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TELEMEDICINE IN INDIA: A NEW HORIZON FOR TRANSFORMING HEALTHCARE

UNDER THE GUIDANCE AND SUPERVISION OF

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DECLARATION

I declare that this Dissertation titled **"TELEMEDICINE IN INDIA: A NEW HORIZON FOR TRANSFORMING HEALTHCARE"** is researched and submitted by me to the National University of Advanced Legal Studies, Kochi, in partial fulfilment of the requirement for the award of Degree of Master of Laws in Public Health Law, under the guidance and supervision of Dr. Liji Samuel, Assistant Professor, NUALS, and is an original, bona fide and legitimate work and it has been pursued for an academic interest. This work or any type thereof has not been submitted by me or anyone else for the award of another degree of either this University or any other University.

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ABBREVIATIONS

1. BoG:	The Board of Governors
2. CIRM:	International Radio Medical Center
3. CHC:	Community Health Centre
4. CPA:	Consumer Protection Act
5. DCGI:	Drug Controller General of India
6. DISHA:	Digital Information Security in Healthcare Act.
7. DPSP:	Directive Principles of State Policy
8. D&C:	DRUGS AND COSMETICS
9. DHD:	Digital Health Data
10. HC:	High Court
11. ICCPR:	International Covenant on Civil and Political Rights
12. ICESCR:	International Covenant on Economic, Cultural and Social Rights
13. UDHR:	Universal Declaration of Human Rights
14. ICT:	Information and Communication Technology
15. VR:	Virtual Reality
16. IMC:	Indian Medical Council
17. ISRO:	Indian Space Research Organization
18. IT:	Information Technology
19. MoH&FW:	Ministry of Health and Family Welfare
20. MCI:	Medical Council of India
21. NASA:	National Aeronautics and Space Administration

22. NMC:	National Medical Commission
23. NHA:	National Health Authority
24. NDHM:	National Digital Health Mission
25. NDHE;	National Digital Health Program
26. OSP:	Other Service Provider
27. PHC:	Primary Health Care Centers
28. PCI:	Pharmacy Council of India
29. PDP:	Personal Data Protection
30. RMP:	Registered Medical Practitioners
31. SatCom:	Satellite Communications
32. SHC:	Secondary Health Centre
33. SC:	Supreme Court
34. SPDI:	Sensitive Personal Data or Information
35. TPG:	Telemedicine Practice Guidelines
36. TCCP:	Telecom Commercial Communication Customer Preference VR: Virtual Reality UDHR: Universal Declaration of Human Rights
37. WHO:	World Health Organisation

LIST OF CASES

1. Parmanand Katara v. Union of India, AIR 1989 SC 2039
2. Consumer Education & Research Centre v. Union of India and Others, AIR 1995 SC 922
3. Paschim Banga Khet Mazdoor Samiti v. State of West Bengal, AIR 1996 SC 2426
4. Indian Medical Association v. V.P. Shantha, AIR 1996 SC 550
5. All India Lawyer's Union (Delhi) v. Govt. of NCT of Delhi, WP(C) No.5410/1997
6. Navtej Singh Johar and others Vs. Union of India, (2018) 10 SCC 1
7. Union of India Vs. Moolchand Kharaiti Ram Trust, (2018) 8 SCC 321
8. State of Punjab v. Mohinder Singh Chawla, (1997) 2 SCC 83
9. Sushil Kumar Patel v. Union of India W.P. No.20889/2020
10. Deepa Sanjeev Pawaskar and Sanjeev Anant Pawaskar v. The State of Maharashtra, Criminal Anticipatory Bail Application No. 513 of 2018
11. Justice K.S Puttaswamy (Retd.) v. Union of India, AIR 2017 SC 4161
12. Indian Medical Association v. V. P. Shantha and Ors, (1995) 6 SCC 651
13. Balram Prasad v. Kunal Saha, (2014) 1 SCC 384
14. General Manager, Telecom v. M. Krishnan, Civil Appeal No. 7687 of 2004

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CHAPTER 1
INTRODUCTION

The health of ourselves and our loved ones is always our top priority as human beings; it is something we are concerned about on a daily basis. Regardless of age, gender, socioeconomic, cultural, or ethnic origin, health is regarded as our most valuable possession. When we think of the term "well-being," we immediately think of health and an atmosphere devoid of illness. The 'right to health' is recognised as a fundamental or fundamental human right that affects the exercise of other human rights. The right to health is, at the very least, a right to specific conditions or facilities that could protect the population's health. It also includes civil and political rights relating to the availability and accessibility of both public and private health-care services. This right also involves providing health care for the diagnosis and treatment of an illness or disease, as well as compensation for people who cannot afford to pay for it.

According to the World Health Organization (WHO), “health is a state of complete physical, mental and social well-being and not just the absence of disease”.

The right to health was first conveyed in the World Health Organization constitution in 1946. It states that “the enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being”.

The WHO further underlines the government's legal commitment to provide all citizens with "timely, acceptable, affordable, and high-quality health care, as well as basic health services like as safe and clean water, sanitation, food, housing, health and education, and gender equality." This right, which is a natural foundation for the development of public health in India, is safeguarded in several ways under the Indian Constitution.

The right to health is not explicitly recognised as a fundamental right in the Indian constitution. The judges, however, believe that this has been learned from the fundamental right to life and liberty (Article 21) and is now considered a part of the Right to Life.

Despite the fact that numerous treatments have been provided to people from ancient times, such as Ayurveda, Siddha, Unani, Yoga, Homeopathy, Naturopathy, and Allopathy, it has been discovered that the said healthcare system does not fully meet the needs of access to healthcare. As a result, there was a pressing need to explore

different options in order to address the aforementioned challenges and protect and ensure access to healthcare.

Telemedicine is one of the methods for meeting people's requirements. Telemedicine will improve patient access and communication while also increasing patient satisfaction. Information about disease and injury diagnosis, treatment, and prevention, research and testing, and health care provider continuing education, all with the goal of enhancing the lives of individuals and communities. TELEMEDICINE (Healing by Wire) has been a blessing to human civilization for the past 20 years, and ICT has positioned itself as a saviour for the global unification of health care systems. Furthermore, because the situation of health delivery in emerging and poor nations is similar, there is considerable evidence that ICT (Information and Communication Technology) applications in health can provide a large-scale solution. The Board of Governors ("BoG"), which was appointed by the Department of Health and Family Welfare to regulate practices with modern medical practitioners, published an amendment to the Indian Medical Council (Professional Conduct, Etiquette and Ethics) Regulations, 2002 ("Code of Conduct") on March 25, 2020, providing official support and laying the groundwork for telemedicine practice in India. India's perspective on the legitimacy of teleconsultation is finally defined by these guidelines.

The government has further intervened by developing legislation like the Digital Information Security in Healthcare Act. By regulating how digital health data is gathered, stored, communicated, and used, DISHA intends to safeguard the privacy and reliability of that data.

1.1 SCOPE OF THE STUDY

Telemedicine uses the internet and related technologies to provide simple access to health-related information and communications at a low cost. This tool is used in a variety of situations in many places, including online information tools and quality assurance tools, critical techniques and patient outcomes, computer-assisted diagnostics, proper medication knowledge, and electronic dose, as well as data availability for advanced research. This information is intended for both health care providers and consumers. Registered Medical Practitioners can treat more patients and provide a more connected level of care than traditional care models. Doctors and

patients, particularly in home and hospital care, can collaborate to achieve their medical goals.

Telemedicine technology, such as intelligent surveillance cameras and analytics software, can be utilised with older clients to alert carers of changes in occupation, falls, or stagnation using telemedicine technology. This form of care can save money, keep seniors in their homes longer, and allow doctors to be more flexible in their treatment plans based on the patient's preferences and service availability.

Telemedicine can give others who specialize in the opportunity because they see it in your home environment. For example, allergists may be able to identify clues in areas near you that cause allergies. Neurologists and physiotherapists can view and evaluate one's ability to navigate and care for one's own home. Telemedicine is also a great way to get psychiatric tests and counseling. Telemedicine refers to the use of information technologies and electronic communications to provide remote clinical services to patients. The digital transmission of medical imaging, remote medical diagnosis, evaluations, and video consultations with specialists are all examples of telemedicine.

Recently, telemedicine has become increasingly important due to the rise and advancement of digital technology. It should be considered in the examination of national and international guidelines. Because of the spread of COVID-19, the mandated use of social media, and the scarcity of effective treatments, telemedicine has become a highly secure method of communication between infected and uninfected patients and nurses.

1.2 RESEARCH PROBLEM

In 2020, the Telemedicine Practice Guidelines were published, legalizing telemedicine in India and thereby trying to bridge the divide between existing healthcare systems and the right to health. There are numerous concerns with the current regulatory framework regulating telemedicine. There is a need for a far more structured and comprehensive telemedicine legislation to ensure equitable access to healthcare and to protect all people' right to health.

1.3 RESEARCH OBJECTIVES

- To explore the existing healthcare system and the issues related to it. Also, to analyze what all possible alternative methods are available.
- To explore the concept of telemedicine, its needs, and challenges.
- To analyse the Telemedicine Practice Guidelines, 2020, in detail.
- To analyse the existing regulatory framework governing telemedicine in India.
- To study in detail how telemedicine is being implemented in India and to determine the extent to which the right to health is protected
- To provide suggestions on how to bridge the divide between existing healthcare systems and health access by deploying telemedicine on a large scale, thus assuring healthcare equity.

1.4 RESEARCH QUESTIONS

- What all are the existing healthcare systems in India?
- Does the existing healthcare system secure access to healthcare for the citizens?
- What are the benefits provided by telemedicine compared to the existing healthcare facility?
- What are the important features and cardinal principles of the Telemedicine Practice Guidelines, 2020?
- What all are the existing regulatory framework governing telemedicine in India?
- How is telemedicine being implemented in India?
- What are the challenges in implementing telemedicine?

1.5 HYPOTHESIS

Telemedicine has proven to be a useful technique for bridging the gaps in the traditional healthcare system and ensuring people's right to health. However, to assure maximum benefit to patients and solve ethical and legal issues connected to the practice of

telemedicine in India, a far more structured and comprehensive legislation dealing to telemedicine should be enacted.

1.6 RESEARCH METHODOLOGY

The research methodology adopted is purely doctrinal legal research in order to establish the hypothesis of this dissertation.

1.7 LITERATURE REVIEW

The research depended on primary sources including India's Constitution, numerous legislations, executive orders, Supreme Court and High Court decisions, and international treaties. Secondary resources such as books and comments were also explored to better comprehend the subject and analyse the various issues. For gathering resources, the research relied heavily on electronic resources such as online databases and webpages.

- Raj Kishor Kustwar and Suman Ray, 2020.eHealth and Telemedicine in India: An overview on the Health Care Need of the People. Journal of Multidisciplinary Research in Healthcare,6(2), pp.25-36.

  The telemedicine system was originally introduced in Boston in 1967, according to this report. It established a regular relationship between doctors and patients in different locales. It also analyses the problems with India's current health-care system. It emphasises telemedicine's role in providing affordable, accessible, and high-quality healthcare to India's poorest citizens, as well as bridging the rural-urban health divide. Also, it considers if telemedicine technology achieves its goal of providing appropriate healthcare to all.

- Dash, S, Aarthy, R. and Mohan, V, 2021, Telemedicine during COVID-19 in India-a new policy and its challenges., Journal of Public Health Policy,42(3), pp.501-509.

This article highlights India's first telemedicine guidelines, which were quickly issued by the Ministry of Health & Family Welfare in response to the COVID-19 pandemic's decreased access to normal healthcare facilities. The authors argue that: guidelines should be expanded to address ethical concerns about the use of privacy, patient data, and storage; limited access to the internet and weaknesses in the telecom infrastructure impede widespread adoption of telemedicine; only by simultaneously improving both will telemedicine adoption become equitable; Indian medical education curricula should include telemedicine, and India should rapidly extend training to practitioners. They find that investment in telemedicine has numerous positive externalities for low- and middle-income countries (LMICs), including India. As a result, using this choice in the future may make healthcare more accessible and equal.

- Hassoun, N., 2015. The Human Right to Health. Philosophy Compass, 10(4), pp.275-283.

  The human right to health and its foundations are discussed in this article. The disparities between legal and moral human rights, as well as rights to health vs. health care, are then highlighted. It then goes over the literature to see if there are any moral (and maybe legal) grounds for a human right to health. It finishes with responses to a number of typical denials of the existence of a human right to health.

1.8 CHAPTERISATION

Chapter 1: Introduction

This chapter provides an overview of the research project by describing the research topic and its significance. It contains the research questions as well as the research hypotheses. The chapter also discusses the research method and provides a brief overview of the literature used in the study.

Chapter 2: Right to health and Indian healthcare system

This chapter explains the right to health and the concept of access to health in detail. It also explains traditional healthcare systems and current therapeutic methods. It discusses how the community benefits from these treatments as well as the issues that these traditional healthcare systems have.

Chapter 3: Telemedicine: a new horizon to secure access to health

This chapter covers the origins of a new alternative healthcare strategy that allows rural culture to readily supply or access healthcare facilities. It explains the benefits, requirements, and how telemedicine can benefit people.

Chapter 4: An Indian Perspective on Telemedicine and Law

This chapter discusses the legal aspects of telemedicine, as well as its role in transforming the healthcare system and the changes it has brought about. It also assists in comprehending the legal ramifications of telemedicine in India during COVID-19.

Chapter 5: Conclusion and Suggestions

This chapter briefly examines the transition from a conventional system to a modern digital technology that supports the health-care system's expansion. It also examines ways to improve the development of telemedicine.

CHAPTER 2

RIGHT TO HEALTH AND INDIAN HEALTHCARE SYSTEM

2.1 INTRODUCTION

Health and well-being are considered personal matters, but when someone close to us or ourselves becomes ill, we discover that health is, in reality, a public issue, and Health Rights play an ongoing role in our daily lives. Access to quality health is not only a human need, a right of citizenship, and a public good, but it is also a prerequisite to good health, which is essential to enjoy and achieve fruits of equitable development. While the right to health would be the ultimate aim, the right to health care would be a first step, a tangible and feasible demand of today's society. A strict understanding of the right to health implies that everyone has the guarantee of perfect health. The right to health is entrenched in a series of international treaties as well as numerous national constitutions. Right to health is a multi-faceted right and an inclusive right. It is often associated with access to healthcare, prevention, and control of diseases, equality in accessibility, affordable pricing of essential medicines, proper mental healthcare, healthcare facilities at the workplace, maternal care, proper infrastructure and availability of medications, and other clinical requirements.

In India, the Preamble of the Constitution aims to secure justice and equality for all its citizens. It means the Constitution guarantees the availability, accessibility, and affordability of healthcare. The provisions under fundamental rights that support equality of opportunity in education, employment, and freedoms guaranteed have a direct bearing on health outcomes. Besides this, India, a platform to various international treaties and covenants approving health as a fundamental human right, commits itself to realize health as a fundamental right to its citizens.

A good healthcare system is essential to secure the right to health for all citizens. The health care system is more than mere treatment and cure. It includes activities that control diseases and reduce the mortality rate through the generation and utilization of knowledge. Therefore, the system must also be equipped to provide urgent and good quality medical services to enhance the mind and body of every person. Government

actions in promoting healthcare are a global concern. The government must achieve equal accessibility and availability of high-quality medical care. It must reach every person who is quintessential in every system. A sound healthcare system needs to ensure equitable access to essential medical products, vaccines, and technologies of assured quality, safety, efficacy, and cost-effectiveness and their scientifically sound and cost-effective use. The government is obliged to provide clinical services at primary, secondary, and tertiary levels of health systems. When the government ensures service delivery to people, it will ensure equity in access to health care.

The challenges include the scarcity and unequal distribution of resources, geographical barriers, low-quality treatment and infrastructure, poorly trained health personnel, lack of awareness among individuals, obsolete working conditions, etc. Many of the challenges mentioned above faced by the healthcare sector in India can be solved with digital technology that is already available or under construction.

2.2 RIGHT TO HEALTH

During ancient times almost in all cultures, health was regarded as the 'absence of disease.' For example, the primitive Indians and the Greeks believed that health is a sound and prompt mind in a disease-free body that resides in a peaceful and happy environment. Modern medicine is more focused on the study of diseases than the study and proper understanding of health. Howbeit, the compendious modern concept of health also explains health as a multidimensional and concerted process that involves an individual's well-being in response to his environment or circumstances. It is an appreciating fact that health has been recognized and acknowledged as a fundamental human right.

As human beings, no matter what, our biggest priority is our health and our loved ones; this is a matter of daily concern. Health is deemed our most fundamental asset despite our age, gender, socio-economic, cultural, or ethnic background. When we take the term, 'well-being' no doubt it is healthy, and illness free environment is what we have in our minds. 'Health right' is regarded as the fundamental or essential human right that is consequential for the exercise of other human rights. The right to health, at the least it holds a meaning, a right to certain conditions or facilities which could protect the

health of the population. It also encompasses civil and political rights concerning the availability and accessibility of public-based and individual-based health care services. Further, this right includes providing health care concerning diagnosis and treatment of an illness or disease and damages for those portions of the population who cannot afford to pay for the same.

The right to health was first conveyed in the World Health Organization constitution in 1946. It states that "*the enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being*"[1] The preamble of the Constitution states health as: "*A state of complete physical, mental and social well-being and not merely the absence of disease or infirmity*"[2]

According to WHO the core components of the right to health are, availability, accessibility, acceptability and quality. WHO defines these four as:

"*Availability,* *refers to the need for a sufficient quantity of functioning public health and health care facilities, goods and services, as well as programmes for all.*

Accessibility, *requires that health facilities, goods, and services must be accessible to everyone. Accessibility has four overlapping dimensions: non-discrimination, physical accessibility**,*** *and economical accessibility (affordability) and information accessibility.*

Acceptability, *relates to respect for medical ethics, culturally appropriate, and sensitivity to gender. Acceptability requires that health facilities, goods, services and programmes are people-centred and cater for the specific needs of diverse population groups and in accordance with international standards of medical ethics for confidentiality and informed consent.*

Quality, *facilities, goods, and services must be scientifically and medically approved. Quality is a key component of Universal Health Coverage, and includes the experience as well as the perception of health care.****"***[3]

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[1] *Constitution – WHO, available at https://www.who.int/about/who-we-are/constitution (last visited October 5,2021)*

[2] *United Nations Human Rights Website - Treaty Bodies available at https://apps.who.int/disasters/repo/13849_files/o/UN_human_rights.htm (last visited October 5, 2021)*

[3] *Human rights and health-WHO, available at https://www.who.int/news-room/fact-sheets/detail/human-rights-and-health (last visited October 5,2021)*

The right to health has been set out in many international and regional human rights treaties as well as in many national constitutions all over the world.

The definition of Health by WHO was given elaborately in various international treaties and conventions. In the Article 25 of the United Nation's Universal Declaration of Human Rights (UDHR), it is said that "Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services".[4] And, UDHR tried to guarantee health as a fundamental human right including economic, political, social and cultural rights that are inseparable and interdependent.

The definition of health given by WHO has been correctly included in Article 12 of The International Covenant on Economic, Social & Cultural Rights (ICESCR) for the enjoyment of highest attainable standard of physical and mental health by reducing still birth rate, infant mortality rate, prevention, treatment and control of epidemic, endemic, occupational and other diseases, improvement of all aspects of environmental and industrial hygiene and to ensure appropriate medical services for disease management.

When the United Nations released General Comment 14 in 2000 to implement Article 12 of the International Covenant on Economic, Social, and Cultural Rights, it solidified past advancements and recognition of the right to health. Health has been designated a fundamental human right that must be exercised in order to exercise other human rights. Every human being has the right to the best possible health, which is necessary for living a dignified life. The achievement of the right to health can be achieved in a variety of ways, including the creation of health policies, the implementation of WHO-developed health initiatives, and the adoption of special legal instruments.[5] In addition, the right to health includes certain components which are legally enforceable. Thus, UDHR and ICCPR, and ICESCR constitute the "International Bill of Human Rights" that serve as guidelines for the nations to maintain human rights conditions in their respective countries. Therefore, it can be reasonably inferred that the health rights and

[4] *Universal Declaration of Human Rights - OHCHR, available at http://www.ohchr.org/EN/UDHR/Documents/UDHR_Translations/eng.pdf (last visited October 5,2021)*

[5] *United Nations Human Rights Website - Treaty Bodies, available at https://apps.who.int/disasters/repo/13849_files/o/UN_human_rights.htm (last visited October 5,2021)*

human rights are interdependent and violation of human rights have serious implication on the health of the aggrieved.

2.3 EVOLUTION OF HEALTH RIGHTS IN INDIA

In India, health rights can be traced to the early civilization of Harappa and Mohenjo-Daro, which, when excavated, revealed well-planned cities with baths and drainage systems. Over the millennia, several indigenous systems of medicines have evolved which have emphasized the maintenance of health rather than mere treatment of disease[6].

The Indian systems of Ayurveda and Yoga stress the maintenance of health rather than medical treatment. Their holistic approach is concerned with the well-being of the physical body and the mind and considers the human being as a part of nature. As such, health is considered a larger philosophical and even a spiritual than a mere medical concept. This has been integrated into the daily life of our people as part of their social and religious practices. India has also incorporated several foreign systems of medicine like Unani, Allopathy, and Homeopathy, which are primarily medically oriented. Though the various systems, unfortunately, tend to be practiced in isolation by their practitioners, they are highly complementary, e.g., Allopathy for communicable diseases and Ayurveda and yoga for diseases of aging and lifestyle[7].

However, modern technology has changed this and led to the increasing institutionalization and urbanization of health care facilities in India.

Human rights have long been promoted and protected in India. It was in the vanguard of the anti-apartheid campaign even before freedom. Our nation's founding fathers crafted our Constitution with a strong commitment to human rights in mind. Our fervent opinion has always been that in a truly pluralistic society like India, citizens' prosperity and welfare can only be secured through the promotion and preservation of human rights.[8]. Ours is a country with a long and diverse history and a vibrant culture.

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[6] *J. Healy & M. Mckee (ed.), Accessing Health Care- Evolution of Health Services in India (New York: Oxford University Press, 2004), p.7.*
[7] *Ibid, p.1.*
[8] *Statement by Goolam E. Vahanvati, The Solicitor General of India, "The Universal Periodic Review of India", Human Rights Council, Geneva, 10th April- 2008, available at http:// www.wilpf.int.ch.pdf. (last visited October 5,2021)*

However, as an independent nation, we are relatively young. While determining the future of our country, the challenge before our founding fathers was to choose a political setup which would ensure a free and independent society and human dignity, freedom, and advancement[9].

A number of committees provided guidelines for national health planning. These committees were constituted by the Indian government from time to time to assess the current state of health and make recommendations for future action. The following is a summary of the committees' recommendations:

The National Planning Committee, acting on the recommendations of the Sokheys Committee, passed a resolution in 1940 recommending the integration of preventative and curative roles, as well as the training of a large number of health personnel. The Bhore Committee, which was established in 1943, laid the foundation for health care built in independent India. After the Panchayati Raj was established, India's health care system shifted from a bureaucratic government-based top-down strategy to a decentralised community-based bottom-up one. This style was popularized and propogated by the nation's father, Mahatma Gandhi, many years ago.

The recommendations of the Bhore Committee (1943-1946)[10] are as follows:

- All administrative levels must integrate preventive, promotional, and curative services.
- The creation of Primary Health Care Centers to provide complete health care to rural India. Secondary Health Centre (Community Health Centre) should be located in each PHC to act as a supervisory, coordinating, and referral institution for a population of 40,000.
- The PHC would have a 75-bed hospital for a population of 10,000 to 20,000 people in the long term (3 million plan).
- It also reviewed the medical education and research, and incorporated a three-month mandatory Community Medicine training programme.
- The committee proposed that the country construct National Programmes of health services.

[9] *Ibid*
[10] *Bhore Committee (1943-1946), available at https://www.nhp.gov.in/bhore-committee-1946_pg, (last visited October 5, 2021)*

The following are the specifics of the long-term plan proposed by the Bhore Committee[11]:

Within 30 to 40 years, the district health scheme, also known as the three million plans, which reflected an average district population, was to be arranged in a three-tier system. The primary unit will be on the periphery. A subset of these primary units will be placed under the supervision of a secondary unit, which will have the twin responsibility of delivering a more efficient type of health service at its headquarters as well as supervising the work of these main units. The district's headquarters will be furnished with an organisation that will include all of the facilities required for modern medical practise, as well as the supervisory staff responsible for the district's health administration in its numerous specialised types of services.

Primary Unit [12]

Every 10,000 to 20,000 people (depending on density in different areas) would be treated by a 75-bed hospital staffed by six medical officers who would include medical, surgical, and obstetrical and gynaecological specialists. Six public health nurses, two sanitary inspectors, two health assistants, and six midwives would give domiciliary treatment to this medical team. There would be 20 nurses, 3 hospital social workers, 8 ward attendants, 3 compounders, and other non-medical personnel at the hospital. Preventive health services and curative therapy would be provided in the homes of patients by two medical officers and public health nurses. Sanitation inspectors and health assistants would assist the medical team in their preventative and promotional efforts. At the least three out of the six doctors should ideally be female. Twenty-five beds would be dedicated to medical issues, ten to surgical procedures, ten to obstetrical and gynaecological procedures, twenty to infectious disorders, six to malaria, and four to tuberculosis. When the need for secondary level care arises, this primary unit would have appropriate ambulatory support to link it to the secondary unit. Each province was given the freedom to structure its primary units in whatever way it saw fit for its population, but quality and accessibility were not to be compromised.

[11] *Ibid*
[12] *Ibid*

Secondary Unit [13]

A secondary unit would have about 30 primary units or less. The secondary facility would be a 650-bed hospital with 140 doctors, 180 nurses, and 178 other employees, including 15 hospital social workers, 50 ward attendants, and 25 compounders. The secondary unit, in addition to being a first-level referral hospital, would oversee the primary units' preventive and curative efforts. Medical 150, Surgical 200, Obstetrics and Gynecology 100, Infectious Disease 20, Malaria 10, Tuberculosis 120, and Paediatrics 50 would be dispersed among the 650 beds of the secondary unit hospital. There are 650 in total.

District Hospital [14]

Every district centre would have a 2500-bed hospital with 269 doctors, 625 nurses, 50 hospital social workers, and 723 other personnel, primarily providing tertiary care. The hospital will feature 300 medical beds, 350 surgical beds, 300 obstetrics and gynaecology beds, 540 tuberculosis beds, 250 paediatric beds, 300 leprosy beds, 40 infectious diseases beds, 20 malaria beds, and 400 mental health beds. A considerable number of these district hospitals would be linked to medical schools. Each of the three levels, however, would contain medical education and training activities, such as internships and refresher courses. This document placed a great emphasis on primary health care; it goes without saying that primary health care was later identified as a critical strategy for achieving Health for All (HFA) by the year 2000 at the Alma-Ata Conference. The Bhore committee approach was founded on the allopathic medical system. Traditional health practises and indigenous systems of medicine widespread in rural India, which had a significant impact and were a part of their socio-cultural environment, were not included in the Bhore committee's suggested model. The strategy was not totally decentralised, but rather a top-down one. It did, however, give a ready-made model at the time of independence, and as a result, it was used as a blueprint for both health policy and the country's development.

The Government of India appointed the "Health Survey and Planning Committee," The Mudaliar Committee (1961), before the end of the second five-year plan (1956-61), to

[13] *Ibid*
[14] *Ibid*

review the progress made in the health sector following the submission of the Bhore committee report.

This committee's key recommendations were as follows[15]:

- With improvements in the quality of health care offered by primary health centres, the population serviced by these centres should be limited to 40,000 people.
- Strengthening district hospitals with specialty services so that they can act as a regional hub.
- Each state has a regional organisation between the headquarter organisation and the district in responsibility of a Regional Deputy or Assistant Director to supervise two or three district medical and health officers.
- On the model of the Indian Administrative Service, an All-India Health Service would be established.

The Chaddah committee (1964) proposed that within the national malaria eradication programme, one basic health worker per 10,000 people be assigned to vigilance operations via monthly home visits. These professionals were envisioned as multipurpose health workers with extra responsibilities such as vital statistics collection and family planning. Three or four of these basic health professionals were to be supervised by the family planning health assistant.

In 1965, a committee known as the Mukerjee Committee[16] was formed, and it proposed that family planning efforts be handled by separate employees so that malaria programmes may receive undivided attention from the staff.

In 1967, the Jungalwalla Committee emphasised the convergence of health systems and the eradication of private practise by government physicians. "A service with an united strategy for all problems instead of a segmented approach for all various problems," according to the definition of integrated health services. Under a single administrator,

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[15] The Mudaliar Committee (1961), available at https://www.nhp.gov.in/mudaliar-committee-1962_pg (last visited October 5, 2021)

[16] Mukerjee Committee (1965), available at https://www.nhp.gov.in/mukherjee-committee-1965_pg (last visited October 5, 2021)

sick care and numerous public health programmes are managed. The committee made the following recommendations[17]:

- Unified cadre
- Common seniority
- Recognition of extra qualification
- Equal pay for equal work
- Special pay for specialised work
- No private practice

The Kartar Singh Committee[18] on Multipurpose Workers established the health worker standards in 1973. The committee proposed that one primary health centre be constructed for every 50,000 people to ensure adequate coverage. Each main health centre will be divided into 16 sub-centres with a population of 3,000 to 3,500 people each. Each sub-centre will be staffed by a team of two health workers, one male and one female. One health assistant will oversee the work of three to four health workers. The PHC's doctor in charge should be in control of all supervisors and health workers in his region.

In 1975, the Shrivastav Committee on Medical Education and Support Manpower made the following recommendations[19]:

- Organizing groups of paraprofessional and semiprofessional health workers from within the community (e.g., school teachers, postmasters, gramsevaks, etc.) to provide basic health services.
- Establishing linkages between primary health centres and higher-level referral and service centres, such as taluka/tehsil, district, regional, and medical college hospitals, to create a "Referral Service Complex."
- To design and implement essential reforms in health and medical education, a medical and health education commission, similar to the university grant committee, should be established.
- For every 5000 people, one male and female HW should be accessible.

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[17] Jungalwalla Committee (1967), available at https://www.nhp.gov.in/jungalwalla-committee-1967_pg (last visited October 5, 2021)
[18] Kartar Singh Committee (1973), available at https://www.nhp.gov.in/kartar-singh-committee-1973_pg (last visited October 5, 2021)
[19] Shrivastav Committee(1975), available at https://www.nhp.gov.in/shrivastav-committee-1975_pg, (last visited October 5,2021)

- Health Assistants should be stationed at SC rather than PHC for every two HWs.

The Rural Health Scheme was established in 1977 in response to the recommendations of the Shrivastav committee report, and it included community health worker training, reorienting medical education (ROME) training of multipurpose workers, and integrating medical colleges to rural health. It was founded on the premise of "putting people's health in their hands." The Community Health Volunteer-Village Health Guide (VHG) Scheme was also established to encourage community engagement. The VHG is to be a villager, generally a woman, who would get short-term training and a small stipend for their efforts.

2.3.1 Constitutional Provisions Relating to Right to Health in India

The Constitution's Preamble outlines some of the fundamental values and concepts that guide the Indian Constitution. Although the preamble is not considered a part of the Constitution and is not enforceable in a court of law, the Constitution is interpreted in light of it, and the Supreme Court of India has held in a majority of decisions that the preamble's objectives of justice, liberty, equality, and fraternity form the foundation of the Constitution. The Preamble mandates the state to take steps to establish justice, equality, and dignity, among other things, all of which have a direct impact on people's health[20].

When right to healthcare is seen within the constitutional framework it is clear that the Constitution of India does not provide for right to health in any way. Right to health has been evident in India through the various case laws decided by the Indian judiciary from time to time. Human rights are separated into two parts in the Indian Constitution. The 'Fundamental Rights,' as defined in Part III of the constitution, include the right to life, the right to equality, the right to free speech and expression, the right to freedom of movement, and the right to freedom of religion, which are referred to as civil and political rights in conventional human rights terminology. The Directive Principles of State Policy (DPSPs) are found in Part IV of the constitution, and they cover all social, economic, and cultural rights, such as the right to education, the right to livelihood, the

[20] *N. B. Sarojini & others, Women's Right to Health (New Delhi: National Human Rights Commission, 2006), p.85*

right to health and housing, etc.,[21] and this forms the economic, social and cultural rights. At the time of formation of the Indian constitution right to health was placed under the directive principles of state policy because direct enforcement of the right to health was found difficult by the makers of the Constitution.

Initially, the Supreme Court of India enforced people's right to health through a series of public interest litigations brought before the Indian judiciary. With the passage of time, the court has come to the conclusion that the right to life under Article 21 is incomplete without the right to live in dignity, which includes a variety of other rights such as the right to education, the right to livelihood, the right to health and shelter, and so on. As a result, the right to health was included in the list of fundamental rights and was enshrined in Article 21 of the Indian constitution.

The provisions of the Indian Constitution that define the right to health are as follows:

The Indian Constitution's Article 21 deals with the protection of life and personal liberty. It states that no one's life or personal liberty can be taken away from them except according to procedure established by law The purpose of Article 21's fundamental right is to prevent encroachment on personal liberty and deprivation of life unless it is done in accordance with legal procedures. The right to life refers to the ability to live a full, meaningful, and dignified life. It doesn't have a specific meaning. It is something more than surviving or animal existence[22].

It has a much broader definition that encompasses the right to live in dignity. The right to life is vital to our existence as human beings, and it encompasses all aspects of life that contribute to making a man's life meaningful, complete, and worthwhile.

This right to live in dignity, enshrined in Article 21, derives its life force from the Directive Principles of State Policy, particularly Clauses (e) and (f) of Article 39 and Articles 41 and 42, and must, at a minimum, include health protection, opportunities and facilities for children to develop in a healthy manner, just and humane working conditions, and so on. These are the bare minimums that must be met in order for a

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[21] Jayna Kothari, "Social Rights and the Indian Constitution", 2004 (2) Law, Social Justice & Global Development Journal (LGD), vol. 2, 2004, available at http://www.escrnet.org/usr_doc/kothari_article2.ocd (last visited on October 5th, 2021)

[22] V. Maheswari, "India– The Expanding Horizons", available at http://legalserviceindia.com/articles/art222.htm (last visited on October 5th, 2021)

person to live with dignity, and no state, including the Central government, nor any state government, has the authority to deprive anyone of these basic necessities[23].

According to Article 47 of the Indian constitution the state shall regard the raising of the level of nutrition and the standard of living of its people and the improvement of public health as among its primary duties and, the state shall prohibit the consumption of intoxicating drinks and drugs which are injurious to health except for medical purposes. It is, however, not enforceable in a court of law, it may not be possible to compel the State through the judicial process to make provision by statutory enactment or executive fiat for ensuring this basic essential which go to make up a life of human dignity but where legislation is already enacted by the State providing these basic requirements to the workmen and thus investing their right to live with basic human dignity, with concrete reality and content, the State can certainly be obligated to ensure observance of such legislation for inaction on the part of the State in securing implementation of such legislation would amount to denial of the right to live with human dignity enshrined in Article 21[24].

This was further explained by the Honourable Supreme Court in the matter of *Parmanand Katara v. Union of India*[25], wherein one road accident victim was denied medical care by a private hospital on the grounds that it was a medico-legal case that should be treated in the Government Hospital under the supervision of acceptable medico-legal rules. The Supreme Court ruled in this case that, under Article 21, the access to emergency medical care is a basic right that cannot be denied by any hospital or medical facility.

In Indian context, Right to Health gets its legal status from Article 21 of the Indian Constitution. According to Article 21, "No person shall be deprived of his life or personal liberty except according to procedure established by law." Honourable Supreme Court of India rightly explained this in the matter of *Consumer Education & Research Centre v. Union of India and others*[26], where it has been held that the right to

[23] *Abhay, "Judicial Interpretation of Article 21 of the Indian Constitution", available at http://legalarticles.deysot.com/constitutional-law/judicial-interpretation-of-article-21-of-the-indianconstitution.html (last visited on 5th October 2021).*
[24] *Abhay, "Judicial Interpretation of Article 21 of the Indian Constitution", note 8.*
[25] *Parmanand Katara V. Union of India, AIR 1989 SC 2039*
[26] *Consumer Education & Research Centre V. Union of India and Others, AIR 1995 SC 922*

life does not mean mere animal existence or continued drudgery through life. Right to life also includes right to clean & healthy environment.

Further, the Supreme Court repeated the need and essence of access to primary healthcare facility in the matter of *Paschim Banga Khet Mazdoor Samiti v. State of West Bengal*[27]. In this case, the victim of a train accident was denied treatment due to less facility and finally he was treated in a private hospital but died due to delay. The Supreme Court held that it is compulsory for the state to provide necessary primary healthcare and the excuse for insufficiency of fund cannot absolve the state from performing its duty.

The Supreme Court gave another important decision in acknowledging right to health in the matter of *Indian Medical Association v. V.P. Shantha*[28]. It was held that giving of medical services, whether therapeutic or diagnostic, for monetary consideration added to service within the meaning of "service" as per the Consumer Protection Act, 1986. As a result, under the Consumer Protection Act, any medical practitioner or facility found guilty of withholding treatment or providing inadequate services may be held accountable.

In *All India Lawyer's Union (Delhi) v. Govt. of NCT of Delhi*[29], the Supreme Court of India went over the international treaties, Indian constitutional provisions, and local case law that obligated India to uphold its citizens' right to health. The Court determined that, because health care is so important to an individual's quality of life, it cannot be left to the market; rather, the government must ensure that every person, regardless of financial means, has access to basic health care.

Following a review of earlier case law, the Supreme Court's Constitution Bench in *Navtej Singh Johar and others Vs. Union of India*[30] , found that right to health and health care is one of the facets of right to life under Article 21 of the Indian Constitution. "The right to life is meaningless unless it is supported by the provision of certain concomitant rights, including but not limited to the right to health," the court ruled. The right to health is regarded as essential to a life of dignity and well-being, and includes,

[27] *Paschim Banga Khet Mazdoor Samiti V. State of West Bengal, AIR 1996 SC 2426*
[28] *Indian Medical Association v. V.P. Shantha, AIR 1996 SC 550*
[29] *All India Lawyer's Union (Delhi) v. Govt. of NCT of Delhi WP(C) No. 5410/1997*
[30] *Navtej Singh Johar and others Vs. Union of India (2018) 10 SCC 1*

for example, the right to emergency medical care as well as the right to public health maintenance and improvement.

In *Union of India Vs. Moolchand Kharaiti Ram Trust* [31], the Supreme Court held that State has to ensure the basic necessities like food, nutrition, medical assistance, hygiene etc. and contribute to the improvement of health. Right to life includes right to health as observed in *State of Punjab v. Mohinder Singh Chawla*[32].

In *Sushil Kumar Patel v. Union of India*[33], the High Court of Madhya Pradesh held that, Article 21 of the Indian Constitution explicitly imposes an obligation on the state to take whatever steps are necessary to ensure citizens' access to health facilities. It also requires the state to ensure that all citizens infected with Coronavirus disease have access to life-saving measures and treatments, such as Oxygen and Remdesivir in this situation.

In all the above judgments, we see the Supreme Court and various High Courts carving out a Right to Health from the various judicial pronouncements which came before the court and thus incorporated this right within Article 21 of the Indian Constitution. The right's scope has also been broad, embracing a variety of aspects of health care and services. The Supreme Court began to consider the relevance of health as a fundamental right to Indian people after recognising that both the Preamble of the Constitution and the basic right to life in Article 21 emphasise the value of human dignity. Article 47 of Part IV of the Constitution stipulates that the "state shall regard enhancing the level of nutrition and the standard of living of its people, as well as improving public health, as among its primary tasks." Articles 38 (social order to promote the welfare of the people), 39(e) (health of workers, men, women, and children must be protected against abuse), 41 (right to public assistance in certain cases, including sickness and disability), and 48A (state's duty to protect the environment) of the Directive Principles all contribute to the right to health.

[31] *Union of India Vs. Moolchand Kharaiti Ram Trust (2018) 8 SCC 321*
[32] *State of Punjab v. Mohinder Singh Chawla (1997) 2 SCC 83*
[33] *Sushil Kumar Patel v. Union Of India W.P. No.20889/2020*

2.4 HEALTH CARE SYSTEMS IN INDIA

The health-care system is the collection of people, institutions, and resources that work together to provide health-care services to the target population. The WHO defines it as "All the activities whose primary purpose is to promote, restore, or maintain health[34]." World Bank (WB) has given a broader definition for the health system by including factors interrelated to health, such as poverty, education, infrastructure, and social and political environment.

According to WHO[35], the goals for health systems are good health, responsiveness to the population's expectations, and fair financial contribution. Progress towards these goals depends on how systems carry out four vital functions of providing health care services, resource generation, financing, and stewardship. Further, other dimensions for evaluating health care systems include quality, efficiency, acceptability, and equity. These dimensions have also been described in the United States as "the five C's": Cost, Coverage, Consistency, Complexity, and Chronic illness.

There are as many different health-care systems as there are countries, each with its own history and organisational structure. Health-care system planning is distributed among market participants in various nations. In others, there is a coordinated effort of governments, labour unions, charities, religious organisations, and other coordinated organisations to deliver planned health care services targeted to the people they serve[36].

However, in India, the health care system is characterized by a pattern of mixed ownership and different systems of medicine - Allopathy, Ayurveda, Yoga, Unani, Siddha, Naturopathy, and Homoeopathy (AYUSH)[37].

Health systems have played a significant role in the dramatic growth in the life expectancy rate that occurred during the 20th century. They have contributed enormously to the betterment of health. It has influenced the lives and well-being of billions of men, women, and children around the world. Their role has become

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[34] Why do health systems matter, available at https://www.who.int/whr/2000/en/whr00_ch1_en.pdf, (last visited October 5, 2021)
[35] A framework for assessing the performance of health systems, available at https://www.who.int/bulletin/archives/78(6)717.pdf (last visited October 5, 2021)
[36] Ibid
[37] AYUSH, available at https://www.nhp.gov.in/ayush_ms (last visited October 5, 2021)

increasingly important. As the third Sustainable Development Goal, health systems are the foundation to achieve and guarantee health for all. It aims to:

- promote and improve health for individuals and groups
- avert dangers to health
- protect people against financial disasters as consequences of ill health
- provide equitable access to health care
- enable people to participate in decisions affecting their health[38]

A health system comprises of all organizations, institutions, and resources devoted to producing health actions. To protect and improve the people's health is the fundamental goal of a health system, and it should be concerned with the health of the people. Ministries of Health, pharmaceutical companies, health financing bodies, and other organizations also play important roles, such as health service provision, oversight, financing, and managing resources in addition to patients, families, and communities[39].

The main purpose of a health system is redefined by the World Health Organization (2000) in its definition as "all activities whose primary purpose is to promote, restore, and maintain health." Over recent years, the definition of "purpose" has been further extended to include preventing household poverty due to illness. As health systems are open to the influence of external factors such as poverty, education, infrastructure, and the broader social and political environment, they are also known as open systems. Many parts of a health system operate at many levels to provide coherence at the community or national level.

Better health is the primary or defining goal and the raison d'être of a health system. There would be no reason if health systems did nothing to protect or improve health. Other systems in society may also contribute to the population's health, but not as their primary goal. Though the other social systems, such as education or the markets for most consumer goods and services, also make the goals of fair financing and responsiveness particularly significant, the health system differs from all these systems. One is that health-care costs can be exorbitant. According to most people, the health system is simply a provider or an organization that delivers personal medical services.

[38] *WHO: Key components of a well-functioning health system.available at https://www.who.int/healthsystems/EN_HSSkeycomponents.pdf (last visited October 5, 2021)*
[39] *Health Systems Background and problem statement, available at http://ifmsa.org/wp-content/uploads/2016/02/IFMSA_Program_Health-Systems.pdf (last visited October 5, 2021)*

By broadly defining the health system, the people and organizations that deliver medical care are not the whole systems; rather, they exercise one of the principal functions of the system.

India's healthcare sector comprises of two significant sectors:

The Public Sector:

The public sector provides publicly financed and managed promotive, preventive, and curative health services. The public health sector consists of the central government, state government, municipal and local level bodies. Health being a state responsibility, the central government contributes substantially through grants and centrally sponsored health programs/schemes. There are other ministries and departments of the government such as defence, railways, police, ports, and mines, which have their health services institutions for their personnel. For the organized sector employees' (public and private) provision for health services is through the Employees' State Insurance Scheme (ESI).

The National Health Policy (2002) envisions a three-tiered healthcare delivery system that includes primary, secondary, and tertiary health care facilities in order to make health care services more accessible to the general public:

First Tier (Primary Level)

The primary tier is designed to strengthen the rural health system in India by adopting three types of health care institutions, namely, Sub-Centres (SCs), Primary Health Centres (PHCs), and Community Health Centres (CHCs). The Directorate of Health Services manages this level, but Family Planning and Maternal and Child Health services are under the Directorate of Family Welfare.

- Sub-Centres:

The SCs are the most peripheral outpost of the existing health delivery system in rural areas and the first contact point between the primary health care system and the community. They are being established based on one sub-center for a population of 5,000 in plain area and one for 3,000 in hilly, tribal, and backward or challenging areas. SCs have assigned tasks relating to interpersonal communication to bring about behavioural change and provide services concerning maternal and child health, family welfare, nutrition, immunization, diarrhoea control of communicable disease

programmes. The SCs are provided with essential drugs for minor ailments needed for taking care of essential health needs of men, women, and children. At least one Auxiliary Nurse Midwife (ANM) / Female Health Worker (FHW) and one Male Health Worker are required to staff each SC (MHW). One additional second ANM is available on a contract basis under the National Rural Health Mission (NRHM). Six SCs are under the supervision of a single Lady Health Visitor (LHV).

Primary Health Centres (PHCs):

The Primary Health Care Center is the village's primary point of contact with the Medical Officer. The primary goal of the PHCs was to provide integrated curative and preventative health care to the rural population, with a focus on prevention and promotion. The state governments develop and manage PHCs as part of the Minimum Needs Programme (MNP)/Basic Minimum Services (BMS) Program. The National Health Plan (1983) recommended that one PHC be established for every 30,000 rural people in the plains and one PHC be established for every 20,000 people in mountainous, tribal, backward, and difficult areas. Two more Staff Nurses are available on a contract basis at PHCs under the NRHM.

PHCs act as a referral unit for 5-6 SCs and have 4-6 beds for patients. The activities of PHCs involve curative, preventive, promotive, and Family Welfare Services. As per minimum requirement, a PHC is expected to have a Medical Officer supported by 14 paramedical and other staff.

- Community Health Centres (CHCs):

The State Government establishes and maintains CHCs as part of the MNP/BMS initiative. Each CHC serves a population of 80,000 to 1.25 lakh people and serves as a referral centre for PHCs at a 1:4 ratio. A CHC must have four medical specialists on staff, including a surgeon, physician, gynaecologist, and paediatrician, as well as 21 paramedical and other employees. It should contain 30 indoor beds, as well as an operating theatre (OT), X-ray, labour room, and laboratory, as well as obstetric care and specialist consultations.

Second Tier (Secondary Level)

The District Hospitals (DH) function as the second tier for rural health care and the primary tier for the urban population. Directorate of Health Services manages this level of health care.

Third Tier (Tertiary Level)

Health care institutions provide tertiary health care in urban areas well equipped with sophisticated diagnostic and investigative facilities. Usually, it includes teaching hospitals and Tuberculosis (TB) Hospitals, Mental Hospitals, Infectious Disease Hospitals, and Leprosy Hospitals, and the Directorate of Medical Education manages them.

The Private Sector:

The key features of the private sector in medical practice and health care are well known. Only around 8% of all qualified modern medical care was offered by the private sector at the time of independence. However, throughout time, the private sector's share of healthcare service has risen to almost 80% of all outpatient care and 60% of all inpatient treatment[40]. The majority of these are found in urban areas. Independent private medical practice has grown in popularity over the last several decades, but it has remained stubbornly urban, with polyclinics, nursing homes, and hospitals spreading, often through doctor entrepreneurs. At our level, tertiary hospitals in major cities are often controlled by business houses that employ corporate business techniques and hi-tech specialty to create demand and attract individuals with high demand or those who are severely vulnerable at growing expenses. Some of them have truly world-class standards, and some of the people who work there are excellent leaders in their fields. However, because medical care has been commodified as part of a business plan, it has been impossible to regulate care quality, accountability, and fairness through criteria for accreditation, fee transparency, medical audit, accountable record keeping, and

[40] *Investment Opportunities in India's Healthcare Sector, available at https://www.niti.gov.in/sites/default/files/2021-03/InvestmentOpportunities_HealthcareSector_0.pdf (last visited October 5, 2021)*

credible grievance procedures, among other things. Accreditation, standard-setting, and licensure systems are best done through self-regulation, however self-regulation in India's medical profession has been lacking in many ways, causing credibility issues. Acute care has risen to the top of the priority list, attracting talent as well as investment in speciality education and infrastructure for technological advancement. In metropolitan regions, common therapies, low-cost diagnostic tests, and family medicine are being replaced and priced out of reach for the majority of individuals[41].

The poor qualities of services are provided at the rural periphery by the large number of unqualified persons. The issues in private sector in India are quality and increasing cost of health. The data on cost of treatment between public and private sector narrowed in recent years. The reason was that in the public sector, patients are asked to buy drugs, injections, diagnostics, etc. from the market. The private sector's dominance in the health sector has resulted in disparities in healthcare access. Hospitalization rates are higher among the wealthy than among the poor. As a result of these discrepancies, women from wealthy families are more likely to have unneeded caesarean operations during childbirth, whilst poorer, rural women are more likely to die during childbirth due to a lack of access to these operations.[42]

2.5 ROLE OF EQUITY IN HEALTH CARE

On both a national and international level, equity deserves a prominent place in health-care policymaking. For decades, many governments and international health organisations have made equity a stated or implicit goal of health policy. The World Health Organization's (WHO) World Health Assembly launched a global health plan in Alma-Ata in 1978, with the goal of achieving Health for All by the Year 2000. Health equity is an implicit priority in health for all, and was particularly prominent in WHO's Health For All strategy for Europe. The European Health For All strategy for the twenty-first century identified promotion of equity and improvement of health as guiding principles. From 1995 to 1998, the World Health Organization (WHO) in Geneva initiated a global drive on equity in health and health care. Concerns about

[41] *HEALTH CARE IN INDIA - ISSUES AND PROSPECTS , available at https://niti.gov.in> 26_bg2020.pdf (last visited October 5,2021)*
[42] *Annual Report to the People on Health, 2010, available at https://main.mohfw.gov.in/sites/default/files/26697288736.pdf (last visited October 5,2021)*

equity were also mentioned in the Millennium Declaration of 2000, which gave birth to the Millennium Development Goals. Despite significant improvements in life expectancy and child survival in the second half of the twentieth century, disparities in health status and health systems between wealthier and less privileged populations within and between countries have persisted, and in many regions and countries are expanding.[43].

Health equity has also become a major focus of research and advocacy. Pursuing health equality "reflects a desire to eliminate health disparities among those who belong to less privileged social groups, such as the impoverished, disenfranchised racial, ethnic, or religious groups, women, and rural dwellers." In practise, attaining health equity entails eradicating health inequities that are systematically linked to underlying social disadvantage or marginalisation"[44]. The unequal distribution of social and economic determinants of health, such as income, employment, education, housing, and healthful settings, continues to be the most pressing policy issue for addressing health disparities. Striving for equity in health care is one aspect of the wider concept of equity in health status, and implies that health care resources are allocated and received according to need, and financing is according to ability to pay.

Evidence suggests that the substantial health advances made in recent decades are unequally distributed, with the poor and other marginalised or socially excluded populations disproportionately missing out. Both between and within countries, persistent and growing health inequities are becoming more apparent. For example, the poorest 20% of the global population are roughly 10 times more likely to die before the age of 14 than the richest 20%. Poverty has multiple dimensions. These dimensions include not only low income, but also lack of access to services, resources and skills; vulnerability; insecurity; and voicelessness and powerlessness. Poverty and other forms of social exclusion—such as gender, race, ethnicity, and age, place of residence, employment status, and sexual orientation—are strong determinants of health[45]

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[43] *"Priorities for research to take forward the health equity policy agenda", Bulletin of the World Health Organization, vol. 83(12), December 2005, p.948, available at www.who.int/entity/bulletin/volumes/83/12/948.pdf*

[44] *Ibid*

[45] *"Equity and Health", available at http://www.wpro.who.int/health_topics/equity (last visited October 5, 2021)*

Though equity in health and health care has been a long-term guiding principle of health policy in India, with a commitment to provide for the needs of individuals who are poor and underprivileged inequalities still exists in health care in India[46]. Despite advances in health-care access, inequities persist due to socioeconomic position, location, and gender. Individuals with the greatest need for health care in India have the most difficulty accessing services and are the least likely to have their needs satisfied.

2.6 CONCLUSION

Health care is now completely commodified, and people are at the mercy of the market. While health care may not be proclaimed as a fundamental right in affluent countries, access has been made more or less universal by legislation or special arrangements for individuals who lack purchasing power. Providing universal access to health care in a country like India, where three-quarters of the population still lives in villages, becomes much more difficult. While public health facilities in urban regions are generally well developed, rural infrastructure is woefully lacking. This puts a lot of strain on city facilities, reducing their efficiency.

Establishing health care as a human right becomes much more crucial in a country like India, where poverty is the primary concern of the political economy. The poor and other excluded groups use health services less because they typically face multiple barriers to access to services, including geographical barriers; financial barriers; socio-cultural attitudes, such as those related to gender or ethnicity; lack of knowledge and awareness; and the poor quality or lack of responsiveness of the health system.

Along with the economic accessibility (affordability) towards the health care, information accessibility also helps in the realization of health as a human right. Since the purpose of health education is to ensure a desired health related behavior, therefore a close study of the science of sociology, psychology and anthropology is required in understanding human behavior, then the methodological and socialization of individual is needed through the health education. Here the importance of close, friendly and sympathetic attitude has been emphasized on the part of doctors, nurses etc. while

[46] *Y. Balarajan , S. Selvaraj , SV. Subramanian, "Health care and equity in India", Lancet, Feb 2011, pp. 505-15.*

dealing with patients. A successful doctor or nurse puts the patients at ease and explains as much about the diagnosis, treatment, diet, precautions etc., as possible not only to win the confidence of the patient, but to ensure proper adherence to the treatment and all precautions necessary for getting cured or relieved. It is also necessary to have a free flow of communication. The two-way communication is particularly of importance in health education to help in getting proper feedback and to get doubts cleared. So, a continued education is necessary in every community to help people to identify their health problems and to help them to understand what steps they have to take for prevention

Many of the above-mentioned challenges faced by the healthcare sector in India can be solved with digital technology that is already available or under construction. Some of the new functions have the potential to fundamentally change the nature of health care by better connecting people with services, performing routine tasks, and analyzing patient data to improve care decisions. The four technologies provide compelling value propositions, addressing India's various challenges are telemedicine, electronic health records, chronic disease management, and evidence-based care analysis. These are less expensive and increases patient involvement.

Since its first appearance in the late 1950's, advances in telecommunications have contributed to the ability of older people to choose old age. In addition, patients living in rural areas who had difficulty finding a doctor can now access them. Doctors and patients can share real-time information from one computer screen to another. They can also see and take readings from medical devices remotely. Using telemedicine software, patients can see a doctor to get a diagnosis and treatment without having to wait for an appointment. Patients can consult a doctor in the comfort of their own homes. The concept of telemedicine and telehealth can still be new to providers and physicians who have been given the slow acceptance of technology in health care.

However, advances in technology and health care have greatly increased its use. In addition, the demands from the new generation of tech savvy people are forced to be quickly accepted due to their ease of use, cost savings and the smart features it brings.

It is now time for the health care system, the medical team, providers and even the sole physician who incorporates telemedicine as part of their medical care offerings in order to ensure access to healthcare to all protect the right to health of the citizens.

CHAPTER 3

TELEMEDICINE: A NEW HORIZON IN PUBLIC HEALTH

3.1 INTRODUCTION

There is a tremendous difference in the distribution of health care in a growing country like India. Although about 75% of Indians live in rural areas, more than 75% of Indian doctors live in cities[47]. The majority of India's 620 million rural residents do not have access to primary health care[48]. The Indian government spends only 0.9% of its annual domestic product on health care, and little of this expenditure reach remote rural areas [49]. The poor infrastructure of rural health facilities makes it difficult to keep doctors in the valleys, who feel isolated and out of date when they live in remote areas. In addition, impoverished rural Indians spend most of their out-of-pocket expenses on special city-based hospitals[50]. The Indian Institute of Public Opinion study found that 89% of Indian patients in rural areas had to walk five miles to receive primary health care. In contrast, others had to travel long distances. [51]

One of the significant challenges people face in the 21st century is making quality health care available to all. Such a view is expressed by the World Health Organization (WHO) in its 21st-century human strategy. Knowing this concept will be difficult, if not impossible, due to the growing burden of people on old and new diseases, rising health expectations, and social conditions, if any, increasing at different levels of health

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[47] *Agence-France Presse (2005 March 17) India will introduce satellite telemedicine only. Available: http:⁄⁄servesrilanka.blogspot. com / 2005/03 / india-to-launch-satelliteexclusively.html. (last visited September 26, 2021)*

[48] *Krishnakumar A (2003 January 18-31) Telephone healing. Previously. Available: http:⁄⁄www. hinduonnet.com/thehindu/thscrip/print. pl? fi le = 20030117007309400.htm date = fl 2001 / & prd = fl ine & (last visited September 26, 2021)*

[49] *Rajalakshmi TK (December 2004) India is facing AIDS. International Monitoring. Available: http: ultmultinationalmonitor.org / mm2004 / 122004 / front.html. (last visited September 26, 2021)*

[50] *Sharma DC (2000) Remote valleys in India to benefit from a telemedicine project. Lancet 355: 1529. Available: http:⁄⁄www.thelancet.com / journals / lancet / article / PIIS0140673605745931 / fulltext. Accessed June 22, 2005*

[51] *Rao R (2005 May) Delivering health to rural areas. i4d. Available: http:⁄⁄www.i4donline. net / May05 / satellitetech.asp. (last visited September 26, 2021)*

within and between countries. Traditionally, part of the difficulty in gaining equal access to health care has been that the provider and the recipient must be present at the same place and at the same time. However, recent advances in information and communication technology have created unprecedented opportunities to overcome this by increasing the number of health care systems. This applies to both developing countries with weak or unstable economies and developed countries. Opportunities to improve the delivery of 'health telematics' using information and communication technology are becoming more widely acknowledged.

Telemedicine has the ability to improve all Indians' access to high-quality health care. India has poor and average patient care, with only one doctor per 1,445 people.[52] This discrepancy is particularly prevalent in rural areas as more and more doctors choose to exercise in cities. According to a WHO study, 59.2% of all health workers are located in urban areas, with a population of 27.8%, and 40.8% of all health workers, and they were in rural areas, where 72.2% of the population lived.[53]

Telemedicine can help exacerbate this inequality by allowing doctors in urban areas to consult with local people, including specialized care when needed.

3.2 DEFINITION OF TELEMEDICINE

Telemedicine improves patient outcomes by improving access to health care and medical information through the use of information and communication technologies. The Government of India has adopted a telemedicine definition provided by the World Health Organization ("WHO"), following, "Delivery of health care services, where distance is of paramount importance, by all health care professionals who use information and communication technology to exchange official information for diagnosis, treatment and prevention disease and injury, research and testing, as well as the continuing education of health care providers, all to improve the health of individuals and their communities".[54]

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[52] *https://health.economictimes.indiatimes.com/news/industry/doctor-patient-ratio-in-india-less-than-who-prescribed-norm-of-11000-govt/72135237*
[53] *https://www.who.int/hrh/resource/t6058health-workforceindia.pdf*
[54] *WHO. A health telematics policy in support of WHO's Health-For-All strategy for global health development: report of the WHO group consultation on health telematics, available at*

3.3 CONCEPT OF TELEMEDICINE

When participants are separated by a significant distance, telemedicine employs electronic information to communicate using technology in order to offer and support health care.[55] "Tele" comes from a Greek word that means "distance," and "mederi" comes from a Latin word that means "to heal." Telemedicine has been termed "telephone treatment" by Time magazine. Telemedicine is now a feasible and solid option, despite its early reputation as "the future" and "experimentation."

Telemedicine provides medical care to patients who were often physically located too far to receive quality health care. It allows health care professionals to use connected medical devices to evaluate, diagnose, and treat the patient in other locations. These devices are enhanced by using Media like Telecommunication technology, Network computing, video conferencing systems, etc. Telemedicine is more important in developing countries since it allows the extension of medical usage to people residing in remote and rural areas where advanced medical use may not be available.

The growing awareness and usage of the information superhighway have also opened a gateway for the healthcare sector. Telemedicine is an innovative way of communication by which patients are able to interact with specialist doctors in different cities, states, and even countries.

In patient care, education, research, administration, and public health, telemedicine has a wide range of uses.[56] All over the world, people living in rural and remote areas are struggling to find timely specialized medical care. Residents of these areas often have limited access to specialized health care, especially since specialist doctors may be found in densely populated urban areas. Telemedicine has the power to close this gap and provide health care in these remote areas.[57] Telemedicine may be the most cost-effective and time-efficient solution to reduce the rural health gap.

Telemedicine will save some expenditures, such as the money spent by patients on travel and lodging. In a small clinic, a telemedicine system consists of a personal

http://apps.who.int/iris/bitstream/handle/10665/63857/WHO_DGO_98.1.pdf?sequence=1, pp-10, (last visited September 28, 2021)

[55] Brown N. A brief history of telemedicine. Telemedicine Information Exchange. 1995; 105: 833-5.

[56] Ganapathy K. Neurosurgeon, Apollo Hospitals, Chennai, Telemedicine India - Apollo experience

[57] Bashshur RL, Armstrong PA, Youssef ZI. Telemedicine: An examination of the use of telecommunications. Spermfield, IL: Charles C Thomas; 1975.

computer with tailored medical software linked to a few diagnostic tools, such as an ECG or X-ray machine or an X-ray scanner.[58]. Through a satellite-based communication link, electronic representations of medical images and diagnostic details (such as X-ray images and blood tests) are delivered to specialised physicians. Through a video conference, information is acquired from a technical centre where experienced physicians examine reports, diagnose, speak with patients (and local physicians), and recommend suitable treatment. The entire programme is simple to operate, and professionals and specialist health care providers just need a brief time of training to manage it. The health-care industry will be transformed by telemedicine.

3.4 HISTORY OF TELEMEDICINE

The most of telemedicine has emerged in the previous 20-30 years, supported by technological advancements. If, on the other hand, telemedicine is defined as any remote medical practise, regardless of how information is sent, it has a long history. In the Middle Ages, the first example of remote medicine, arguably one of the earliest public health networks, occurred when word concerning bubonic plague was spread across Europe using flames. With the development of national postal services in the mid-19th century, long-distance health care delivery methods were used, and the practice of diagnostic and therapeutic practitioners was adopted. In the middle of the 19th century, telegraphy - signed by telephone - was also introduced and soon used by those who provided and organized medical care. This includes its use during the American Civil War to send a list of wounded soldiers and arrange medical supplies, as well as the most recent technology advancements that allow X-ray images to be broadcast. The telegraph was quickly replaced as a common mode of communication in much of Europe and the United States by the telephone, although it lasted much longer in Australia due to the great distances involved. The telephone has been used to provide health services since its inception in the late 19th century, and for 50 years or more has been a mainstay of communication for such purposes. However, it was

[58] *Wootton R (2001) Recent Developments: Telemedicine. BMJ 323: 557-560. Available: http: //bmj.bmjjournals.com / cgi / content / full / 323/7312/557. (last visited September 20, 2021)*

established in the early 1910s that the telephone could be used for other purposes besides voice communication; amplified sounds from the stethoscope have been transmitted over the telephone network and similar devices are still in use today. Other uses of the standard telephone network have been identified and include the transmission of electrocardiograms (ECGs) and electroencephalograms (EEGs). The next development of widespread importance was in the late 19th century when radio communication took place. This is done initially by Morse code and later by voice. The use of radio to provide maritime medical advice was recognized very quickly, and in 1920 the Seaman's Church Institute in New York became one of the first organizations to provide medical care through radio, at least five other maritime nations established radio medical services in 1938[59]. One was the International Radio Medical Center (CIRM), headquartered in Rome, Italy. It was established in 1935 and in its first 60 years was assisted by more than 42,000 patients, making it one of the largest.[60] Advice on passenger radio treatment for long-distance air travel is also provided recently. In cases of health problems that require professional help, and occur at an average of about 1 in 50,000 transported passengers, assistance can be obtained from understaffed health care workers.[61]

3.5 THE BIRTH OF MODERN TELEMEDICINE

Recent advances in telemedicine have been simplified in two phases. First, there are advances in electronic communications. Analogue means were used at first, but modern digital communication systems are now a main pillar. Second, telemedicine has improved as a result of the pioneering efforts of a few organizations and individuals. The first represented the interest of high-level enterprises, such as the National Aeronautics and Space Administration (NASA) spacecraft in the USA. While this has surely aided in the advancement of telemedicine and telecommunications in general, the efforts of a few individuals employing easily available commercial technology have

[59] *WHO report on TELEMEDICINE opportunities and developments in Member States, https://www.who.int/goe/publications/goe_telemedicine_2010.pdf (last visited on September 28, 2021)*
[60] *Amenta F, Rizzo N. Radiation services. In: Wootton R, ed. European Telemedicine 1998/99. London: Kensington Publications, 1999: 125-6*
[61] *https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6618173/*

been critical in the advancement of telemedicine. It's fascinating to notice that little has changed in the 40 years or so since these people started their careers, depending on who is doing the study for profit and how. In the late 1950's, advances in television and video communications were hampered by medical professionals, who began using them in medical practice. In early 1964, a two-way television program was established between the Nebraska Psychiatric Institute in Omaha and Norfolk Psychiatric Hospital, 180 km (180 km).[62]The program has facilitated collaborative consultation between professionals and general practitioners, and facilitated education and training in the remote area. One of the first television programs to connect doctors and patients was Massachusetts General Hospital / Logan International Airport Medical Station, founded in 1967.[63] This made use of a two-way audio and video microwave system and allowed approved care to be given to passengers and airport staff 24 hours a day by nurses, assisted by medical technology using visual and visual linking. In the first report on the feasibility of this approach to health care delivery, a review of 1000 episodes was recorded. It is noteworthy that only a few reports of telemedicine projects since then contain these numbers of episodes produced. With the broad availability of video conferencing, there has been a major surge in real-time telemedicine recently. The progress of digital communications and the introduction of low-cost computers, the majority of which are now PC applications specialised for videoconferencing, have made this possible. The first examples of such programs were the Alaska ATS-6 Satellite Biomedical Demonstration from 1971 to 1975, which tested the effectiveness of health development in the Alaska region through satellite video consultation, and the Memorial University of Newfoundland program established in 1977, the first - time to provide education and health care services to Canadians.[64]

[62]*Benschoter RA, Wittson CL, Ingham CG. Television teaching and consultation: I. Closed communication. UJ Hosp Commun Psychiatry 1965; 16: 99-100*

[63] *Whitten PS, Mair FS, Haycox A, May CR, Williams TL, Hellmich S. Systematic review of effective telemedicine intervention studies. Br Med J 2002; 324; 1434-7*

[64]*The works of Elford R. Telemedicine at Memorial University of Newfoundland: a historical review, 1975-1997.Telemed J 1998; 6: 207-24*

3.6 TELEMEDICINE INITIATIVES IN INDIA

India is the world's seventh largest country, covering around 3.2 million square kilometres. This vast South Asian country given its ancient historical site has a variety of plateaus such as mountainous regions, deserts, green plains, and remote and hilly areas of Jammu & Kashmir, Uttaranchal, the North East region, and the coastal islands of the Andamans and Lakshadweep. Providing basic health care to the people of India, especially those in rural areas and who are still being distributed in remote areas, has been one of the priorities of the Health Administration all this time. In today's world, apart from the many advances that have been made in the medical field, benefits are still available to a few privileged individuals living mainly in urban areas. With the advent of telecommunications technology, especially Satellite Communications (SatCom) combined with Information Technology, we have ways to extend the benefits from advanced medical science even in remote and inaccessible areas. It is well known that 75% of qualified doctors work in cities, while the vast majority of Indians reside in rural areas. The Indian Space Program is motivated by the country's development needs and aims to achieve lower levels of development. Today, advanced communications and remote sensing satellites, as well as spatial systems, cover a wide range of national demands, including communications and natural resource management. The Indian Space Research Organization (ISRO) has successfully implemented a number of projects in the areas of Drinking Water Mission, Watershed Management, Wasteland Development, Tele-education, and, most importantly, Telemedicine / Tele-health, the most important social media in the country by enabling Specialty Healthcare for remote, rural, and underprivileged people, all in the best interests of the grassroots.[65]

Telemedicine facilitates the provision of remote medical care. It is an effective solution to provide specialized health care in the form of improved access and reduced costs for rural patients and to reduce the professional segregation of home physicians. Telemedicine can enable general practitioners to perform routine tasks. Through the Telemedicine projects, ISRO has successfully connected hospitals and health care facilities in remote rural areas with specialized urban hospitals using INSAT satellites.

[65] *http://www.televital.com/downloads/ISRO-Telemedicine-Initiative.pdf*

Therefore, communication between patients in remote areas and specialist doctors in cities has been successfully established. With a large and skilled medical community embracing new ideas, a small beginning in Telemedicine was made by ISRO through the Telemedicine Pilot Project in 2001[66], linking Apollo Hospital in Chennai with Apollo Rural Hospital in the Aragonda area of Chittor district of Andhra Pradesh. Later in March 2002, the Beginning the Karnataka Telemedicine project linked Narayana Hrudayalaya, a specialized cardiology hospital in Bangalore with a regional hospital, Chamarajanagar and Vivekananda Memorial Trust Hospital in Saragur in southern Karnataka[67]. The invaluable experience gained through these Pilot Projects programs has encouraged ISRO to continue its efforts to empower special health care in rural areas. There are also a few reputable private hospitals that run hospitals with the exception of a large number of private hospitals and clinics. Therefore, the purpose of ISRO was to introduce SatCom which is based on Telemedicine Technology in various parts of the country through these Projects. This is to ensure that hospitals will have the necessary training and experience to run the facility so that the provinces can introduce telemedicine in a standard operating manner.

3.7 TYPES OF TELEMEDICINE

- STORE-AND-FORWARD

In-store telemedicine-referral exceeds the need for the physician to personally contact the patient. Instead, patient information such as medical pictures or bio signals can be sent to a specialist as needed when it is received from a patient. This practice is common in the medical field of dermatology, radiology, and pathology. With proper organization and care, store-bought and advanced telemedicine can save time and allow medical professionals to serve the community with their services to the fullest. However, instead

[66] *Pilot Project on Telemedicine - ISRO, https://www.isro.gov.in/update/16-nov-2000/pilot-project-telemedicine (last visited September 28, 2021)*
[67] *Inauguration of Karnataka Telemedicine Project - ISRO, https://www.isro.gov.in/update/08-apr-2002/inauguration-of-karnataka-telemedicine-project, (last visited September 28, 2021)*

of physical inspection, this type of telemedicine relies on historical records, recorded information, or photographs, which can lead to issues like misdiagnosis. [68]

- REMOTE MONITORING

Also known as self-examination or self-examination, remote monitoring uses many technological devices to remotely monitor the patient's health and clinical symptoms. This is widely used in the treatment of chronic diseases such as heart disease, diabetes and asthma. Other benefits associated with remote monitoring include cost-effectiveness, constant monitoring, and greater patient satisfaction. There is a certain danger that the tests performed by the patients themselves may not be accurate; however, the results are generally considered to be similar to the evaluations of specialists and patients[69].

- REAL-TIME INTERACTIVE SERVICES

Collaborative services can provide immediate advice to patients in need of medical attention. There are many different methods used for this purpose, including telephone, online and home visits. Medical history and consultation on the presentation of symptoms may be performed, following the same tests as for a face-to-face appointment.[70]

3.8 TELEMEDICINE IN HEALTHCARE

Advanced technology with state-of-the-art network services allows people to improve health delivery and make it more accessible to more people. Telemedicine is a highly beneficial technology that can make it easier for people to access antiretroviral drugs and help with their longevity. This is especially true for those dealing with the financial or regional causes of receiving quality medical care. Telehealth has the power to make health care more efficient, more organized, and more accessible. Research on the area is still in its early stages, but it is growing. For example, telephone-based care and telephone screening of important symptoms in people with heart disease have reduced

[68] *https://www.news-medical.net/health/Types-of-Telemedicine.aspx*
[69] *Ibid*
[70] *Ibid*

the risk of death and hospitalization and improved quality of life. There are several compelling reasons for people to get a diagnostic or recovery program. This can make patients feel confident that they are receiving the best possible treatment.

Telemedicine is an excellent choice for treating mental health issues. It eliminates some of the barriers that prevent patients from accessing this delicate treatment.[71] Telemedicine helps patients access medical care quickly and is safe at the same time. This could mean that one does not need to take time off work or arrange for child care. Going to a doctor's office that involves staying close to others can cause infection. This is especially dangerous for people with chronic medical problems or weakened immune systems. It prevents the chances of getting an infection in a doctor's hospital. Telemedicine service providers may have lower prices. Clinicians may find that telemedicine can increase their income by allowing them to care for more patients. When caregivers see patients online, they are not exposed to diseases that the patient may bring. A patient can be happy with his doctor if he does not have to fly to the office or wait for treatment or infection at the hospital.[72] Telemedicine has improved the ability of health care providers to care for more people without physical contact.

Moreover, now that it has been proven appropriate, it will be there for a long time. Telemedicine technology is up-and-coming for patients in remote areas. The most important result is provided in various countries where health facilities are few and far between. To ensure an accurate medical history, all patients and physicians must have adequate hardware and software security. Some clinics can offer visible appointments with doctors through an online video conference. When face-to-face visits are unnecessary, these appointments enable them to continue receiving treatment from a general practitioner. Web-based visits with a doctor or nurse are another option for joint arrangements. As part of their contribution to health care, several large companies have access to automated physician offices.

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[71] L.S. Wilson, AJ Maeder's latest trends in telemedicine: a review of research trends and performance 213

[72]F. SarhanTelemedicine in health. 1: to evaluate its use, pros and cons Nurs. Times, 105 (42) (2009 Oct 1), pages 10-13

On the other hand, the nursing call center works with nurses who use a question-and-answer format to provide home treatment advice.[73] This technology allows people to take blood transfusions, complete their course, and remember their appointment. In addition, patients can explain their symptoms to doctors by email, take a series of self-tests, and sign up for step-by-step training services for their specific condition. In all cases, electronic health technologies make it easier to control the chronic disease by simply placing monitoring and care programs in the hands of patients.[74]

Telemedicine has increased access to high-quality health facilities. Patients will now receive more personalized clinical services. They can also meet leading healthcare providers by simply using video application software, the consultation can be taken remotely, and doctors have the right tools for communication, data storage, report management, and the use of individual skills. This improves the quality of treatment, which allows physicians to spend less time on home assignments and provide more patient care. Telemedicine also empowers independent health professionals to familiarize themselves with and improve patient knowledge. Patients will no longer need to stand in long lines, and doctors will be able to access patient information smoothly and efficiently through electronic files and eliminate general waiting times. In addition, remote appointments allow physicians to spend less time on each patient, allowing them to treat more patients.[75]

3.8.1 CAPABILITIES AND FEATURES OF TELEMEDICINE WHEN USED IN HEALTHCARE MANAGEMENT SYSTEM

The concept of telemedicine and related services is now well established and proven with the community's help. It provides continuous health management, prescription compliance, remote services, and care for all under the most critical and critical cases,

[73] *R. Bashshur, G. Shannon, E. Krupinski, J. Grigsby Taxes for telemedicine tax Telemedicine and e-Health, 17 (6) (2011 Jul 1), pages 484-494*

[74] *UJ. Lokkerbol, D. Adema, P. Cuijpers, C.F. Reynolds III, R. Schulz, R. Weehuizen, F. Smit Improves the cost-effectiveness of a depressive health care system use of telemedicine: a study of the health economics modelAm. J. Geriatr. Psychiatr., 22 (3) (2014 Mar 1), pp. 253-262*

[75] *E. Parimbelli, B. Bottalico, E. Losiouk, M. Tomasi, A. Santosuosso, G. Lanzola, S. Quaglini, R. Bellazzi Reliance on telemedicine: a discussion of risks, safety, legal consequences and the responsibility of the stakeholders involvedInt. J. Med. Inf., 112 (2018 Apr 1), pages 90-98*

which ultimately supports this approach to health care and the medical care sector. In addition, a series of wireless devices heal patients and keep them updated on their unique health status.[76] Telemedicine is a new technology, and many call it a new distraction. Therefore, to address the patient remotely, telemedicine uses social media in various technologies, from teleconferencing to image sharing to remote patient monitoring. Physicians can also use automation to provide quality treatment to their patients. They need to develop better IT support systems and learn a new file management system. For example, a visible appointment encourages primary care physicians to seek professional advice when they have concerns about illness or treatment. Examination reports, history, medical findings, X-rays, or other photographs are sent to a specialist for an examination. The specialist may respond electronically, setting up a visible meeting with the doctor. This practical consultation can eliminate the need for unnecessary referral to specialists, reduce waiting times for specialists' responses, and eliminate the need for unnecessary travel. Telemedicine techniques are instrumental in seeing the patient, diagnosing the disease, and planning activities.[77] The personal electronic record system uses health records to view and maintain. We may use a web-enabled device, such as a desktop or smartphone, at any time. The personal health report will promptly provide important information to emergency responders, such as diagnoses, instructions, drug preferences, and doctor's contact details. This technology is designed to assist clients in better organizing their medical records in one safe place. Rehabilitation programs should establish policies to improve patient behaviour, which will become more difficult due to the evolving health technologies. It allows patients to count calories, record vital signs, record exercise, and control dosages and schedules. In addition to diabetes, the concept of telemedicine self-regulation can be extended to other chronic illnesses such as hypertension and many digestive disorders.[78]

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[76] *W. El-Shafai, F. Khallaf, E.S. El-Rabaie, FE Abd El-Samie Strong technology encryption based on DNA-chaos cryptosystem for telemedicine applications and safe health care*

[77] *M. MarsTelemedicine and development in urban and rural health delivery in AfricaProg. Cardiovasc. Dis., 56 (3) (2013 Nov 1), pp. 326-335*

[78] *SS Bajowala, J. Milosch, C. BansalTelemedicine pays for billing and coding update Curr. Allergy Asthma Rep., 20 (10) (2020 Oct), pages 1-9*

Telemedicine solutions will be of great help to doctors. However, when combined with Artificial Intelligence (AI), it can be very effective. It can simplify basic tasks by reducing the burden on doctors and increasing job satisfaction. App and timely app transfer data to ensure a suitable appointment. It will enable physicians to review more complex patient health issues and diagnose any abnormalities. Patients are encouraged to see an open (available) doctor's time, as well as their upcoming appointments and resilience. Health care analytics is often used to communicate data collected and viewed from a user interface. In the long run, the last resort means better use of time and cost. Telemonitoring is based on various electronic devices that transmit patient statistics directly to the healthcare provider's interface.[79] These technologies have proven to be valuable and valuable to a wide variety of telecommunications and medical industries. Significantly it transforms surgery, medical training, and learning. Once the doctor has accepted the desired appointment, the patient must receive confirmation. Internal records, such as reviews, changes, and critical hospital warnings, may be included in their profiles. Physicians can hold meetings using schedules as well. Planning, and redesign, are standard features of modern telemedicine systems. When doctors are informed of the appointment, they can obtain the patient's medical record and other details as needed to get appropriate consultation and diagnosis.

Virtual Reality (VR) programs have transformed communication systems into telemedicine devices, making them more immersive. Doctors and their teams can now view 3D monitors when performing surgical procedures. Through a video conference, doctors and even surgeons will operate on people thousands of miles away. This enables international medical teams to cooperate and to hold video conferences in complex and emergencies. The telehealth platform can use VR to mimic patient data and a graphical environment with video conferencing to facilitate physician communication. This approach is also helpful in rural or isolated areas and is very important in providing patients with local health care. In rural areas, this ensures increased reliance on the local health care system. This tool means more support for local health services for people

[79] *Ibid*

who are far away from the patient. In addition, this technology can allow all patients to stay with family and friends.[80]

3.9 TELEMEDICINE IN HEALTHCARE: SIGNIFICANCE

Telemedicine technology has access to various treatments, including counselling and primary care, psychotherapy, physical therapy, and much more. Provides treatment using wireless technologies such as laptops and smartphones. In most cases, video conferencing is used on television. Some services, on the other hand, prefer to provide treatment by email or phone message. Patients often use telemedicine in conjunction with their primary care physician. This technology helps when a patient has to maintain a physical distance or is unable to visit a health care facility. This also makes the practice more attractive to a growing number of patients who insist on television as the choice of a primary care provider.[81] Telemedicine technology has access to many therapies, including counselling and primary care, psychotherapy, physical therapy, and more. Provides treatment using wireless technologies such as laptops and smartphones.

In most cases, video conferencing is used on television. Some services, on the other hand, prefer to provide treatment by email or by telephone. Patients often use telemedicine in collaboration with their primary care physician. This technology helps when a patient has to maintain a physical distance or is unable to visit a health care facility. It allows the practice of selling extended hours or weekends without incurring the cost of opening an office. This also makes the procedure more attractive to a growing number of patients who insist on television as the choice of a primary care provider.

[80] *S. Bahl, R.P. Singh, M. Javaid, IH. Khan, R. Vaishya, R. SumanTelemedicine technology for dealing with the COVID-19 epidemic: review Journal of Industrial Integration and Management, 5 (4) (2020 Dec 1)*

[81] *LA VasquezCevallos, J. Bobokova, PV. GonzálezGranda, J.M. Iniesta, EJ. Gómez, ME HernandoThe design and technical certification of EcuadorTelemedicine's telemedicine health care and e-Health service, 24 (7) (2018 Jul 1), pages 544-551*

3.9.1 APPLICATION AREAS

1. Telehealth

Advances in technology and health care technology have significantly increased their effectiveness. With the introduction of this technology to healthcare, doctors, researchers, lab staff, and physicians can also apply the concept of telehealth. Now is the time for hospital systems, medical teams, and providers to incorporate telemedicine into their medical services. In addition, many organizations want to work with a telemedicine provider to simplify the process and delivery. Telemedicine is made using a telemedicine device, which includes a computer and hand-held medical equipment. Doctors also use high-resolution imaging cameras to provide accurate diagnostic images.[82]

2. Remote Treatment

Remote treatment can almost be done, which effectively keeps people out of the hospital. Patients wishing to see a provider with more specialized knowledge of a particular disease will do so without having to drive long distances and have video visits. The knowledge and skills of each expert can be put to good use. Sometimes, healthcare can be a competitive game, with primary care and professional doctors working together to ensure the best possible patient health outcomes. Telemedicine helps you with this by allowing all physicians to communicate with the patient and each other via a secure remote link.[83]

3. Treatment of school-going children

Telemedicine can play a crucial role in treating our rapidly aging population. When a child is sick at school, he may see a school nurse or be picked up by his parents and taken to an emergency room, especially something that is not well and perhaps unnecessary. Forward-thinking schools can partner with physicians to make video tours

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[82] *A. Majerowicz, S. TracyTelemedicine: closing gaps in health deliver AHIMA Journal, 81 (5) (May 2010), pages 52-53*

[83] *O.S. Nigeria-based online telemedicine programInt. J. Inf. Manag., 24 (3) (2004 Jun 1), pp. 221-234*

from the classroom. The provider can decide what action is needed and provide parents with guidance or reassurance. It has also been shown that the availability of doctors over the phone overnight and on weekends will help keep patients in assisted living facilities out of the hospital.[84]

4. Doctor's appointment virtually

In this age of social isolation, millions of people yearn for the appointment of doctors. Telemedicine has improved drug management, better patient health, and reduced health care costs. The Telemedicine app's growth has become a significant target for healthcare providers to deliver health services to online and remote patients. This technology creates appropriate telemedicine applications for doctors and patients. In addition, patients find it more reliable and accurate when small details are combined with a robust authentication machine.[85]

5. Enhance overall healthcare system performance

Telehealth refers to a variety of technologies and services used to provide patient care and improve the overall functioning of the health care system. Telemedicine includes an extensive list of online health care facilities. In addition to health care, remote non-medical services such as provider appointments, management meetings, and ongoing medical education are used. Telemedicine uses portable messages and tools to help bring health care to people who cannot see a doctor physically. This technology is also suitable for appointments, chronic treatments, specialist consultations, drug administration, and other health services that can be accessed remotely through secure video and audio connections.[86]

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[84] *R. Hojabri, E. Borousan, M. ManafiThe impact of using telemedicine on information management in health care organizations: a case studyAfr. J. Bus. Manag., 6 (4) (2012 Feb 1), pp. 1604-1613*

[85] *S. Scalvini, M. Vitacca, L. Paletta, A. Giordano, B. BalbiTelemedicine: a new frontier of efficient health services at Malondi Arch. Chest Dis., 61 (4) (2004 Dec 30)*

[86] *EF Magann, SS McKelvey, WC Hitt, M. Smith, GA Azam, C.L. Lowery The use of telemedicine in obstetrics: a review of the literatureObstet. Gynecol. Survival., 66 (3) (2011 Mar 1), pp. 170-178*

6. Cost-effective

Compared to conventional health care methods, telemedicine is a less expensive method. Such cost reduction is possible because doctors and patients do not need to travel every time, they need to see a doctor or patient. In addition, video consultation is generally less expensive than public consultation, saving money on travel and hospital setup costs. Also, making online bookings and video conferencing is a health-saving solution. This is especially helpful in areas where patients may find it challenging to get to a hospital for medical attention.

Another function of telemedicine is to expand the scope of the medical field. Studies in this field, science, and growth are now becoming more and more accessible. With the help of video conferencing streamlines, a school for medical and preparation students now makes sense.[87]

Various technologies are used in the field of engineering, health care, and their corresponding area. This helps solve different problems related to the design, production, and construction of a sustainable environment. Telemedicine is often used to connect doctors who work with a patient in one place and experts in another to help them by telephone. This is especially helpful in remote or inaccessible areas where specialists are not readily available. It is used for long-distance travel and time. The advent of the internet has brought significant improvements in the performance of telemedicine. The advent of this sophisticated technology that enables high-quality video streaming has opened the way for long-term health care to be delivered to patients in their homes, offices, or assisted living facilities as an alternative to hiring people within both primary and professional care. Many people claim that telemedicine has been in some way or another since the invention of the telephone. One can send pictures instead of data to the handset. Telemedicine is also an accepted form of healthcare in various countries. It has many unique applications, allowing patients to schedule

[87] *LB Le, H.K. Rahal, MR Viramontes, KG. Men, TS Dong, S. Saab Patient Satisfaction with Health Use using telemedicine on liver transplant recipientsDig. Dis. Sci., 64 (5) (2019 May), pages 1150-1157*

follow-up video editing, improves consistency and guidelines for post-care visits, and reduces stress on patients and physicians.

Modern healthcare applications support telemedicine and bind software-related clinical interactions. The treatment of patients with minor ailments, exchanging information to investigate data, or the discovery of imaging are examples of unthinkable events. Patients can also purchase drugs and receive instructions from a dedicated app. Turn off communication through payment methods. Here the analysis and transfer of information take place in real-time. These telemedicine programs are often integrated; as a result, it allows patients and physicians to easily interact with a single app to chat and share information. Direct patient data can be collected and forwarded to the appropriate physician. This evidence can be a transcript of an appointment or a test report stored in an Electronic Health Record program folder. In addition, it allows physicians to interpret data once it has been collected.

Telemedicine makes extensive use of confidential medical records. It is used to capture, store, and distribute data, which helps process essential processes in the area. Telemedicine is a website that allows one to talk to a doctor remotely. Mobile applications serve as a link between this device and the hospital's internal infrastructure. Dedicated modules can transmit warnings, research notes, and viewing data to aid clinical decisions. The program uses remote control to care for people with severe and persistent conditions. Any patient admitted to the hospital and kept under care during surgery takes a precious bed. Home health Telemedicine collects vital signs, has video conference services, and can be heard by alarms on the nursing station.[88]

3.10 ADVANTAGES AND DISADVANTAGES OF TELEMEDICINE

'Telemedicine' is a new system for providing long-distance health care using telecommunications and modern information technology. However, the concept came in the 20th century by telephone and radio; today's advanced technology, including

[88] *M. Javaid, A. Haleem, R.P Singh, R. Suman Industrial ideas for 3D scanning: features, roles and application analysis Sensors International (2021 Jun 30), Article 100114*

video telephony, the latest telemedical devices, interactive technology, diagnostic methods, customer distribution or server programs, etc., improved the quality of Telemedicine Service[89]. This program has removed grade barriers to bring health care to clinics. Some of the significant benefits and disadvantages of Telemedicine are listed below:

ADVANTAGES

- Many patients feel uncomfortable going to the hospital or doctor's office. This program builds communication between patients and health workers who keep it simple and committed. In addition, the use of Telemedicine medical information and photographs is kept confidential and securely transmitted from one location to another. Therefore, people can trust this program and feel free to seek help from it.
- It saves lives in emergencies, and there is no time to take a patient to the hospital.
- In many rural communities or remote or post-disaster areas, consistent health care is not available. Telemedicine can be used in such places or situations to provide emergency medical care.
- This program is helpful for patients living in inaccessible areas or isolated districts. Patients can get health care in their own homes without a difficult trip to the hospital.
- Modern information technology technologies such as mobile collaboration allow for easy sharing of information and discussion of critical medical cases among health professionals from many areas.
- Telemedicine has made it easier to monitor patients using a computer or tablet or telephone technology that has reduced patient visits. Doctors are now able to prescribe treatment or administer drug administration. In addition, home-based patients may seek medical attention without being rushed to the clinic by ambulance. Therefore, the cost of health care has been reduced.
- The program also facilitates health education, as primary health professionals will monitor the performance of health care professionals in their fields, and specialists can monitor novice activities.

[89] *https://eztalks.com/healthcare/what-are-the-vantages-and-disvantages-of-telemedicine.html*

- Telemedicine eliminates opportunities for the transmission of infectious diseases between patients and health workers.

DISADVANTAGES

- The total cost of the telecommunications system, especially data management tools and the practical training of medical professionals, is enormous.
- Visual therapies reduce the interaction between health care professionals and patients, which increases the risk of error in clinical services if inexperienced specialists provide the service. In addition, confidential medical information may be disclosed through a faulty electronic system.
- Telemedicine may take longer to complicate the visual connection due to low internet speed or server problems. In addition, this program may not provide immediate treatment, such as antibiotics.
- Low-quality health informatics records, such as X-rays or other images, clinical progress reports, etc., pose a risk of incorrect treatment being provided to the patient.
- The Telemedicine system requires strict legal regulations to prevent unauthorized and illegal service providers in the sector.

3.11 CONCLUSION

The purpose of this chapter was to understand the new environment created in the field of health care. This new approach paved the way for technological advancement and made it much easier for people to access it from older health care systems. There is no doubt that telemedicine is effective in some cases.

It does not take much thought to see that telemedicine will soon be just another way to see a health professional. Remote monitoring can perform minute calculations by collecting clinical data from multiple patients simultaneously. However, data may be lost due to software meltdown or hardware meltdown. Therefore, over-reliance on a computer system to prevent errors in health care data can be problematic.

There has to be a wise balance between relying entirely on computer solutions and the use of human ingenuity. Seeking that balance can make a huge difference in saving a person's life. That day is not far off when many health-related interventions will be made "almost" using telemedicine technology, finally ending in a situation where this approach is more preferred than optional. Telemedicine is an exciting technology and continues to hold the promise of real change through the delivery of health care for the benefit of all. As the population grows faster than the corresponding number of appropriate clinics and facilities (institution beds, research laboratories, child care centres), these technologies will need to be fully integrated to ensure all those who need care are provided within the acceptable levels. As more people are cared for without comprehensive resources, care providers will be able to "visit" patients under their care at anytime from anywhere without physical activity. Those in need of ongoing care are cared for with effective interventions, inevitably leading to a situation where only those who need physical contact with their doctors are cared for. This will help to address many of the challenges currently facing the system. The patient's load on the facilities will be reduced, and doctors will need to move slowly and devote more time and effort to these patients who need such attention. Telemedicine will improve both levels of communication and satisfaction. While their costs and benefits associated with legal aspects will continue to be significant, the increased use of technology will bring greater confidence and allow all stakeholders to learn ways and means of using technology, making it easier for low pressures that continue to limit their widespread use.

Changing anything is not easy. Changing the old order and new import is difficult and painful, a process that will meet opposition at various levels, at least initially. However, not keeping things "new" is not the wise course.

Telemedicine is essential and needed to make the "course adjustments" required for the care delivery process. A knowledgeable patient armed with easy access to this latest "buzz" is wise and concerned with the many opinions expressed by the many "experts" who flock to the modern and old news jungle there. In order to guide "properly" and ensure that you can get the proper care, it is necessary to attach the tools at the end correctly. It will help clinicians keep up with the times and make a real difference to their patients and work together to provide the best possible care regularly.

CHAPTER 4

AN INDIAN PERSPECTIVE ON TELEMEDICINE AND LAW

4.1 INTRODUCTION

The development of information technology has had a dramatic impact on society. Telemedicine transfers medical information and expertise via telecommunications and computer technologies to facilitate patients' diagnosis, treatment, and management. Telehealth includes distance learning, medical peer review, patient education initiatives, etc. Telemedicine is an essential tool to combat and improve the delivery of health care services using information and communication technology to exchange valid data for diagnosis, treatment and prevention of disease and injury, research and evaluation, and further education of health care providers.[90] Telemedicine attempts to address the requirements of today's health consumers and has the ability to completely change the way healthcare is delivered. Telemedicine supports efforts to significantly improve health care quality by increasing accessibility and efficiency by reducing travel needs, providing clinical support, overcoming local barriers, providing a variety of communication devices, and improving patient outcomes. Therefore, given the current focus on cost-cutting efforts, enhancing the delivery of care to all segments of the population, and meeting consumer demand, telemedicine is an attractive tool that can be used.[91] Telemedicine connects easy access, low cost, and convenient access to health-related information and communication using the internet and related technologies. From the use of telephone ideas, telemedicine has become increasingly sophisticated with each technological advancement, and it now includes telecommunications and computers to provide information on health services and services to customers in many areas. The use of this tool covers a wide range of scenarios, including online information resources and quality assurance tools, critical methods and patient outcomes, computer-assisted diagnostics, adequate drug

[90] *Home-ATA Main, available at: http: // americantelemed.org (last visited October 5,2021)*
[91] *Hebda TL, Czar P. Handbook of Informatics for Nurses & Healthcare Professionals. 4th day. Upper Saddle River, NJ: Pearson Prentice Hall; 2009.*

information, and electronic dosage, and availability of improved research data. Physicians can treat more patients than traditional care models with that information for health workers and consumers alike. With increased access and a more integrated care level, physicians and patients can work together to achieve their therapeutic goals, especially in home and hospital care.[92] Telemedicine has become a significant source of two-way communication between a health worker and a patient. Telecommunications consultation is not a new technology; however, the field has developed more and more and has become more popular with patients and hospital administrators due to the ongoing COVID 19 disease, a rapidly spreading disease that has proven compelling health global health effects.[93] It is a great way to provide equitable services to everyone while ensuring safety during epidemics.

The internet, cell phones, and e-mail are new areas, and if health care providers want to enter this domain, they should do so with caution. Telemedicine has medicolegal implications relating to registration, licensing, insurance, quality, privacy and confidentiality issues, and other risks associated with electronic health care communication and online health care contact. Another important aspect is the physician-patient relationship, the standard of care, and informed consent. The absence of statutes or laws further complicates these intricate issues, especially related to professional negligence, duties, liabilities, and penalties in such situations. Further problems in telemedicine, telehealth, teleconsultation, telemonitoring, tele treatment, and patient information records must also be addressed. However, effective implementation of telemedicine services requires detailed policy clarification and regulatory articulations.

[92] *Andrews V. Uses telemedicine to make medical decisions. Practice Nursing. 2014; 25 (1): 42-46. doi: 10.12968 / pnur.2014.25.1.42*
[93] *Tripathi S, Gogia A, Kakar A. COVID-19 in pregnancy: A review. J Family Med Prim Care 2020;9 4536-4540*

4.2 REGULATORY FRAMEWORK GOVERNING TELEMEDICINE IN INDIA

In India, the telemedicine service falls under the authority of the Department of Health and Family Welfare and the Department of Information Technology. Telemedicine has also been expanded with traditional medicine in India, such as the National Rural A.Y.U.S.H. Telemedicine Network, which aims to promote the benefits of conventional methods of healing the whole community through telecommunications.[94]

Telemedicine is governed by a number of legislations, namely:

- NATIONAL MEDICAL COMMISSION ACT, 2019 (NMC ACT)

The N.M.C. Act was introduced by the Department of Health and Family Welfare ("Department of Health") in September 2020 as the principal law governing medical education and practise in India. The N.M.C. Act provides that only those people who have a recognized medical degree and are registered with a state medical council have the right to practice medicine in India. The N.M.C. Act replaces the Indian Medical Council Act, 1956 ("I.M.C. Act"), which regulated the medical profession before September 2020. The N.M.C. Act contains provisions that change the rules and regulations published under the I.M.C. Act continues to apply until defined new standards or requirements under the N.M.C. Act.[95] Rules and regulations are deemed to have been issued under the relevant provisions of the N.M.C. Act itself.[96] The Indian Medical Council (Professional Conduct, Etiquette and Ethics) Regulations, 2002 ("MCI Code"), which sets out the ethical standards that physicians must follow in their dealings with patients, pharmaceutical companies, and the profession, is one of the standards set out in the I.M.C. Act. The MCI code continues to apply and will be deemed to have been issued under the N.M.C. Act unless a separate medical code of conduct is issued under the N.M.C. Act.

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[94] *AYUSH. AYUSH Telemedicine [Internet] report. Ayush.gov. to. 2018. [quoted 2019 Jan 01].*
[95] *Section 61 (2) of the NMC Act.*
[96] *Reference in section 61 (2) of the NMC Act.*

- TELEMEDICINE PRACTICE GUIDELINES ("T.P.G.") ISSUED UNDER THE MCI CODE

A judgment[97] of the Bombay High Court in 2018 sent doctors offering teleconsultation into a panic. In that case, anticipatory bail was denied to two gynaecologists on the basis that they were criminally negligent towards their patient, who died while in their care. The deceased patient had presented herself with a fever and acute vomiting, according to the facts of the case. The hospital personnel admitted her to the accused doctors' nursing home without an examination since the doctors were out of town. One of the doctors began treating the patient over the phone, instructing the on-call nurse. Regrettably, the patient passed away. The patient died as a result of, among other things, being administered therapy over the phone without an acceptable diagnosis, and the Court ruled this conduct to be criminal negligence. The doctors' application for bail in anticipation of arrest was denied. The doctors, on the other hand, were successful in their appeal and were not arrested.

Some doctors saw this decision as making the practise of telemedicine and teleconsultation illegal. However, such an interpretation is erroneous and without foundation. The Court was only concerned in the doctor's failure to diagnose the patient. The fact that the doctor communicated the medications for the patient's treatment over the phone has no bearing on the outcome of the case. It isn't the basis for the decision. In other words, the Court would have reached the same finding if the doctor had given the identical medications to the nurse orally while physically present but without examining the patient, and the patient had died. As a result, the ruling should not be interpreted to mean that telemedicine and teleconsultation are illegal in and of themselves.

Because there was no law in India to regulate telemedicine consultations, medical authorities frequently requested that the Medical Council of India and the government to issue clear standards for telemedicine administration. There is no specific law in India that prohibits or regulates telemedicine. However, the most significant benefit of

[97] *Deepa Sanjeev Pawaskar and Sanjeev Anant Pawaskar v The State of Maharashtra, Criminal Anticipatory Bail Application No. 513 of 2018*

the publication of Practice Guidelines is that it dispels scepticism about telemedicine as being illegal or contrary to public policy.

On March 25, 2020, The Board of Governors established by the Central Government to regulate medical education and medical practice in India has issued the Telemedicine Practice Guidelines in collaboration with N.I.T.I. Aayog. These Guidelines are appended to the Indian Medical Council (Professional Conduct, Etiquette and Ethics) Regulation, 2002[98]. These Ethical Regulations are delegated legislation under the Medical Council of India Act and are binding in nature. When made part of them, they get the character of law. More than anything else, due to the absence of any other authoritative professional document in India, these Guidelines would get the normative character by default.

Telemedicine is defined under the Telemedicine Guidelines[99] as:

"*The delivery of health care services, where distance is a critical factor, by all health care professionals using information and communication technologies for the exchange of valid information for diagnosis, treatment and prevention of disease and injuries, research and evaluation, and for the continuing education of health care providers, all in the interests of advancing the health of individuals and their communities*"

The relevant part of the Guideline that permits RMPs' to offer consultation through telemedicine is as follows[100]:

3.8.1. Consultation through Telemedicine by the Registered Medical Practitioner under the Indian Medical Council Act, 1956 shall be permissible in accordance with the Telemedicine Practice Guidelines contained in Appendix 5 (of Code of Conduct).

A Registered Medical Practitioner (RMP) under Indian Medical Council Act, 1956 is a person who is enrolled in the State Medical Register or the Indian Medical Register under the Indian Medical Council Act, 1956 (or National Medical Commission Act, 2019 as and when it comes into full force and replaces the Indian Medical Council Act,

[98] *Appendix 5 of the Indian Medical Council (Professional Conduct, Etiquette and Ethics) Regulation, 2002*
[99] *Guideline 1.1.1 of the Telemedicine Practice Guidelines, 2020*
[100] *Guideline 3.8.1 of the Telemedicine Practice Guidelines, 2020*

1956)[101]. Before beginning his or her medical practice, every practicing doctor in India is required by law to register with the State Medical Register or the Indian Medical Register. As a result, the amendment makes no changes to the registration requirements for doctors who want to practice telemedicine and give teleconsultation to their patients.

A Registered Medical Practitioner (RMP) is entitled to provide telemedicine consultation to patients from any part of India[102]. Within the inherent constraints of telemedicine, RMPs employing it must adhere to the same professional and ethical norms and standards that apply to traditional in-person care[103].

To enable all those RMPs who would want to practice telemedicine get familiar with these Guidelines as well as with the process and limitations of telemedicine practice[104]:

- The Board of Governors, in supersession of the Medical Council of India, shall establish and make available an online programme.
- Within three years after notification, all registered medical practitioners who wish to give online consultation must take an obligatory online course.
- During this period, the concepts outlined in these guidelines must be observed.
- Following that, completing and passing a stipulated course will be required before practising telemedicine.

Following are the nine cardinal principles on which the Practice Guidelines are built:

There is no difference in the standard of care between telemedicine and in-person care[105] . Telemedicine is only an interphase or medium used by the Registered Medical Practitioner (RMP) in delivering medical care to the patient. Patient safety being the central part of health care, there should be no difference between the channel of telemedicine and in-person care provisioning.

Use of discretion before adopting Telemedicine[106] - Guidelines state that the RMP is well-positioned to decide whether technology-based consultation is sufficient or an in-person review is needed. The practitioner shall exercise proper discretion and not

[101] *Guideline 1.1.3 of the Telemedicine Practice Guidelines, 2020*
[102] *Guideline 1.3.1 of the Telemedicine Practice Guidelines, 2020*
[103] *Guideline 1.3.2 of the Telemedicine Practice Guidelines, 2020*
[104] *Guideline 1.3.3 of the Telemedicine Practice Guidelines, 2020*
[105] *Guideline 3.1.2 of the Telemedicine Practice Guidelines, 2020*
[106] *Guideline 3.1.1 of the Telemedicine Practice Guidelines, 2020*

compromise on the quality of care. As referred above, a school of expertise claims that the first visit (or examination) of the patient shall be in-person; subsequent follow-up can happen over telemedicine. This would comply with the so-called legal and ethical mandate that the doctor shall physically examine the patient before treating them. However, instead of answering the question either in positive or negative, the present Guidelines remain silent. But they clearly place the burden upon the medical practitioner to take a call before proceeding under the telemedicine channel. For instance, a doctor feels it is essential to examine the patient physically; he shall do so without adopting technological avenues. If the use of technology for some reason is not working out (like the image is not clear), the doctor shall insist on an in-person examination of the patient. Guidelines also demand that the patient must be advised for an in-person interaction with an RMP at the earliest in case of emergency.

Use of best possible technology[107] - Guidelines encourage almost all modes of communication for telemedicine. However, each technological medium might have its own limitation considering the context of patient treatment. Therefore, the RMP is advised to use the best possible technology for giving tele medical care. Guidelines state that "considering the situation, using his/her best judgment, an RMP may decide the best technology to use to diagnose and treat."

No anonymous consultation[108] - The Guidelines mandate that both patient and the RMP need to know each other's identity. To identify the patient by name, age, address, e-mail I.D., phone number, registered I.D., or any other identification deemed appropriate. On the other hand, the RMP should begin the consultation by informing the patient about their name and qualifications. This is to address the issue of quacks practicing and prescribing drugs. In addition, the RMP shall display his professional registration number accorded to him by his Professional Regulatory Body on prescriptions and other e-communications.

Situation of inherent limitation for Telemedicine - Although telemedicine helps to heal from a distance, it has its intrinsic limitation at times. If the physical examination is critical, the RMP may - (i) insist on in-person consultation; or (ii) recommend video

[107] *Guideline 3.3 of the Telemedicine Practice Guidelines, 2020*
[108] *Guideline 3.2.1 of the Telemedicine Practice Guidelines, 2020*

consultation or examination by another RMP/health worker. Depending upon expertise and experience between RMPs, the communication in the latter scenario poses a challenge. Therefore, developing standard protocol and uniform standardized language becomes key, which the professional community shall develop.

Prescription of medicine[109] - The RMP may prescribe medications via telemedicine only when they are satisfied that adequate and relevant information about the patient's medical condition; and prescribed drugs are in the patient's best interest. It has been specifically made clear that 'prescribing medicines without an appropriate diagnosis/provisional diagnosis will result in professional misconduct. The drugs that can be prescribed via telemedicine are classified into the following four categories.

1. List O - Generally, those common medicines sold 'over the counter' and safe to be prescribed through any mode of teleconsultation and do not require an actual prescription to dispense the drug. These would include those medicines which become necessary to be used during public health emergencies.

2. List A - These medicines can be prescribed during the first consultation through video mode or be re-filled in case of follow-up consultations. These would include drugs that are relatively safe medicines with low potential for abuse.

3. List B - These are medicines that RMP can prescribe to a patient who is undergoing follow-up consultation in addition to those which have been prescribed during an in-person consult for the same medical condition.

4. Prohibited List - The medicines with a high potential for abuse could harm the patient or society if misused. Therefore, via telemedicine, the RMP is prohibited from prescribing such medication. These are medicines listed in Schedule X of Drug and Cosmetic Act, 1940 and Rules, 1945, or any Narcotic and Psychotropic substance listed in the Narcotic Drugs and Psychotropic Substances Act, 1985.

Ethics, data privacy and confidentiality[110] - All principles of medical ethics are equally applicable to the telemedicine scenario, as patient autonomy and safety are pivotal

[109] *Guideline 3.7.4 of the Telemedicine Practice Guidelines, 2020*
[110] *Guideline 3.8.1 of the Telemedicine Practice Guidelines, 2020*

interests to be protected. Special mention regarding patient privacy and confidentiality is made in the guidelines. As there is a propensity for data compromise in this digital world, the RMPs should ensure a reasonable degree of care is undertaken while hiring such services. RMP is absolved from liability if confidentiality is breached by a technology breach or another person other than the RMP. In this regard, the telemedicine practice guideline has been very liberal and facilitated the adoption of telemedicine by healthcare professionals.

Fee consideration for telemedicine services [111]- Telemedicine consultations are equated to in-person consultations as fee consideration is taken into account. For the telemedicine services provided, the RMP may charge an appropriate fee. RMP should provide a fee receipt/invoice for the fees charged.

Explicit patient consent[112] - Except for the medium of consultation, there is no difference between in-person and telemedicine consultations. Apart from these specific Practice Guidelines, all other regulatory aspects would apply to telemedicine. Hence, consent before providing telemedicine care is absolutely imperative. It can be implied or explicit (express). Naturally, if the patient initiates the telemedicine consultation, then consent is implied. If the initiation is on behalf of the RMP or caregiver, then express consent is required. The express consent here might be recorded in any form for subsequent verification or retrieval. It was deemed unethical if the doctor approaches the patient to provide healthcare services, which amounts to a solicitation. However, in the case of telemedicine, considering exceptional circumstances, the guidelines contemplate initiation of consultation on behalf of RMP by a health-care worker or another RMP. Or the Guidelines mandate express consent to be recorded during the continuation of telemedicine episodes, where the RMP, as per the schedule, initiates the process.

- DRUGS AND COSMETICS ACT,1940("D&C") ACT and DRUGS AND COSMETIC RULES,1945 ("D&C) RULES

D&C Act and D&C Rules regulate India's manufacture, sale, importation, and distribution of drugs. In many international conclusions, there is a clear distinction

[111] *Guideline 3.8.3 of the Telemedicine Practice Guidelines, 2020*
[112] *Guideline 3.4.2 of the Telemedicine Practice Guidelines, 2020*

between a drug that must be sold under the supervision of a registered pharmacist in producing a legal document (signed by a registered doctor) and those that can be sold by over-the-counter retailers (over-the-counter ("O.T.C."). O.T.C. drugs have a different meaning in the context of Indian law. D&C law requires that all drugs be sold under license. D&C rules clearly state which drugs can only be sold in the production of a prescription by a registered physician, meaning that there is a difference between prescription and over-the-counter medications. Drugs that can only be sold on prescription drugs are listed in Schedules H, H1, and X of the D&C Rules. The D&C Act states that no person may sell any drug without a license issued by the licensing authority. I.e., those under schedule K of the D&C Rules, to be sold by persons without such a license. Therefore, O.T.C. drugs in the Indian context will only refer to those drugs described under schedule K. These include broadly non-pharmaceutical drugs, quinine, and other antimicrobials, magnesium sulphate, substances intended for the use of pesticides or insecticides that cause disease to humans or animals, and home remedies, among other things. D&C regulations also state that prescription drugs can only be discontinued in the production of prescription-compliant prescriptions. A prescription must be written, signed, and dated by the doctor who issued it in order to be considered valid under the D&C Rules.[113] The doctor's note must also state the name and address of the person being offered their treatment and the amount to be given.[114]

- THE PHARMACY ACT, 1948

The Pharmacy Act of 1948 was enacted to regulate the pharmacy profession and practice. People's health was being jeopardized by the health system's incorrect compounding, mixing, and dispensing. It was determined that enacting a legislation to regulate the profession and practice of pharmacy was necessary. The Pharmacy Act of 1948 was created to attain this purpose. The Pharmacy Council of India (PCI) was established under the Act to govern the practice of pharmacy[115]. The Pharmacy Council of India makes the Pharmacy Practice Regulations in exercise of the powers provided by Sections 10 to 18 of the Pharmacy Act, 1948.

The Drugs Consultative Committee, an expert committee, published a report in 2015 that looked into the challenges in the industry. The committee presented its

[113] *Rule 65 (10) (a) of the D&C Rules*
[114] *Rule 65 (10) (b), (c) of the D&C Rules*
[115] *Section 3 of the Pharmacy Act, 1948*

recommendations to India's top drug regulator, the Drugs Controller General of India ("DCGI"), who referred them to the Ministry of Health and Family Welfare ("Health Ministry").[116]

Following that, in August 2018, the Health Ministry published for public consultation the draft rules proposing to regulate e-pharmacies under the D&C Act ("E-Pharmacy Rules")[117]. The E-Pharmacy Rules aim to provide a controlled environment for e-pharmacies in India, and in addition to streamlined registration procedures, they address a wide range of issues such as patient privacy and disclosure, data localization, and so on. However, the Draft E-Pharmacy Rules only consider organisations who sell pharmaceuticals online directly, not the marketplace model that some e-pharmacies now use in India.

- THE INFORMATION TECHNOLOGY ACT, 2000 ("IT ACT"), THE INFORMATION TECHNOLOGY (REASONABLE SECURITY PRACTICES AND PROCEDURES AND SENSITIVE PERSONAL DATA OR INFORMATION) RULES, 2011 ("DATA PROTECTION RULES") AND THE INFORMATION TECHNOLOGY (INTERMEDIARIES GUIDELINES) RULES, 2011 ("INTERMEDIARY GUIDELINES")

The current legal framework governing e-health protection in India is governed by the provisions of the Information Technology Act, 2000, read with the Information Technology (Reasonable Security Practices and Procedures and Sensitive Personal Data or Information) Rules, 2011, which provide some protection for the collection, disclosure, and transfer of sensitive personal data, including medical records and histories. The fundamental requirement of the Information Technology Act and the Information Technology (Reasonable Security Practices and Procedures and Sensitive Personal Data or Information) Rules, 2011, which govern data protection in India, is for body corporates to have appropriate security measures in place.[118]. If a body

[116] *Report of the 48th Meeting of the Drugs Consultative Committee held on 24th July, 2015. New Delhi. available at https://cdsco.gov.in/opencms/opencms/system/modules/CDSCO.WEB/elements/common_download.jsp?num_id_pk=ODEw (last visited October 5, 2021)*
[117] *Notification G.S.R. 817 (E) dated 28th August, 2018*
[118] *Section 43A of the Information Technology Act, 2000 ("IT Act")*

corporate fails to protect data due to a lack of such safeguards, the individual impacted will be entitled to compensation. This is hardly adequate as a data protection 'law.'

Telemedicine involves the regular exchange of information between a patient and a service provider. Patient personal information, such as medical history and physical condition, is considered Sensitive Personal Data or Information[119]("S.P.D.I.") under the Data Protection Regulations. When the body organization [120] collects, stores, transmit, or analyzes such data, certain requirements under the Data Protection Act are omitted. Data Protection Regulations also require that corporate bodies put in place adequate security measures to ensure that data is stored securely. I.T. legislation is expected to be replaced by the Personal Data Protection Bill, 2019 ("PDP Bill") as India's leading data protection and privacy framework. The PDP Bill also considers approval as the basis for data processing. However, the PDP Bill is much broader in its approach to data protection compared to the I.T. Act.

- DIGITAL INFORMATION SECURITY IN HEALTHCARE, ACT (DISHA) & THE PERSONAL DATA PROTECTION BILL, 2019 (PDP BILL)

Following the Apex Court's historic ruling in Justice K.S Puttaswamy (Retd.) v. Union of India[121], in which the right to privacy was declared a fundamental right, efforts were undertaken in India to draft a data protection legislation. PDP Bill, 2019 was introduced in Parliament as a result of this process, and is currently being discussed and deliberated by a Joint Parliamentary Committee in conjunction with experts and stakeholders in the field.

The Ministry of Family and Health Welfare, on the other hand, drafted DISHA particularly for the security of Digital Health Data (DHD). The user has the power to manage the flow of his or her data at every level of data collection, processing, storage, transfer, and so on under DISHA. Furthermore, the user has the ability to refuse consent for data collection at any time. For every use of data in an identifiable form, all of these

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[119] Rule 3 of the Data Protection Act defines sensitive personal or personal information to mean that information which contains information relating to (i) the password; (ii) financial information such as a Bank Account or credit card or credit card or other details of a payment instrument; (iii) physical, physical and mental health; (iv) sexual orientation; (v) medical records and history; (vi) Biometric data.

[120] Section 43A of the IT Act defines "body company" means any company and includes a firm, joint ownership or other association of persons involved in commercial or professional activities

[121] Justice K.S Puttaswamy (Retd.) v. Union of India, AIR 2017 SC 4161

actions must be completed after receiving express and prior permission from the user. The distinction between the two pieces of legislation is that the PDP Bill, 2019, requires consent for the processing of digital data, and as health data is considered sensitive personal data, consent is required.[122], the requirement is explicit consent, at only one stage which is before using such data by any entity[123]. Whereas, if we observe DISHA, then M-Health service providers like applications or wearable devices which collect DHD of its customer fall under the ambit of 'other entity' (since they aren't clinical establishment or health information exchange)[124]. As a result, they will be governed by DISHA and will be required to acquire consent at each level of data gathering. So, in the case of any app or wearable device that collects DHD and is governed by the PDP Bill, 2019, consent is only required once, before the data is processed by the collecting organisation. If DISHA is to be implemented, consent must be obtained at every stage of data collecting, from processing to transmission and storage. As a result, if DISHA is used in this situation, it will extend the procedure while also limiting the usage of such data due to DISHA's high compliance standards.

DISHA has limited the use of DHD by 'other entity' to only limited purposes and completely prohibited the commercialization of DHD.[125] Further it has been prohibited[126] the use and access of DHD in 'anonymized'[127] form for any commercial purpose. The use of DHD in the anonymized form helps in creating data points, which helps in curating to the user's need and developing the product in tune with the current trends in the market.

In the PDP Bill, 2019, health data, as sensitive personal data, requires the individual's express agreement to be processed, but in DISHA, any use of DHD for commercial reasons is prohibited. The issue is one of application, or which legislation will apply in this situation, as both the PDP Bill[128] and DISHA[129] have overriding clauses.

[122] *Section 3(36), PDP Bill 2019*
[123] *Section 11, PDP Bill 2019*
[124] *Section 29(2), DISHA*
[125] *Section 29(5), DISHA*
[126] *Section 29(5), DISHA*
[127] *Section 3(1)(a), DISHA*
[128] *Section 96, PDP Bill 2019*
[129] *Section 96, PDP Bill 2019*

As a result, if there are any conflicting provisions of another legislation, the conflicting provision will not apply. In such a circumstance, support can be found in *General Manager, Telecom v. M. Krishnan*[130], where it was held that when two sets of laws conflict, the special law, which in this case is DISHA, shall take precedence over the general law, which in this case is PDP Bill 2019.

Both of these bills will alter India's data protection (personal or health data) landscape, bringing it closer to international standards. While current law in terms of health or personal data protection is more generic in nature, the proposals impose extra responsibilities on data collectors, with harsh fines and penalties for non-compliance, which will need to be properly reviewed if these bills become law.

- GOVERNMENT POLICIES REGULATING HEALTH DATA

The National Health Authority (NHA) is the government of India's apex agency in charge of designing, implementing, and managing Ayushman Bharat and the National Digital Health Mission (NDHM) across the country. The Indian government is actively working to develop a national health system, with the eventual goal of having all Indians' medical records computerised. The process began with the release of the National Health Policy, 2017 which identified universal access to health care and the establishment of the National Digital Health Program ("N.D.H.E.") as its single objective. Subsequently, N.I.T.I. Aayog (think tank of the Government of India) and the Department of Health have issued various policies for the development of N.D.H.E. These policies include the National Department of Health and the National Digital Health Report which sets out the basic infrastructure and the N.D.H.E. framework.

On August 15, 2020, the Government of India announced the launch of the National Digital Health Mission ("N.D.H.M.") - a major digital health program aimed at providing a Health ID for everyone in the country.[131] The Health Data Management Policy and the Data Privacy Policy are the policies adopted under NDHM, and they are as follows:

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[130] *Civil Appeal No. 7687 of 2004*

[131] *Hindustan Times, What is the National Digital Health Mission, available at https://www.hindustantimes.com/india-news/explained-what-is-national-digital-health-mission-and-how-itwill-benefit-people/ Story qOKlv3rbkrvB0aR9ZQyvdK .html (last accessed September 20, 2020).*

Health Data Management Policy

The Policy is the first step in incorporating security and privacy by design concepts into the proposed digital health system, as well as establishing minimum data protection standards. The necessity for interoperability of health data collected in order to maximise the efficiency with which the data is used, as well as the privacy of personal health information, is one of the key concerns that this Policy has endeavoured to address. This will aid in establishing a trust quotient across the envisioned NDHE and, as a result, integrating every Indian citizen's personal health record and associated data.[132]

This policy has been deemed a revolution in the government's Digital India vision, and it has the potential to revolutionise personalised healthcare. With the Telemedicine Guidelines, 2020 in place, a policy dealing with the digitalization of health records could revolutionise the healthcare industry's practises. Instead of a centralised system, proper data control division across three levels (Centre, State, and Health Facilities) will facilitate technological independence and flexibility in data processing and handling.

Data Privacy Policy

The NDHM Privacy Policy defines how the NDHM and its ecosystem partners acquire, process, and use personal data of individuals in accordance with the requirements set forth in Clause 26.3 of the NDHM Health Data Management Policy. The NDHM Privacy Policy establishes a minimal standard of data protection and information security standards and serves as a guide for the NDHM and its ecosystem partners when collecting, using, and processing personal data.[133]

[132] *Section 3 Health Data Management Policy*
[133] *Section 2 Data Privacy Policy*

- OTHER SERVICE PROVIDERS REGULATIONS UNDER THE NEW TELECOM POLICY 1999 ("OSP REGULATIONS")

Service providers who provide Application Services - including telemedicine services - using telecom services provided by telecom service providers, are required to register as 'Other Service Provider' ("O.S.P.") with the Department of General Communications, O.S.P. registration requires the registration holder to comply with certain conditions as part of the license.

- TELECOM COMMERCIAL COMMUNICATION CUSTOMER PREFERENCE REGULATIONS,2018("T.C.C.P. Regulations")

Telemedicine platforms may be required to send SMS to patients and users on the platform. Sending unsolicited commercial communications via voice or SMS is not permitted under T.C.C.P. Regulations.[134] Promotional messages can only be sent to subscribers who choose to receive this contact once they have registered with an access provider[135]. However, there is no official bar for sending transaction messages or voice calls. One transaction message generated by a transaction made by the recipient of the message if the recipient is the sender's client and the message is sent within 30 minutes of the transaction generated and directly related to it[136]. For example, any information sent by OTP or the purchase of goods and services will be identified as a transaction message. All other messages (even if they are directly linked to the delivery of goods) can only be sent in a format registered with the access provider after receiving the recipient's permission.

- CONSUMER PROTECTION ACT, 2019 (CPA)

The CPA was enacted with the goal of allowing customers to resolve their complaints without having to go to civil court, which can be a costly and time-consuming process. The CPA allows consumers to seek reimbursement from service providers in the event that the service supplied is deficient. Consumers can file claims for defective items and

[134] *Schedule IV, Telecom Commercial Communication Customer Preference Regulations,2018*
[135] *Regulation 1.3, Telecom Commercial Communication Customer Preference Regulations,2018*
[136] *Regulation 3.3.15, Telecom Commercial Communication Customer Preference Regulations,2018*

unfair trade practices in addition to service deficiencies. To hear such complaints, consumer forums have been established at the district, state, and national levels.

Earlier, there was some ambiguity with regard to whether medical services provided by doctors, hospitals or other institutions were covered under the ambit of the CPA. In the case of *Indian Medical Association v. V. P. Shantha and Ors* [137], the Supreme Court resolved the situation, ruling that medical services are covered by the CPA if the patient is charged for the service. The payment for the services is one of the most important aspects of a claim, as the CPA eliminates services that are provided for free. However, in the *V. P Shantha case*, a major exemption was noted in situations when the service supplied is usually chargeable but is waived under specific circumstances, such as for people who cannot pay it. The person who received the services for free would still be eligible to file a claim under the CPA in such instances.

Medical services shall fall under the ambit of 'services' mentioned in Section 2(42) of the new Act.[138] The phrase "*includes, but not limited to*" appears in Section 2(42) of the CPA 2019, and it is an inclusive clause. It expressly states that under section 2(42) of the CPA 2019, the term "*healthcare*" can still be included and interpreted accordingly.

Hence, under Section 2(11) of the new Consumer Protection Act, 2019, any matter involving medical negligence on the part of the service provider would be considered a deficiency.[139] Any person who has been aggrieved by medical malpractice can sue a doctor or a hospital for damages. The time period for filing a complaint for medical negligence is 2 years from the date of damage, according to Section 69(1) of the Consumer Protection Act, 2019. [140] For claims raised with consumer forums, there is no limit to the amount of compensation that can be sought. While the quantum of compensation granted varies, the average compensation is between INR 2 Lakh to INR 6 Lakh. There have also been instances where compensations of up to INR 11 crore (*Balram Prasad v. Kunal Saha*)[141] have been granted in medical negligence cases.

[137] *Indian Medical Association v. V. P. Shantha and Ors, (1995) 6 SCC 651*
[138] *Section 2(42) of the Consumer protection Act, 2019*
[139] *Section 2(11) of the Consumer protection Act, 2019*
[140] *Section 69(1) of the Consumer Protection Act, 2019*
[141] *Balram Prasad v. Kunal Saha, (2014) 1 SCC 384*

- DISCIPLINARY ACTION BY THE MCI

A consumer has the right to file a complaint against a doctor for professional misconduct with the relevant state medical council. If a complaint against a doctor is not resolved by the state medical council within six months of receipt, the MCI may, on its own or at the request of the consumer, press the relevant state medical council to resolve the complaint or refer the complaint to the MCI's Ethical Committee for prompt resolution.[142]. Consumers who are dissatisfied with the state medical council's decision have the opportunity to appeal to the MCI within 60 days of the date of the state medical council's order.[143]. Instances of professional misconduct are specified in the MCI Code, such as non-maintenance of medical records[144], refusing treatment on religious grounds, performing operations without written consent[145], etc. These are not exhaustive and complaints can be made for acts or omissions that are not covered under the MCI Code as well. If a complaint is proven to be true, the doctor's medical license may be suspended or revoked.

4.3 TELEMEDICINE DURING COVID- 19

Coronaviruses can cause illness in humans or animals. Several coronaviruses are known to cause respiratory infections ranging from the common cold to severe diseases in humans. Newly discovered coronavirus causes Coronavirus-19 infection (COVID-19). The disease originated in Wuhan, China, and has spread to other parts of the world. The first symptoms of COVID-19 include fever, dry cough, and difficulty breathing. Older people and those with fundamental health problems such as high blood pressure, heart problems, and diabetes are at higher risk of getting the disease in its way. This global event has been declared a pandemic by the World Health Organization (WHO). An important factor in reducing the transmission of the virus is the "social gap" or social distance that results in decreased personal contact.

[142] *Regulation 8.7 of the MCI Code*
[143] *Regulation 8.8 of the MCI Code*
[144] *Regulation 7.2 of the MCI Code*
[145] *Regulation 7.16 of the MCI Code*

Tourism restrictions have been imposed and enforced worldwide to reduce and curb migration, and many cities are isolated. However, people infected with COVID-19, especially those at high risk of contracting the disease (e.g., older people and those with infectious diseases), should receive daily care without the risk of exposure to other patients in the hospital. In addition, staff such as psychiatrists strictly refused to enter the COVID-19 patient ward under strict infection control. Natural disasters and epidemics present many challenges in providing health care. Because of this, unique and innovative solutions are needed to address the critical needs of patients with COVID-19 and other people in need of health care. In this regard, technological advances offer new options.

Telemedicine is often described as a combination of both technologies and devices that can access remote information about patients' health status, thus helping to determine the need or urgency of intervention. It can, therefore, represent a diagnostic tool, which has shown significant value in recent literature, primarily due to the high distribution and development of digital technologies (e.g., smartphones and digital connections).

Appropriate tools allow doctors to reach out and periodically monitor people who have difficulty attending specialist visits, especially patients with chronic illnesses who need ongoing follow-up. And with this, in the event of a personal appointment, treatment can be tested periodically by sending the recorded data using a digital tool to a specialist.

The current catastrophic times of the coronavirus epidemic have created a global crisis, which has paved the way for the use of health technology or telemedicine. Telemedicine is an ongoing approach to treating the spread of COVID-19, especially by caring for the needs of isolated and symptomatic patients. It also aims to ensure the prevention of the virus reaches more and more active people daily. Leading health care providers can classify patients into "risk and risk factors" and effectively reduce the risk of transmission of the virus, especially to chronic patients.

Although the final solution for COVID-19 has many features, one of the most effective ways is to use existing technologies to simplify service delivery while minimizing the

risk of direct personal exposure.[146] The use of telemedicine during epidemic diseases (COVID-19 epidemic) can improve epidemiological research, disease control, and clinical trial management. The use of telehealth technology is a 21st-century approach to patient care and protection for patients, physicians, and others. Telehealth is the delivery of health care services by health workers, where distance is a priority, through the use of information and communication technology (I.C.T.) to exchange valid and accurate information[147]. Telehealth Services uses real-time or in-store and forwarding methods. With the rapid emergence and reduction of portable electronic devices, many families have at least one digital device, such as smartphones and webcams, that provide communication between a patient-provider and health care provider.[148]

Video conferences and similar television programs provide health care programs to hospitalized or isolated individuals to reduce the risk of exposure to others and employees. Separated physicians can use these services to care for their patients remotely. In addition, covering multiple sites by a telephone doctor can address some of the challenges for employees.

There are various benefits to using telehealth technology, especially in non-emergency / routine care and in situations where services do not require direct contact with patient providers, such as providing psychiatric services.[149] Remote care reduces the use of resources in health facilities, improves access to care, and minimizes the risk of direct transmission of an infectious agent from person to person. In addition to helping keep people safe, including the general public, patients, and health workers, another significant benefit is to provide more access to caregivers. Therefore, this technology is an attractive, efficient, and inexpensive method[150]. Patients are eager to use telehealth, but barriers still exist. Obstacles to making these plans depend heavily on

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[146]Zhou X, Snoswell CL, Harding LE, Bambling M, Edirippulige S, Bai X, et al. The role of Telehealth in reducing mental health burden from COVID-19. The health of E. 2020. 10.1089 / tmj.2020.0068. [Published]

[147] Organization WHO. Telemedicine: opportunities and developments in member states. Report on the second global survey in eHealth: World health Organization; 2010.

[148] Jahanshir A, Karimialavijeh E, Sheikh H, Vahedi M, Momeni M. Smartphones and medical applications in the daily emergency department. Emergencies. 2017; 5 (1). PMID: 28286821. [PMC free article] [PubMed]

[149]Fortney JC, Pyne JM, Edlund MJ, William DK, Robinson DE, Mittal D, et al. A randomized trial of television-based collaborative care for depression. J Gen Inside Med. 2007; 22 (8): 1086-1093.

[150] Sauers-Ford HS, MY Hamline, Gosdin MM, Kair LR, Weinberg GM, Marcin JP, et al. Acceptability, usability, and efficiency: a qualitative study examining a children's telemedicine system. Acad Emerg Med 2019; 26 (9): 1022–1033. https://doi.org/10.1111/acem.13763

authorization, payment plans, and insurance. In addition, some physicians are concerned about technical and clinical quality, safety, privacy, and accountability.

During the ongoing crisis of COVID-19, various institutions in India, such as hospitals, e-pharmacies, governments, etc., adopted and implemented telemedicine and teleconsultations on WHO recommendations. These were done through guidelines issued by the Ministry of Health and Family Welfare, N.I.T.I. Aayog and the Board of Governors of the Medical Council of India (MCI).

e-Sanjeevani

The Ministry of Health and Family Welfare has implemented e-Sanjeevani, a doctor-to-patient telemedicine system, across the country as part of the Government of India's Ayushman Bharat Scheme. It is a web-based comprehensive telemedicine solution. Anyone can obtain medical advice and medication via audio and video through e-Sanjeevani OPD. During times of Covid-19 pandemic, the scheme is especially important because it allows individuals to avoid travelling out to see a doctor or visit a hospital. Anyone can obtain medical advice and medication via audio and video through e-Sanjeevani OPD. People living in the most remote places will now be able to receive health-related consultations due to the implementation of this service.

Apart from improving the quality of medical services and addressing issues such as unequal distribution and a lack of infrastructural and human resources, e-Sanjeevani also aims to make healthcare services more equitable by bridging the digital divide that exists between urban and rural areas, as well as between rich and poor people. Interns, workers from various Common Service Centers (CSCs), and others can benefit from e-Sanjeevani's medical education[151].

As a result, it is acceptable to conclude that telemedicine is a basic necessity for all individuals, health care providers, and COVID-19 patients, especially when people are isolated, allowing patients to contact a health care provider for advice on their health problems in real time. Telemedicine should be a crucial tool in the fight against the COVID-19 pandemic, allowing for constant access to critical health services.

[151] *E-sanjeevani, available at https://www.cdac.in/index.aspx?id=hi_pr_eSanjeevani (last visited October 5, 2021)*

4.4 OPPORTUNITIES AND CHALLENGES OF TELEMEDICINE

Telemedicine is regarded as a combination of medical services and information and communication technology. Several benefits include increasing operational reliability, accuracy, and efficiency resulting from the computer system. In addition, communication technologies perform services that rely heavily on visual distance and other environmental impacts. People living in rural areas face several difficulties accessing the same services compared to those living in urban areas. Now, people in rural or difficult regions have access to health care due to the implementation of telemedicine.

Nevertheless, there are many barriers to achieving goals, including economic, human, and national ideas. The shortage of qualified medical personnel is creating more uncovered health services, especially in developing areas. In the case of telemedicine, significant barriers to implementing solutions include a lack of legal policies/regulation, an unsupported organizational culture, competing priorities, a lack of knowledge of applications, and a lack of technical expertise. In summary, four details are needed to support telemedicine's development, including costs, infrastructure, legal and ethical issues, and patient perceptions.

The following are the opportunities and challenges of telemedicine:

OPPORTUNITIES

Many countries face a shortage of doctors. The people living in remote or developing areas tend to have lower access to appropriate health care than those living in urban or developed areas. Such limitations only make matters worse, especially in emergencies where emergency help is needed. Telemedicine can be used to deliver medical services regardless of distance and time with information and communication technology. Several studies and reviews of telemedicine use in developing countries have been conducted. The available opportunities for telemedicine are as follows:

- Cost Reduction - One of the main goals of digital integration is to provide better services at a lower cost. In the case of telemedicine, several operating costs such as travel can be reduced as patients can access medical services online. Many

results show the low cost of telemedicine compared to other methods. Telemedicine can therefore be considered an alternative diagnostic and therapeutic method in several cases. For example, it can be used for initial diagnosis or emergency to provide emergency care. In addition, hospitals benefit from the use of telemedicine. A hospital bed or living space and the use of resources can be improved as patients receive medical care at any location at any time.

- Preventive Medicine Promotion - People sometimes have preventable symptoms. One of the main benefits of using preventive medicine is to reduce potential infections. It can be done on several levels ranging from government agencies to individuals. The concept of health monitoring and telemedicine is a crucial driver of the use of preventive medicine. For the acquisition of critical real-time signals, wearable devices available in the market may be used to hear and transmit readings to medical personnel. The initial diagnosis and follow-up procedures were made using telemedicine. Possible illnesses can be prevented or diagnosed early.
- Medical Education - Many countries are still facing shortages of medical staff and professionals. Remote areas do not have specialists who will provide specific medical care or treatment options. Such problems are worse when there is an emergency. In addition to being a therapeutic platform, telemedicine can be used as a continuous medical education where medical professionals and professionals meet, learn and share their knowledge and experience.
- Healthcare equity - People worldwide can access medical services as soon as they are connected to the internet. Medical services are not only offered by local doctors, but specialists living in other areas can provide diagnosis and treatment. Local or novice doctors can also learn from medical professionals. To achieve equity in healthcare, cooperation, regulation and standardization are required. Government agencies and private institutions must work together and agree on a set of requirements. Concerning issues related to digital technology, specific standards previously defined as communication agreements may be accepted.
- Variety of Service - Data delivery and processing have greatly improved with the advancement of the latest digital technologies. Instead of primary data, multimedia streaming over the internet is now more efficient. Processing power

has also increased dramatically while the price of hardware has been steadily declining. Such advances support a variety of medical services and enable real-time applications. Various telemedicine services such as telepathology, tele dermatology, telenursing, and teleoperation and the acceptance of their operations are being developed. An important consideration in providing a new service is choosing the right set of tools and technology.

CHALLENGES

Telemedicine has recently been introduced in many developed and developing countries. As with other application applications, several challenges have arisen and are described as follows. A total of five critical issues based on economic, technical, and social aspects and other existing studies have been described.

- System Development Costs - In addition to the necessary medical problems, empowering many people, especially those living in remote or developing areas, to benefit from information and communication technology makes additional costs. This requirement can be considered a vital policy of the 21st century and needs to be enforced by the government. Both technologies are critical infrastructure and require a large budget to invest in the necessary computer resources and innovation tools. Hardware installation and software storage and trained staff and data transfer reflect single and periodic investments.
- System Implementation - Many groups inside and outside the institutions are involved in telemedicine services. Like other domains, the implementation of telemedicine is not only a technology but also a management prospect. Before undertaking a telemedicine project, several issues involving technical and social aspects should be carefully considered. As telemedicine services are built on existing digital technologies, developing teams are generally required to understand users' basic infrastructure and needs. Advances in digital technology, including hardware and software, have been made and used to transform several sectors to produce better solutions and competitive advantages. The tools used and devices have been developed and upgraded to keep pace with the latest developments. System developers are always expected

to make good choices and use tools and instruments to build the next generation of telemedicine solutions that fit the needs. In addition, finding specific needs is a challenge as they require appropriate communication skills and interpersonal skills between groups of people with different backgrounds and backgrounds. Telemedicine affects traditional medical care procedures, and several public concerns may arise. Significant concerns, including legal, regulatory, security, and personnel matters and the effective use of telemedicine services, are being addressed. As a result, establishing a telemedicine service entails not only completing programme implementation but also considering the consequences of programme implementation.

- Digital Learning - This issue affects older people as they are born before the age of "digital disruption" where most programs or services are integrated with digital technology. Unlike subsequent generations that digital technology has become a significant part of their lives, older people should learn to use specific devices such as smartphones and engage in applications such as health technology-based apps. Hence, users over the age of 65 produce lower success rates and higher errors in computer-assigned tasks than younger ones.
- Adoption of Digital Technology - Although digital technology is integrated into many aspects of our daily lives, some people, including adults, have not yet embraced it in terms of many issues such as privacy and security. Many firms, such as banks, offer their own financial services on the web or mobile applications to reduce operating costs. Several campaigns or entitlements are provided to persuade their customers to go online. However, a different awareness can be seen in the health care sector. First, health-related personal information needs to be securely transmitted to digital networks and targeted precisely to the predefined recipients. Second, additional devices, such as portable devices, are used to measure heart rate or blood pressure to detect and transmit measurements to detection sites. The performance of such devices, especially their accuracy compared to conventional medical devices, is one of the significant problems.

- Accuracy of diagnosis - Accuracy of diagnosis is one of the main concerns, especially when doctors and patients are in different locations. Face-to-face treatment often brings confidence to patients, especially the elderly. However,

the short duration of medical research and the evaluation of significant symptoms performed at the hospital may not reflect current symptoms due to white coat disease. Physicians can obtain more accurate results through continuous health monitoring based on the electronic health care system.

4.4.1 LEGAL ISSUES

Matters of medico-legal liability and risks involved are among the many pertinent issues that continue to pose a roadblock to the uptake of telemedicine. Due to the absence of a comprehensive national regulatory framework, medical professionals are reluctant to engage in the use of telemedicine. With the introduction of the 'Telemedicine Practice Guidelines, 2020,' the practice of telemedicine gains legal legitimacy. The guidelines establish a framework for the RMP's responsibility to adhere to appropriate standards of care, conduct diagnosis, and consult based on his prudent professional judgement[152].

However, because the risk of misdiagnosis is greater in a virtual setting than in a physical consultation, the duty of standard of care should be applied at a higher level to avoid medical malpractice claims[153]. Without the foregoing and a precise set of principles defining the nature of consultation via telemedicine platforms, the RMP may face frivolous legal actions. Additionally, identification measures and informed consent are critical components of the virtual medical consultation process when it comes to SPDI[154].

According to the guidelines, safety checks include requiring the RMP to always confirm the patient's identity. Additionally, they state that consent may be 'explicit' or 'implied' if the patient initiates the teleconsultation[155]. The patient should also be aware of the RMP's identity. Individuals conducting teleconsultations must be aware of the

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[152] *Rule 4, Framework for telemedicine: Essential Principles Telemedicine Practice Guidelines 2020, MoH&FW (Mar.25, 2020), available at https://www.mohfw.gov.in/pdf/Telemedicine.pdf (last visited October 5, 2021)*

[153] *Giuoli Nittari et al., Telemedicine Practice: Review of the Current Legal and Ethical Challenges, Mary Ann Liebert Inc. (Feb. 12, 2020), available at https://www.liebertpub.com/doi/10.1089/tmj.2019.0158. (last visited October 5, 2021)*

[154] *Health in India: Legal Regulatory and Tax Overview, Nishith Desai Associates (Apr.2020), available at http://www.nishithdesai.com/fileadmin/user_upload/pdfs/Research_Papers/Digital_Health_in_India.pdf. (last visited October 5, 2021)*

[155] *Rule 3.2, Telemedicine Practice Guidelines 2020, MoH&FW (Mar.25, 2020), available at https://www.mohfw.gov.in/pdf/Telemedicine.pdf. (last visited October 5, 2021)*

associated risks, benefits, nature, and consequences. This awareness may be primarily generated through the concept of electronic informed consent[156]. Other vital factors in order to promote awareness with regards to telemedicine particularly in rural areas is by educating the masses on digital literacy and digital healthcare with the aim to encourage the usage of telemedicine

Therefore, the legal issues and challenges are summarized as follows:

- As telemedicine develops, it will, like any other medical discipline, bring with it a slew of medico-legal issues. Medical confidentiality, quality of care, doctor qualifications, and informed consent will all need to be addressed, as will fraud, licensing, remuneration, clinical incompetence, obligations, fines, and civil liability.
- Telemedicine has some drawbacks due to its virtual character. Infrastructure and technical training are required.
- Because internet connections are impersonal and a physical examination is required to provide a correct diagnosis, it can minimize direct contact between patients and doctors. The interface necessitates an organised framework as well as the lack of a form of agreement to either request or deny the service.
- Medical education does not yet include telemedicine.
- There are also concerns about safety, confidentiality, medical information preservation, and care, in addition to liability in the event of neglect. There is no clarity on the medico-legal issues that may arise as a result of telemedicine. In India, no health-care scheme takes telemedicine into account.
- The huge benefit in combining and protecting electronic health records (EHRs) has been widely advocated. EHRs can be used for scientific research in addition to improving treatment quality and offering quick access to patients' medical records. The expanding concerns surrounding the preservation of a patient's sensitive data, on the other hand, must be addressed as soon as possible in order to effectively incorporate technical solutions that can enable the storage, analysis, and retrieval of medical data.

[156] *Christine Coughlin, E-Consent: Can Informed Consent Be Just a Click Away, 50 Wake Forest L. Rev. 381 (2015)*

- Medical practitioners frequently use telemedicine to prescribe medications based solely on telephone interactions (or discussions with the patient about any other audiovisual means). As a result, the legality of e-pharmacies and tele-pharmacies in India continues to be the most significant obstacle for the delivery of telemedicine services in India.

4.5 CONCLUSION

This chapter aimed to discover the importance of Telemedicine in India, the regulatory framework governing telemedicine in India, the changes it would make, and explore how it transforms the health sector. Lack of medical staff, human problems and facilities are major barriers to the development of medical services. Telemedicine can be used in the transformation of the aging community resulting in high demand for remote care and treatment. In the areas of medical consultation, nursing, tele-radiology, psychotherapy, and tele neurology, telemedicine for patients has been proved to be feasible and generally accepted. Not only are there fewer distances between the doctor and the patient, especially in remote and difficult-to-reach places, but there is also the potential of receiving assistance, whether from a medical professional, a nurse, or a psychologist, as shown in the articles. Standardization of telemedicine regulations is necessary to enhance the global use of telemedicine. Data privacy is a major concern. Despite the high levels of assurance, patients' data must be protected to the greatest extent possible in the future. This assurance must be supplied first and foremost by all health experts, not only those who supply the gadget.

Therefore, telemedicine not only creates a new system but also fixes asset systems. Apart from the technical problem, certain factors, including economic and social, must be considered.

The expense of programme development, programme execution, digital learning, digital technology uptake, and diagnostic accuracy are all major hurdles in the usage of telemedicine. Building a telemedicine service necessitates the use of information and communication technologies as a foundation. Other professionals who can fulfil the needs of users and design the appropriate system are required for system integration.

By gathering clinical data from numerous patients at the same time, remote monitoring can do minute computations. However, data loss may occur as a result of a software or hardware meltdown. As a result, relying too heavily on a computer system to prevent inaccuracies in health-care data might be dangerous.

Therefore, practice of telemedicine has the numerous above-mentioned challenges. However, it has to progress in spite of all these challenges, as it will avoid long journeys for a short follow-ups and expert opinion becoming available in remote and inaccessible areas. There is need for determination of duties of referring doctor and the expert doctor advising via telemedicine and doctor-patient relationship. If licensing is made compulsory for the institutions, then penalties for violating the provisions of license and practicing without license will have to be determined. Confidentiality will have to be maintained of the patient's records and improper disclosure may be a big problem in telemedicine and will have to be taken care in the proposed law. Can the same provisions will have to be strictly followed during emergency use of telemedicine, use of telemedicine in remote areas and during wars will be a big question and will have to be taken care of in the law. Technical aspects of telemedicine will have to be taken care of in the law to be enacted. There will be need to protect the routes being used for telemedical practice so that there is no leakage and no person may have unauthorized access to it. There will be a need for maintaining the technical reliability in the law

Many studies have shown that the regulatory framework for telemedicine is not as strict as they should be. This makes it difficult for patients to receive the most effective and efficient medical care. A review of this area should be conducted to see if the legislators around the world show a greater sensitivity. The two issues that seem to have entered fully into the telemedical activity and been dealt with due consideration: ethical arguments and costs. The ethical aspects of telemedicine have been summarized in many works. Most of the authors have focused on protecting patient information, informing consent, and avoiding making the patient a burden. Several articles also examined the high costs of implementing telemedicine.

Many works have examined the ethical aspects of telemedicine, and it appears comforting that all of the authors have emphasised the protection of patient information, informed consent, and the fact that behind the screen, however, there is a suffering person, not reducing the patient to a number to be cared for. Several studies have looked

into the high expenses of telemedicine adoption due to automation, security, and legality, among other factors.

Although there are still many flaws to be solved, telemedicine addresses the majority of the deficiencies that may exist in its current form. If these are not addressed, it may have a detrimental impact on the patient as well as the profession.

CHAPTER 5

CONCLUSION AND SUGGESTIONS

5.1 INTRODUCTION

The right to health is a multifaceted and all-encompassing right. It is frequently linked to healthcare access, disease prevention and control, equity in access, affordable price of essential medicines, proper mental healthcare, workplace healthcare facilities, maternal care, proper infrastructure and pharmaceutical availability, and other clinical necessities. Quality health care is not only a human need, a civic right, and a public benefit, but it is also a precondition for good health, which is required to enjoy and attain the fruits of equitable development.

A good healthcare system is necessary to ensure that all citizens have access to health care. A good healthcare system must provide equal access to essential medicines, vaccines, and technologies of assured quality, safety, efficacy, and cost-effectiveness, as well as their scientifically sound and cost-effective application. Clinical services must be provided by the government at the primary, secondary, and tertiary levels of health systems. When the government ensures that people receive services, health care access will be more equitable.

However, scarcity and unequal distribution of resources, geographical hurdles, low-quality treatment and infrastructure, poorly qualified health workers, lack of awareness among individuals, outmoded working conditions, and other issues are among the challenges that makes healthcare inequitable. Many of the above-mentioned difficulties in India's healthcare sector can be addressed with digital technology that is either already available or under development.

Through communication infrastructure, telemedicine includes testing and consulting. Telemedicine allows doctors to diagnose, evaluate, and treat patients without having to see them in person. Patients can use their technology to contact with doctors from the comfort of their own homes. The rapid rise of the computer and telecommunications industries, combined with a focus on community and medical personnel focused on improving health care in remote and rural settings, has accelerated efforts to promote

telemedicine use. Because of the ongoing COVID 19 disease, a fast-spreading disease with compelling global health impacts, telemedicine has grown and become more popular among patients and hospital administrators. It's a great method to ensure that everyone gets equal access to services while staying safe during epidemics.

Nevertheless, Telemedicine has medicolegal implications relating to registration, licensing, insurance, quality, privacy and confidentiality issues, and other risks associated with electronic health care communication and online health care contact. The lack of specific telemedicine statutes or laws adds to the complication of these issues, especially when it comes to professional negligence, duties, liabilities, and penalties.

In India, however, telemedicine is governed by a number of laws, guidelines and policies, such as the National Medical Commission Act, 2019, Telemedicine Practice Guidelines issued under the MCI Code, Drugs And Cosmetics Act, 1940 and Drugs And Cosmetic Rules, 1945, The Pharmacy Act, 1948, The Information Technology Act, 2000, Digital Information Security In Healthcare Act (DISHA) & The Personal Data Protection Bill, 2019 (PDP BILL), Government Policies Regulating Health Data, and the Information Technology Act, 2000, and The Consumer Protection Act, 2019.

5.2 CONCLUSION

Chapter 1 gives an introduction to the topic and a brief idea of the research. This Chapter also deals with the relevance of the topic and the importance of the research.

Chapter 2 illustrates the concept and value of the right to health, as well as the importance of access to healthcare and healthcare equity. It also examines whether the existing healthcare system, with a focus on India, is sufficient to ensure the right to health, or whether alternative approaches, such as telemedicine, are required.

Chapter 3 discusses telemedicine as a technique of ensuring healthcare access. It discusses telemedicine's definition and concept. The evolution and history of telemedicine are thoroughly covered. It also discusses telemedicine's applicability, benefits, and drawbacks. Finally, it examines how far telemedicine has helped to bridge the gap in healthcare access and equity from that of the existing healthcare system.

Chapter 4 discusses the telemedicine initiatives in India, regulatory framework of telemedicine in India such as the National Medical Commission Act, 2019, Telemedicine Practice Guidelines issued under the MCI Code, Drugs And Cosmetics Act, 1940 and Drugs And Cosmetic Rules, 1945, The Pharmacy Act, 1948, The Information Technology Act, 2000, Digital Information Security In Healthcare Act (DISHA) & The Personal Data Protection Bill, 2019 (PDP BILL), Government Policies Regulating Health Data, and the Information Technology Act, 2000, and The Consumer Protection Act, 2019. It also covers into the use of telemedicine during COVID-19, as well as the potential and pitfalls that come with it.

From the above-mentioned chapters, following conclusions can be drawn:

1. There are many international guidelines and regulations to ensure right to health, such as UDHR, ICCPR, and ICESCR. In India, the Constitution of India safeguards the right to health of the citizens by virtue of Articles 21, 47, 38, 39, 41 and 48A and the Directive Principles of State Policy all contribute to the right to health. Despite the fact that such regulations, guidelines, and the Constitution exist to guarantee citizens' rights to health, we are unable to secure citizens' rights to health and assure universal access to healthcare.[157]
2. Due to scarcity and unequal distribution of resources, geographical barriers, low-quality treatment and infrastructure, poorly qualified health workers, lack of awareness among individuals, outmoded working conditions, and other issues, the existing healthcare sector fails to provide equity in healthcare and ensure access to health.[158]
3. Despite the fact that technological advancements have made healthcare more accessible and equitable, we continue to fall behind.[159]
4. Telemedicine could be a useful technique for ensuring healthcare equity and access for those living in remote locations. However, in order to obtain the drugs prescribed, patients must go all the way to urban regions to visit medical shops,

[157] *See Chapter 2 of the dissertation*
[158] *Id.*
[159] *Id.*

which negates the fundamental purpose of telemedicine and teleconsultations.[160]

5. Rural areas still lack technology breakthroughs to adopt telemedicine and teleconsultations, despite the fact that telemedicine is widely employed to assure access to healthcare.[161]
6. Telemedicine has been used in India for a long period of time. Telemedicine Practice Guidelines for 2020 were released in response to COVID-19, which legalised telemedicine in India. However, there is a dearth of specific legislation governing medical confidentiality, healthcare quality, physician's qualifications, and informed consent, while offering telemedicine services. Additionally, precise rules for licensing, remuneration, clinical incompetence, duties, fraud, fines, and civil liability should be incorporated in the aforementioned legislation.[162]
7. Health information is regarded as extremely private and personal information about an individual. However, given the absence of legislation governing the subject, concerns about privacy and confidentiality deter people from adopting telemedicine as a way of consultation.[163]

5.3 SUGGESTIONS

1. To protect citizens' health rights, the government should ensure that alternative approaches such as telemedicine are integrated into the existing healthcare system through legislation and regulation.
2. Government initiatives to extend fiber optic connectivity to remote areas must be followed by efforts to connect the smallest administrative and healthcare units, such as Public Health Centers (PHCs) and Health & Wellness Centers (HWCs), to larger hospitals and medical college hospitals. Objective evaluation is critical in the medium term. It is past time to perform a review of the public and private telemedicine programmes now in operation, such as eSanjeevani. The outcomes of the evaluation should be utilised to inform future updates of the guidelines and legal framework.

[160] *See chapter 3 of the dissertation*
[161] *Id.*
[162] *See Chapter 4 of the dissertation*
[163] *Id.*

3. In the short term, it is medical practitioner education that requires immediate attention. Telemedicine 'crash courses' or continuing medical education modules can raise practitioners' awareness and assist them in staying current on technological, ethical, and legal concerns and advancements.
4. Despite years of advancement and success, telemedicine has not yet become a completely integrated component of the healthcare delivery system. Telemedicine's success is dependent on its integration into the healthcare delivery system, not on its implementation as a stand-alone project. As previously indicated, it is now important to move telemedicine from a pilot phase to a routine operational phase in the mainstream health-care delivery system.
5. Despite the fact that the Telemedicine Practice Guidelines, 2020, have expanded on the practice of telemedicine, guidelines are not legally binding unless they are backed by legislation. Because of this, a specific legislation governing telemedicine and teleconsultations in India should be enacted in order to ensure the proper functioning and regulation of these services in India.
6. The guidelines lack clarity regarding privacy and data use for patients and practitioners. They impose complete duty on doctors for maintaining records of all interactions between doctors and patients. The guidelines do not yet specify the duration of data storage or the conditions under which that data may be used in the future. The guidelines essentially state that practitioners must be aware of and adhere to applicable data protection and privacy regulations. When a practitioner is obligated to record details such as a patient's address and other 'reasonable' identification, privacy concerns arise.
7. Although the guidelines distinguish between implicit and explicit consent, the mere act of commencing a telemedicine consultation is considered implicit consent. Additional information on consent in a teleconsultation and how to obtain and record it should be included in the guidelines.
8. To conduct consultations via telemedicine, there is a need for an open network that ensures that telemedicine services are publicly accessible in a secure manner, safeguarding the security and confidentiality of the doctor-patient interaction.
9. The practice of prescribing drugs only through telephone interactions is common among medical practitioners who employ telemedicine (or discussions

with the patient about any other audiovisual means). Consequently, the legality of e-pharmacies and tele-pharmacies in India remains the most major impediment to the provision of telemedicine services in the country. As a result, e-pharmacies and tele-pharmacies should be legalised in India in order to ensure that telemedicine services are delivered in the country.

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APPENDIX

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