive styles of data protection are problematic. Restrictive style may deny the doctor the access to important information in a desperate situation while the permissive method endangers the confidentiality that exist in doctor--patient relationship. Another danger is that the stored medical records of the patients may be changed. The change can be done by people who have the knowledge of the computer and how the information are put in the cards. Cyber medicine has great potentials of improving the medical field and health care generally. However, there is need to put in more checks and balances.

39 Ibid.
40 Barroso, P. op. Cit. p. 172.
so as to protect the privacy of patients in the cyber space. This is a challenge to computer engineers and all stakeholders in the information technology industry.

2.5 THE PRINCIPLES OF TRUST AND CARING

The World Medical Association Declaration of Helsinki number two state that it is the duty of the physician to promote and safeguard the health of the people and that his or her knowledge and conscience are dedicated to the fulfillment of this duty. This is again stated in the Hippocratic Oath that is taking by medical doctors upon their graduation from the medical school. Here they pledge to respect life and to protect the life of their patients to their utmost knowledge and ability. On this Oath lies the basis for the principle of trust and caring in healthcare. Hence, it is the duty of physicians by what they pledge to care for patients and on this basis patients have trust on medical personnel. I argue that this principle can be seen as a re-reading of Beauchamp and Childress principles of nonmaleficence and beneficence in the sense that medical doctors avoid the causation of harm and provides benefits and balances benefits against risks in all dealings with the patient.

The trust in this principle presupposes that medical personnel are reliable given the facts at hand. The medical personnel becomes reliable when the patient knows that he or she is an authentic medical doctor. This is proven by the doctors certificate, the association of doctors that the medical professional belongs and other tangible evidences that the patient could see. Therefore, reliability and validity become pre-conditions for trust on the part of patients and care on the part of the physician. This reliability and validity reduces the fear of fraud and low quality health care which are arguments against cyber medicine as I will demonstrate in chapter three. For this trust to be, there must of necessity be a physical encounter between doctors and patients.

When this is reviewed vis-à-vis the various cyber medicine sites, we can see that there is no physical encounter between the doctor and the patient in the various cyber
medicine websites. Hence, cyber medicine raises a very big ethical question for the principle of trust and care in healthcare. As John J. Paris puts it,

"...there is no accreditation agency, no standards, no norms on the web. Who guarantees the accuracy of the information, the integrity of the claims? The promise of security?..." 41

There can be abuses and neglect in cyber medicine that can lead to serious problems in health care. Though cyber medicine may increase the principle of trust on the part of the patient who presumes that the cyber doctor is an expert, the drugs that are bought are of high standards and having gathered enough information by the means of the information giving websites. The patient presumes because he or she believes that cyber medicine is more technologised than conventional medicine. Presumably also, the cyber doctor will try to give his best given the distance, the information given are genuine and authentic for the information giving sites and the drugs sold via e-pharmacy sites are of high standard. But the American Medical Association have doubts about cyber medicine. For the association cyber medicine fails below the principle of care in health care. They captured this thus,

...the practice of cyber medicine fails to meet the minimum standard of care...there is too much room for abuse and neglect. The mere fact that the physician does not see the patient in person continues to raise a lot of suspicions. 42

Given that most information in the net cannot be validated and also the anonymous nature of the cyber space it is doubtful whether the cyber doctor will be breaching the principle of care when he or she fails to perform in the same manner that a reasonable and careful physician would in the similar situation.

Also, there is no way of determining a breach to the principle of trust and

41 Paris, J. J. op. Cit.
caring. Along the same line, there is no body to prosecute those cyber doctors who will go against this principle of care and trust. The sanctions that will be given to those who go against this principle of trust and caring are yet to be determined. All these are problems that are surrounding the principle of trust and caring with particular reference to cyber medicine today.

However, cyber medicine seems to have potentials of living up to the principle of trust and caring in healthcare. I argue this way because given the sophisticated nature of the internet, patients sometimes presume that cyber doctors are more competent than conventional medical doctors, that the information gotten from the information giving sites are more reliable than the one gotten from ordinary hospital because the launchers of the internet are experts. I maintain that patients presume because in this age of technology it is believed that the more technologised a thing is the more reliable it is. Since patients believe that more technology is involved in cyber medicine than in ordinary medicine they tend to trust cyber medicine more than ordinary medicine. For patients who think in this way, cybermedicine is more caring than conventional medicine. But this potentiality of improving the principle of trust and care in healthcare urges us urgently to determine the criteria for validating the various cyber medicine websites.

3.6 THE DOCTOR – PATIENT RELATIONSHIP

As I stated in my introduction to this chapter, the doctor-patient relationship is not an ethical principle rather it is an important relation in healthcare that goes a long way in helping the healing of patients. That is why I decided to discuss it. Again, since doctor-patient relationship helps the healing of patients, it has a value in healthcare. By this the doctor-patient relationship is necessary in determining the morality of cyber medicine. Hence one of the major doubts that critics hold against cyber medicine in its various forms is that it alters the normal doctor—patient relationship in healthcare. As Keith Bauer puts it,
Some critiques of cyber medicine claim that it is problematic because it fails to create physician-patient relationship. But electronically mediated encounters do create such relationships. The issue is the nature and quality of those relationships and whether they are conducive to good patient care and meet the ethical ideals and standards of medicine.\(^43\)

However, the general argument is, if cyber medicine introduces a new doctor–patient relationship? Of course, cyber medicine introduces a new doctor–patient relationship. The new doctor–patient relationship in question is that between the patient and the cyber doctor for the consultation sites, between the patient and the information given for the information giving sites and between the patient and the pharmacy for the e–pharmacy sites or drug shops.

Goran Collste accurately thematised four different kinds of clinical interaction that exist between the patient and the doctor in a typical clinical experience. They are the engineering model, the healing relationship, the trust or fidelity relationship and the contract model.

In the engineering model the patient is like an object for treatment similar to a broken car taken to a mechanic workshop. Here the doctor gets information so as to make diagnosis and take a decision on the treatment that should be given to the patient. The temperature, urine, blood pressure, blood, etc are some of the information that are necessary for the doctor to make his or her decision on therapy.

In the healing relationship, the doctor and the patient are in a dialogue with a specific purpose of achieving a mutual understanding. What Martin Buber calls the ‘I –Thou’ relationship, even though the doctor–patient relationship is asymmetrical. The ‘I –Thou’ relationship means that I am because you are. One person is because the other exist. This makes it possible for one to put others in once position in anything one does.

The trust or fidelity relationship is based on competence and solitude. Because, the patient knows that the doctor is competent, then the patient trusts the doctor. The doctor is also compassionate to the patient because the patient is seen as a friend. In the contract model, the patient and the doctor maintain the rights and duties of each other respectively.

These models are not independent of each other and they represent the different aspects of clinical encounter between the patient and the doctor. But in healthcare effective communication and compassion are very necessary in establishing a good doctor–patient relationship. It is doubted whether effective communication and compassion can be established in cyber medicine in its various forms. In reality, the medical advise, information and drugs are collected from a distance. Even though there may be interactions, this interaction cannot be equated to a face to face encounter with a physician. Also this new encounter is not better and more reliable than a face to face encounter with a physician. This was observed thus,

...A website would degrade the personal relationships...Gone would be the shake–your–hand–look–you–in–the–eye–personal exchange of feelings, persona and character – always a key element in human interactions replaced by words and images on a screen. Pixels rather than hugs, people reduced to digital elements I's and O's, nothing any longer accurately reflecting that analog life form – the human being...

Though the patient may have more trust on cyber medicine due to the fact that it is sophisticated and that the cyber doctor is more competent and may be a specialist in a particular area of healthcare as I argued before. But this is not always the case. For now, the identity and credentials of cyber doctors and other related cyber medicine sites are yet to be adequately proven. It is as a result of this that the American Medical Association stated emphatically that it is doubted if any reasonable doctor–patient relationship do exist on the net.

44Collste, G. The Internet Doctor op. Cit. pp. 121-122.
46“Cybermedicine” in www.ama -- assn.org
Stakeholders in healthcare know that the doctor-patient relationship presupposes a contract between the doctor and the patient. This contract is consolidated in the doctor agreeing to give medical treatment to the patient and in the patient following adequately the doctor's medical advice. It is doubted for now whether this type of contract could exist between the patient and the various forms of cyber medicine sites. There is no way by which the cyber doctor will know that the patient is following the internet advice adequately. As a result of this, the doctor-patient relationship is not easily constructable in cyber medicine. Hence, Keith Bauer maintains thus,

... cybermedicine can interfere with the development of physician compassion and patient trust, it should be viewed as a potential threat to the moral integrity of the physician-patient relationship and the most basic goal of medicine--the advancement of patient health and well being.

However, a new doctor-patient relationship exists in cyber medicine but the problem is that the nature and quality of this new type of relationship leaves nothing to be desired.

2.7 SUMMARY OF THE CHAPTER

In this chapter, I tried to evaluate cyber medicine and some ethical principles. The ethical principles that I considered are the principle of respect for autonomy, the principle of responsibility, the principle of privacy, and the principle of trust and caring. I also considered the doctor-patient relationship not as an ethical principle but as an important relationship in healthcare that affects the healing of patients. In all these, I discussed on the possibility of justifying cyber medicine morally based on these ethical principles and the doctor-patient relationship. However, I am of the opinion that given the numerous ethical problems associated with cyber medicine, it cannot be morally justified for now unless some conditions are laid down. Let us

47 Bauer K, op. Cit. p. 84.
deepen our investigation by reviewing the arguments for and against cyber medicine.
CHAPTER THREE

3.0 ARGUMENTS FOR AND AGAINST CYBER MEDICINE

3.1 INTRODUCTION TO THE CHAPTER

There has been arguments for and against the three cyber medicine sites and cyber medicine generally. In this chapter, I am going to present some of these arguments. In my exposition of the arguments, I am going to compare and contrast them using the ethical principles I presented in chapter two so that I can take a stand. However, I am going to state the particular type of cyber medicine that a particular argument is for.

The arguments include bridging of gap in healthcare, convenience, greater access to information, confidentiality, quality of healthcare, potentiality of fraud, alternative cure, and illegal drug sales.

3.2 BRIDGING OF GAP IN HEALTH CARE

This is an argument for cyber medicine and it maintains that given the wide range and variety of information about diseases and sicknesses on the information given sites, the sophisticated nature of the e-pharmacy and the consultation sites, there has been arguments that cyber medicine should be encouraged and supported because it gives medical assistance to the poor and under developed countries with little health care facilities. With cyber medicine, a patient in Umuduru Mbieri, Imo State Nigeria can read up an information about his or her sickness on a website that was lunched in Tolentino, Italy. The same patient can seek medical advice from a physician in Texas USA. Again a patient in Anara Mbano, Imo State, Nigeria suffering from an endemic sickness can buy a drug via an internate pharmacy or drug shop that is in Sweden. These are examples of how cyber medicine can help in bridging the gap in medical care between developed and sophisticated nations with adequate health care facilities and developing nations with inadequate healthcare facilities. Based on this people have maintained that cyber medicine should be encouraged. This is because it
is morally good according to the ethical principle of justice for everyone to get good healthcare as against bad healthcare. One way of doing this is by providing adequate, good and current healthcare facilities. In developed countries of the world, adequate healthcare facilities are provided while in developing nations of the world, the healthcare facilities are not of the current standard. Hence cyber medicine in its three forms helps in bridging this gap in healthcare. With particular reference to Africa, it was observed thus,

..  
...Dwindling resources, burgeoning populations and a chronic shortage of doctors and nurses are throwing healthcare in Africa into crisis, it is time African doctors took a closer look at medical websites... 48

However, many patients in the developing countries do not have access to the computer and the internet. Even those who have access to the internet, many cannot access the information correctly. Moreover, there is no person to monitor their application of the information gotten in the stipulated and accurate way. In case of a mistake in the application of the information gotten, the internet doctor or the luncher of the website or the e-pharmacist cannot be found to correct the mistake. According to a report monitored in a Nigerian teaching hospital by Grace Ada Ajuwon, about the internet use, by first year clinical and nursing students in that school, it was discovered that 42.6% of the entire sample could use the computer. 57.4% could not. 58% of the medical students are computer literate, majority 75.9% of the student nurses are not. Slightly more than two thirds, 60.7% of the entire students had ever used the internet, 33.9% had not. E-mail was the most popular of internet services used by the students. 76.4% and the cyber cafe was the common place where students had accessed these. 49

And in another report monitored in a Tanzanian medical school by Mirian Samuel et al, a similar result was found. They have this to say,

The highest levels of competence in generic ICT areas were for email, Internet and file management. For other skills such as word processing, most respondents reported low levels of competence...our study has found a low level of ability to use ICT facilities among medical students in a leading university in Sub-Saharan African.  

This is an example of what is happening in the developing countries of the world. To worsen the situation, in both Nigeria and Tanzania, the case study was carried out among medical students who all things being equal should know. This tells us the amount of computer literacy among the so called countries with inadequate healthcare facilities who are advised to make use of cyber medicine via the net. Following from this report one will imagine the amount of mistakes that would be made by patients in these countries if they decide to seek medical advise via the internet. There will be more mistakes than healings. If instead of healing the patient, the sickness continues, then the end purpose of all medicine which is the healing of the patient is not achieved. It is not morally sound by the ethical principles of beneficence and nonmaleficence that a patient went for healing but instead the sickness worsened. This argument of bridging of gap in healthcare concerns all the three cyber medicine websites namely the information giving sites, the consultation sites and the e-pharmacy sites.

3.3 CONVENIENCE

Cyber medicine in its three forms of the information giving sites, the consultation sites and the e-pharmacy sites could be supported based on the fact of convenience. The argument is that cyber medicine has potentials to solving various limitations of the orthodox medicine. For instance, people living in remote areas who wish to avoid length travels just to see their doctor on some minor problems can solve this problem with the aid of cyber medicine. This could be done by reading up information via the

Miriam, S. et al. Assessing Computer Skills in Tanzanian Medical Students; an elective experience
information giving sites. Another argument is the difficulties that are involved in getting medical advise at odd hours like in the mid night and queing up for the whole day just to see the doctor, they are solved by the fact of cyber medicine especially for elderly people. Again cyber medicine has a round the clock availability. \(^{51}\)

Cyber medicine is also convenient to the user in the sense that it allows information to be read and answers given at the convenience of the user. With the aid of cyber medicine one can stay in once house and have a direct communication with his or her doctor in any part of the globe. Also, one can buy drugs from any online pharmacy from any part of the world from one’s house provided that the person has access to the internet. I argue that because of this convenience patients trust cyber medicine. Therefore, by this argument, cyber medicine increases the principle of trust and caring in healthcare.

### 3.4 GREATER ACCESS TO INFORMATION.

There is also argument to support cyber medicine based on the fact that patients have quicker access to information about their diseases and sicknesses, how to cure them, preventive measures and the most recent drugs that are produced about them. This greater access to information helps patients to make decisions about their cure thereby enhancing their autonomy as I discussed in chapter two. This argument is especially in the support of the information giving sites. Though similar information could be gotten in health centers but it is not in the same degree and fastness as it is gotten from the net about sickness via the information giving sites. Patients have now informed knowledge about their conditions.

But my doubt about this access to information is its reliability. How are we sure that the so called information that are been accessed are not masterminded by some pressure groups or some pharmaceutical companies or promoters who want to make their money? This was captured thus,
...With the new internet technologies anybody with a computer can act at the same time as author, editor and publisher and anonymously if desired. A distinction between evidence, informed discussion, personal biases and simple deceit is hard to make.\textsuperscript{52}

Again, patients use the information gotten in self medication which is not morally acceptable in healthcare because it can lead to mistreatment or other problems. Hence it goes against the principle of beneficence and nonmaleficence in healthcare. However, I am of the opinion that the information giving sites remain relevant to patients who want to know more about their sickness. But this information gathered from the web sites should act as a means of enhancing the personal interaction with once doctor. One way of doing this is the patient taking these information along with him or her when going for consultation with his or her doctor and discussing it with the doctor. The doctor will now see the patient as an informed person. Such discussions help in increasing the doctor-patient relationship as I discussed in chapter two.

3.5 \hspace{1cm} CONFIDENTIALITY

Many patients suffering from some diseases and sicknesses like Aquired Immune Deficiency Syndrome (AIDS) in the developing countries do not feel free to approach a conventional doctor to receive treatment. This may be as a result of shame. Again, some of this patients in developing countries feel that when they report to the government hospitals or to conventional doctors that a terminal injection will be giving to them and they will die gradually. They prefer dying in silence than visiting a conventional doctor. This is with particular reference to the developing nations. But the same patients feel free to approach cyber doctors via the internet because for them their identity is not known by the cyber doctors. This is what is called confidentiality or otherwise put anonymity in cyber medicine.

By this argument the privacy of patients is protected therefore cyber medicine in this
way promotes the principle of privacy in healthcare. This argument is used especially in the support of the consultation sites and the e-pharmacy sites. For the proponents of this argument cyber medicine should go ahead because of its confidentiality. It does not reveal the identity of the patient nor the doctor. Hence, patients who are shy about their problems get it solved via cyber medicine. With this confidentiality as their focus, proponents of this argument maintain that cyber medicine should be encouraged. As Nancy Calabretta observed with regard to health information seekers on the net “…they also said, they were able to get more information online than from other sources and they liked being able to do so with seeming anonymity especially regarding sensitive topics.”

It is obvious that for an appropriate diagnoses to be carried out, there is need for a physical and experimental examinations to be carried out whereby some test are done, there is cross questioning and touching of the patient by the doctor but all these are not possible with cyber medicine in its various forms. No amount of questionaire answered by a patient over the net will equal the physical and experimental examination by a doctor. Even there is a psychological healing that takes place when a doctor counsels a patient. Even though such a thing happens also in cyber medicine especially with the consultation sites but I doubt if it is the case in reality. Dr Grant Kelly of the London Medical School captured this thus,

...There is no substitute for making a pulse or just putting your hand on someone's chest to feel their heartbeat.

It is a proven fact in medicine that some drugs go with age and some situation of sickness require certain drugs. It is only a trained and qualified medical doctor that can dictate these situations and the appropriate drugs to be issued out. The fever drug given to a patient suffering from malaria will not be the same as the one given to a patient suffering ordinary fever eventhough they may have the same symptoms.

52 Ten Have A.M.J op. cit. p.118.
53 Calabretta, N. op.cit.
Similar drug for headache may not be given to a man of 90 years and a boy of 12 years. Even, there are times that certain patients will be allergic to some drugs. That is why it is advisable in medicine for people to have a private doctor who will be acquainted with one's medical history. Doctors get to know their patients' problems by cross questioning, physical and experimental examinations. But all these are not possible with cyber medicine. Even when there is questioning over the net it will not be as deep as it would be in conventional medicine. As Mandl et al put it with regard to cyber medicine,

Communication when it does occur is often too brief, with little opportunity for discussion or follow up questions.\textsuperscript{55}

With all these I doubt for now if cyber medicine will give adequate and the required healing to patients who make use of it though it is more confidential than conventional medicine. If it is so, then it cannot be morally justified because morality by the ethical principle of beneficence demands that adequate healing be given to patients. Furthermore, there is also confidentiality in conventional medicine because medical doctors take oath of secrecy not to reveal medical information about their patients.

\subsection*{3.6 QUALITY OF HEALTHCARE}

According to the American Medical Association (AMA) in their website,\textcolor{red}{(www.ama-assn.org)} the quality of healthcare that is giving in cyber medicine in its three forms of the information giving sites, the consultation sites and the e-pharmacy sites is below standard. For the fact that there is a distance between the doctor and the patient in the case of online consultation, between the information seekers and the information in the case of the information giving sites, between the patient and the e-pharmacy in the case of the pharmaceutical sites or drug shops, there may be over diagnoses or under diagnoses. Again, some of the cyber medicine sites are anonymous in nature. This calls to question the quality of healthcare giving by these

\textsuperscript{55}Mandl, K. D. et al quoted by Nancy Calabretta, op. Cit. in www.pubmedcentral.gov.
cyber medicine sites. In the case of a problem, the ethical principle of responsibility as I discussed in chapter two will be very difficult to be realised here.

On the e-pharmacy sites, they sell drugs to patients without the doctor’s prescription. All that a buyer needs is to pay with a credit card and give his or her address and the drugs will be delivered to the address. With this patients have access to unapproved drugs. By removing the intervention of medical doctors, I doubt the quality of the medication given over the net by the e-pharmacy sites.

On the contrary, I argue that this argument could be opposed because given the amount of information on healthcare that is on the net and the easy accessibility, healthcare will improve via the net than in conventional medicine. Given the world wide nature of the internet a patient in Nigeria can have access to an information in Britain and that improves the quality of healthcare that a patient gets.

Moreover, there can be patient to patient information, patient to doctor information, doctor to patient information and doctor to doctor information. In conventional medicine it is not often the case that there are association of patients suffering from the same sicknesses but this is done in cyber medicine through chat rooms. Here the patients advise and encourage themselves on the possibility of their healing. This gives psychological healing to them. By sharing their experiences, they find out the best doctor to approach for their problems. All these improve the quality of healthcare given. Also, doctors can update their knowledge about recent drugs and cures about a particular disease via the net there by improving the quality of healthcare given to their patients. Rather than reducing the quality of healthcare, cyber medicine according to the later argument have improved the quality of healthcare. However, I submit that, cyber medicine is more effective for patients that have formerly seen a doctor and are aware of their sickness.

3.7 POTENTIALITY OF FRAUD

This argument is against cyber medicine in its three forms. The argument maintains that because of the anonymous nature of the internet, there can be the potentiality for fraud in cyber medicine. The fraud can be two sides both on the side of the
patients and on the side of the internet website. For instance, for wanting to get a particular drug, a patient may lie about his or her condition. Drug addicts who want to get controlled substances can do this by just purchasing them via an internet pharmacy. By controlled substances I mean the drugs that are not allowed by the government like cocaine.

On the other hand, how can one know that the cyber doctor giving the advice that one receives is a licensed medical practitioner or if it is just a person disguising himself or herself as a medical doctor when in reality he or she is not one? This is difficult to dictate in cyber medicine. We are not sure that what is prompting the cyber doctor or the healthcare websites is not the quest for money rather than the quest for correct and accurate healthcare. It is difficult to know in cyber medicine the school of medicine the cyber doctor attended and the year he or she graduated. Again, it is known in cyber medicine, the medical association that licensed the cyber doctor as a practising medical doctor. All these go along way in showing that there is a great potentiality of fraud in cyber medicine. Even the so-called drugs that are bought by the means of the e-pharmacy sites, its security cannot be guaranteed.

The e-pharmacy has been identified as a potentially easy way of selling illegally unapproved drugs with fake medical claims. The principle of beneficence demands that the medicine that are bought by patients should heal them of their sickness and disease. If the drugs do not do this then the patient must have been deceived and the consequence of this is often tragic in healthcare. The e-pharmacy sites tend to do this when they sell unapproved drugs with fake medical claims. This also goes against the principle of nonmaleficence because harm should be avoided in healthcare.

Furthermore, there is no distinction between advertisement sites and unbiased medical content sites. Eventhough some legislations have been made to protect some of this anomalies, but their implementation remain a problem given the nature of the cyber space. But if there is fraud in cyber medicine then the healing of the patient will not be achieved and if this is so, cyber medicine will not be morally justified. Provided, there will be a means of checking this fraud in cyber medicine, there is no doubt that cyber medicine will lead to an improved healthcare.
3.8 ALTERNATIVE CURE

Patients who may be disappointed with their doctors can seek for an alternative via the internet doctor. The line of thought of this argument is that conventional medicine does not have all the answers that are bourging the contemporary society in healthcare. Hence cyber medicine should help in clarifying those facts. As Goran Collste puts it,

> Consultation via the internet is a way for those with sufficient economic resources to obtain a second opinion, yes, even a second doctor. There can be many reasons for this demand; the patient may have lost confidence in her ordinary doctor, she has heard of some specialist in the particular disease she is suffering from, she finds herself in a desperate situation etc.  

The nature of contemporary healthcare makes it necessary to have an alternative. Doctor's visit has reduced to about 15 minutes, patients leave the doctor's consultation room having most of their questions unanswered. According to opinion sampling conducted in 1999 in the United States of America, it was found out that more than half Americans were not satisfied with the duration of time they spent with their doctor's and with their doctor's availability. I argue that because of this most patients prefer going to the net to read up the solutions to their sicknesses or visiting a cyber doctor who will spend enough time with them. This leads them to preferring cyber medicine to conventional medicine. By this argument cyber medicine promotes the principle of trust and caring in healthcare.

But is cyber medicine a safe and secure alternative for now? Since there are no

56 Collste, G. “The Internet Doctor and Medical Ethics” in Medicine, Healthcare and Philosophy, op. cit., p. 121.
ways of distinguishing the correct and incorrect cyber medicine sites, the medication given over the net cannot be guaranteed. Therefore cybermedicine as an alternative for now remains a disputed idea. It was put by Kent Anderson with regard to the future of cybermedicine thus,

An important bottomline is that the future may well be better than the present, but will be characterised by radically altered market forces, profit expectations and business models.  

For him, the future of healthcare with regard to cyber medicine is bright but the problem is that e-business will affect the quality of the medication that will be given. This is because it is difficult to distinguish between websites that are for the purpose of making money and those ones that are for authentic medication. If e-business affects cyber medicine, it means that cyber medicine is not a safe alternative. This argument is with particular reference to the information giving sites and the consultation sites.

3.9 THE DRUG SALES

The e-pharmacy sites are criticised because of the sale of drugs over the net. There are no limitations to the amount and quality of drugs that are purchased over the net. In various countries of the world, there are policies that are made for the selling of drugs. Some of the policies in Nigeria for example is that substandard and unapproved drugs should not be sold to the public. In some countries like Sweden, certain drugs cannot be given to a person unless on doctors’ prescription. There are also policies that guide the establishment of pharmaceutical shops. For instance people with no formal knowledge of medicine are not allowed to open pharmaceutical shops. Drugs have to reach certain standards before the government agrees that it should be sold to the public given the delicate situation of human health.

In Nigeria, The National Agency For Food, Drug and Control (NAFDAC), makes

sure that the drug that is sold to the public reaches the required standard. Accordingly, there are similar bodies in various countries of the world. With the coming of cyber medicine, it will be difficult for such bodies to control the sell of sub-standard and unapproved drugs over the net. This is because of the anonymous nature of the cyber space. Such bodies will also not know when the policy for the selling of drugs to the people are violated over the net. With this I doubt the genuinity of cyber medicine and especially the e-pharmacy sites.

As I argued before, I am against the drug shops keeping the doctor aside in its dealing with patients. This goes against the principle of trust and caring in healthcare and calls to question the doctor-patient relationship as I discussed in chapter two.

It is the profession of the doctor to know what each patient needs at a particular time. The doctor gets to know this by his or her examination of the patient. Hence, it is only the doctor by his or her qualification that is entitled to recommend a particular drug to a patient and the dosage too. The conflict is that some patients may want a particular drug due to some reasons, for instance sleeping drugs but they may not be good for their health. The patients wanting this satisfy their desire by the means of the internet pharmacy. Given this the drug shops and cyber medicine generally can be seen as potential threat to healthcare in the contemporary society.

However, cyber doctors and pharmacist maintain that all the questionnaire that are answered by the patients before the drugs are given go a long way in helping them to know what is the problem of a particular patient and the actual drug to be given to the patient. Despite this, the morality of the selling of drugs over the net by the drug shops remain a problem that needs urgent attaintion. This fear was captured thus:

one possible consequence of the availability over the internet of drugs taken without supervision may be an increase in the number of people turning up in accident and emergency departments having used unlicensed drugs or having used drugs inappropriately. Who will be liable for the misuse or mis-selling of treatments if a drug is bought from a drug company, or if clinical advice is given over the internet by
a clinician in a distant country?\textsuperscript{59}

The cyber doctor or pharmacist should be held responsible because this is a problem that he or she should foresee. But, cyber medicine has made it possible for people to buy certain drugs that are not available in their own country or state from other countries or states. However, the worry is that majority of drug abuse cases were as a result of drugs that were bought over the net.

3.10 SUMMARY OF THE CHAPTER

In this chapter, I presented the arguments for and against cyber medicine. I tried to critically expose the arguments by comparing and contrasting them applying the ethical principles I discussed in chapter two. Through this I tried to bring out the merits and demerits of every argument. I also pointed out the particular type of cyber medicine that each argument is referring to. Having done this, I wish to maintain from the arguments that cyber medicine has potentialities of improving the healthcare of the modern man given the sophisticated nature of information technology but the morality of cyber medicine in its three forms cannot be justified unless there is a way of differentiating the correct and incorrect cyber medicine websites. When this is done, the end purpose of every medicine which is the healing of the patient will be realised in cyber medicine. By this cyber medicine will be morally justified. One way of realizing this morality of cyber medicine is by implementing some checks and balances.

\textsuperscript{59}Parker and Gray, “What is the role of Clinical ethics support in the era of e-medicine” in Journal of Medical Ethics, 2001, 27, p. 133.
CHAPTER FOUR

4.0 CONDITIONS FOR A MORALLY ACCEPTABLE CYBER MEDICINE

4.1 INTRODUCTION TO THE CHAPTER

As we have demonstrated from the previous chapters, cyber medicine is a moral problem because of the various ethical problems that have surrounded it. One solution will be to outlaw cyber medicine because of the ethical implications that follow its practice. Given the sophisticated nature of the cyber space, outlawing cyber medicine will not be possible. Also, cyber medicine has some potentialities towards improving the modern healthcare as I discussed in the previous chapters.

A second option will be to allow cyber medicine to operate without any regulation. But allowing cyber medicine to be practiced without any regulation will lead to so many ethical problems in healthcare as I discussed in the previous chapters. This will make it very difficult for cyber medicine to be morally justified.

A third option will be to accept cyber medicine with some regulations. I argue that this third option is the best among the others. Cyber medicine should be accepted with regulations to checkmate its excesses and it is with these regulations that cyber medicine can be morally justified. Though, regulating cyber medicine websites will be very difficult today due to the anonymous nature of the internet. This was noted thus,

That difficulty is highlighted in the American Medical Association's recently published Guidelines for A.M.A. websites, there, in the dense and turgid prose that marks regulatory standards, the A.M.A attempts to address quality standards that should apply to content, advertising and sponsorship, privacy and confidentiality and e-commerce. The task, as its
authors admit is both daunting and ever evolving—one that will require ongoing re-evaluation and frequent revision.

However, some opinions have been developed on what shall be done for there to be a morally accepted cyber medicine. My task in this chapter is to critically thematise some of the necessary conditions for a morally acceptable cyber medicine.

Various medical and health associations like the American Medical Association, World Medical Association, Pharmaceutical Associations, individual groups, health agencies, etc have developed some conditions for a morally justified cyber medicine. But I am going to take the mode provided by Health On The Net Foundation, (HON) as a guide. I choose Health On The Net Foundation because it is a non governmental and non profit oriented organization. Again, giving the integrity and status of the people that came together to form it, the information contained in their website is reliable.

According to the Health On The Net Foundation Website(www.hon.ch), the Health On Net Foundation (HON), is a non governmental organization created in 1995. It is based in Switzerland having its mission as guiding ordinary persons or non medical users and medical practitioners to a reliable and useful online medical and health information. The origin of this organization goes back to 7th to 8th September 1995, when some of the world’s renowned experts on telemedicine gathered in Geneva, Switzerland, for a conference with the title “The Use Of The Internet and World Wide Web For Telemedicine In Healthcare”. Eleven countries were represented at the conference which had sixty participants. Some of the participants at the conference include the U.S heart surgeon Dr. Micheal DeBakey, physicians and professors, researchers and senior representatives of the World Health Organization (WHO), International Telecommunication Union, (ITU), the European Laboratory For Particle Physics (CERN), the European Commission, the National Library of Medicine and

60John J. Paris, op.cit.
the G7- Global Healthcare Applications Project.

In this conference there was an unanimous agreement to create a permanent body that would promote the effective and reliable use of the new technologies for telemedicine in healthcare around the world. As a follow up from this the Health On The Net Foundation Website took effect on March 20, 1996, with the name www.hon.ch. It became one of the very first URLs guiding both lay people and medical professionals to reliable sources of healthcare information in the cyber space. Health On The Net Foundation is a leader among other websites in setting ethical standards for web site developers and today it has become one of the most respected not-for-profit portals to medical information on the net. It works closely with the University Hospital Of Geneva, and the Swiss Institute of Bioinformatics. The council members and webteam hail from several European countries and the U.S.A.

Among the distinguishing features of Health On The Net Foundation are two widely used medical search tools, MedHunt and HONselect and the HON code of conduct (HONcode), for the provision of authoritative, trustworthy web based medical information. Thus the code of conduct provided by Health On The Net Foundation for cyber medicine websites whether in the form of the information giving sites, the consultation sites or the pharmaceutical sites include authority, complementarity, confidentiality, attribution, justifiability, transparency of authorship, transparency of sponsorship, honesty in advertising and editorial policy. Let us discuss the principles gradually.

4.2 AUTHORITY CRITERIA

According to Health On The Net Foundation, the authority criteria for the acceptability of cyber medicine maintains that any medical or healthcare information hosted on the net must be given by a medically trained and qualified healthcare professionals. The essential points were summerised thus,

61 www.hon.ch.
Is the author of all medical information mentioned? Have you listed his/her training/credentials? 62

This is applicable to all the three cyber medicine websites namely the information giving sites, the pharmaceutical sites and the consultation sites. Hence, the websites that offer medical advise must do so with a trained and qualified medical doctor. If there is any need for organizations that are not in the healthcare arena to launch a website on cyber medicine, there must be a clear cut statement to indicate this. Therefore, medical information provided on the net must not be anonymous. The qualifications of the author must of necessity be known. Health On The Net foundation went further to maintain that it is very necessary for the area of specialization of the author to be known. When all these are determined it will go along way in making the various forms of cyber medicine to be morally accepted.

4.3 THE COMPLEMENTARITY CRITERIA

According to Health On The Net Foundation, the complementarity criteria says that all website must provide information that should act as help or improvement towards the existing relationship between a patient and the doctor hence should be complementary to orthodox medicine. The main points of the complementarity principle was noted thus,

Have been the purpose of the website and the missions, both of the site and the organization behind the site clearly presented?...we recommend also adding a statement such as the following, 'the information provided on (name of the site) is designed to support, not replace, the relationship that exists between a patient/site visitor and his/her physician'. Have you describe the intended audience? 63

This principle mostly refer to the information giving sites. This is very important today for the acceptability of cyber medicine morally. This is because doctor – patient relationship is very important in medicine and healthcare generally. It is through this relationship that a patient is healed. When there is a good doctor-patient relationship, the patient and the doctor will trust and understand each other and this goes a long way in bringing a fast healing to the patient.

Hence I argue that one way of doing this and which will lead to the acceptability of the information giving sites is by distinguishing the true and false websites and using a seal to mark them. Though this may be difficult as a result of the anonymous and sophisticated nature of the internet, but it is better started than never. And this will go along way in making people to accept the information in the cyber medicine websites. The complementarity principle also applies to the pharmaceutical sites and the consultation sites. Hence the pharmaceutical sites should not replace the patients' doctor in the issuing and delivering of drugs as well as the internet doctor should not replace the patient's own doctor.

But what of a situation whereby the internet doctor is the patients own doctor? In a situation like this, the internet should help in increasing the already existing doctor-patient relationship rather than replacing it. This should be the aim and purpose of the cyber medicine websites. Hence for any cyber medicine website to be morally accepted, the purpose of the website, its mission and that of the organization that is behind the website should be known. Also, the reason for the presentation of the information must be clearly stated and the person that launched the website must indicate accurately the particular audience that the website is targeted at.

4.4 CONFIDENTIALITY CRITERIA

Confidentiality as a criteria for a morally accepted cyber medicine according to Health On The Net Foundation maintains that all medical data whether in the information giving sites, the e-pharmacy sites or the consultation sites relating to a
patient or visitors to a cyber medicine website must be treated with utmost confidentiality. It was captured thus,

Your site must describe how you treat confidential, private or semi-private information such as email addresses, email content, email exchanges with your visitors. You have to inform your visitors if their data will be recorded in your own database, who can access this database (others, only you, nobody) if this information is used for your own statistics, (anonymous or not), or if these statistics are exploited by third party or other companies.\(^{64}\)

Hence, the website launchers are bound to obey the legal requirements of medical information privacy that is obtainable in the country and state that the website is located. For any website to be accepted as a cyber medicine website, it must of necessity describe in details how it treats the medical data that visitors to the website present. However, the essential points of the principle of confidentiality was observed thus,

Have you a specific page devoted to your confidentiality/privacy/security code? Have you explained how you treat the information sent to you by your visitors? (use of cookies, storage and statistics files, email addresses or/and contact information, names, personal or medical data – which one, for whom and what for). Besides, if none of these points are relevant for you, inform your visitors.\(^{65}\)

Hence the confidentiality criteria remains a relevant principle for the moral acceptance of cyber medicine. Infact, every cyber medicine website whether the information giving sites, the consultation sites or the e-pharmacy sites should have a column for a privacy policy where they will state clearly the confidentiality policy. Also, the countries to which this policy is binding should be clearly mentioned.

\(^{64}\text{Ibid.}\)
\(^{65}\text{Ibid.}\)
But the problem is how to enforce this and the agencies that are going to do this. However, the availability of medication over the internet presents a vexing and complex challenge to state and federal agencies charged with enforcing drug laws. 66

I am of the opinion that the state and federal agencies should enforce drug laws that will govern the cyber space with a special attention to the drug shops and the consultation sites. This will be a road towards accepting cyber medicine morally.

4.5 ATTRIBUTION CRITERIA

Attribution as a condition for an acceptable cyber medicine according to Health On The Net Foundation says that information contained on the cyber medicine websites will have to be supported by clear references to source data. Again the date when a clinical page was last updated should be clearly shown on the website. We can summarise the important points of the attribution criteria thus,

where does the information come from?, what literature was used to gather information for the article? A bibliography must be included, with hypertext links if possible. Date of last modification must be included on every page of the site. For clinical articles, we recommend including the creation date as well. 67

This is important so as to know if the information provided is out dated and if the materials used in writing the information is authentic and genuine. This is mostly concerned with the information giving sites and the e-pharmacy sites, though the consultation sites are not excluded from this. Therefore the information that are contained in the cyber medicine websites should contain date of publication, the origin of the quotations, and the update of all the information that are contained

66 Mills D. "Cybermedicine: The benefits and Risks of Purchasing Drugs over the internet", op.cit
67 www.hon.ch/honcode/guidelines.html
therein. In the case of clinical pages, the dates of creation and the last modification should of necessity be included in the information that should be given.

But one may ask of the feasibility of this, given the nature of the cyber space. But I argue that stakeholders in medicine and healthcare generally should have a way of ensuring that reputable websites are only allowed on the internet. One way of doing this is by having an editorial board and having a seal to distinguish the approved and non-approved cyber medicine websites. This is applicable to all the various cyber medicine websites either the information giving sites, the consultation sites or the e-pharmacy site. On the other hand the patients and all visitors to the cyber medicine websites should be very careful when visiting the websites. David Mills puts it thus with particular emphasis to the e-pharmacy sites,

> Also compare prices of several different pharmacies before making a purchase and inquire about delivery and shipping charges. Finally, inquire about the opportunity to consult online with the pharmacist. If there is no available contact with a pharmacist, or no cost savings, or if it takes a week to get the medication, then it might worth it to stick with the traditional mortar and brick pharmacy. 13

However, if all the checks and balances that the attribution criteria maintained are put in place, there is no doubt that it will go a long way in ensuring a morally acceptable cyber medicine.

### 4.6 JUSTIFIABILITY CRITERIA

For Health On the Net Foundation, for a cyber medicine website to be accepted, any claims relating to the benefits or performance of a specific treatment, commercial product or service must of necessity be supported by an appropriate, balanced evidence. The necessary points of this principle could be summerised thus,

All information about any treatment must be given with scientific evidence (medical journals, reports or others) clearly identified. The
alternative(generic) treatments must be described. The commercial or company's sites clearly stated must inform about the other products from their competitors. 

This is because some websites make unproven claims which can deceive visitors to the website. It follows therefore that all information whether in the information giving sites, the consultation sites or the e-pharmacy sites, regarding the benefit or the performance of a particular treatment, a product or a commercial service, will be given with all necessary precaution that were layed down in the principle of attribution.

Here, the internet lunchers should justify vividly every claim of theirs about the effectiveness or non-effectiveness of a particular treatment or drug. Their information must also be a balanced one, which according to HON foundation means that the internet launchers should include the alternative treatments in their claims. The basis for the recommendation of a particular commercial product must be clearly stated and the bibliography that supports the information must be shown.

This is important given the moral questions that have surrounded cyber medicine. When they are implemented there is no gain saying that they will help in the realization of a morally acceptable cyber medicine.

4.7 TRANSPARENCY OF AUTHORSHIP CRITERIA

Authorship may be seen as the identification of a person who has made a substantial intellectual contributions to a work. Transparency of authorship according to Health On The Net Foundation simply means that the launchers of the cyber medicine websites in its three different forms should give their information in a way that is very

68Www.hon.Ch  
69Www.hms-harvard.edu, Authorship Guidelines.
clear. Among the important information that should be given is a concrete contact address for people who on visiting a particular website would like to have further information or have a physical contact with the cyber doctor or the e-pharmacist or the launcher of the information giving sites. This address must of necessity contain valid phone numbers, and e-mail addresses. This should be seen clearly on the website. The quality of the site should also be known. Health on the net foundation summerised these points thus,

A valid email address or a link to a valid contact form must be available from the homepage and be easily accessible throughout the site...giving a personalised and swift answer to the websites visitors' enquiries.70

This transparency of authorship is generally applicable to the information giving sites, the e-pharmacy sites and the consultation sites. One of the major critiques of cyber medicine today, whether in the form of the information giving sites, the e-pharmacy sites and the consultation sites is that often times, the launchers of the websites prefer being anonymous. As Sunday Business puts it,

The web is a medium in which anyone with a computer can serve simultaneously as an author, editor, publisher. And this can be done anonymously if so desired. There is little on the internet to distinguish those promoting informed discussion from those pushing a political agenda or merely trying to mark a buck.71

One way of ensuring the transparency of authorship is for medical associations and stake holders in the health industry to set up a body that will identify, certify and validate the correct cyber medicine websites in its three forms as against others that

70Www.Hon.Ch.

are not correct. We may also argue that, since there are proliferation of websites, control is not so easy hence the only way is for bodies like the world medical association to provide a website in which people will know that the information there are accurate and valid.

One may argue that this will eradicate the false claims and other ethical problems that occur in cyber medicine but in reality this is not the case. In this age of information technology, it is possible for quacks to launch internet websites with the names of renounced organisations. Then it will be difficult for patience to separate the correct ones from the incorrect ones.

If associations like the American Medical Association, Swedish Medical Association, Nigerian Pharmaceutical Association etc will develop their own websites, I think it will go along way in checking the abuses that are in cyber medicine today provided there are ways of distinguishing the genuine and fake websites. This will go along way in making cyber medicine to be morally acceptable today.

4.8 TRANSPARENCY OF SPONSORSHIP CRITERIA

According to Health On The Net foundation, this principle maintains that, the sponsors of a particular website must be vividly shown. Also, the names of the commercial and non-commercial organizations that contributed funding or other services or materials to the website must be clearly shown. Personal sites, sites funded by the government or its agencies, pharmaceutical companies sites and all other commercial bodies sites are all included in this principle. The various cyber medicine websites should of necessity include statements showing their sources of founding. It was noted thus,

You are a school, a university or any other public services and you receive funds from a government agency, have you indicated it? You have created your own personal website with no external sources of funds, have you informed your visitors about it? You are in charge of a commercial or company's website and funded by this entity, have you given this
One of the major problems that have created doubts about the authenticity of some cyber medicine websites is the fact of sponsorship. This is because some medical companies or groups sponsor some cyber medicine websites just for the promotion of their products and for their own personal aggrandisement. Hence, the principle of transparency of authorship is made for the purpose of correcting this anomaly. This is because some of the products that are used for promotion are not always generally acceptable. Also, companies may not say all the truth about their products. As a result, patients may be deceived into buying a product which ordinarily, they will not like to buy.

Therefore, any cyber medicine website whether the information giving sites, the consultation sites, or the e-pharmacy sites, that do not show vividly its sources of funding should not be accepted as a genuine and authentic cyber medicine website according to Health On The Net Foundation.

This will help to know the people that are behind the various cyber medicine websites and the various agenda that they have in mind. But how can we know when the cyber medicine websites are telling us the truth about their source of funding. This is very difficult to know. I argue that cyber medicine websites indicating their sources of funding will go a long way in bringing a morally acceptable cyber medicine provided the Health On The Net Foundation will have a way of dictating when the launchers of the cyber medicine websites are telling us the truth or lies about their sources of funds.

4.9 HONESTY IN ADVERTISING AND EDITORIAL POLICY

According to Health On The Net Foundation, this principle states that, it should be clearly stated at the website whether advertising is the source of funding of a particular website or not. All cyber medicine website should of necessity display in

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Ibid.
their home page the advertisement policy that they adopt. This principle maintains that advertising and other promotional material will be presented to visitors to the website in such a manner that they will make a difference between it and the authentic material created by the institution operating the site. On advertising indicators it was noted thus,

All advertising (including, but not limited to, pop up windows and banners) should be identified with the word 'Advertising' or similar identifying clearly the sponsor. If banners are served from a free web hosting service or 'banner exchange', the webmaster must clearly state that the advertising banners are from the free web host and are not endorsed by the site editor.73

Advertisement generally constitutes a problem in cyber medicine today. This is because it is difficult today to distinguish between the websites that are for the purpose of advertisement and those that are genuinely for an unbiased presentation of facts. It was as a result of this that John J Paris said,

The most intractable problem "Hi Ethics" will face is advertising. How with so much money and opportunity for instant wealth so intense, will health information sites keep a bright line of separation between content and advertising?... some enter the health networks to promote informed intelligent discussion, some to push a political agenda and some in the pursuit of a fast buck. For most, the motives are mixed. And for some, self delusion leads to the belief that they unlike others, are not subject to the temptation to confuse the gods...74

Hence, correct advertising and editorial policy is necessary to distinguish between correct and incorrect cyber medicine websites according to Health On The Net Foundation. Visitors to a cyber medicine website, should look out for this, in their

73Www.hon.Ch
distinguishing the correct and incorrect cyber medicine websites.

4.10 SUMMARY OF THE CHAPTER

In this chapter I discussed the conditions for a morally acceptable cyber medicine according to Health On The Net Foundation. The principles I discussed include, the authority criteria, complementarity criteria, confidentiality criteria, attribution criteria, justifiability criteria, transparency of authorship criteria, transparency of sponsorship criteria, and honesty in advertising and editorial policy.

In all these, I discussed on how they should be implemented so as to lead to a morally justified cyber medicine. I maintain that when these principles are correctly implemented, they will be steps in the right direction towards achieving a morally acceptable cyber medicine.
CHAPTER FIVE

5.0 GENERAL EVALUATION AND CONCLUSION

5.1 EVALUATION

So far, I have discussed various issues, ideas, arguments, etc. related to the three types of cyber medicine. A resume of it will bring out the important points about cyber medicine and most especially the possibility of a morally acceptable cyber medicine.

I started by defining cyber medicine and the various understandings of the concept. Thus cyber medicine has been seen from various perspectives by different authors but I made it clear that I am going to use the concept of cyber medicine to mean any medication via the internet whether in the form of the doctor’s consultation, the buying or ordering of drugs via an internet website and the reading up of medical information via an internet website. Through this I distinguished three types of cyber medicine that call for ethical evaluation. They are the consultation sites, the e-pharmacy sites, and the information giving sites.

The consultative sites make use of medical doctors or pharmacists in giving medical advise to patients. Often times the patient is required to fill some questionnaire for medical advise to be given. Though patients have benefited from this type of cyber medicine but the strongest criticism of this type of cyber medicine is that no amount of questionnaire will give the same result as a physical examination. As it was put,

...An online form or questionnaire, no matter how detailed, simply cannot substitute for a physical examination. Without an actual face to face examination critics contend that patient warning signs which might easily be detected by torch could go unnoticed posing potential risk to the patient. 75

75 Mill, D. “Cybermedicine: The Benefits and Risks of Purchasing Drugs Over The Internet” op. cit.
I demonstrated in this work that this raises a lot of ethical problems in healthcare. The e-pharmacy sites sale drugs online to patients and they are the most dangerous among all the cyber medicine websites because of the potentialities of selling harmful drugs to their visitors.\textsuperscript{76}

Again, the e-pharmacy sites eliminate the intermediary medical assistance of medical doctors which is important in healthcare. I argued that it is not ruled out that there are some correct e-pharmacy sites but there is no distinguishing mark between correct e-pharmacy sites and the incorrect ones. Again, it is not possible for now to check the sell of unapproved drugs over the net. Also the e-pharmacy sites do not tell their patronizers the side effect of the drugs they buy. All these constitute ethical problems in healthcare.

These problems as I said in my work requires that more checks and balances be put in place for cyber medicine to be morally justified. The information giving sites contain medical information that patients log in and read up. It was made clear in this work that the information giving sites have been of help to patients who want to know more about their illness. But the greatest danger that is envisaged with these information giving sites, are the problems of the validity and reliability of the information gotten from these websites. Another problem is that very often information gotten here leads to self medication which is not encouraged in healthcare. With this type of cyber medicine the information which was formally an exclusive reserve of medical doctors are now made available to everybody who knows how to make use of the internet. Commenting on this Henk A.M.J. ten Have said;

\begin{quote}
“abundant data are indeed available and patients sometimes have more specialised information about potential treatments and drugs in particular, than the physian they are consulting”.
\end{quote}

\textsuperscript{76} Ibid.

This is a problem and calls to question the meaning of the concept of a patient as I said in this work.

This ushered in a critical analysis of cyber medicine via the ethical principles of autonomy, responsibility, privacy, trust and caring and doctor patient relationship which is not an ethical principle but an important relationship in healthcare. This investigation made it important to discuss on what is an ethical principle and why I choose these particular ethical principles and not others.

Reviewing the ethical principle of autonomy, it was made clear that cyber medicine promotes the principle of autonomy but some conditions need to be fulfilled for the realization of autonomy. For instance, informed consent, alternatives and competence. I argued that cybermedicine operators should be responsible for bad outcome of its application in healthcare because this is what should have been envisaged by the cyber doctors for the consultation sites, the e-pharmacist for the e–pharmacy sites and the launchers of the information giving sites.

But the problem I envisaged is with locating the launchers of the websites given the anonymous nature of some of the cyber medicine websites. I doubted whether, the cyber medicine websites can ever respect the principle of privacy given the anonymous nature of the cyber space. In the discussion on the principle of trust and caring, I maintained that though cyber medicine seems to promote this principle but reliability and validity are the pre-conditions for trust on the part of patients and care on the part of the physician. For this trust to be, there must be a physical encounter. Since, there is no physical encounter between the doctor and the patient in the three cyber medicine websites, I said that the principle of trust and caring is not realised in cyber medicine.

In the proceedings of this work I said that a new doctor-patient relationship exist in cyber medicine but the ethical implications of this new type of relation calls to question the issue of responsibility in healthcare. Also, I argued that this new doctor-patient relationship is not better than the ordinary doctor-patient relationship.
Immediately, I started discussing the arguments for and against cyber medicine. The arguments I presented are, bridging of gap in healthcare, convenience, greater access to information, the fact of confidentiality, quality of healthcare, potentiality of fraud, the fact of alternative and the drug sales. From the arguments the following deductions were made. That cyber medicine has a lot to offer to the developing nations but for now more effort should be put in improving computer literacy in the developing nations of the world. With this, people will not make mistakes when viewing cyber medicine websites, therefore the end purpose of every medicine which is the healing of the patient will be achieved. Also, cyber medicine aims at improving the general healthcare of the contemporary man but there are some excesses that needs to be critically reviewed. I applied the ethical principles which I discussed in chapter two in my analysis cyber medicine using the arguments.

However, I argued that cyber medicine in its three forms have a lot of ingenuities to be offered to healthcare in general but that presupposes that some basic and necessary conditions are laid down to accommodate morality in healthcare.

After this, I discussed the conditions for a morally acceptable cyber medicine. I maintained that I am going to discuss the views of The Health On The Net Foundation as against other views because it is a non governmental and non profit oriented organization. Again, given the caliber of people that came together to form the association, their information will be more reliable than others. Hence, the conditions I discussed that are necessary for the morality of cyber medicine to be justified include according to HON foundation include authority, complementarity, confidentiality, attribution, justifiability, transparency of authorship, transparency of sponsorship and honesty in advertising and editorial policy. The discussion on these principles maintained that when these principles are correctly applied it will go along way in making cyber medicine to be morally accepted. However, the problem I envisage in this is with the implementation of these principles.
CONCLUSION

I will start by pointing out that cyber medicine in its three forms of the consultation sites, the e-pharmacy sites and the information giving sites have become a complex moral problem in healthcare in general. It is as a result of this that Goran Collste said,

Healthcare authorities should in line with the maxim 'to guide rather than to guard' inform their patients about the reliable information sites. In the long run, there is probably also a need for rules or regulations. Through peer reviews, licensing or other ways of authorization, it should be possible to identify those sites that are reliable. A digital signature can then mark these. Some kind of authorisation is also needed in order to distinguish professional internet doctors from non professional ones.78

This complexity is worsened by the sophisticated and anonymous nature of the cyber space. I have proposed various principles following the Health On The Net Foundation and other ways by which a morally acceptable cyber medicine could be obtained.

However lofty and wonderful these ideas may be, the problem is on the implementation of them given the nature of the cyber space. It is as a result of this that John J. Paris maintained that the only protection is 'caveat emptor' for both the patients and the cyber medicine website providers.79 This implies self advice by both the internet operators and the patients. Other scholars like Ten Have A.M.J. have advocated for self regulation and self binding of providers and consumers80 as the only way forward for a morally acceptable cyber medicine.

The availability of medication over the internet presents a vexing and complex

78Collste, G. The Internet Doctor and Medical Ethics, op.cit.p.125.
80Ten Have, A.M.J. op.cit.
challenge to state and federal agencies charged with enforcing drug laws. Hence, I maintain as I said before that the state and federal agencies should enforce medical laws that will govern the cyber space with a special concentration on the consultation sites, the e-pharmacy sites and the information giving sites. This will be a road towards accepting cyber medicine morally. Moreover, there is need for conscientizing both the patients and the cyber medicine providers. By this I mean awakening the conscience of the consumers and providers to the end purpose of every medicine which is the healing of the patient. This will enable them to re-direct their steps towards a morally acceptable cyber medicine.

In conclusion however, I state that there should be a proper orientation of both the cyber medicine providers and consumers towards the end purpose and aim of every medicine. By proper orientation I mean an education that will convince them about the end purpose of every medicine which is the healing of the patient. When they are properly orientated, they will be able to implement the necessary checks and balances for there to be a morally acceptable cyber medicine. The best for now is the principles according to Health On The Net Foundation as I proposed in this thesis. The earlier this is done, the better for us. Let us all get involved in this campaign.

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81 Mills D. “Cybermedicine: The benefits and Risks of Purchasing Drugs over the internet”, op.cit
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