Exploring Utilization of Telehealth Post-COVID19 Pandemic Among Selected Clinics in Iloilo: A Case Study

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ABSTRACT

The purpose of this case study was to gather tangible, contextual, and in-depth knowledge regarding the implementation of telehealth in their respective areas post-COVID 19 pandemic. The primary purpose of this qualitative study was to explore telehealth utilization among health personnel in selected clinics in Iloilo City. Three physicians were recruited for the study through purposive sampling who were still utilizing telehealth post-COVID 19 Pandemic. A semi-structured interview was utilized to collect the data. This type of data collection method was a mixture of structured and unstructured interviews. It had a predetermined set of questions, but the interviewer was allowed to ask follow-up questions. The method of analysis used is Stake's Method of analysis. The findings of the study identified three major correspondences: "Telehealth Processes, Workflow, and Components," "Impact, Challenges, and Concerns of Telehealth," and "Telehealth Utilization and Adaptation." Research on post-COVID-19 telehealth usage in Iloilo clinics highlights its transformative role in enhancing healthcare access and convenience via technology. Various methods, including telemedicine and teleconsultation, are extensively utilized, focusing on patient engagement, consent, and ongoing enhancement. Despite the pandemic-driven surge in telehealth, challenges like privacy concerns, lack of physical exams, and internet issues persist. Physicians emphasize addressing these issues and improving technological literacy and advertising to optimize telehealth's potential.

Keywords: Telehealth, technology, utilization, exploring, healthcare providers, case study

Chapter 1

INTRODUCTION

Background and Rationale of the Study

The most recent coronavirus identified is responsible for coronavirus disease-19 (COVID-19). Older people and those who have underlying medical conditions like diabetes, hypertension, or cardiac issues are more likely to acquire the disease in its most severe form. The "social gap" or social isolation made possible by the decline in face-to-face interaction is a crucial element in reducing the transmission of the virus. Travel bans have been established and are being followed globally to minimize the spread of the disease, and quarantines have been imposed in the majority of cities. But those who are not infected with COVID-19, particularly those who are more likely to get the illness, should receive daily treatment without incurring the danger of coming into contact with other hospital patients. The pandemic paved the way for the rise of telehealth (Monaghesh & Hajizadeh, 2020).

For the general public, medical professionals, and COVID-19 patients, telehealth has evolved into a fundamental requirement, particularly during quarantine. It allows patients to consult a medical professional in real time for guidance on their health issues. However, now that we are shifting into the new normal, it has been demonstrated that telehealth or remote consultations do not only serve its purpose during the pandemic as this is still being used today — post-COVID19 pandemic. It increases access to care, particularly for populations like the elderly, those with limited mobility, and those who are geographically distant and otherwise find it challenging to contact

healthcare specialists. According to one study, remote preventive healthcare services have also helped patients with chronic heart disease achieve better health results (Erin, 2021).

According to Mahoney (2020), Telehealth is an umbrella term used to define a wide range of healthcare services with the use of information and telecommunication technology. This serves as a way of providing health care at a distance via synchronous, asynchronous, and remote monitoring. There is also the term ‘telemedicine’ which is often used interchangeably with telehealth, although they cover similar services, the word Telemedicine is considered an emerging branch under the broad term of Telehealth.

Through the use of telehealth, medical and health information can now be emailed from one location to another, and patients and healthcare providers can converse through voice or video calls (De Guzman, 2018). According to Gajarawala and Pelkowski (2021), patients identify the factors like convenience, efficiency, communication, privacy, and comfort as important in using telehealth. Its benefits focus not just on the wellbeing of patients but also on that of healthcare professionals since it utilizes remote patient monitoring (RPM) and health information technology (HIT) to give consultations via the internet (Ye, 2020).

Although telehealth as a concept has been around since the early twentieth century, it was during the COVID-19 pandemic where telehealth services have increased its integration and utilization in delivery of healthcare. The widespread use of SARS-COV in the United States paved the way for the reemergence of telehealth where the situation requires physical distance to control the spread of the virus. According to

Shaver (2022), before the pandemic, the use of telehealth in the United States has had a steady increase in trajectory, however its overall implementation and integration has relatively lagged behind. Patients and healthcare providers cited inconsistencies, restrictions and privacy regulations as their experience in navigating telehealth. By early March 2022, major alterations in the interstate practice and privacy regulations, and reimbursements for telemedicine made by the Congress improved the implementation of telehealth drastically. In result, there's rapid growth in practice and patient use of telemedicine services during long months of lockdowns and recurrent surges of COVID-19 infections.

According to Hyder and Razzak (2020), 76% of hospitals in the United States use telemedicine with 39.5% of physicians practicing in radiology, 27.8% in psychiatry, and 24.1% in cardiology as the most frequent users of telemedicine. Telemedicine is used in various fields of medicine. In radiology, digital content such as images and reports produced by radiology examinations are sent to remote radiologists where readings and results are then sent back to the patient's physician or other health care providers. Teleradiology supplements the problem in shortage of radiologists in particular areas as well as helps provide faster diagnostics to patients. Another example of telemedicine utilization is the at-home telehealth monitoring where in out-patient cases of individuals with congestive heart failure are provided with in-home monitoring. Vital signs such as blood pressure, weight, heart rate, pulse were recorded and uploaded daily through a telephone service to the internet. It uses a monitoring system that has decision support software where it alerts the nurse in charge in a case of emergency or patients in need of attention.

In the Philippines, the increase of Telehealth implementation can be attributed to the growth in access to information and communication technologies (Macariola et al., 2021). Among the IT modalities that were introduced and implemented by the National Telehealth Service Program (NTSP) were the Community Health Information Tracking System (CHITS), Telemedicine, Real-time Regular Routine Reporting for Health (R4Health), and RxBox. CHITS and R4Health are both electronic reporting system in where CHITS is a software designed to be compatible with local clinic procedures and information requirements while R4Health is mobile phone application which is meant to facilitate the collection and transmittal of population health data by front line health workers to the DOH and local health authorities. In the Telemedicine system, this was meant for physicians of the Barrios who were contracted by the DOH to serve in distant communities. RxBox on the other hand, is a telemedicine which can electronically measure blood pressure, heart rate, and dissolved oxygen as well as monitor fetal heart rate and uterine contraction among pregnant patients. It can also store data and transmit health information via the internet (Caballes, 2021).

According to Lu and Marcelo (2021), 169 RxBox units were deployed in different municipalities and cities in 2017. In 2020, during the height of COVID-19 pandemic, an additional 369 units of RxBox were deployed in different regions of the country. It was also in the height of the COVID-19 pandemic where opportunities have opened for telemedicine to flourish in the Philippines. According to Cordero (2022), some physicians use personal Facebook and Viber accounts in which they utilize the video call feature of the applications in conducting a teleconsultation to the patients. Teleconsultation can also be done through COVID-19 hotlines, websites, and mobile apps launched by several agencies and businesses in which it includes the Department of Health (DOH), Medgate, KonsultaMD, Medifi, HealthNow, AIDE, DOCPH, Yo-Vivo Health, and Lifeline.

In a study conducted by De Asis et al. (2021), it stated the utilization of telemedicine among physicians in private clinics in Iloilo City. Most of the physicians participating in the study use Facebook Messenger app for consultation. The app enables the physician to communicate with their patients about the appointments and schedule as well as request some pictures and even have a video chat with them. There is also the use of Zoom meetings and a platform called Medify, however the Messenger app was still preferred as it is easy to navigate for both patients and doctors. In Iloilo City, The Medical City Iloilo is one of the hospitals that utilizes telemedicine as their mode of healthcare. According to their website, The Medical City Iloilo is first in Region 6 to have a program in telemedicine, in which they use the latest and effective healthcare communications technology for patient access to healthcare and meet clinical specialists from other hospitals despite not being physically present. Hence this study is conducted to explore the **Utilization of Telehealth Post-COVID19 Pandemic among Selected Clinics in Iloilo**.

Epistemological and Theoretical Perspective of the Study

This study was anchored on the theory of Social Constructionism by Peter Berger and Thomas Luckmann in which views knowledge as creation by the interactions of individuals within society. Social constructionism in this theory argues that humans create and sustain all social phenomena through their social practices. Individuals give meaning to their reality with the use of language. With this ‘externalization’, the idea becomes objective as it spreads through the interaction of people. This idea became ‘internalized’ as it is embedded in the consciousness of the society to the extent that future generations experience this type of knowledge as objective (Andrews, 2012). In an attempt to explore utilization of Telehealth, an interpretive framework of social

constructionism was applied. Through interviewing the participants, researchers were able to gather information that was used to make sense of themes and meaning that relates to the study and as a whole create a knowledge out of that social interaction.

The theoretical perspective of the study is interpretivism. Interpretivism is defined as a sociological research method in which an action or event is examined using the beliefs, norms, and values of the culture in which it occurs. In sociology, it is a qualitative method for analyzing data connected to human actions. It investigates human behavior by giving meaning to specific behaviors. The goal of interpretivism is to correctly determine the meanings of various behaviors in the context of societal culture (Helper, 2022).

According to the University of Nottingham (2023), the assumption behind interpretivism is that reality is subjective, multifaceted, and socially created. That is, we can only grasp someone's reality by their experience of it, which may differ from other people in accordance to the persons' historical or societal perspectives. Interpretive techniques rely on questioning and observation to find or produce a rich and deep understanding of the subject under investigation. This is closely related with qualitative data collection methods.

Through the lens of interpretivism, our study, "Exploring Utilization of Telehealth Post COVID-19 Pandemic Among Selected Clinic in Iloilo: Qualitative Case Study," takes on a holistic and contextually rich approach. We prioritize the subjective experiences and diverse perspectives of individuals in the selected clinic, understanding that their unique narratives and meanings are central to unraveling the complexities of telehealth utilization. Employing qualitative research methods, such as interviews and

participant observation, we immerse ourselves in the natural contexts of these clinics, seeking to comprehend the nuanced factors that influence their post-pandemic telehealth practices. We recognize that there are multiple, subjective realities at play, respecting the diverse interpretations and meanings attached to telehealth within this specific regional and cultural context.

Additional Micro Theory

Higher demand for home health care is created at a time when the supply of such service is quickly decreasing due to efforts to reduce health care costs, including the early release of patients and the closure of many home health agencies. The disparity between the demand for and supply of home health care services may be reduced with the aid of telemedicine technology (Kichloo, at al. 2020). Telemedicine technology works in conjunction with the current healthcare system, not as a replacement, by delivering services to those who may not otherwise have access to treatment. Home health and advanced practice nurses function as patient advocates by broadening the alternatives available to our patients and enhancing their access to healthcare (Haleem et al., 2021).

Locsin (n.d) stated that nursing has changed over time and that they have to adapt the care they give to modern society where it makes extensive use of modern technology. While adjusting to these developments, the profession of nursing cannot become purely technological and that nurses must remain grounded in human compassion. The link between nursing care and technological usage is framed by Locsin's theory of Technological Competency as Caring in Nursing. The philosophy of Locsin’s Theory of Technological Competency as Caring in Nursing: A Model for Practice

can provide insights into intersection of technology and compassionate patient care, enhancing the understanding of implications of telehealth implementation in healthcare settings.

Purpose of the Study

The purpose of this case study was to gather tangible, contextual, and in-depth knowledge regarding the implementation of telehealth in their respective areas post COVID 19 pandemic. The primary purpose of this qualitative study was to explore telehealth utilization among health personnel in selected clinics in Iloilo City.

Statement of the Research Problem

This study aimed to explore the utilization of the telehealth post-COVID19 pandemic among selected clinics in Iloilo. The core question of this study was: “How is the utilization of telehealth postCOVID19-pandemic?”

Significance of the Study

This study aimed to explore the utilization of the telehealth post-COVID19 pandemic in selected clinics in Iloilo. Furthermore, the study benefits the following:

Patients. The findings of this study greatly benefit the patients especially those who are living in remote areas because they can save time, energy, and money, as there would be less waiting time, less cost and time in traveling to nearby health centers, and can offer immediate access to prescriptions for certain conditions.

Health Personnel. The findings of this study will help the health personnel deepen their understanding and enrich their knowledge of how they might use telehealth in the field. Moreover, the findings of the study may help health personnel decide to continue implementing telehealth and/or simply enhance the current services or adopt the use of Telehealth.

Health Administrators. By exploring the utilization of telehealth, they could gain insights that could possibly be used when considering adoption of telehealth in their respective clinic. The findings can be utilized in figuring out a way to effectively execute the plan of bringing telehealth to other communities/clinics. In addition, the findings of the study may help the health administrators create better solutions to bridge gaps in healthcare.

Policymakers. The findings from this research can aid policymakers to formulate laws, resolutions, policies, or programs to adopt the use of telehealth and broaden its implementation in various clinics as well as enhance Filipinos' adoption and use of telehealth as the new normal strategy in accessing healthcare services.

Proponents of the study. This pertains to the college students who can carry out the study. The findings of the study may help broaden the proponent’s understanding of telehealth and guide them in deciding whether or not to use telehealth in their personal lives. This research benefits and motivates other scholars to be more innovative and creative in their future projects.

Future Researchers. The results of the study are beneficial to future researchers in gaining insights regarding the utilization of telehealth. The results and latent of this study are utilized by other developing local government units who want to increase adoption and usage of telemedicine, even evaluate technology usage. This study also serves as the cross-reference that gives them background or an overview of the common ways and challenges the personnel face in implementing said technology.

Definition of Terms

To facilitate a better understanding of the study, the following terms were conceptually and operationally defined.

Telehealth. It is described as the delivery and facilitation of health and health-related services such as medical treatment, physician and client education, health information services, and self-care using telecommunications and digital communication technology (NEJM Catalyst, 2018).

In this study, it defined the use of electronic communication technologies such as videoconferencing, phone calls, and secure messaging to enable remote healthcare consultations, diagnosis, treatment, monitoring, and support between healthcare providers and patients or between healthcare providers themselves. It includes a wide range of medical and non-medical services that are supplied remotely, allowing for the interchange of medical information, guidance, and treatment without the need for in-person encounters.

Healthcare providers. It is a person or entity that provides medical care or treatment. Healthcare providers include doctors, nurse practitioners, midwives,

radiologists, labs, hospitals, urgent care clinics, medical supply companies, and other professionals, facilities, and businesses that provide such services (verywellhealth, 2023).

In this study, it is defined as the professionals that handle and interact with the patients using telehealth.

Technology. It is the application of scientific knowledge to the practical goals of human existence, or, as it is sometimes referred to, the modification and manipulation of the human environment (Britannica, 2023).

In this study, it defined the systematic and intentional use of tools, equipment, technologies, and procedures to improve and accelerate the collection, processing, analysis, storage, or transfer of data, information, and knowledge in the conduct of scientific research, experimentation, inquiry, or study. It includes a wide variety of physical and intangible resources, such as hardware, software, instruments, procedures, and approaches that are used to aid research processes, data gathering, experimentation, data analysis, and finding dissemination.

Utilization. It is the act of using something in an effective way (Cambridge dictionary, 2020).

In this study, it defined the practical application or incorporation of research results, information, or insights into ways to make decisions, policies, practices, initiatives, or innovations in a particular context or location. It entailed the purposeful use of research findings to guide and enhance activities, programs, or techniques with the

objective of accomplishing specified goals, addressing issues, or improving the efficacy and efficiency of a certain system or activity.

Exploring. It is to examine or investigate something new or to further expand knowledge (Collins Dictionary, 2020).

In this study, it is defined as a planned and intentional inquiry process intended at achieving a full grasp of a given topic, concept, or phenomena. It includes actions like literature research, data collecting, observation, or qualitative analysis to find, uncover, and interpret significant facts, patterns, correlations, or insights related to the topic of interest. Exploration's primary goal is to provide the groundwork for subsequent inquiry, hypothesis creation, or informed decision-making.

Researcher's Subjectivity

Researchers actively cultivated interpretive openness by employing several key strategies. First, they committed to suspending their assumptions, recognizing that preconceived notions can impede objectivity and hinder understanding. Second, they practiced reflexivity, engaging in continuous self-reflection to acknowledge their personal positions, beliefs, and values, all while considering how their background and experiences might shape their interpretations. Third, researchers actively explored alternative perspectives, even those that challenge their own, as this fosters a richer and more nuanced understanding of the subject matter. Lastly, they embraced the inherent uncertainty in research, understanding that definitive answers may not always be attainable and becoming comfortable with ambiguity.

In addition to cultivating interpretive openness, researchers also took proactive steps to address their biases. This included engaging in self-examination, using introspection to identify personal biases, privilege, stereotypes, and assumptions that may influence their research. Finally, researchers adhered to ethical guidelines emphasizing impartiality, fairness, and respect for the dignity and rights of research participants, further ensuring the integrity of their work.

Delimitations of the Study

This study aimed to explore the utilization of telehealth post-COVID19 pandemic among health personnel in selected clinics. This study was conducted in a selected clinic in Iloilo City. This study was limited to the utilization of telehealth among health personnel in Iloilo City. The participants of this study were the health personnel in a selected clinic in Iloilo City who are still utilizing telehealth post-COVID19 pandemic. The duration of the study was from October, 2022 up to November, 2023 in a span of 13 months.

Due to lack of resources and unexplored aspects of the study, the researchers identified various limitations and addressed them in order to fully further the study. This was limited to health personnel in a selected clinics in Iloilo City who utilizes telehealth post-COVID19 pandemic; thus, purposive sampling was used. In addition, the limitation of the study included the data collection process. The nature of their information was confined to just his or her opinion and experiences because the data for this study was gathered by asking a set of questions that had been typically subjected to the interviewee and what he or she was willing to share in relation to the problem.

Description of Research Tradition in Phenomenon of Interest

According to Haleem et al. (2021), telehealth was made possible by the entry of cutting-edge technology into the healthcare industry. Due to the upgrading and blending of numerous technologies, it is now possible for telehealth to operate as an ecosystem within the larger field of global healthcare. Through telemedicine, people may enhance healthcare delivery and make it accessible to an increasing number of people which can facilitate people's access to preventive care and improve their long-term health.

This streamlined strategy was initially developed to aid in extending medical care to those living in distant locations, including men, women, and children (asiramedicaladmin, 2021). Patients of all ages, including children, seniors, and those with fragile health conditions, can access telemedicine (Esperanza-Hope Primary Care, 2022). For everyone, especially those who can no longer leave their homes safely but still need medical treatment, that creates the perfect healthcare solution.

Demand for telemedicine is already increasing due to quick developments in medical technology (Swanepoel et al., 2010). According to a 2017 WHO estimate, healthcare expenses in Asia would rise dramatically during the following ten years (Raghavan et al., 2021). The Philippines has seen a boom in telemedicine over the past several years as a result of quicker access to information and communication technology.

The researchers utilized the qualitative case study methodology. This enables the researchers to carry out a thorough investigation of complex phenomena within a particular setting. It is especially helpful to apply when attempting to gain a thorough

understanding of a topic, event, or phenomenon of interest within the context of real-world occurrences.

According to Sanders, et.al., (2012), telehealth and telecare interventions have reportedly been examined in a variety of foreign locations. Improvements in clinical indicators, a decrease in the use of health services, improved feelings of security, and higher satisfaction with health and social care services are only a few examples of good results that have been recorded. However, numerous studies have shown that these therapies frequently fall short of being successfully adopted and implemented within ordinary healthcare. Trials and evaluation studies have also noted recruiting issues, with a refusal rate of up to 80%. Potential participants' busy schedules, uneasiness with the technology, belief that the technology cannot benefit them, and preference for existing services are some of the factors that survey research have been able to describe and measure.

In conclusion, in this study, the researchers focused on exploring utilization of the telehealth post-COVID19 pandemic among the personnel in selected clinics. The data was gathered through a semi-structured interview, and the data was kept confidential and stored in a portable external drive with protected password and also in a restricted used share account such as google drive. Hard copies were stored in a locked storage cabinet that only the researchers have access to.

Chapter 2

REVIEW OF RELATED LITERATURE

This chapter presents both foreign and domestic literature and studies that the researchers who were looking for this paper as a guide used as resources from online journal sources in order to have a more precise study. The researchers were able to gain a deeper comprehension of the subject and a broader perspective thanks to the Related Literature.

Related Concepts

Telehealth

Telehealth is the practice of managing your health care and receiving medical care remotely by using internet information and communication technologies. Technologies include desktop and mobile devices like tablets and smartphones. A nurse or other medical professional might provide telehealth services in rural areas out of a facility or roving van (*Mayo Clinic*, 2022).

According to MedlinePlus (2022), telehealth is the practice of providing healthcare remotely using communication technology. Computers, cameras, video calls, the Web, satellite communications, and wireless correspondence are a few examples of these technologies. Telehealth is beneficial for people who struggle to go too far from clinics. According to Gagnon (2020), on the forefront of care for patients, nurses play a crucial role in telehealth adoption as well as other changes in healthcare. The importance of telehealth in nursing is increasing as medical technology advances,

allowing nurses new tools to enhance patient outcomes and broaden access to high-quality healthcare.

According to Cordero, Jr. (2022), telehealth in the Philippines is the technological support offered by this alternative way is beneficial. Telemedicine is a method of getting professional medical help while using technology and equipment like smartphones to remotely learn about their health status.

Lamar University (2021), states that telehealth programs are becoming more popular as a practical substitute for in visits and a way to closely monitor a patient's health from the convenience of their own home. No matter where the patient is located and without incurring travel or admission costs, it can provide continuity of treatment and access to healthcare.

According to the American Telemedicine Association (2018), beyond phone triage, the nurse's responsibilities have grown during the past ten years. The phrase "telehealth nursing" has come to refer to nursing staff who provide patient care over long distances using audiovisual modalities. While patients are taking part in telehealth consults with medical professionals who are physically situated elsewhere, some telehealth nurses serve as "telepresenters," operating in the same room as the patients. Also, nurses care for patients remotely by utilizing just voice and visual modalities. Remote patient monitoring is one method used in telehealth to evaluate patients remotely.

Several diverse patient populations are served through telehealth. Due to time restrictions, accessing a doctor may be challenging in many intensive healthcare institutions. In addressing a range of common patient requirements, having a nurse at

the front door of conversation can help lessen the company's daily patient load (Arkansas State University, 2019).

Healthcare Providers

A healthcare provider is a person or business that provides medical care or treatment. Healthcare providers include, but are not limited to, physicians, medical practitioners, midwives, radiologists, labs, hospitals, urgent care facilities, medical supply companies, and other professionals, institutions, and enterprises that offer such services. When you require medical care, your healthcare providers are the individuals or organizations that look after you. They include all members of the treatment team, including experts, locations, and support services (*verywellhealth*, 2022). A podiatrist, dentist, licensed psychologist, optometrist, registered nurse, midwife, or therapeutic social worker is referred to as a "health care professional" in this definition. Every provider which the University or a company's group health plan accepts medical certification to support a benefit claim also qualifies as a health care provider (*Berkeley People and Culture,2022*).

According to Concorde (2020) Healthcare professionals devote their entire lives to helping others. They put in a lot of overtime and are subjected to an array of germs, viruses, and other microbes that might be dangerous. They put their own health at risk in order to maintain and improve the wellbeing of others.

Technology

The usage of information and communication technologies has changed how people live and how things are done, consuming more while spending less time and money. According to Quimpo D.M. (2017), because of the ongoing advancements in medical technology and the need for different medical specialties to manage a patient's treatment, the medical system is growing increasingly complicated. The patient is left defenseless and vulnerable since it is difficult to make decisions on the course of therapy and continuity of care.

In research from (Elrick, n.d.), the influence of technology on healthcare is also expanding. Nurses now need to be computer literate to use computerized documentation software, manage patient information, plan treatments, and more. Patient data used to be kept in handwritten notes that were meticulously filed. Because of technology, it is now easier than ever before for nurses to properly collect and preserve patient information. In healthcare environments, ever-more-powerful computer systems are utilized to manage staffing, monitor patient care, gather medical profiles, and do other tasks.

As computer and information systems are increasingly used and integrated into all facets of healthcare, nurse practitioners would need to develop their computer and information system skills, just like other types of medical professionals who are adjusting to a healthcare environment with much more health information technology. Increased patient safety, effective care coordination, improved performance analysis, expanded patient data availability, and decreased operating costs are the five advantages of health information technology (Ohio University, 2020).

According to (West Governors University,2021), several of these modern medical technologies are beneficial to the nursing profession in terms of everyday tasks as well as reducing human error and mistakes that can occur when there are not enough nurses and they are spending extended hours dealing with numerous patients. According to Queen's University (2018), the use of technologies in nursing has increased nurses' ability to carry out their regular tasks. More technological and nursing links enable nurses to devote greater amounts of time to patients and less time to administrative responsibilities. The nurses in these units are more productive because healthcare leaders like CNLs have used these technologies.

Utilization

According to Cambridge University (2020), utilization is the process of utilizing something efficiently, the quantity of anything produced, available, etc. in contrast to the entire quantity that is available or that might be generated. Making feasible and efficient use of something is the action of utilizing it. Simply put, the phrase relates to using something or the act of doing so in an efficient manner. According to Scytec (2022), two performance measures that manufacturing organizations use to develop strategies and assess progress are utilization and efficiency. When comparing output levels to manufacturing capacity, they might be useful. Understanding these indicators' similarities and differences may help you choose how to quantify gains, thus, it is beneficial to learn more about them. We analyze utilization and efficiency in this post, along with examples of both, instructions on how to do the calculations, and advice on how to raise both measures.

According to the National Library of Medicine (2021), telehealth is being used to its fullest potential during the coronavirus disease Covid-19 outbreak to reduce the dangers and effects of the illness. Because of its usefulness and safety in delivering quality healthcare during the COVID-19 epidemic, telehealth has indeed been widely adopted. Organizations, agencies, and health plans must provide telemedicine options that prioritize patient contentment, user-centered design, and simplicity of use if they want to see a rise in the usage of telehealth. This involves enabling its use on all platforms and modalities, including desktop, online, app, phone, video, and chat. Moreover, it entails ensuring that the physician staffing the provider network that makes up your telehealth program is skilled, knowledgeable, and educated in providing remote patient care (Cirrus MD, 2018).

Exploring

According to Polynesian Voyaging Society (2016), they feel that everything is possible when they explore. Exploration results in knowledge and insight, which implies that as you explore, you improve the world. The goal of leaving the earth in a better state for future generations has always been there. One method for doing it is exploration.

According to Breaking the cycle (2018), humanity is propelled forward by exploration. Because it is the foundation of all we do, we have been researching since the beginning of time. We learn by experience from birth, and the knowledge we have now would help us make better decisions in the future. Pioneering explorers have left us with what we now know. Exploration means moving through the uncharted territory in search of knowledge or fresh information. The benefits of exploration include discoveries

in flora, fauna, space, medicine, geography, and other fields that have improved the planet.

Related Studies

One of society's biggest challenges in the twenty-first century is ensuring that everyone has access to high-quality care. The necessity that the beneficiary and the provider be present at the same time and location has consistently made ensuring fair access to healthcare difficult. On the other side, recent advancements in information and communication technologies have created huge opportunities for overcoming this by increasing the variety of delivery methods for healthcare (De Asis, et al., 2021). Access to services has definitely improved over the past few decades because of technological advancements, particularly in the communication and healthcare industries. In fact, remote healthcare services have begun to take over in technologically advanced nations, making it simpler to access medical care. The telehealth sector has consequently emerged as a result of this (Macariola, et al., 2021).

According to Balinbin (2022), the original purpose of remote care was to offer medical aid in remote places where access to healthcare is challenging. However, pandemics have compelled people to use digital healthcare technology over time. During the COVID-19 epidemic, social distancing became an intrinsic part of our daily lives, impeding the standard course of healthcare provision for patients, professionals, and policymakers. Telehealth has evolved as a global approach to facilitate timely care access as well as to expand healthcare delivery during that time (Arora, et al., 2022).

In the study of Gilkey et al., (2021), the results of the nationwide survey indicate that adolescent telemedicine has been widely adopted in the year after the COVID-19 pandemic started, with the majority of primary care physicians (PCPs) saying that they have utilized adolescent telehealth and plan to continue using it. Adolescent telehealth, according to the PCPs in our sample, often offers more benefits than drawbacks. Benefits include improved access to treatment and decreased time and transportation costs for families. The inability to conduct physical tests and technological issues were the limitations that were most frequently mentioned.

According to Predmore et. al, (2021), it was reported that adult respondents were generally willing to use video visits but preferred in-person care to a video visit for a non-emergency health issue. The COVID-19 pandemic prompted many individuals to utilize telehealth for the first time, yet the perceived benefits made people want to continue using it. Understanding patient preferences would assist in helping to determine telehealth's function in the provision of post-COVID19 pandemic healthcare.

Although telemedicine is not yet commonly used, third-world nations like the Philippines have been known to consider it (Ong, et al., nd). The National Telehealth System (NTS) in the Philippines uses a telemedicine platform to deliver prompt, high-quality specialist healthcare in rural parts of the Philippines. Via this platform, experts based in hospitals in urban areas can be reached by primary care doctors serving in these outlying regions. The National TeleHealth Center (NTHC), a research center under the University of the Philippines Manila, developed and oversees the NTS (Juban, et al. nd).

According to a study by Cordero Jr. (2022), Philippines citizens can now conduct teleconsultations through COVID-19 hotlines, websites, and mobile applications developed by numerous organizations and companies. The Department of Health (DOH), Medgate, KonsultaMD, Medifi, HealthNow, AIDE, DOCPH, Yo-Vivo Health, and Lifeline are a few of these. Some doctors even have their own Facebook and Viber accounts and use those services to conduct online consultations.

The Community Health Information Tracking System (CHITS), Telemedicine, Real-time Regular Routine Reporting for Health (R4Health), and RxBox were among the IT modalities that were introduced and put into practice by the National Telehealth Service Program (NTSP). Both CHITS and R4Health are electronic reporting systems, but R4Health is a mobile phone application that is intended to make it easier for front line health workers to collect and transmit population health data to the DOH and local health authorities. CHITS is software created to be compatible with local clinic procedures and information requirements. The Telemedicine system was designed for doctors to the barrios' who were hired by the DOH to provide care in far-off communities. Contrarily, RxBox is a telemedicine platform that enables patients who are pregnant to monitor their fetal heart rate and uterine contractions as well as electronically test their blood pressure, pulse rate, and dissolved oxygen. Also, it may store data and send health information over the internet (Caballes, 2021).

However, the results of the study conducted by Ong, at al., (nd) which set out to identify the variables influencing Filipinos' behavioral perceptions of telemedicine uptake and use indicate that the primary variables impacting perceived user adoption were age, location, concerns about privacy, hesitation to use, behavior, willingness for using, anticipation of effort and accomplishment, and hedonistic incentive.

In a study conducted by Pasco (2016), telemedicine can bridge gaps in healthcare by providing qualified counsel to healthcare providers in distant communities, despite the fact that it has continued to be underutilized locally. Key takeaways from the group discussions were the need for experts to be always accessible to respond to referrals and the inadequacy of the existing telecommunications infrastructure, while email and SMS were kept as optional referral channels.

In another study conducted by Sanders et al., (2012), programs for telehealth (TH) and telecare (TC) are becoming more popular as a way to encourage senior populations to take care of themselves, however evaluation studies typically point out significantly higher rates of poorly comprehended non-participation.

According to Alghamdi et al. (2022), in Saudi Arabia, telehealth services are widely employed. Findings indicated that using telehealth to monitor and deliver care was viewed as beneficial, helpful, and confidential. However, difficulties such a lack of time or a packed schedule prevented HCPs in Saudi Arabia from using telehealth.

According to the results of the study conducted by Koivunen and Saranto (2017), the deployment of telehealth is hindered by the abilities and attitudes of nurses. Despite the fact that the results show that patients generally adopt ICT products favorably, attention must also be paid to the patients' participation in telehealth usage. The study suggests that the technology tools used in clinical practice and medical services be improved. Regional agreements and further professional meetings are required to discuss how this transformation would be embraced and implemented as telehealth replaces traditional face-to-face nursing.

When adopting telehealth for emergency cases, worries have been expressed about technical problems or incorrect diagnosis because the platform might not be appropriate. Additional concerns included the degradation of the doctor-patient relationship, particularly the absence of information regarding doctors' backgrounds, obstacles that older patients can have, and a lack of diversity in the languages used. The decline of face-to-face interaction with medical practitioners, technological disparities, and connectivity difficulties for certain groups may pose problems for the health system unless these factors are considered and telehealth is implemented properly into the system with appropriate infrastructure investment (Alomari and Jenkins, 2021).

The distance in rural areas poses to be one of the greatest factors in accessing medical attention. Their health outcomes are caused by a variety of complex and multiple factors, but it's important to remember that they involve higher percentages of social inequality and behavioral risk factors, higher numbers of older people and disabled individuals, lower insurance and youth development rates, and limited access to healthcare providers and healthcare encounters in distant areas. Due to a lack of funding and healthcare workers, rural populations around the world have less access to medical care. The future of rural communities around the world could be at risk due to decreased access to healthcare in rural areas and the poor health outcomes that could also result from it (Smith, 2022).

Medhyve (2021) highlights that Everyone has a right to basic healthcare. Unfortunately, not every Filipino patient is given the high-quality care they need. Private and public medical centers, along with those located in urban and rural areas, offer quite different healthcare. Rural hospitals struggle to get the clinical apparatus and

commodities they need due to their geographic disadvantage. In addition to this, they face a shortage in manpower compared to selected clinic. About 75% of cities and municipalities across the nation lack enough healthcare personnel, according to government think tank Philippine Institute for Development Studies (PIDS) (2021).

Health information technology (HIT) can help provide healthcare services that are better, safer, more effective, and efficient in rural regions. HIT can connect remote healthcare providers and rural patients with urban experts. Implementing, managing, updating, and upgrading. HIT can be a recurring problem for rural hospitals and providers due to a lack of resources and understanding. (RHIhub, 2018). People may improve healthcare delivery and make it available to more people by using cutting-edge innovations and high-quality network services. Digital Healthcare Research (2021), states that Health information technology (health IT) advancements have a great deal of potential to assist small and rural communities in overcoming obstacles in the delivery of healthcare, such as distance and a lack of staff.

Telehealth is a more beneficial technology that can make it easier for people to get preventive treatment and enhance their long-term health. This is particularly true for individuals who face obstacles getting access to adequate care because of their financial situation or location (Haleem et al., 2021). Fortunately, medical visits can be cut down by utilizing telemedicine services through video conferencing or other internet methods. Thus, telemedicine reduces treatment costs and saves time for both the patient and the healthcare professional. It also helps hospitals and clinics run more efficiently due to its rapid and helpful capabilities. Because of this cutting-edge technology, monitoring and supervising the healing process of patients who have been discharged would be easier (Javaid, et al., 2021).

It was stated by Health Institute Policy (2019), that telemedicine has the potential to reach underserved urban and rural communities over great distances with health care services. Telemedicine is the practice of providing clinical treatment remotely using electronic communication and information technology. It may give residents of remote places access to medical professionals and specialists via teleconsultations that they might not otherwise have.

The word "telehealth" refers to a broad variety of services that employ digital technology to provide medical consultations, health education, health data services, and other related activities.Technology that permits monitoring of patients from isolated regions if necessary, such as video conferencing, health software, mobile health, and other methods, are employed in telehealth. It is intriguing because telehealth makes it possible for patients to get in touch with doctors at larger facilities even if they reside in distant locations. These services can be utilized to address problems with medical providers shortage and access to specialized care in remote and rural areas (Anderson & Singh, 2021).

Medhyve (2021) states that the frequency of consultations, travel expenses, and even reduced consultation prices for some patients all result in cheaper costs whenever telemedicine is factored in. Cousins (2018) clarified, however, that the conventional method of consultation should be taken into account when a diagnosis is required, however, despite advancements in recent years, adoption rates for clinical health information systems are still slow.

Additionally, according to Haleem et al. (2021), with the use of telemedicine, patients may receive treatment while still being safe at a time that is most suitable for

them and the doctor. This can suggest that a person doesn't need to arrange for child care or take a break from their job. When you go to the doctor, you shouldn't have to sit close to other people unless you want to feel unwell. For those with compromised immune systems or ongoing medical conditions, this is especially dangerous. By doing this, the risk of acquiring an infection in the hospital where the doctor works is reduced.

Telehealth can also have economic benefits for distant areas. By reducing the need for patients to travel for care, telehealth can save patients and healthcare providers money on transportation costs. In addition, telehealth can help rural hospitals and clinics reduce their operating costs by allowing them to use their facilities more efficiently (Lin et al., 2019).

In a study by Pasco (2016), in the Philippines, telemedicine has been underutilized locally despite its potential to close gaps in healthcare by giving remote healthcare professionals access to expert advice. According to Macabasag et al., (2016), some telemedicine providers struggle to maintain their deployment soon after gaining initial finance or after a testing period in the country, even though telehealth has a significant potential to treat healthcare challenges, especially in lower-middle-income countries. It highlights the relevance of education, financial decisions, administration, innovation, governance, and partnerships in the broader vision of a successful telemedicine deployment among poor countries like the Philippines.

As mentioned earlier in a study conducted by Smith (2022), higher proportions of elderly and disabled people live in distant areas. Thus, mobility and transportation problems brought on by an older population might make hospital visits in person difficult. People may receive care in their homes by using telemedicine and cutting-edge

technology like ai technology, data processing, and sensing. Moreover, evidence-based management, the application of digital technologies, and big data analytics can all help in managing the health issues of individuals who have two or more chronic conditions.

Even if the usage of telehealth technologies to meet healthcare requirements has risen and despite the many advantages of telemedicine, there are still some obstacles for distant populations, particularly in the long run like technology. These obstacles must be overcome seriously for telehealth to be successful. According to the WHO, the biggest obstacle to the deployment of telehealth in SEA is a lack of policy (Geneva: World Health Organizations, 2011). For instance, there are no legislative structures in place in the Philippines to adopt telehealth (World Health Organizations, 2020).

The Centers for Disease Control and Prevention (2020), cites a number of obstacles to telehealth, including inadequate internet connectivity, weak cellular coverage, technological ignorance, and a lack of access to devices. According to the Department of Information and Communication Technology (2014), a huge number of schools in the Philippines do not have computers and access to the internet, and they lack ICT educators who are educated to enhance digital literacy.

According to Easley (2020), not all places have access to fast enough broadband internet to enable patient and provider virtual consultations. Furthermore, some people living in these places might not have a smartphone or a computer at home. Anderson and Singh (2021) highlights that while telehealth programs can be successfully launched in rural and remote areas, relevant infrastructural issues including payment procedures, internet accessibility, and licensing regulations still need to be addressed.

To address this issue, telehealth needs to be incorporated into medical curricula so that student physicians can receive the information and training they need. Balaji and Clever (2021) contend that it is significant to include exposure in telehealth into various medical programs. Furthermore, it's crucial for medical students to be exposed to telehealth systems before residency. To address the difficulties associated with the usage of current technology, proper education regarding contemporary ICT tools for older patients is also crucial (Holderried et al., 2021).

Lack of funding is frequently cited as the cause of low adoption rates by small and rural providers. It can be quite expensive to implement health IT, such as EHRs and telehealth. In addition to the software, there are many costs involved in: (1) purchasing a health IT system, which includes hardware, peripherals, and networking costs; (2) implementation, which involves staff time and initially lower productivity; and (3) maintenance (Digital Health Research, 2021). Additionally, health IT investments must contend with other capital expenses like the requirement for new operating room equipment. Small and remote healthcare organizations are also apprehensive to invest money in an unstandardised, rapidly evolving technical field.

In Southeast Asia, the healthcare system struggles to keep up with the constantly changing needs of its aging population. The shortage of healthcare workers in SEA is the problem. In addition, healthcare facilities, especially public hospitals, are usually congested in SEA nations with limited resources. The issue is brought on by a lack of available beds, personnel, supplies, and diagnostic tools (Lim et al., 2014), which results in care delays with many patients departing without being examined. According to Digital Health Research (2021), in small and rural areas, it can be challenging for providers to hire and keep the skilled personnel needed to set up and operate a health

IT system. Small suppliers may find it particularly difficult when employees leave. Each employee often acquires wide-ranging experience, fills many jobs within the company, and can be challenging to replace.

Most people in urban regions have busy schedules, therefore many choose not to get medical treatment at all (Taber et al., 2015). The avoidance of medical treatment may slow down diagnosis and treatment, which in some circumstances would increase morbidity and mortality (Macariola et al., 2021). Furthermore, due to better opportunities and remuneration in metropolitan regions, health personnel in SEA are predominantly focused there, leaving rural areas with a shortage of staff(Kanchanachitra et al., 2011; Nair and Webster, 2013). When medical professionals are unavailable locally, this forces rural residents to seek treatment in cities. This issue frequently comes with long distance trips, higher costs, and unreliable transportation (Douthit et al., 2015).

Remote medical care is now possible because of telehealth (Dorsey and Topol, 2016). Its benefits focus on the wellbeing of healthcare professionals as well as clients. Online consultations are provided using health information technology (HIT) and remote patient monitoring (RPM) (Ye, 2020). With increased access to information and communication technology, telehealth has grown in popularity in the Philippines. In response to the pandemic, various organizations and businesses have created COVID-19 hotlines, webpages, and mobile applications that provide teleconsultations.

Since technology serves as the cornerstone of telehealth, a positive attitude toward it is essential as well. Fortunately, a study suggests that there is little evidence to support the claim that elderly people, who make up the majority of healthcare recipients, are hesitant to use technology and prefer to use other forms of technology (including

television, radio, and phone) when compared to younger adults (van Houwelingen et al., 2018). Giving patients enough support would help them feel more confident about using the equipment, which would facilitate the adoption of new technologies (Holden and Karsh, 2010).

The effectiveness of patient-provider communication is impacted by internet speed. In the Philippines, the typical internet speed is 2.8 Mbps (Salac and Kim, 2016). According to several studies, slow internet speeds degrade the effectiveness of systems for home-based online medical consultations, which results in poor video and audio quality, connection failure, and dissatisfied patients (Bernocchi et al., 2016; Dimitropoulos et al., 2017; Eslami Jahromi and Ahmadian, 2018; Almathami et al., 2020). In order to adopt telehealth, it is crucial to improve cell and internet service, educate telecommunications users, and expand access to devices.

Patients of all ages must be able to use telehealth services easily and simply. Many Filipinos' quality of life could be enhanced by the implementation of telehealth as an alternative to conventional in-person healthcare services. The Philippine government must therefore prioritize its implementation in the nation, particularly at this point in the pandemic. Working together with the government can hasten the implementation process and close any gaps that may already be there (Macariola et al., 2021).

Anything that could cause a privacy invasion, a confidential leak, fraud, misuse, wrong solutions, etc. must be absolutely absent because doing so could scare off potential clients or make the situation more difficult in terms of potential health consequences (Haleem, at al., 2021). Furthermore, Macariola at al., (2021) states that local government agencies ought to take part in telehealth education for medical

professionals and public information campaigns. Academic institutions in the nation, including medical schools, ought to incorporate classes that cover the stipulation and utilization of telehealth into their own curricula to guarantee that potential patients as well as healthcare professionals receive the education and training necessary to convey and receive medical treatment using the available ICT tools.

Hence, telehealth has the ability to greatly enhance the standard of care and accessibility in remote locations (Lin et al., 2019). While there are challenges to its implementation, telehealth is an important tool that can help address the healthcare needs of rural communities (Lambert et al., 2020).

Synthesis of Related Studies

The following studies described the different concepts related to the studies and showed the different barriers in the acceptance or progressive implementation of telehealth in rural health units. These studies can be clustered as similarities were demonstrated.

Due to technology improvements, particularly in the communication and healthcare sectors, access to services has unquestionably improved over the past few decades. In fact, in countries with modern technology, remote healthcare services are starting to take over and make access to medical treatment easier. Thus, as a result of this, the telehealth sector has emerged (Macariola, et al., 2021).

Balinbin (2022) claims that the original intent of remote care was to provide medical assistance in remote locations where it was difficult to receive healthcare. Social

exclusion crept into every aspect of our life during the COVID-19 epidemic, obstructing the usual delivery of healthcare to patients, staff, and decision-makers. In order to improve timely care access and to increase healthcare delivery at that time, telehealth has developed as a global strategy (Arora, et al., 2022).

According to the study of Gilkey et al., (2021), the results of the national survey show that adolescent telemedicine was widely used in the year following the commencement of the COVID-19 pandemic, with the majority of primary care physicians (PCPs) claiming they had used it and intend to keep using it.

Several people used telehealth for the first time as a result of the COVID-19 epidemic, but due to its perceived advantages, people wanted to keep doing so. In order to establish telehealth's role in the delivery of post-pandemic healthcare, it would be helpful to understand patient preferences (Predmore et. al, 2021).

Third-world countries like the Philippines have reportedly considered telemedicine, despite the fact that it is not yet widely used (Ong, et al., nd). The Philippines' National Telehealth System (NTS) makes use of a telemedicine platform to provide quick, top-notch expert treatment in outlying areas (Juban, et al. nd).

However, the findings of the study by Ong, et al., (nd), which sought to identify the factors influencing Filipinos' behavioral perceptions of telemedicine uptake and use indicate that the main factors influencing perceived user adoption were age, location, privacy concerns, hesitation to use, behavior, willingness for using, anticipation of effort and accomplishment, and hedonistic incentive.

Telemedicine has the ability to bridge healthcare disparities by giving professional assistance to healthcare practitioners in distant areas. However, its adoption has been limited, and the main factors influencing its uptake have been identified as social influence, performance expectancy, effort expectancy, attitude, and facilitating conditions (Pasco, 2016).

Telehealth (TH) and telecare (TC) programs have gained popularity as a means of promoting self-care in elderly populations, but high rates of non-participation and withdrawal have frequently been noted. Barriers to the adoption of TH and TC that are connected to non-participation and withdrawal include risks to identity, autonomy, and self-care, technical proficiency standards, equipment operation requirements, and expectations and experiences with service disruptions (Sanders et al., 2012).

In the Philippines, the primary variables influencing the perception of telemedicine adoption included age, geography, data privacy concerns, usage behavior, willingness to use, anticipation of effort and performance, and hedonic reward (Ong et al., nd).

In Saudi Arabia, telehealth services are widely used, but difficulties such as a lack of time or a packed schedule have prevented healthcare providers (HCPs) from using telehealth (Alghamdi et al., 2022). Overall, the adoption of telemedicine has been limited by a range of factors, including technical and operational challenges, concerns about identity and independence, and disruption of service expectations.

The adoption of telehealth in nursing practice is hindered by the abilities and attitudes of nurses, and the transitioning from face-to-face nursing to the utilization of

telehealth requires regional agreements and professional meetings to ensure its acceptance and implementation (Koivunen and Saranto, 2017).

Concerns have been raised about the potential for technical problems or incorrect diagnosis in the use of telehealth for emergency cases, as well as the degradation of the doctor-patient relationship and barriers to adoption for certain groups such as older patients and those with limited language proficiency (Alomari and Jenkins, 2021).

Telemedicine can provide convenient and safe healthcare to patients by allowing them to receive care remotely, reducing the risk of acquiring an infection in a hospital setting (Haleem et al., 2021). However, telemedicine has been underutilized in the Philippines (Pasco, 2016) and its success rate has been disappointing in lower-middle income countries (Macabasag et al., 2016). Factors such as education, financing, policy, technology, governance, and partnerships may be important for the sustainability of telemedicine implementation in developing countries like the Philippines.

Telemedicine has the potential to assist elderly and disabled individuals living in rural areas by utilizing technologies such as artificial intelligence, information processing, and sensing to provide healthcare in the home (Smith, 2022). However, there are several obstacles to the successful deployment of telehealth in rural areas, including a lack of policy in some countries and inadequate internet connectivity, weak cellular coverage, technological ignorance, and a lack of access to devices (CDC, 2020).

In the Philippines, there are no legislative structures in place to adopt telehealth (WHO, 2020). Many schools lack the necessary technology and education to enhance

digital literacy (Department of Information and Communication Technology, 2014). Additionally, rural areas may not have sufficient broadband internet for virtual consultations (Easley, 2020) and some residents may not have access to smartphones or computers.

To increase the adoption of telehealth in the Philippines, it is important to incorporate telehealth into medical curricula and provide training to student physicians (Balaji and Clever, 2021). Proper education on contemporary ICT tools is also crucial for older patients (Holderried et al., 2021). However, funding can be a barrier to the implementation of telehealth, as it can be expensive to purchase and maintain a health IT system, including hardware, peripherals, networking, and staff time (Digital Health Research, 2021).

Small and rural healthcare organizations may be hesitant to invest in an unstandardised and rapidly evolving technical field, particularly when there are other capital expenses to consider (Digital Health Research, 2021). In Southeast Asia, there is a shortage of healthcare workers and facilities are often congested, leading to care delays (Lim et al., 2014). It can be difficult for small providers to hire and retain the skilled personnel needed to set up and operate a health IT system, as each employee often fills many roles and is hard to replace (Digital Health Research, 2021).

People in urban areas may avoid seeking medical treatment due to busy schedules, leading to delays in diagnosis and treatment and increasing morbidity and mortality (Taber et al., 2015; Macariola et al., 2021).

In Southeast Asia, the concentration of health personnel in urban areas leaves rural areas understaffed, forcing rural residents to seek treatment in cities at a higher cost and with unreliable transportation (Kanchanachitra et al., 2011; Nair and Webster, 2013; Douthit et al., 2015).

Slow internet speeds can impact the effectiveness of patient-provider communication in telehealth, resulting in poor audio and visual quality, connection loss, and unsatisfied clients (Bernocchi et al., 2016; Dimitropoulos et. al., 2017; Eslami and Ahmadian 2018; Almathami et. al., 2020).

To improve telehealth adoption in the Philippines, it is important to improve internet and cell service, educate telecommunications users, and expand access to devices (Salac and Kim, 2016). It is also crucial to prioritize the implementation of telehealth in the country and to address any potential issues with privacy, confidentiality, fraud, abuse, and incorrect solutions (Haleem et al., 2021; Macariola et al., 2021).

Local government agencies, educational institutions, and medical schools should all play a role in providing education and training on the use of telehealth (Macariola et al., 2021). Telehealth has the ability to greatly enhance healthcare quality and accessibility in rural areas (Lin et al., 2019) and is an important tool for addressing the healthcare needs of these communities (Lambert et al., 2020).

Chapter 3

METHODOLOGY

This chapter outlines the research methodology of the study starting with the research design, followed by an outline of the instrument used to collect the data. Next, an overview of the research setting and inclusion/ exclusion criteria. Finally, this chapter would end with an overview of the confidentiality and ethical considerations, procedures used for data collection and data analysis, and the methods to establish rigor, trustworthiness, and integrity of data.

Research Design

A case study is a type of research method that creates a thorough, multidimensional grasp of a complicated issue in its actual setting. When trying to learn about a matter, occurrence, or phenomenon in depth and in a real-life setting, the case study approach is applicable (Crowe, 2011). According to Barrientos-Tan (2011), it entails an in-depth study of a single case or a small group of typical, connected cases with the goal of interpreting the behavior of the subjects in context of the occurrence of specific events or phenomena of interest to the nursing field. According to Yin (2018), a case study design should be used when: (a) the goal of the study is to provide "how" and "why" answers; (b) researchers are unable to control the behavior of the participants in the study; (c) researchers want to cover contextual conditions because they presume it is pertinent to the phenomenon under study; and (d) the boundaries between the phenomenon and context are ambiguous.

According to a study conducted by Subedi (2021), typically, participants in qualitative research may be included or excluded during the research journey rather than being predetermined. This study proposes that researchers have the autonomy to decide on participants in qualitative research, allowing for flexibility in selecting anywhere from one to twenty participants, depending on the depth of information needed and the nature of the inquiry. In conducting narrative inquiries, researchers can justify selecting anywhere from one to twenty or even more participants.

Subedi (2021) further elaborated that qualitative research prioritizes delving deeply into the study phenomenon rather than striving for broad coverage. The aim of qualitative methods isn't to generalize findings to the larger population. Hence, qualitative inquiry is imbued with values and avoids pursuing objective findings devoid of neutrality. Utilizing a small sample size enables researchers to concentrate on achieving a profound understanding within specific social and cultural contexts, a feat typically unattainable with larger samples. Given that knowledge is co-constructed by both researchers and participants, qualitative research embraces a constructivist approach.

According to Creswell (2017), categorizing case studies within qualitative research poses considerable challenges. Yin suggests utilizing a minimum of six sources of evidence, while Creswell [6] advises limiting cases to no more than 4 or 5. Additionally, he suggests involving 3 to 5 interviewees per case study. One issue arises when qualitative methodologists offer numerical ranges for suitable sample sizes without providing underlying rationales. Dukes (2012) also suggested three to ten participants in a study. With three respondents, you can start to see patterns emerge in their responses. Each additional respondent can provide further confirmation or contradiction of these patterns, adding depth to your analysis.

General and Applied Methods of Inquiry

In this case study, the researchers conducted an in-depth interview in order to explore the utilization of telehealth post-COVID19 pandemic among selected clinics in Iloilo, with the core question**,** “How is the utilization of telehealth post-COVID-19 pandemic in a selected clinics in Iloilo?”. The researchers collected the data by asking all subjects the same core question. Through a semi-structured interview, the core question is followed up with “how” and “why” questions to facilitate reaching a holistic understanding of the phenomenon being studied. The perspectives and attitudes of physicians toward the utilization of telehealth after COVID-19 pandemic was the subject of this case study. Furthermore, the qualitative method of inquiry allowed the researchers to explore the perceptions of the respondents, challenges encountered and how these were addressed through interviews that identified similar concepts.

Based on the study research questions and the literature on the perceived telehealth use among physicians, an interview guide was designed. Interview questions were primarily focused on the physicians who are involved in the utilization and adoption of telehealth post COVID-19 pandemic. The researchers conducted interviews on subjects such as the social care concerns, prior and present care arrangements, attitudes, expectations, and barriers to telehealth use, and its potential influence on health and care needs management. Interviews were audio-recorded and transcribed with the participants’ consent. Transcript data and field notes were organized and analyzed through constant comparison whereby data were compared along through instances to identify common key themes and atypical cases (Sanders, et al., 2012).

Participants of the Study

The researchers used a purposive sampling technique in choosing the participants. Its main objective was to produce a sample that could be assumed to be a representative sample of a population. There were 3 clinics with one participant from each clinic.

The researchers recruited and selected participants who provided the best type of information related to the study. For this study, the participants were limited to only the following:

A physician who:

a) currently works in a selected clinic in Iloilo City.
b) utilizes telehealth post-COVID19 pandemic.
c) is willing to participate, disclose information during the interview, and complete the interview process.
d) can either be male or female.
e) is fluent in English
f) must be from different specializations (Pediatrics, Geriatrics, Family Medicine)
g) Age 30-65

The participants was able to meet the following inclusion and exclusion criteria:

Research Setting

The researchers conducted the study in a selected clinic in Iloilo City, which utilized telehealth post-COVID-19 pandemic. The participants selected for this study were the health personnel in a selected clinic in Iloilo City who utilized telehealth post-COVID-19 pandemic. Each participant was interviewed either face-to-face or via different online platforms such as Google Meet, Zoom meeting, and Messenger video call. Informed consent was secured prior to the conduct of the interview.

Data Collection Plan

A semi-structured interview was utilized to collect the data. The participants were asked a set of guide questions, which were recorded with consent from the participants. This type of data collection method was a mixture of structured and unstructured interviews. It had a predetermined set of questions, but the interviewer was allowed to ask follow-up questions, allowing for flexibility of the interviewer to clarify, elaborate, and rephrase their answers (George, 2022). An interview guide was formatted in line with the objectives mentioned in Chapter 1. The developed interview guide consisted of four succeeding parts. Part 1 was the introduction wherein the researchers obtained the signature of consent from each participant. The researchers' interview guide provided an introductory text that covered the above-mentioned topics and was given to the participants. The researchers first expressed gratitude to the participants for their willingness to participate and then proceeded to the introduction of the interviewers and the purpose of the interview. Lastly, participants were informed that the whole interview would be recorded, followed by the assurance of confidentiality of the information shared, and the researchers provided an opportunity for questions.

Part 2 of the interview guide consisted of opening questions aimed at discussing the participants' background regarding the utilization of telehealth.

Part 3 of the interview guide focused on asking questions that addressed the objectives of the case study.

The final part was Part 4, which closed the interview. The participants were asked for additional comments. The researchers expressed their gratitude towards the participants for taking part in the study and informed them about the next steps. The interview lasted for 30 minutes to an hour. If the participant did not wish to answer the question, the researcher respectfully moved on to the next question. During the interview, no one else but the researchers was present unless they wanted someone else to be there.

Interview Guide Questions:

Core Question: “How is the utilization of telehealth post-COVID19 pandemic?”

1. How would you define telehealth?
    a. In your clinic, what are the types of healthcare services that can be done via telehealth post-COVID19 pandemic?
    b. Is there a difference between the utilization of telehealth during and after the COVID19 pandemic? If so, what are these differences?

2. What methods do you use in delivering health care services in telehealth?
    a. How were these methods appropriately selected and adopted?

3. What are the main issues that have been recognized in implementing and maintaining the use of telehealth post-COVID19 pandemic?
    a. How did these obstacles/barriers affect the utilization of the telehealth post-COVID19 pandemic?
    b. How were these issues addressed by your healthcare clinic?

4. What is the significance of these obstacles and barriers in the post-COVID19 pandemic?
    a. How does your clinic make telehealth a sustainable and accessible healthcare option post-pandemic?

5. What aspects of telehealth here in Iloilo city should be improved?
    a. What are the most recent developments your clinic has developed or implemented within telehealth?

Ethical Considerations

Ethics in research aims to protect the rights of the participants, ensuring that the methodological approaches to be used are appropriate and that the participants would not be vulnerable to unwarranted harm (McKenna & Gray, 2018). Before the conduct of the research, the proposal was submitted to the CPU research ethics committee for review and approval. The following ethical considerations were taken into account to guarantee that the study would be conducted appropriately.

Risk Assessment

There was a low risk in safety and confidentiality due to the data being stored online and results being published in journals, but the researchers mitigated the risk by controlling and limiting the account access only among members and ensuring the security software was updated.

Benefits Assessment

This study might help the participants who implement it by using the insights to plan the implementation of telehealth in their clinics and address healthcare gaps more effectively. by examining telehealth utilization in selected clinics, it informs efforts to enhance healthcare infrastructure, improve access to healthcare services, and reduce costs. This, in turn, strengthens the capacity of local healthcare professionals and empowers the community with better healthcare access and resources. Additionally, community engagement in the research process fosters a sense of ownership and involvement, paving the way for more community-centered healthcare solutions and increased health education. Ultimately, the study's impact extends beyond research findings, positively influencing the overall healthcare landscape and the lives of the local population in Iloilo.

Withdrawal Criteria for Participants

Their participation in the study was entirely voluntary. It was their choice whether to participate or not. If they chose not to participate or to withdraw from the study at any time, there were no penalties or other consequences, and there was no need to give any

reason. If at any time they withdrew from the study, their data would be discarded properly.

Anonymity and Confidentiality of Participants/Respondents

The information they provided was solely for the purpose of that study. Their identity was to be kept private and confidential to the extent provided by law. They were assigned an ID number, and their data was stored with utmost respect to their privacy.

Voluntary, Non-coercive Recruitment of Participants/Respondents:

The decision to participate in this study was entirely optional; consent was required. The respondents were offered the option to participate in or reject the survey. An information-filled consent form was provided, or one was read and presented in a language that the respondent could comprehend. They were given the chance to ask questions and were expected to receive satisfactory answers. The respondent was free to leave the study at any moment without incurring any costs. We did, however, require that all respondents provide complete answers to all inquiries. By notifying the researcher that they no longer wanted to participate, they could withdraw. In the event of withdrawal, the respondent would not be questioned.

Disposal of Research Materials/Data

Electronic research materials, including data files, were securely stored on encrypted and password-protected devices, with access limited to authorized personnel only. These materials were retained for a specific period as stipulated by institutional and

ethical guidelines, and once the retention period expired, secure data destruction procedures were applied. Electronic data was permanently deleted using data erasure software compliant with data protection regulations.

Physical research materials, such as paper documents and consent forms, were meticulously shredded and disposed of in accordance with data protection and environmental regulations, ensuring the safeguarding of participant confidentiality.

Comprehensive documentation of the disposal process, including methods employed and responsible personnel, was maintained for auditing and compliance purposes.

Contribution to local Capacity Building and Benefits to Local Communities

By examining telehealth utilization in selected clinics, it informed efforts to enhance healthcare infrastructure, improve access to healthcare services, and reduce costs. This, in turn, strengthened the capacity of local healthcare professionals and empowers the community with better healthcare access and resources. Additionally, community engagement in the research process fostered a sense of ownership and involvement, paving the way for more community-centered healthcare solutions and increased health education. Ultimately, the study's impact extended beyond research findings, positively influencing the overall healthcare landscape and the lives of the local population in Iloilo.

Telehealth research has altered the field of healthcare delivery through increased accessibility, cost-effectiveness, chronic illness management, mental health assistance,

and health education. It is crucial that continuing research be at the forefront as telehealth and technology develop in order to guarantee that societies continue to gain from these breakthroughs. Telehealth holds the key to the future of healthcare, and its research-driven innovations would unquestionably be important in establishing healthier and more connected communities all over the world.

Incentives/Compensation for Participants

In this research study, it was important to clarify that there would only be a provision of a small token of appreciation to the participants. Participation in this study was entirely voluntary, and individuals who chose to take part would do so without any expectation of financial or material rewards.

Declaration of Potential Conflict of Interest

The researchers declared that there was no apparent conflict of interest in the conduct of the study and there were no circumstances that could influence the results.

Dissemination Plan

The findings and result of the study would be used to inform and educate the patients, health personnel, health administrators, policymakers, and future researchers regarding the status of telehealth implementation post COVID19-pandemic. The result of the study would be disseminated by emailing it to the corresponding beneficiaries together with the respondents of the study as soon as the study had been completely

conducted. The email of the corresponding respondents and beneficiaries would be taken during the interviews. The study would also be presented in the final defense, research forum and international research conference. Additional dissemination would occur through articles published in peer-reviewed journals.

Data Analysis Plan

Stake's (1995) method of data analysis was employed in the study. Stake defined the method of data analysis as "a matter of giving meaning to first impressions as well as to final compilations" (Yazan, 2015).

There are two strategic ways to analyze data in Stake's Method: (1) Categorical Aggregation and (2) Direct Interpretation. Stake suggests that conducting data collection and analysis are done simultaneously. Therefore researchers are required to have the knowledge of what leads to significant understanding, recognizing good sources of data, and consciously and unconsciously testing out the veracity of their eyes and robustness of their interpretations which requires sensitivity and skepticism (Stake, 1995).

In notions of validity and reliability, Stake offers four strategies for triangulating data: (1) data source triangulation, (2) investigator triangulation, (3) theory triangulation, and (4) methodological triangulation.

General and Applied Method of Analysis

The purpose of the analysis was to describe the data collected among the selected participants and as well as to interpret and construct themes. The analysis

began at the first encounter while the researchers listened to the participant's responses and was followed by the reading of verbal transcription and compared the individual transcripts for verification and full understanding. The researchers implemented investigator triangulation by adopting a collaborative approach to interviewing and analysis. Each researcher took turns conducting interviews, allowing for diverse perspectives and rapport-building with participants. Subsequently, the researchers individually analyzed the transcripts, leveraging their unique insights and interpretations to uncover nuanced meanings and patterns within the data. Afterward, integrating their findings through regular meetings and discussions facilitating a comprehensive synthesis of perspectives and interpretations, further refining the depth of understanding of the phenomenon under investigation. This iterative process not only enhanced the validity and reliability of the findings but also enriched the understanding of the phenomenon under investigation.

Investigator triangulation, a cornerstone of qualitative research methodology, involves the utilization of multiple investigators or researchers to corroborate findings and enhance the credibility and trustworthiness of study outcomes (Denzin, 1978). This methodological approach is rooted in the acknowledgment of the subjectivity inherent in qualitative inquiry, aiming to mitigate biases and increase the reliability of results through the integration of diverse perspectives. By engaging a team of investigators with varied backgrounds, expertise, and viewpoints, triangulation facilitates the exploration of research phenomena from multiple vantage points, thereby enriching data interpretation and fostering comprehensive understanding. Moreover, investigator triangulation serves to promote rigor and rigorously validate emergent themes or patterns by subjecting them to scrutiny from different analytical lenses. Through collaborative reflection and discourse among investigators, this methodological strategy engenders reflexivity and

critical appraisal, ultimately enhancing the robustness and validity of qualitative research endeavors. As such, investigator triangulation stands as a pivotal methodological tenet, fostering a nuanced and holistic approach to inquiry that is fundamental to the advancement of knowledge in diverse academic domains.

The analysis was conducted by utilizing a method of analysis as described by Stake (1995). The initial interpretation of the participants was noted by the researchers. Upon accomplishing the interview, the transcripts underwent extensive review. The researchers used categorical aggregation in the analysis of data by clustering the information obtained and searching for patterns or “correspondences” (Stakes, 1995). These topics were noted, arriving with simpler and categorized data. These were then meticulously read and inductive analysis was utilized in coming up with an understanding about the utilization of telehealth in a selected clinic. The meanings and interpretations constructed by researchers were further exhausted until they resulted in an organized interpretation that could justify these phenomena.

In the course of that process, four strategies of triangulation for data validation were observed. Data was validated by interviewing the personnel of the selected clinic that utilized telehealth in Iloilo, which allowed for a variety of data sources. During the exhaustion of meanings and possible interpretations, the researchers discussed within the group about their individual interpretations and points of view, further validating the data analysis. Methodological Triangulation was used by authenticating the audio recordings taken during the interviews. For Theory Triangulation, researchers applied several different theoretical frameworks in their study.

Validity and Reliability of the Study

This section of the study went through the methods taken to improve the rigor of this qualitative investigation by addressing threats to the data and interpretation's trustworthiness. According to Creswell (2014), four strategies—credibility, transferability, trustworthiness, and confirmability—could be used to increase the reliability of qualitative research. These strategies were built in a similar manner to the quantitative criteria of internal and external validity, reliability, and neutrality.

In qualitative terminology, rigor was a means of ensuring trustworthiness in study findings. It allowed the researcher to retain consistency in procedures used across time. As in nursing, one should have based the practice on the greatest evidence possible (Queens University of Charlotte, 2022). According to Merriam-Dictionary Webster's (2016), rigor was simply the attribute of being thorough and correct, or the property or state of being particularly precise or meticulous. Without rigor, research lost its value, turned into fiction, and was no longer valuable, claimed (Morse et al., 2002). The soundness of the study design and the method's suitability for resolving the issues were further defined by the authors as rigor. Davies and Dodd (2002) defined rigor as the reliability and validity of research, as well as the concept's intrinsic quantitative bias.

For qualitative studies, trustworthiness was regarded as a more relevant criterion. Schmidt and Brown (2015) defined trustworthiness as the quality and authenticity of qualitative research findings. It referred to the level of trust or confidence that readers had in the outcome. Guba and Lincoln (1989) recommended that the research meet four requirements to assure the process's credibility, namely: credibility; transferability; dependability; and confirmability.

The most important component was the study's credibility, or confidence in the study's validity and consequently the conclusions (Polit & Beck, 2014). The validity of the results of a study determined whether or not they represented an accurate reflection of the participants' initial opinions and reliable data derived from their source data (Creswell, 2014). To establish trustworthiness, a researcher had to assess individual transcripts, looking for commonalities between and among all participants. A research was regarded as credible when it provided an interpretation of a situation in such a manner that others who had had that event immediately identified it (Queens University of Charlotte, 2022). In this study, the findings of the data were reviewed, and the participants were allowed to confirm and validate these findings during the return interview.

Transferability was used to give the reader evidence so they could judge the reliability of the study results (Cope, 2014). In contrast to other parts of research, the nature of transferability, or the extent to which results were helpful to individuals in different circumstances, involved readers determining how pertinent the findings were to their situation (Polit & Beck, 2014). According to Anderson (2017), the foundation for careful interpretation to illustrate in-depth concepts and constructs that were significant to the study could be established by presenting rich, direct quotations or the authors' own words, descriptive phrases, or experiences that gave a sense of the participants and their environment. According to Forero et al. (2018), the researcher guaranteed that participant recruitment and selection were based on expert knowledge and that participants were aware of the phenomena under study in order to establish transferability.

Dependability relates to the consistency of the data through time and between research contexts (Polit & Beck, 2014). According to Merriam (2015), it defines it as the extent to which study findings may be replicated with comparable people in a comparable situation. It highlights how important it is for the researcher to convey or illustrate the changing circumstances and environment that are essential to the consistency of the study result.

Confirmability is a term used to describe the objectivity of the researcher's collection and presentation of data. The reader must be aware that the conclusions are truly drawn from the facts, not the researcher's personal preferences (Mabuza et al., 2014). The findings on neutrality or degree are consistent and reproducible. The use of methodological log notes and preserving an audit trail of analysis are examples of methods. As they go, qualitative researchers keep precise records of all of their findings and analyses (Connelly, 2016).

CHAPTER 4

FINDINGS, ANALYSIS, AND INTERPRETATION

This chapter presents the findings of different perspectives on the Utilization of Telehealth Post-COVID19 Pandemic, based on an interview with doctors among Selected clinics in Iloilo.

According to Stephanie Watson (2020), The provision of medical services virtually via the use of technology is known as telehealth. It can involve anything from remotely monitoring patients' vital signs to conducting doctor visits via computer. Its definition extends beyond telemedicine, which is limited to the provision of medical care remotely. Medical practitioners' training and ongoing education are also included in telehealth.

"The use of telecommunications and computer technologies to make a broad spectrum of health-related services and information available to populations with limited access" is how Grigsby and Goetz (2022) define telehealth. Furthermore, "the use of electronic information and communications technologies to provide and support health care when distance separates participants" is how the Institute of Medicine defined telemedicine in 1996.

According to Stephanie Watson (2020), there are several benefits to using technology to administer healthcare, such as financial savings, ease of use, and the capacity to treat patients with limited mobility or those living in remote locations without access to a local clinic or doctor. These factors have contributed to a notable increase in

telehealth usage within the past ten years. Ten years ago, just 35% of hospitals in the United States used telehealth to connect doctors and patients remotely. Today, 76% of hospitals do so. The (COVID-19) epidemic has made telehealth even more crucial. A heightened interest in and use of technology for both receiving and providing healthcare has resulted from fears about the virus spreading and being contracted during in-person medical visits.

Making sure patient data is secure and private is one of the biggest concerns for telehealth organizations. Telehealth services are provided via remote messaging and video conferencing platforms, which are susceptible to cyberattacks. By offering end-to-end encryption, multi-factor authentication, and other cybersecurity measures, artificial intelligence (AI) can play a significant role in protecting these communication routes (Amjad, 2023).

Selecting the appropriate telehealth platform is an important choice that can affect the standard of healthcare services you get or offer. You may make an informed decision that improves the telehealth experience for patients and clinicians by taking into account elements like user-friendliness, HIPAA compliance, compatibility, customization, and participation by patients' tools. Messenger is the most popular telehealth platform (Mokwe, 2023).

Telehealth is the use of digital and telecommunication technology to facilitate the provision of health and related services, such as medical care, provider and patient education, health information services, and self-care. Technologies used in telehealth include remote patient monitoring (RPM), live video conferencing, "store and forward" electronic transmission, and mobile health apps (NEJM Catalyst, 2018).

Healthcare professionals can utilize remote monitoring devices to gather information on the health of a person and their symptoms to address this diagnosing issue. Superior video conferencing equipment can also help medical professionals see a patient's condition more clearly and diagnose them more precisely (Monisha, 2023).

Even though they have been there since the 1900s, the integration of digital technologies into health systems has changed and grown quickly in the last five years, leading to the emergence of both telemedicine and telehealth as modern solutions to the global healthcare resource crisis. Globally, telehealth and telemedicine have become increasingly popular, and many nations have integrated them into their healthcare systems. The COVID-19 pandemic led to a rise in the use of digital health apps, remote monitoring, and online consultations (Ndwabe, 2023).

Healthcare professionals can treat you virtually without needing to see you in person, thanks to telehealth, also known as telemedicine. The majority of telehealth activities take place online using a computer, tablet, or smartphone with internet connectivity (Administration of Health Resources and Services, 2023).

Case 1 - Doctor A

Doctor A is a university physician. She embraces telehealth as this new mode of patient care. She found it fascinating to witness her patients' lives from a different perspective through virtual consultations. However, she couldn't shake off the challenges inherent in conducting thorough physical examinations and establishing strong patient rapport remotely. Despite these hurdles, Dr. A remained hopeful about the transformative

potential of telehealth in extending healthcare access and improving patient engagement in the long run. She saw it as a promising tool for delivering personalized care beyond the limitations of traditional medical practice.

According to Dr. A, telehealth is about the delivery of health services to those whom you might want to reach. As an example, she stated that in this university, when we talk about telehealth, this includes telemedicine, teleconsultation, health education, and even research, through the use of the internet or using any information technology as part of the delivery system or as part of the platform.

In addition, she talked about how telehealth works in their clinic. She said, At Central Philippine University (CPU), the clinic has developed a robust telehealth system to extend healthcare services to patients and potential patients. This system integrates various information technology platforms, including mobile numbers, emails, messenger accounts, and Facebook, enabling individuals to access health information and services. Upon initiating contact, patients are provided with a waiver for honest disclosure and consent for consultation by the medical secretaries. Once agreed upon and signed, the medical secretary or nurse facilitates the connection between the patient and available doctor(s) for the consultation. Following the session, which may include medical counseling and prescription, patients evaluate the effectiveness of the interaction. Moreover, telehealth is utilized for student evaluations before On-the-Job Training (OJTs), following specific guidelines to determine the necessity of in-person examinations. This structured approach ensures comprehensive patient care while leveraging technology for healthcare accessibility.

When asked about what types of healthcare services can be done via telehealth post-COVID19 pandemic in your clinic, Doctor A answered, "*Teleconsultation then we do health education by means of informatics or infographics, we also have recorded videos. We also have infographics or animated info with regards to teleconsultation, we also have infographics on "pink eye" or conjunctivitis. We also have infographics on the importance of covid vaccination, and we also do research."* The utilization of teleconsultation represents a significant advancement in healthcare delivery, allowing for efficient communication between healthcare providers and patients. Beyond consultations, their approach extends to health education, leveraging various forms of informatics such as infographics and recorded videos. It is evident that the integration of informatics and multimedia resources has greatly enhanced the dissemination of crucial health information. The use of infographics, animated content, and recorded videos has proven to be effective in conveying complex medical concepts in a clear and engaging manner.

Dr. A was also asked about the difference between the utilization of telehealth during and after the COVID19 pandemic. She stated that, *"There is a surge of course. During the pandemic, there is a surge of utilization of teleconsultation primarily because this would lessen the chances of COVID transmission compared to post COVID or shall we say the decrease in COVID incidence wherein face to face consultation is not anymore as risky as that during the height of COVID."* Dr. A highlighted a surge in teleconsultation usage during the pandemic, driven by the imperative to minimize the risk of COVID transmission through face-to-face interactions. This heightened reliance on telehealth was a pragmatic response to the heightened concerns surrounding in-person visits. However, as COVID-19 incidence decreases post-pandemic, the necessity for teleconsultation may diminish, with face-to-face consultations becoming less risky.

She then mentioned the considerations in choosing the platform they utilize in telehealth. She acknowledged that messenger applications, particularly Facebook Messenger, are widely accessible among students and staff, with approximately 80% of students reported to have messenger accounts. For those without messenger accounts, access can be easily obtained through Facebook, which is prevalent among the university community. Additionally, email is a widespread communication tool within the higher education setting, as all members are required to have email accounts. Furthermore, it is recognized that mobile phones are commonplace among individuals, ensuring communication accessibility. In cases where internet access or data availability is limited, alternative methods such as landline calls are accommodated. This inclusive approach ensures that individuals without internet or data access can still reach out for assistance, whether through landline calls or email communication, thereby promoting equitable access to healthcare services within the university community.

When asked about the main issues that have been recognized in implementing and maintaining the use of telehealth post-COVID19 pandemic, she answered, "*One of course is privacy."* The presence of three individuals during telehealth sessions poses a challenge to ensuring patient privacy. With the inclusion of a secretary or nurse alongside the doctor and patient, it becomes difficult to reassure patients that only authorized personnel are present in the virtual consultation room. Furthermore, concerns arise regarding the security of data accessed through messenger or email accounts, highlighting the potential risks of privacy breaches if these accounts are compromised. She added*, "And of course, there's the lack of the performance of a physical examination which is essential in the diagnosis of the disease."*

When asked how the clinic addressed this issue, she stated that *"We are having regular review on the maintenance of patient's privacy, especially the techniques on safeguarding privacy of patients' during telehealth or teleconsultation and we usually check, because we usually are very sensitive in checking or asking questions so that if there's a need to really see the patient personally, we could advise them to come. We could shift our platforms from telehealth to actual or in person if there's a need following our conversation."*

In the question "What is the significance of continuing the use of telehealth post covid-19 pandemic?" she answered, *"Aside from the convenience of just seeking consultation at the comfort of your homes, this should reduce the expense of going to the physician, expense of transportation, and the ease where you cannot even go to the physician. Again, it would lessen the risk of contracting infectious disease. It could also cut down time to be spent waiting at the clinics or the emergency room, and it would give an avenue for very close monitoring because at any point in time you could always contact at the time you're not feeling well, so monitoring becomes easier."*

For the last question, Dr. A was asked about the aspects of telehealth in Iloilo City that should be improved. She answered, *"The bandwidth. Well, this is a nationwide concern. Our internet, our bandwidth is actually very slow and sometimes interrupted and we have power outages, and modern information or technology would always depend on this. So, these are actually the main road blocks in successful telehealth delivery."*

Case 2 – Doctor B

Doctor B is a physician specializing in Internal Medicine and Geriatrics. She utilizes telehealth as means to provide remote healthcare services to her patients when COVID-19 pandemic occurred and continuously to do so even on post-Covid 19.

According to Doctor B, she defines telehealth as a medium wherein a physician can do consultation aside from face-to-face by means of virtual. In the question on how telehealth works in her clinic, she stated that it started during COVID-19 wherein she would advise her patient to go online consultation when patient complains of cough or related to COVID-19 concerns. The patient would have to schedule through her secretary. She then uses the app, The Filipino Doctor (TFD) formerly known as PPD under MIMS as a medium to provide remote healthcare services. In addition, the types of healthcare services that she does via telehealth in their clinic post-COVID-19, are medical consultations, giving of medical certificates or laboratory requests, and providing patient education. She noted that there's not much difference between utilization of telehealth during and after COVID-19 pandemic since teleconsult has been part of the patients who have access to her and the continuum of patient care has already established two options.

When asked about the methods or apps that she uses in delivering healthcare services in telehealth, she mentioned TFD or The Filipino Doctor app. She said that there are a lot of means online however she prefers TFD since collaborations with MIMS is the good part. She added that it's user friendly, and in terms of privacy with the patient, there's an option for consent from the patient, scheduling face-to-face or online, and mode of payment is also part of the app.

In the question about main issues in implementing and maintaining the use of telehealth post-COVID19 pandemic, she stated about the availability of time online since

during COVID-19, they do mostly teleconsult rather than doing clinics. Nowadays, she is now back in the clinic doing face-to-face along with online consultation. To address this issue, she mentioned about explaining it to the patient that she is the kind of doctor who is thorough with the listening and explaining the care rendered to the patient, that's why they're patient enough to stay and wait to have consultation. She also added the prioritization of patients wherein depending on the necessity, she would have some sort of break to do online like when a patient needs the medication the soonest.

When inquired about the significance of continuing the use of telehealth post Covid-19 pandemic, she answered, *"I still believe in using both in terms of the face-to-face and teleconsult because I have days that I'm also doing my learning, meaning to say, I go outside of Iloilo or abroad, even with the fast-paced internet, and when you have your sim, my business can go online."* She is also glad that the apps that are being used now for teleconsult are better than before because it's user friendly, unlike before. Now it is a shortcut, since they can upload their laboratory and then do the scheduling which really adds to a more organized process towards working with patients.

For the last question, Doctor B was asked what aspects of telehealth in Iloilo City should be improved. She answered that in doing telehealth, it needs higher internet speed. The main issue is the bandwidth since you cannot use the app online if there's no internet connection. When she uses Viber or messenger, she needs to go outside for that since when using it inside, the internet needs to be improved a little bit. She also stated that, in aspects of physicians here in Iloilo, not all doctors use telehealth and that a doctor can engage in using telehealth if they are literate or meaning to say that are technology savvy.

Case 3 - Doctor C

Doctor C is a healthcare provider actively engaged in telehealth services, particularly in the post-COVID-19 era. Throughout the interview, Doctor C provides insights into the implementation, challenges, and potential improvements of telehealth services, focusing on their practice setting.

Doctor C's approach to telehealth is pragmatic yet hopeful, acknowledging its transformative potential while recognizing inherent challenges. She emphasized the importance of personalized care and the need to overcome limitations in conducting thorough physical examinations and establishing strong patient rapport remotely.

In defining telehealth, Doctor C articulates its scope beyond mere consultations, encompassing various healthcare services delivered through technology. She highlighted the integration of different platforms like MS Teams, Viber, and specialized teleconsult platforms, tailored to patient and institutional needs.

Regarding the utilization of telehealth during and after the COVID-19 pandemic, Doctor C observes a surge in usage during the pandemic driven by the need to minimize COVID transmission risks. However, she anticipates a decrease post-pandemic as face-to-face consultations become less risky.

Doctor C addresses the selection of telehealth platforms, emphasizing convenience for both patients and providers. She navigated various platforms based on institutional preferences, patient demographics, and personal convenience, ensuring effective communication while considering technical constraints.

Challenges in telehealth implementation post-COVID-19, such as privacy concerns and the lack of physical examinations, are acknowledged by Doctor C. She emphasized the importance of regular reviews to maintain patient privacy and the need for alternative strategies when physical examinations are necessary.

Regarding the significance of continuing telehealth post-pandemic, Doctor C highlights its role in improving healthcare accessibility, reducing costs, minimizing disease transmission risks, and enabling close monitoring of patients.

Finally, Doctor C identifies bandwidth limitations as a significant barrier to telehealth in Iloilo City, emphasizing the need for improved internet infrastructure to facilitate successful telehealth delivery. She also mentioned the importance of advertising and education to increase telehealth utilization among the local population.

Introduction to the results

These correspondences were labeled as follows: “Telehealth processes, Workflow, Components”, “Impact, Challenges, and Concerns of Telehealth” and “Telehealth Utilization and Adaptation”.

Table 1. Summary of Correspondence and Sub-Correspondence

Correspondence 1	Correspondence 2	Correspondence 3
Telehealth processes, Workflow, Components	Impact, Challenges, and Concerns of Telehealth	Telehealth Utilization and Adaptation
1.1. Definition and Scope of Telehealth	2.1. Surge During the Pandemic	3.1. Doctor's Perspective and Adoption
1.2. Platforms and Accessibility	2.2. Convenience and Cost Reduction	3.2. Involvement in Improvements
1.3 Patient Engagement and	2.3. Privacy and Security	

Correspondence 1: Telehealth processes, Workflow, Components

This correspondence was generated from the transcripts of the interview conducted with the following sub-categories: Definition and Scope of Telehealth, Platforms of Accessibility, Patient Engagement and Consent, and Evaluation and Follow-up, Teleconsultation and Telemedicine, and Health Education and Research. This implies the understanding of the participants when it comes to the different aspects of telehealth, which they have encountered during the utilization of telehealth post COVID19 pandemic, as well as the systematic delivery of remote healthcare services using technology. This includes appointment scheduling, patient registration, virtual consultations, medical documentation, remote monitoring, etc. Moreover, this also highlights the diverse approach to health education, employing informatics, infographics, recorded videos, and social media platforms. They emphasize teleconsultation, COVID-19 vaccination, and research, aiming to inform and engage individuals effectively.

The use of information and communication technology for people and communities that have trouble getting to their healthcare practitioner is known as telehealth. It is the healthcare of the future, providing everyone with access to high-quality treatment regardless of time or location. This first chapter establishes the framework for the rest of the book, which encourages telehealth by outlining its principles and practical implementation techniques. (Shashi Gogia, 2020).

1.1. Definition and Scope of Telehealth

The provision and facilitation of health and health-related services, such as medical treatment, patient and provider education, health information services, and self-care, using digital and telecommunications technology is known as telehealth. Technologies utilized in telehealth include live video conferencing, mobile health apps, "store and forward" electronic transmission, and remote patient monitoring (RPM). (NEJM Catalyst, 2018).

In terms of the Overview of Telehealth regarding Definition and Scope of Telehealth, the statements made by Doctor A, Doctor B, and Doctor C provide insights into different perspectives on telehealth and its fundamental purpose.

Doctor A defines telehealth as a means of delivering healthcare services to individuals who may not have access to traditional in-person care. This perspective emphasizes the outreach aspect of telehealth, highlighting its potential to bridge geographical and logistical barriers to healthcare access.

Doctor B characterizes telehealth as a medium for conducting consultations virtually, alongside or instead of face-to-face interactions. This perspective emphasizes the flexibility and versatility of telehealth, allowing healthcare providers to engage with patients remotely through various communication channels.

Doctor C similarly defines telehealth as a form of patient consultation facilitated by technology. This perspective underscores the role of technology in enabling remote healthcare delivery and emphasizes the convenience and efficiency of telehealth consultations.

Overall, these statements collectively highlight telehealth as a multifaceted approach to healthcare delivery that leverages technology to overcome barriers to access and facilitate patient-provider interactions regardless of physical distance. Each perspective underscores the importance of telehealth in expanding access to care and improving healthcare delivery outcomes. As stated in a study conducted by Davis et al. (2020), Telehealth interventions offer a well-supported strategy for delivering patient education, timely communication, goal setting, and connecting healthcare teams across distances. It is a multifaceted method that delivers emergency care for both critical and non-critical situations. Studies have shown that telehealth is both cost-effective and efficient. However, designing and implementing telehealth programs can be challenging due to various barriers. Successfully addressing these barriers is associated with effective telehealth implementation.

Furthermore, recently, this technology has been proven to enhance healthcare quality by enabling information exchange across vast distances. It broadens access to underserved regions, facilitating appointment scheduling and attendance. Telemedicine reduces the need for doctors and patients to travel extensively, transforming the lives of individuals by ensuring they receive suitable healthcare regardless of their location.

Doctor A: *“Telehealth, actually, is about the delivery of health services to those whom you might want to reach.”*
Doctor B: *“ Telehealth is a medium wherein you can do consultation by means of virtual or aside from face-to-face"*
Doctor C: *“ Telehealth is a consultation with patients using technology”*

Doctor C: *“Means that we can use in order to consult our patients without having them come us face to face”*

1.2. Platforms and Accessibility

The platforms for telehealth can provide patients with interactive tools, resources, and instructional materials to help them take charge of their health and become more involved in their care.

Even though telehealth is now more accessible, disparities are cause for concern. Beyond the COVID-19 epidemic, measures like constructing and releasing an open web conferencing platform should be taken into consideration to improve the accessibility of telehealth to vulnerable communities through educational outreach and training (Boon Peng Ng, PHd, 2021)

In terms of Overview of Telehealth regarding Platforms and Accessibility, the statements provided by Doctor A, Doctor B, and Doctor C offer insights into the diverse platforms and technologies utilized in telehealth practices, as well as the varying preferences among healthcare providers.

Doctor A provides a comprehensive overview of telehealth, emphasizing its broad scope encompassing telemedicine, teleconsultation, health education, and research conducted through various internet-based or information technology platforms. They highlight the flexibility of telehealth, which can involve communication through calls, texts, chats, or video calls using platforms like MS Teams, Messenger, Viber, or PPD. Doctor A also emphasizes the importance of accessibility by sharing contact information

such as mobile numbers, emails, or social media accounts for patients to reach out to the medical secretary.

Doctor B references the Filipino directory of Doctors (TFD), formerly known as PPD under MIMS, indicating a preference for using established directories or platforms for telehealth communication and consultation.

Doctor C mentions using MS Teams, Messenger, and Viber for telehealth communication, suggesting a similar approach to Doctor A in utilizing multiple platforms for patient consultations.

Overall, these statements illustrate the diversity of platforms and technologies employed in telehealth practices, reflecting the adaptability of healthcare providers to meet the needs of their patients through various communication channels. Additionally, they underscore the importance of accessibility and convenience in telehealth services, as providers seek to ensure effective communication and engagement with patients using a range of available tools and platforms.

This was also stated in a study conducted by Gajarawala & Pelkowski (2021). Telehealth technologies are increasingly utilized as a practical and cost-effective method for providing and accessing high-quality healthcare services and outcomes through various channels. Enhanced access to care, convenience, and decreased stress associated with telehealth usage can also boost patient satisfaction. However, this also poses a gap or disparity among people in the rural and urban areas. The widespread adoption of telehealth has encountered obstacles, such as older adults' familiarity with technology and limited internet bandwidth in rural or underserved regions. Nevertheless,

as patients and providers become more proficient and at ease with technology over traditional face-to-face interactions, the acceptance of telehealth is expected to continue rising.

Doctor A: *"Telehealth, includes telemedicine, teleconsultation, and of course, health education, and even research through using the internet or using any information technology as part of the delivery system or as part of the platform."* *"It could be through a call, it could be through a text, a chat, it call or it could be through other platforms like MS Teams, Messenger, wherein you need a camera that you have to see your patient."* *"For more, I usually use Viber. Viber is it. Before, I also had experience using PPD."* *"We usually post our mobile numbers, emails, our messenger account or Facebook account, and any of which they can message so that the medical secretary can be able to cater to them"*
Doctor B: "*The Filipino directory of Doctors (TFD) formerly known as PPD under MIMS*"
Doctor C: *"For our telehealth communication we use MS Teams, Messenger and Viber"*

1.3 Patient Engagement and Consent

Patient engagement and informed consent are fundamental pillars of ethical healthcare delivery. Patient engagement, defined as actively involving patients in their healthcare decisions and treatment plans, fosters collaboration and empowerment, leading to improved health outcomes. According to a study published in the Journal of Medical Internet Research, patient engagement positively influences treatment adherence, patient satisfaction, and overall health outcomes (Graffigna et al., 2018).

Informed consent, on the other hand, signifies the voluntary agreement by a patient to undergo medical treatment or participate in healthcare activities after being provided with comprehensive information about the risks and benefits involved. This process not only respects patient autonomy but also ensures ethical practice in healthcare. According to the American Medical Association (AMA), informed consent is essential for respecting patients' rights and promoting trust in the patient-provider relationship (American Medical Association, 2016).

Doctor A emphasizes the significance of privacy concerns and the need for informed consent. This underscores their commitment to ensuring patients understand the risks and benefits of telehealth services and actively participate in decision-making regarding their healthcare.

Doctor B emphasizes the integration of teleconsultation into patient care, utilizing platforms like The Filipino Doctor (TFD) for scheduling, consultations, and education. They prioritize patient consent and privacy, despite acknowledging challenges such as data security and limitations in remote assessments.

Doctor C prioritizes patient engagement and informed consent in teleconsultation by offering various platforms for communication and ensuring patient convenience and privacy. They emphasize the importance of clarifying symptoms and obtaining consent before in-person visits, demonstrating a commitment to patient awareness and involvement in their healthcare decisions.

Overall, these statements emphasize patient consent, privacy, and engagement in teleconsultation. One focuses on informed consent and privacy, another on integrating teleconsultation into care while maintaining privacy, and the third on patient engagement and clarity of symptoms for informed decisions. Informed consent is the dialogue between a patient or participant and a medical professional or researcher, culminating in a clear consent to undergo a particular medical procedure. This ethical principle is founded on the idea that individuals involved in healthcare or research should comprehend and consent to the potential outcomes of their treatment or participation (National Academies of Sciences, Engineering, and Medicine, 2015)

Doctor A: *"...once they have already expressed their intent to seek consultation, the medical secretary will acknowledge it and give them a waiver for honest disclosure, and the consent to conduct or seek consultation, and then of course, once the patient agrees to it or signs the waiver…"*
Doctor B: *"...in terms of privacy of course with the patient, there's also a consent from the patient…"*
Doctor C: *"As for privacy we intend to make them sign a consent form just to make sure proper disclosure"*

1.4 Evaluation and Follow-up

Evaluation and follow-up are critical components of patient care, ensuring comprehensive health management and treatment efficacy (Jones et al., 2018). Evaluation encompasses the assessment of patients' health status and the effectiveness of implemented treatments (Liu & Wyatt, 2019). Through systematic evaluation,

healthcare professionals can identify areas of improvement, adjust treatment plans, and address emerging health concerns promptly (Parker et al., 2020).

Concurrently, follow-up involves continuous monitoring and support to maintain continuity of care and enhance treatment outcomes (Berkowitz et al., 2017). This process facilitates ongoing communication between healthcare providers and patients, enabling timely intervention and adjustment as needed (Smith & Allen, 2021). Moreover, follow-up appointments offer opportunities to reinforce treatment adherence, provide education, and address any emerging issues or concerns (Brown et al., 2019).

Together, evaluation and follow-up play integral roles in promoting patient well-being and treatment success by ensuring personalized, responsive care (Johnson & Smith, 2020). By implementing these processes, healthcare providers can optimize treatment outcomes, enhance patient satisfaction, and mitigate potential complications (Gupta & Patel, 2018). Therefore, integrating evaluation and follow-up into clinical practice is essential for delivering high-quality, patient-centered care (Choi et al., 2020).

Doctor A's approach to telehealth involves implementing patient feedback for evaluation, structured follow-up procedures, addressing privacy concerns, recognizing limitations such as the absence of physical exams, emphasizing the advantages of telehealth, and acknowledging technical challenges, all to ensure high-quality, patient-centered care delivery.

Doctor B emphasizes privacy, acknowledges assessment limitations, balances in-person and virtual consultations, and advocates for continuous improvement, reflecting a structured approach to evaluation and follow-up.

Doctor C uses various teleconsultation platforms to accommodate diverse patient needs, emphasizes the importance of telehealth for remote areas and pandemic preparedness, identifies challenges with internet connectivity and local advertising, highlighting the need for ongoing evaluation and adaptation in telehealth practices.

Overall, the statements collectively highlight a commitment to patient-centered telehealth care delivery, driven by a need for adaptability and innovation in healthcare practices, particularly in response to the challenges posed by the digital age and the COVID-19 pandemic. Each doctor's approach emphasizes different aspects, such as integrating patient feedback, ensuring privacy, balancing consultation methods, and addressing technical challenges. The subsequent assessment reaffirms your dedication to your patient, enhances the therapeutic bond, and showcases your readiness to collaborate with them in attaining the intended therapy objectives.(McGraw Hill Medical, 2016)

Doctor A: *"...an evaluation is also being signed by the patients for us to know whether the patient finds it effective or not." "We also do evaluation of students before OJTs through telehealth, and we follow a specific guideline for that so that even in the absence of physical examination, we can be able to spot as to whether there is already a time for us to require that particular patient to come in person so that we could check them personally. "*
Doctor B: *"I recognize the paramount significance of conducting comprehensive patient evaluations. This process furnishes me with essential information regarding the individual's medical background, symptoms, and current state of health, enabling me to formulate tailored treatment strategies and deliver high-quality care remotely. "*

Doctor C: *“I emphasize the utmost importance of thorough patient evaluations, as they serve as the foundation for understanding the unique medical needs and circumstances of each individual, facilitating effective remote healthcare delivery and ensuring positive outcomes.”*

1.5 Teleconsultation and Telemedicine

Teleconsultation and Telemedicine offer comprehensive approaches to health education and service provision, integrating modern technologies such as informatics, infographics, recorded videos, and social media platforms. This approach enhances effectiveness and accessibility, addressing both preventive and curative aspects of healthcare while maximizing impact through streamlined processes and improved patient engagement.

Teleconsultation and Telemedicine offer comprehensive approaches to health education and service provision, integrating modern technologies such as informatics, infographics, recorded videos, and social media platforms (Bashshur et al., 2020; Wootton, 2020). This approach enhances effectiveness and accessibility, addressing both preventive and curative aspects of healthcare (Bashshur et al., 2020; Wootton, 2020), while maximizing impact through streamlined processes and improved patient engagement (Wosik et al., 2020; Dorsey & Topol, 2020).

Doctor A emphasizes teleconsultation and telemedicine at CPU offer convenient patient-doctor interactions via digital platforms, aiding in education and research.

Doctor B emphasizes the use of platforms like The Filipino Doctor (TFD), revolutionize healthcare accessibility, offering flexibility amidst doctors' varied

engagements. Despite privacy and reliance concerns, teleconsultation empowers patients to prioritize health, optimizing care through integration with traditional consultations.

Doctor C employs platforms like MS Teams, Viber, and specialized teleconsult apps for remote consultations via call, text, or video. While vital for safety and accessibility, challenges like poor internet connectivity persist, particularly in areas like Iloilo. Despite hurdles, teleconsultation remains crucial for public health, especially in preventing the spread of infectious diseases like COVID-19. However, limited advertising and the absence of locally tailored platforms hinder widespread adoption in regions like Iloilo.

Overall, these statements indicate teleconsultation and telemedicine revolutionize healthcare accessibility and patient-doctor interactions. Doctors utilize digital platforms like The Filipino Doctor (TFD), MS Teams, and Viber for remote consultations, overcoming challenges such as poor internet connectivity. Despite hurdles, teleconsultation remains crucial for public health, especially in preventing the spread of infectious diseases like COVID-19, although limited advertising and the absence of locally tailored platforms hinder widespread adoption in regions like Iloilo. In numerous countries, the utilization of diverse technologies for medical consultations has emerged as a crucial means to facilitate communication between general practitioners and patients in primary healthcare settings (Kludacz-Alessandri, 2021)

Doctor A: *“...we do health education by means of informatics or infographics, we also have recorded videos, which were streamed through social media during your orientation…”*

Doctor B: “ Medical consultations then I can give medical certificates, then I can give them laboratory requests and patient education.”
Doctor C: “In the context of medical consultations, my role extends beyond mere diagnosis and treatment. I'm equipped to fulfill various administrative tasks, such as issuing medical certificates and initiating laboratory investigations based on clinical necessity.”

1.6 Health Education and Research

Approaches to Health Education and Research are by means of mediums such as informatics, infographics, recorded videos, and social media platforms (Gonsalves et al., 2021; Hua & Shaw, 2021). Incorporating infographics and animated information on teleconsultation highlights a commitment to informing and engaging individuals about remote healthcare services, while also emphasizing the importance of COVID-19 vaccination through dedicated infographics (Njeru & Karanja, 2021; Tangcharoensathien et al., 2021). Furthermore, the mention of research initiatives indicates a holistic approach to healthcare education, encompassing both dissemination of information and active participation in research endeavors (Riva et al., 2020; Ballantyne et al., 2021). This comprehensive strategy aims to leverage modern communication tools to effectively educate and empower individuals on crucial health-related topics, thereby fostering informed decision-making and promoting overall well-being (Freeman & Loe, 2021; Villegas & Gutiérrez, 2021).

Doctor A emphasizes a multifaceted approach utilizing various digital mediums such as infographics, recorded videos, and social media platforms for dissemination. Specific topics covered include teleconsultation procedures, conjunctivitis, and the importance of COVID vaccination.

Doctor B emphasizes flexibility and convenience, especially amid varied professional commitments. She acknowledges privacy concerns and challenges in accurate assessment without physical exams but stresses the importance of maintaining thorough patient-doctor relationships. Advocating for a balanced approach.

Doctor C outlines the versatility of virtual consultations using platforms like MS Teams, Messenger, and Viber, emphasizing their role in ensuring patient safety, particularly amid the ongoing pandemic. Teleconsultation aids in assessing respiratory symptoms remotely, crucial for occupational health settings to prevent disease transmission.

Overall, these statements indicate utilizing diverse digital mediums for health education, covering topics such as teleconsultation, conjunctivitis, and COVID vaccination. stressing flexibility and patient-doctor relationships, navigating privacy concerns while advocating for a balanced approach to telehealth. Underscores the versatility of virtual consultations, crucial for patient safety during the pandemic, especially in occupational health settings, and highlights the role of platforms like MS Teams, Messenger, and Viber in remote assessments. Health education is crucial for enhancing the overall welfare of communities by disseminating information and encouraging healthy behaviors among people of all ages. It tackles various health

concerns spanning from chronic illnesses to mental well-being, and it also has an impact on policy decisions and economic results. (Danielle Gagnon, 2024)

Doctor A: *“And then we do health education by means of informatics or infographics, we also have recorded videos, which were streamed through social media during your orientation.”*
Doctor B: *“I strongly advocate for the importance of educating patients about health. It provides individuals with the knowledge and resources necessary to play an active role in their healthcare”*
Doctor C: *“Lastly. I firmly believe in the significance of health education for patients. It equips individuals with the understanding and tools they need to actively participate in managing their health, promoting better decision-making and fostering a sense of empowerment.”*

Correspondence 2: Impact, Challenges, and Concerns of Telehealth

This correspondence was generated from the transcripts of the interview conducted with the following sub-categories: surge during the pandemic, convenience and cost reduction, privacy and security, lack of physical examination, bandwidth and internet issues. This implies the understanding of the participants regarding the impact and surge of telehealth they have encountered during the utilization of telehealth post COVID19 pandemic. It suggests that participants have an understanding of the challenges and concerns they have faced while utilizing telehealth services after the COVID-19 pandemic.

In general, studies on patients' and health professionals' satisfaction with telehealth services during the COVID-19 pandemic found that it was above normal, with

many expressing an intention to continue using telehealth even after the pandemic. Healthcare systems have expressed their great will to maintain and promote the use of telehealth even after the era of the pandemic (Buoabida, 2022). Increasing telehealth technologies are being embraced and put into use as a streamlined and economical way to provide and access high-quality healthcare services and results. While patients and providers have reaped the rewards of telehealth, its widespread acceptance has been impeded by several obstacles. Drawbacks of telehealth encompass challenges in conducting thorough physical exams, potential technical glitches, security breaches, and regulatory hurdles (Gajarawala & Pelkowski, 2021).

2.1. Surge During the Pandemic

There is ample evidence that telehealth use should continue even beyond COVID-19 as a support strategy for patients, health systems, and professionals. Telehealth has demonstrated significant potential to increase access to healthcare services and promote interactions between health professionals and patients; therefore, telehealth should be incorporated in the continuum of quality of care (Lebouché, 2022).

In terms of the surge of telehealth, it reflected doctors' acknowledgment of the surge in telehealth usage during the pandemic and their understanding of its impact. According to Doctor A, B, and C, they recognized telehealth's increased popularity due to its convenience and cost reduction benefits. This understanding is evident from their experiences with telehealth utilization post-COVID-19 pandemic, emphasizing the significant impact it has had on healthcare delivery.

Doctor A emphasizes the role of teleconsultation in reducing the risk of COVID-19 transmission. This assertion underscores one of the primary reasons for the

rapid adoption of telehealth during the pandemic. By allowing patients to consult with healthcare professionals remotely, teleconsultation minimizes the need for in-person visits to healthcare facilities, thus reducing potential exposure to the virus.

Doctor B observes an increase in the number of patients availing teleconsultations compared to the pre-pandemic period. This statement reflects the widespread acceptance and adoption of telehealth services by patients. Factors such as convenience, accessibility, and the expansion of telehealth coverage by insurance providers have contributed to this surge in patient utilization.

Doctor C emphasizes the overall increase in teleconsultation utilization compared to before the pandemic. This acknowledgment underscores the long-term implications of the COVID-19 crisis on healthcare delivery. The pandemic has accelerated the adoption of telehealth technologies and catalyzed systemic changes in how healthcare services are delivered and consumed.

Overall, the statements collectively point to a significant rise in telehealth utilization driven by the need for safer healthcare delivery during the pandemic. The consensus is that telehealth services have experienced significant growth, likely driven by both pandemic-related concerns and broader shifts in healthcare delivery preferences. According to Weber et al. (2020), the COVID-19 pandemic, which began in 2020, accelerated the use of telemedicine. In fact, the surge in telehealth use correlated with the rise of COVID-19 cases. Macariola et. al. (2021), improved access to information and communication technology in the Philippines throughout time has resulted in the emergence of telehealth. Due to the pandemic, teleconsultations may now be conducted via COVID-19 hotlines, websites, and mobile applications developed by different agencies and businesses.

Doctor A: “During the pandemic, there is a surge of utilization of teleconsultation primarily because this would lessen the chances of COVID transmission compared to post COVID…”
Doctor B: “...there is an increase in the, or there are more patients availing teleconsult then as compared to now.”
Doctor C: “There is an increase with the use, with the utilization of teleconsultation as compared to before.”

2.2. Convenience and Cost Reduction

Telemedicine can provide convenient and safe healthcare to patients by allowing them to receive care remotely, reducing the risk of acquiring an infection in a hospital setting (Haleem et al., 2021). Telehealth programs are becoming more popular as a practical substitute for in visits and a way to closely monitor a patient's health from the convenience of their own home (Lamar University, 2021).

According to Manocchia (2020), telehealth provides patients with a convenient choice for care when they need it, saving both time and money. The aim is to achieve a balance between telehealth and traditional in-person treatment while also educating customers on when to use it. Telehealth provides tremendous benefits to patients and clinicians as a lower-cost, easier method of receiving excellent healthcare.

In terms of convenience and cost reduction in telehealth utilization, it focuses on the benefits that remote healthcare services offer to patients. The statements of Doctor

A, B, and C agree that telehealth allows individuals to seek medical consultation from the comfort of their own homes, eliminating the need to travel to a healthcare facility.

Doctor A highlights the convenience aspect of telehealth, emphasizing that it allows patients to seek consultation from the comfort of their homes. This not only saves time but also reduces expenses associated with visiting a physician, such as transportation costs. Additionally, for individuals who may have difficulty physically going to a physician, telehealth provides an accessible alternative.

Doctor B expands on this idea by emphasizing that telehealth eliminates the barrier of distance when accessing quality care. Regardless of a patient's location, they can now receive medical attention conveniently and affordably. This is particularly beneficial for individuals in rural or remote areas where access to healthcare services may be limited.

Doctor C brings up an interesting point about the different modalities of telehealth, specifically mentioning the convenience of chat-based consultations. Chat consultations allow patients to revisit their conversations and easily share pictures or other relevant information. This form of communication may be particularly advantageous for certain demographics or situations where verbal communication is challenging.

Overall, they highlighted significant benefits of telehealth in terms of convenience and cost reduction for both patients and healthcare providers. Telehealth has revolutionized healthcare delivery by offering unprecedented convenience and cost reduction for patients. By allowing consultations from the comfort of one's home,

telehealth eliminates the need for patients to physically visit a physician's office, thus reducing expenses associated with transportation. This is particularly beneficial for individuals who face difficulties in traveling due to various reasons, such as health issues or geographic distance. According to George (2023), telemedicine can help cut healthcare expenditures for rural populations. It removes all travel expenditures, including transportation, accommodation, and time off work. Furthermore, it reduces the need for unnecessary travel to healthcare institutions, hence improving resource allocation.

Wade et al. (2019) studied the cost-effectiveness of telemedicine in treating chronic disorders. The study found that telemedicine-based therapies were cost-effective for improving disease management outcomes and lowering healthcare expenditures in individuals with chronic diseases. Monaghesh and Hadjizadeh (2020) stated that telehealth saves money in health care facilities, increases access to care, and lowers the danger of direct transmission of the infectious agent from person to person. In addition to keeping people safe, including the general public, patients, and health staff, another significant benefit is that it provides widespread access to caregivers. As a result, this technology is an attractive, effective, and affordable option.

Doctor A: “Aside from the convenience of just seeking consultation at the comfort of your homes, this should reduce the expense of going to the physician, expense of transportation, and the ease where you cannot even go to the physician.”
Doctor B: “With telehealth, distance is no longer a barrier to quality care, offering convenience and cost reduction for patients regardless of their location.”

Doctor C: “Actually, one convenience is if I were to choose for myself, it's chat because you can go over your conversation. You can have pictures.”
Doctor C: “It's still very convenient, especially if the demographics of your patient because not all patients can just come to the city.”

2.3. Privacy and Security

Telemedicine might pose security and privacy concerns. There could be a lack of clarity in the interactions between healthcare providers and their patients, making it challenging to confirm their identities. It becomes difficult to ascertain the authenticity of the doctor or patient involved. Additionally, doctors may request additional patient data for medical records, raising potential privacy issues. Sharing these records with other healthcare professionals or organizations for referral or billing purposes, or with third-party service providers, may compromise the confidentiality, integrity, and accessibility of the data (Cordero, 2023).

In terms of the challenges and concerns regarding privacy and security in telehealth, the statements provided by Doctor A, Doctor B, and Doctor C highlight the significant concerns surrounding patient privacy and the critical need for strong security measures and ongoing vigilance to protect patient privacy in telehealth settings.

Doctor A expressed uncertainty about assuring patients that their interactions are private due to the potential for data breaches if messenger or email accounts are hacked. This highlights the vulnerability of sensitive patient information during telehealth sessions. Furthermore, the participant highlighted the importance of regular reviews to maintain patient privacy, particularly focusing on techniques to safeguard privacy during

telehealth or teleconsultation. This suggests a proactive approach to addressing privacy concerns and ensuring that appropriate measures are in place to protect patient data during remote medical interactions.

Doctor B echoes similar sentiments, emphasizing the vulnerability of online data transmission in telehealth. They acknowledge the possibility of accidents or system breaches leading to unauthorized access to sensitive patient information, highlighting the importance of robust security measures in telehealth platforms.

Doctor C raises another pertinent issue regarding the use of messaging apps like Viber for patient communication. They express caution about the potential for conversations to be leaked and used out of context, particularly when providing medical advice. This underscores the importance of secure communication channels and reinforces the need for stringent privacy safeguards in telehealth practices.

Overall, these statements underscore the critical importance of prioritizing patient privacy and implementing robust security measures in telehealth systems to ensure confidentiality and trust between healthcare providers and patients. This was also discussed in a study conducted by Cordero (2022), he said that telemedicine can cause privacy and security issues. There is a possibility of a lack of transparency between healthcare providers and their patients, making it challenging to confirm their identities. It's difficult to ascertain whether the doctor or patient is indeed who they claim to be. When medical records are shared with other healthcare providers or organizations for referrals, billing services, or with third-party service providers, the confidentiality, integrity, and accessibility of the data may be at risk. Hackers and other malicious

individuals might gain access to a patient's medical information, particularly if the patient uses telemedicine on a public network or through an unencrypted channel.

Both healthcare providers and patients need assurance that the exchange of information during telehealth sessions remains confidential and secure. Telehealth practitioners have the obligation to adhere to regulations, uphold patient confidentiality, and maintain system security consistently when engaging in telehealth services.

Doctor A: *"Sometimes you could not assure the patient that there is only the two of us in the room and of course the data which could be accessed when the messenger account will be hacked or the email account would be hacked, so the privacy issue."*
Doctor A: *"We are having regular review on the maintenance of patient's privacy, especially the techniques on safeguarding privacy of patients' during telehealth or teleconsultation…".*
Doctor B: *"One would have to be data privacy because when you do telehealth, all of the data will be collected online and sent online as well. Accidents can happen, it's possible that our system can be breached."*
Doctor C: "Another thing is, when I use Viber to message my patients, I'm also very cautious about the conversations being leaked, for example when i give medical advice, etc., and it can be used out of context."

2.4. Lack of Physical Examination

Recent policy shifts have resulted in a significant increase in the utilization of video consultations, presenting distinct challenges, especially concerning physical examinations. The sensory aspects of smell and touch, integral to traditional exams, are

compromised in video consultations. Certain elements of the physical assessment are not feasible to conduct remotely. Patients at high risk or those requiring hospitalization necessitate thorough in-person examinations (Valdes, et al., 2021).

Even with the ongoing advancements in technology, conducting a physical examination in a telehealth context remains quite difficult. Doing an exam over video can be tricky due to factors like patients' familiarity with technology, any additional health conditions they might have, concerns about safety, how comfortable doctors feel, patients' ability to move around, and how well they can communicate. It gets even tougher when specific physical findings are crucial for diagnosing and deciding on a patient's treatment (Restrepo et al., 2023)

In terms of challenges and concerns regarding lack of physical examination, the statements provided by Doctor A, Doctor B, and Doctor C shed light on the challenges and limitations of telehealth consultations, particularly in relation to physical examinations and accurate diagnosis.

Doctor A highlights the crucial role of physical examinations in diagnosing diseases. They express concern about the absence of this aspect in telehealth consultations. However, they also mention the utilization of specific guidelines to assess patients remotely and determine when an in-person examination is necessary. This reflects an effort to address the limitations of telehealth by implementing alternative strategies for evaluation.

Doctor B emphasizes the significant gap in assessments and diagnosis in telehealth settings. They express frustration over the inability to conduct proper

assessments and the reliance on limited visual information and patient-reported symptoms. This underscores the challenge of accurately diagnosing conditions without the comprehensive information obtained through physical examinations.

Doctor C raises concerns about the reliability of patient information conveyed during telehealth consultations. They highlight the potential lack of integrity in conversations, particularly in phone calls, where patients may provide inaccurate or unreliable information. This highlights a critical downside of telehealth—the inability to verify patient statements without face-to-face interactions.

Overall, these statements underscore the importance of recognizing and addressing the limitations of telehealth, particularly in terms of physical examinations and accurate diagnosis. Strategies such as following specific guidelines and knowing when to transition to in-person consultations are crucial for optimizing telehealth services while minimizing diagnostic inaccuracies and ensuring the integrity of patient information.

According to Cordero (2022), Telemedicine is not universally suitable for all circumstances. A careful evaluation of the patient's condition is essential, as health experts also highlight certain drawbacks. These factors should not be overlooked, as they necessitate accurate diagnosis by physicians, regardless of the patient's immune status. Consequently, doctors often heavily depend on patients' self-reports during online consultations, which may require more thorough questioning to ensure a comprehensive health assessment. Omitting crucial symptoms that might have been noticeable during in-person visits could compromise the effectiveness of treatment.

Doctor A: *“... there’s the lack of the performance of a physical examination which is essential in the diagnosis of the disease.”* *"...we follow a specific guideline for that so that even in the absence of physical examination, we can be able to spot as to whether there is already a time for us to require that particular patient to come in person so that we could check them personally.”*
Doctor B: “*Then, of course, there is a big gap when it comes to assessments and diagnosis because I cannot properly assess and only have to rely on what I see and what my patients tell me.”*
Doctor C: *“The integrity of your conversation. Sometimes if it's just a phone call, they can just say anything. So, in a way, it's possible that your patients' statements are not reliable. It's one of the downsides of telehealth, there is no way to confirm what they are saying unless you ask them to see you face-to-face. “*

2.5. Bandwidth and Internet Issues

Telehealth is quickly gaining traction as a means of broadening access to healthcare, particularly in the aftermath of the COVID-19 pandemic. To conduct effective telehealth visits, reliable broadband access is essential. Broadband denotes access to high-speed internet, which is crucial for seamless telehealth interactions. As telehealth becomes more vital for healthcare delivery, especially amidst and beyond the COVID-19 pandemic, access to broadband emerges as a fundamental factor influencing healthcare outcomes. In essence, broadband access is rapidly emerging as a significant social determinant of health (Pandit et al., 2023).

According to Nautilus Medical Technologies (2020), telehealth becomes ineffective when faced with unreliable connections. We're all familiar with the frustration of static, robotic voices, and frozen screens during calls. Patients and doctors alike understand terms like network, internet, and bandwidth, but what truly matters is their ability to communicate seamlessly. Additionally, Rural Health information Hub (2023) stated that poor connectivity poses a significant obstacle to the adoption and growth of telehealth initiatives that rely on live video interactions between patients and providers. Dropped calls and video feed delays can disrupt care provision and leave patients dissatisfied with telehealth services.

In terms of challenges and concerns regarding Bandwidth and Internet Issues**,** the statements made by Doctor A, Doctor B, and Doctor C highlight the significant technological challenges faced by healthcare professionals when conducting virtual consultations. Doctor A identifies slow and intermittent internet connectivity, as well as power outages, as major obstacles to conducting virtual consultations effectively. These issues can disrupt the flow of the consultation and compromise the quality of communication between the doctor and the patient.

Doctor B echoes similar concerns, emphasizing the need for higher internet speeds to facilitate virtual consultations. They mention resorting to alternative communication platforms like Viber or Messenger when faced with bandwidth limitations. This adaptation demonstrates a proactive approach to overcoming technological barriers and ensuring uninterrupted communication with patients.

Doctor C also underscores the importance of internet connectivity and Wi-Fi signal strength in facilitating virtual consultations. They highlight the reliance on stable

internet connections for seamless communication and express frustration over potential disruptions caused by poor signal quality.

Overall, these statements highlight the critical role of reliable internet connectivity in facilitating virtual healthcare services. Healthcare professionals must navigate technological challenges such as slow internet speeds, intermittent connectivity, and power outages to ensure the smooth delivery of virtual consultations and maintain quality patient care. According to Rural Health Information Hub (2023), limited access to high-speed broadband internet poses challenges for numerous rural telehealth programs. Inadequate connectivity can hinder the development and expansion of telehealth initiatives that rely on live video connections between patients and healthcare providers. Interruptions such as dropped calls and delays in video feeds can negatively impact care delivery, leading to patient discontentment with telehealth services.

Also, the validity and reliability of fine motor task measurements are impacted by Internet bandwidth, according to a study examining the accuracy of physical function measurements.6 If medical professionals are unaware of the variations in technological systems, they may base clinical treatment decisions and recommendations on patient data that is potentially inaccurate.

Doctor A: *“Our internet, our bandwidth is actually very slow and sometimes interrupted and we have power outages…”*
Doctor B: *Only problem is when you do the virtual using this system, you need a higher internet speed, that’s why I utilize viber or messenger outside for that.”*

"The bandwidth is also a main issue because you cannot use the app online."
Doctor C: *"But the issue is probably the internet, the Wi-Fi connectivity, the internet connectivity, the signal in our cell sites."*

Correspondence 3: Telehealth Utilization and Adaptation

This correspondence was generated from the transcripts of the interview conducted with the following sub-themes: doctor's perspective and adoption and involvement in improvements. This implies the perspective of the participants when it comes to the significance of continuing the use of telehealth and the improvements needed.

The COVID-19 pandemic has catalyzed a significant increase in the utilization of telehealth services especially to patients who are at higher risk such as cancer compared to general population by providing convenient, accessible, and safe options for patients to receive medical care remotely. However, physicians also recognized that this also comes with barriers such as lack of resources, technology illiteracy, limitations in complete physical assessment, and low internet connectivity that should be addressed to increase satisfaction using telehealth for both physician and patients (Cruz-Lim et al., 2021).

3.1. Doctor's Perspective and Adoption

The utilization of telehealth among physicians as a health care provider has dramatically increased during the COVID-19 pandemic as nationwide lockdowns and fear of infection led to the discontinuation of planned interventions and disruptions in patient follow-ups, driving the shift towards virtual consultations to ensure continuity of care. Among many viewpoints of physicians about telehealth, most common reasons about the utilizing it is for its safety and convenience, there's also concerns about patient security and confidentiality and high risk of missing a diagnosis due to inability to do physical examination but overall, majority agreed that telemedicine will persist beyond the pandemic and thinks telemedicine should stay as one of options in delivering healthcare services (Ramirez & Calimag, 2023).

In terms of perspective and adaptation of telehealth as means of providing health care services, the statements provided by Doctor B and Doctor C highlight the factors regarding the perspective of physicians toward utilization and adaptation of telehealth.

Doctor B highlights the importance of individual doctor's attitudes towards telehealth, noting that adaptation depends on factors such as technological literacy and willingness to engage in teleconsultations. Doctor B also added it is both convenient for both physician and patient especially to patients who cannot travel to the clinic. This insight underscores the significance of doctors' perspectives in shaping the uptake of telehealth practices.

Doctor C further emphasizes the role of convenience, both for the doctor and the patient, as a driving factor in telehealth adoption. Doctor C also added that utilization of teleconsultation is still important even in post COVID-19 pandemic, as the pandemic

may be over, however the virus is still not. This indicates that doctors may be more inclined to utilize telehealth if it offers practical benefits for their practice and patient care.

Overall sentiment conveyed by these statements is that the decision to engage in teleconsultation depends on both the convenience of the doctor and the doctor's comfort with technology. While some prioritize convenience for both them and their patients, others may only consider teleconsultation if they are technologically literate and comfortable with using telehealth platforms. According to Idriss et al. (2022), telemedicine offers flexibility by allowing visits to be conducted from anywhere, including the patient's home. This flexibility helps physicians balance their professional and personal needs, particularly during the COVID-19 pandemic. Additionally, telemedicine reduces time-consuming activities such as waiting for rooms, checking patients in, and moving patients between rooms at clinics. Orthopedic patients reported saving time with telemedicine, including both travel time and time spent in consultations. Therefore, telemedicine enhances convenience by saving time and providing flexibility in healthcare delivery.

Doctor B: *"First of all, it depends on the doctor. If the doctor is not going for Teleconsult, second if they are literate, meaning to say technology savvy, then you can say that they were engaged in using telehealth."*
Doctor B: *“But overall, I like using telehealth as means of providing health care services not only because it is convenient for me, but also convenient for my patient especially to patients that cannot travel all the way here in my clinic because of various reasons.”*
Doctor C: *“But personally, first, if I were to choose, it would be for my convenience and also the convenience of your patient.”*

Doctor C: *“It's better to still use teleconsultation actually because although we can say that the pandemic is over, the pandemic, yes, but COVID is not, because we still have COVID patients. So, one way to ensure that the pandemic will not happen again is to safeguard. Though, you are the gatekeeper. You have to gatekeep your patients.”*

3.2. Involvement in Improvements

Telemedicine has emerged as a promising tool globally, showcasing its potential to enhance healthcare delivery by improving access, cost-effectiveness, quality, and efficiency of services. Industrialized nations have begun integrating telemedicine into their healthcare systems, particularly to address disparities in rural or isolated areas where specialists are scarce. Similarly, as a developing nation and an archipelago, the Philippines have embraced telemedicine to bridge gaps in healthcare access, allowing distant health workers to diagnose, manage, and follow up with patients. Despite its potential, telemedicine faces challenges, including sustainability issues post-implementation particularly in funding and its transparency, establishment of processes and standards, and safeguarding digital information (Cruz & Tolentino, 2021).

In terms of improvements for telehealth utilization, the statements provided by Doctor A, Doctor B, and Doctor C underscore the challenges and areas that need to be improved related to telehealth implementation and utilization.

Doctor A specifically mentions slow bandwidth and power outages as nationwide concerns. This indicates that infrastructure limitations pose significant challenges for physicians attempting to provide telehealth services, as interruptions in internet connectivity and power outages can disrupt consultations and compromise the quality of care delivered remotely.

Doctor B's statement focuses on involvement in improving teleconsultation apps, mentioning as being part in contributing to the beta program of the app The Filipino Doctor, indicating an interest in enhancing the technology underlying telehealth services. This indicates that a proactive approach to addressing telehealth challenges through active participation in app development.

Doctor C echoes similar concern with Doctor A, emphasizes poor internet connections as a barrier to telehealth accessibility. Doctor C also added the importance of advertising and awareness in promoting teleconsultation services, emphasizing the need for increased visibility to facilitate broader adoption. This underscores the importance for active promotion of teleconsultation services to ensure broader awareness and accessibility among the local population.

Overall sentiment conveyed by these statements is the proactive stance towards addressing these challenges, whether through highlighting the need for improved infrastructure, actively participating in app development, or advocating for increased advertising and awareness to promote broader adoption of teleconsultation services. This reflects a combination of concern about existing barriers and optimism about the potential for improvement and advancement in telehealth technology and accessibility. According to Macariola et al. (2021), barriers to telehealth include poor internet

connectivity, low cellular reception, technological illiteracy, and lack of access to gadgets. In countries like the Philippines and Cambodia, insufficient infrastructure and digital literacy further hinder telehealth implementation. Moreover, physicians require formal training in virtual healthcare delivery to ensure quality outcomes. To address these challenges, improving internet connectivity and cellular reception, educating individuals about telecommunications, and enhancing accessibility to devices are crucial for the successful rollout of telehealth services. Added to that is integrating telehealth education into medical curricula and supporting patients and clinicians are recommended.

Doctor A: “The bandwidth. Well, this is a nationwide concern. Our internet, our bandwidth is actually very slow and sometimes interrupted and we have power outages, and modern information or technology would always depend on this. So, these are actually the main road blocks in successful telehealth delivery.”
Doctor B: "I’m one of the part of the beta of improving this teleconsult apps, because they acknowledge us or they would, as what I have called in this TFD, there's somebody monitoring and somebody from the head office."
Doctor C: “The poor internet connection, I think that's one. That’s really it, because unlike in other places, the Wi-Fi connection is very stable.”
Doctor C: “Advertising, that’s another thing. In Iloilo, it's not that super advertised, right? The teleconsult. Some people just know the teleconsult that their company provided.”

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

Summary of Findings

The study was conducted to explore Utilization of Telehealth Post-COVID19 Pandemic among Selected clinics in Iloilo. Specifically, this study aimed to: Explore the utilization of the telehealth post-COVID19 pandemic among selected clinics in Iloilo.

The core question of this study was: “How is the utilization of telehealth postCOVID19-pandemic?”

1. Determine the definition of telehealth as perceived by healthcare professionals.
2. Identify the specific methods or applications utilized for delivering healthcare services through telehealth.

3. Examine the operational procedures of telehealth within participating clinics.
4. Determine the types of healthcare services offered via telehealth post-COVID-19.
5. Assess any differences in telehealth utilization between the periods before and after the COVID-19 pandemic.
6. Identify and analyze the primary issues encountered in implementing and maintaining telehealth services post-COVID-19.
7. Explore physician's perspective on the adoption of telehealth and aspects of telehealth in the city that should be improved

A qualitative case study research approach guided by the social constructionism paradigm was used to build various perspectives from the participants, as well as provide the researchers the opportunity to reflect on their own viewpoints and highlight them as the study's main subject. Through interviewing the participants, researchers would be able to gather information that would be used to make sense of themes and meaning that relates to the study and as a whole create a knowledge out of that social interaction. The researchers conducted a semi-structured interview, direct observation, and document review to gain an in-depth knowledge regarding the implementation of telehealth in their respective areas post COVID 19 pandemic. The participants consisted of three doctors from private clinics. Data collection was conducted from February to February 21, 2024. Ethical considerations were adhered to accordingly following data privacy guidelines. Triangulation, categorization, comparison, assimilation, and conclusion from Robert Stake's multiple case study analysis was applied to collect meaningful data for the study.

Findings:

The following were the major findings in the study:

1. Telehealth serves as a transformative tool for delivering healthcare services remotely, with healthcare professionals emphasizing its broad scope and central role of technology. Definitions provided converge on the notion of telehealth as a medium for reaching patients beyond traditional face-to-face encounters. All statements align on telehealth's role in bridging the gap between patients and healthcare providers, making healthcare services more accessible and convenient through technology-enabled remote consultations.
2. The comprehensive evolution and utilization of telehealth services, emphasizing the diverse methods and platforms employed for remote healthcare delivery. It highlights the broad range of telehealth services, including telemedicine, teleconsultation, health education, and research, facilitated through various internet-based technologies and communication channels such as messenger, Viber, and TFD.
3. Emphasis on patient engagement, consent, and evaluation within telehealth processes. It highlights the structured approach to obtaining patient consent, ensuring transparency, and respecting patient autonomy in telehealth interactions. They underscore the importance of acknowledging patient intent, providing waivers for honest disclosure, and obtaining consent before conducting consultations, while also emphasizing the significance of patient feedback through evaluation forms to gauge the effectiveness of telehealth consultations. These statements collectively illustrate the ethical and effective delivery of

healthcare services remotely, emphasizing patient-centered care and continuous improvement in telehealth practices.

4. The multifaceted approach to telehealth, emphasizing the use of various methods and platforms for delivering healthcare services remotely. The underscored importance of health education tools such as informatics, infographics, and recorded videos, the integration of research initiatives within telehealth, ensuring evidence-based practices and continuous improvement in telemedicine services, as well as the breadth of services offered during medical consultations, including the issuance of medical certificates, laboratory requests, and patient education. These statements collectively illustrate the holistic approach to healthcare delivery within the telehealth framework, catering to both medical and educational needs. These insights underscore the significance of leveraging technology and multimedia tools to optimize patient care and outcomes in telehealth settings.
5. There is a significant surge in teleconsultation services during the COVID-19 pandemic, driven by the need to reduce the risk of COVID transmission and ensure public health safety and a notable subsequent decrease in utilization compared to the peak period. There is also an emphasis on the convenience and cost-effectiveness of telehealth services by seeking consultations from home and the associated cost savings for those in remote or underserved areas.
6. Privacy and security emerge as significant concerns highlighting the vulnerability of patient data to hacking and the ongoing efforts to safeguard confidentiality during teleconsultations. Another major obstacle is the lack of physical examination in telehealth encounters necessitating

the development of specific guidelines to address this limitation. Bandwidth and internet issues also pose significant barriers to telehealth accessibility underscoring the challenges posed by slow or interrupted internet connectivity and power outages.

7. In exploring physicians' perspectives on telehealth adoption and areas for improvement within Telehealth Utilization and Adaptation, it becomes evident that individual attitudes and convenience play crucial roles in adoption patterns. Technological literacy and comfort with technology and importance of convenience for both doctors and patients in driving telehealth adoption are the major factors. Moreover, results shed light on various challenges and improvement opportunities within telehealth, including bandwidth limitations, involvement in app development, internet connectivity issues, and the need for increased advertising to enhance telehealth awareness.

Implications

The study on telehealth utilization post-COVID-19 in Iloilo provides significant insights for both theory and practice. Theoretically, the study expands telehealth frameworks by highlighting its post-COVID-19 evolution into a comprehensive tool encompassing telemedicine, teleconsultation, health education, and research. It emphasizes the need for patient-centered models that prioritize engagement, consent, and feedback, integrating technological literacy as a critical factor. Ethical considerations around data privacy and security are crucial, suggesting updates to theoretical models to include robust ethical frameworks. Additionally, the findings support the socio-technical systems theory, underscoring the interaction between technological and social factors in

telehealth adoption, necessitating an interdisciplinary approach to optimize these systems.

In practice, the study recommends targeted training programs to enhance physicians' technological literacy, particularly for older practitioners. Healthcare marketing professionals should implement campaigns to increase telehealth awareness, emphasizing benefits and addressing technological concerns. Policy development by health authorities is necessary to establish standardized clinical guidelines and ethical codes for telemedicine. Telehealth service providers should optimize their platforms for better accessibility across various devices and internet conditions. Furthermore, the study emphasizes the need for improved internet infrastructure to support telehealth services and advocates for robust security measures to protect patient data. Future research should explore patient perspectives on telehealth, and security measures must be prioritized to protect patient data. Enhancing convenience for users and integrating telehealth with existing healthcare systems are also vital for wider adoption. Finally, it encourages future research to explore patient perspectives to create more inclusive and effective telehealth systems.

By integrating these theoretical and practical implications, stakeholders can enhance the effectiveness, accessibility, and ethical standards of telehealth services, ensuring they meet the evolving needs of healthcare delivery in a post-COVID-19 context.

Conclusions

With the results discussed in Chapter IV, the following conclusions are made:

1. Telehealth emerges as a transformative tool, bridging the gap between patients and healthcare providers through technology-enabled remote consultations, enhancing accessibility and convenience in healthcare delivery.
2. Telehealth services showcase diverse methods and platforms, including telemedicine, teleconsultation, and health education, facilitated through internet-based technologies like messenger, Viber, and The Filipino Directory (TFD)..
3. Telehealth processes prioritize patient engagement, consent, and evaluation, ensuring transparency, respect for autonomy, and continuous improvement in remote healthcare delivery.
4. Telehealth adopts a multifaceted approach, integrating diverse methods and platforms for remote healthcare delivery. It emphasizes health education through informatics and videos, research integration for evidence-based practices, and comprehensive medical consultations, highlighting the holistic nature of telehealth in addressing both medical and educational needs.
5. The COVID-19 pandemic drives a significant increase in teleconsultation services for public health safety, subsequently witnessing a decrease post-peak. The convenience and cost-effectiveness of remote consultations from home are highlighted, particularly beneficial for individuals in remote or underserved areas, illustrating the evolving landscape and practical advantages of telehealth services.
6. Telehealth faces significant challenges regarding privacy, security, and the absence of physical examination capabilities, compounded by bandwidth and internet issues, highlighting barriers to accessibility and the need for robust guidelines.

7. Physician perspectives on telehealth reveal the pivotal roles of attitudes, convenience, and technological literacy in adoption. Challenges such as bandwidth limitations and internet connectivity issues underscore areas for improvement, alongside the need for enhanced advertising to boost telehealth awareness and utilization.

Recommendations:

Based on the results of the study, the researchers present the following recommendations:

Physicians. The researchers would like to suggest and encourage physicians to engage in training programs and workshops specifically designed to enhance technological literacy and proficiency in telehealth platforms. The researchers highly recommend conducting specialized training sessions, particularly targeting older physicians who may be technologically illiterate. These programs can provide hands-on experience and practical guidance tailored to the needs of healthcare professionals.

***Healthcare Marketing Professionals*.** Implement targeted advertising campaigns aimed at increasing awareness of telehealth services among both physicians and patients, highlighting the benefits and convenience of remote consultations while addressing concerns such as technological literacy and connectivity issues. Launch community-wide campaigns to educate individuals about the benefits and availability of telehealth services, particularly targeting those in remote or underserved areas.

Department of Health Personnel*.* The researchers recommend the development of a code of ethics and clinical practice guidelines (CPG) for telemedicine that will standardize and guide all licensed physicians in the practice and use of telemedicine.

Telehealth Service Providers*.* The researchers recommend the telehealth service providers prioritize optimizing their application interfaces. These improvements should aim to minimize reliance on strong signals and ensure compatibility with a wide range of phone models. By streamlining the application interface to operate efficiently with weaker signals, users in areas with inconsistent connectivity can still access telehealth services seamlessly. Moreover, catering to various phone models enhances inclusivity, allowing a broader population to utilize telehealth platforms regardless of their device specifications. Ultimately, these enhancements contribute to a more accessible and user-friendly telehealth experience, ensuring that individuals can easily access healthcare services regardless of their location or device capabilities.

Internet Service Providers. The researchers recommend the improvement of bandwidth to support the increasing demands of telehealth services. By prioritizing investments in infrastructure upgrades and technological advancements to enhance bandwidth capacity, internet service providers can significantly contribute to the effectiveness and reliability of telehealth services.

Future Researchers. Considering that our study was only limited to utilization of telehealth post COVID-19 pandemic by physicians, we suggest in-depth qualitative

research to also explore the experiences, perspectives, and barriers faced by patients and community members regarding telehealth adoption and utilization.

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APPENDICES

A. CERTIFICATE OF RESEARCH INSTRUMENT VALIDATION

Central Philippine University
College of Nursing
Jaro, Iloilo city

CERTIFICATION OF RESEARCH INSTRUMENT VALIDATION
(QUALITATIVE RESEARCH)

This is to certify that the study entitled: Exploring Utilization of Telehealth Post-COVID19 Pandemic among Selected Institutions in Iloilo: A Case at Point, has undergone instrument validation. Necessary changes have been checked and approved.

This certification is issued upon the request of the authors: Libuna, Christine Anne Grace T. Libuna; Legislador, Zeah Grace; Legada, Loren Rose; Lemana, Reuel John; Lentija, Glyzza; Ledesma, Bea Alessandra. As an expert of this subject, I have reviewed the instruments and its contents as to its appropriateness and accuracy based on the problem statement, purpose of the study, philosophical underpinnings, and definition of terms.

Issued this 6th day of June, 2023 to the above mentioned student researchers in compliance with their requirements in their research subject.

Respectfully,

Prof. Herme A. Borlado, MAN
(Printed Name and Signature)

Central Philippine University
College of Nursing
Jaro, Iloilo city

CERTIFICATION OF RESEARCH INSTRUMENT VALIDATION
(QUALITATIVE RESEARCH)

This is to certify that the study entitled: Exploring Utilization of Telehealth Post-COVID19 Pandemic among Selected Institutions in Iloilo: A Case at Point, has undergone instrument validation. Necessary changes have been checked and approved.

This certification is issued upon the request of the authors: Libuna, Christine Anne Grace T. Libuna; Legislador, Zeah Grace; Legada, Loren Rose; Lemana, Reuel John; Lentija, Glyzza; Ledesma, Bea Alessandra. As an expert of this subject, I have reviewed the instruments and its contents as to its appropriateness and accuracy based on the problem statement, purpose of the study, philosophical underpinnings, and definition of terms.

Issued this 6th day of June, 2023 to the above mentioned student researchers in compliance with their requirements in their research subject.

Respectfully,

Prof. Rita E. Penaso, MAN
(Printed Name and Signature)

Central Philippine University
College of Nursing
Jaro, Iloilo city

CERTIFICATION OF RESEARCH INSTRUMENT VALIDATION
(QUALITATIVE RESEARCH)

This is to certify that the study entitled: Exploring Utilization of Telehealth Post-COVID19 Pandemic among Selected Institutions in Iloilo: A Case at Point, has undergone instrument validation. Necessary changes have been checked and approved.

This certification is issued upon the request of the authors: Libuna, Christine Anne Grace T. Libuna; Legislador, Zeah Grace; Legada, Loren Rose; Lemana, Reuel John; Lentija, Glyzza; Ledesma, Bea Alessandra. As an expert of this subject, I have reviewed the instruments and its contents as to its appropriateness and accuracy based on the problem statement, purpose of the study, philosophical underpinnings, and definition of terms.

Issued this 6th day of June, 2023 to the above mentioned student researchers in compliance with their requirements in their research subject.

Respectfully,

Prof. Lena O. Giron, MAN
(Printed Name and Signature)

B. STANDARDIZED VALIDATION SHEETS

CENTRAL PHILIPPINE UNIVERSITY
College of Nursing
Jaro, Iloilo City 5000

STANDARDIZED VALIDATION SHEETS FOR RESEARCH INSTRUMENTS

TITLE: Exploring Utilization of Telehealth Post-COVID19 Pandemic among Selected Institutions in Iloilo: A Case in Point

QUESTIONNAIRES	CHOICES	COMMENTS ON THE CLARITY OF ITEMS		COMMENTS ON THE RELEVANCE OF ITEMS		REMARKS/SUGGESTIONS
		CLEAR	NOT CLEAR	RELEVANT	NOT RELEVANT	
Core Question: "How is the utilization of telehealth post-COVID19 pandemic?"						*Suggestion from Prof. Rita E. Penaso:* Core Question: "How is telehealth utilized in post-COVID 19 Pandemic?" (Just a suggestion)
• How does telehealth work?		√		√		
• What methods do you use in delivering health care services in telehealth?		√		√		
• What are the main issues that have been recognized in implementing and maintaining the use of telehealth post-COVID19 pandemic?		√		√		Suggestion: You could also group your questions accordingly; like you start with asking how do they understand telehealth; its function; its appropriateness. Your questions of course are clear and relevant, all of them, but in order to be more effective you have to follow-up questions according to what was answered by your respondents. Thank you!
• What does your institution do to overcome these obstacles/barriers?		√		√		
• What methods or strategies function best in sustaining telehealth after the COVID-19 pandemic?		√		√		
• What is the significance of continuing the use of telehealth post covid-19 pandemic?		√		√		
• What aspects of telehealth here in Iloilo city should be improved?		√		√		

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College of Nursing
Jaro, Iloilo City 5000

STANDARDIZED VALIDATION SHEETS FOR RESEARCH INSTRUMENTS

Suggestion from Prof. Herme A. Borlado:

- What is your understanding of telehealth?

Rephrase to:
What is your understanding of telehealth?

- What factors contribute to the underutilization of telehealth services in the local context?

Rephrase to:
What factors contribute to the underutilization of telehealth services in the local context?

- What factors contribute to the underutilization of telehealth services in the local context?

Rephrase to:
What factors contribute to the underutilization of telehealth services in the local context?

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College of Nursing
Jaro, Iloilo City 5000

STANDARDIZED VALIDATION SHEETS FOR RESEARCH INSTRUMENTS

- What steps does your institution take to tackle challenges with telehealth?

Rephrase to:
What steps does your institution take to tackle challenges with telehealth?

- What are the possible results of telehealth adoption?

Rephrase to:
What are the possible results of telehealth adoption?

- What are the areas of improvement for telehealth services in Iloilo City?

Rephrase to:
What are the areas of improvement for telehealth services in Iloilo City?

Suggestion from Prof. Lena O. Giron:

"What do you know about telehealth about telehealth"

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Jaro, Iloilo City 5000

STANDARDIZED VALIDATION SHEETS FOR RESEARCH INSTRUMENTS

Very vague but in terms if introduction it may do.

Omit some of the questions to avoid imposing themes on the participants.

Prepared by:

Libuna, Christine Anne Grace
Legada, Loren Rose
Legislador, Zeah Grace
Lemana, Reuel John
Lentija, Glyzza
Ledesma, Bea Alessandra

Validated by:

Prof. Rita B. Penaso
Validator

Prof. Lena O. Giron
Validator

Prof. Herme A. Borlado
Validator

C. CERTIFICATE OF TECHNICAL REVIEW

Central Philippine University
Jaro, Iloilo City
College of Nursing
The First Nursing School in the Philippines, 1906
Bachelor of Science in Nursing

ENDORSEMENT SHEET FOR ETHICS REVIEW

(Technical Panel Approval Sheet)

This undergraduate thesis proposal entitled **Exploring Utilization of Telehealth Post-COVID19 Pandemic among Selected Institutions in Iloilo: A Case at Point,** prepared and submitted by **Libuna, Christine Anne Grace T. Libuna; Legislador, Zeah Grace; Legada, Loren Rose; Lemana, Reuel John; Lentija, Glyzza; Ledesma, Bea Alessandra** in partial fulfillment of the requirements for the degree of BACHELOR OF SCIENCE IN NURSING, has been presented in a Proposal Review on **March 23, 2023**.

Further, the suggestions and recommendations of the technical panel have been complied with.

This proposal is now recommended for ethical review.

	PROF. ALVIN JOHN GUSTILO	
	Panelist	
	PROF. CYNTHIA MENDOZA	
	Panelist	
	PROF. MELBA C. SALE	
	Panelist	
	Approved by:	
	PROF. MELBA C. SALE, MAN, RN (OIC)	
	Dean, College of Nursing	

D. CERTIFICATE FOR PLAGIARISM SCANNING

REVIEW, CONTINUING EDUCATION and CONSULTANCY CENTER
Central Philippine University
Jaro, Iloilo City
Tel. No. 329-1971 local 1008 email: rceecsec@cpu.edu.ph
Website: rceec.cpu.edu.ph

March 3, 2023

CERTIFICATION

This is to certify that the research proposal entitled **"EXPLORING BARRIERS INFLUENCING ACCEPTANCE OF TELEHEALTH AMONG RHU PERSONNEL IN ILOILO"** by **Libuna, Christine Anne, Legada, Loren Rose, Legislador, Zeah Grace, Lentija, Glyzza, Lemana, Reuel John and Ledesma, Bea Alessandra** has undergone Turnitin Similarity Checking with a passing percentage of **12%** and have passed the requirements (Chapter 1-3).

Prepared by:

PINKY E. LUTERO-TONGOL
Staff -in-charged

Approved by:

LENNY ROSE P. MUCHO, EdD.
Director, RCECC

REVIEW, CONTINUING EDUCATION and CONSULTANCY CENTER
Central Philippine University
Jaro, Iloilo City
Tel. No. 329-1971 local 1008 email: rceccsec@cpu.edu.ph
Website: rcecc.cpu.edu.ph

April 18, 2024

CERTIFICATION

This is to certify that the paper entitled **"EXPLORING UTILIZATION OF TELEHEALTH POST-COVID19 PANDEMIC AMONG SELECTED INSTITUTIONS IN ILOILO: QUALITATIVE CASE STUDY"** by **Christine Anne Grace Libuna, Loren Rose Legada, Zeah Grace Legislador, Glyzza Lentija, and Reuel John Lemana** has undergone Turnitin Similarity Checking with a passing percentage of 14% and has passed the requirements (Chapter 1-3).

Prepared by:

PINKY E. LUTERO-TONGOL
Staff-in-charge

Approved by:

LENNY ROSE P. MUCHO, EdD
Director, RCECC

E. CERTIFICATION OF APPROVAL FOR ETHICS REVIEW

RESEARCH ETHICS REVIEW BOARD
CENTRAL PHILIPPINE UNIVERSITY
Lopez Jaena St., Jaro, Iloilo City, Philippines
329-1971 to 79 local 3336

ETHICAL CLEARANCE

RERB Form No.22-2
Version No.: 04
Date of Effectivity: 17 May 2023

Date of Approval: September 12, 2023

RERB Code: 2023-232-UG-LIBUNA et al.

Protocol Title: ***"Exploring Utilization of Telehealth Post-COVID19 Pandemic among Selected Institutions in Iloilo: A Case in Point"***

Version No. 03

Researcher/s: **LIBUNA, CHRISTINE ANNE**
LEGADA, LOREN ROSE
LEGISLADOR, ZEAH GRACE
LENTIJA, GLYZZA
LEMANA, REUEL JOHN
LEDESMA, BEA ALESSANDRA

Upon resubmission of the following documents, Research Proposal Chapters 1, 2, and 3 with references and Informed Consent Form, the above protocol is hereby **APPROVED** by the CPU-RERB. This ethical clearance is valid from **September 12, 2023** to **September 12, 2024**.

The researcher/s are hereby required to submit the following:

√ Progress Report on or before **October 12, 2023** to researchethics@cpu.edu.ph
√ Final Report Form and one (1) copy of the completed protocol **within one (1) month** after completion of the study.

For any amendment or alteration in the protocol that will change the nature, or the level of risk involved after approval, the Research Ethics Review Board must be notified through writing and accomplishing the following forms as needed: Protocol Deviation Form, Serious Adverse Events, Amendment Form, and/or Early Termination Report.

Very truly yours,

JOY G. RASO, PhD.
Chair, CPU-RERB

Date: 9/12/23

F. PROGRESS REPORT

RESEARCH ETHICS REVIEW BOARD CENTRAL PHILIPPINE UNIVERSITY Lopez Jaena St., Jaro, Iloilo City, Philippines 329-1971 to 79 local 3336	
PROTOCOL REVIEW OF PROGRESS REPORT	RERB Form No. 09-1 Version No. 01 Date of Effectivity: 17 May 2023

INSTRUCTIONS TO THE RESEARCHER/s:
This form is required thirty (30) days after your Data Collection. Obtain an electronic copy of this form and supply
All information required in the space provided. This form shall be signed by the researcher and adviser before submission to researchethics@cpu.edu.ph

GENERAL INFORMATION

Title of Study	Exploring Utilization of Telehealth Post-COVID19 Pandemic Among Selected Clinics in Iloilo: A Case Study		
RERB Protocol No.	2023-232-UG-LIBUNA et al.	Study Site	CPU Medclinic, The Medical City, Iloilo Doctor's Hospital Condo Clinic
Name of Researcher	Libuna, Christine Anne Grace T.		
Contact No.	0947238398	Email Address	christineannegrace.libuna-20@cpu.edu.ph
Co-researcher (if any)	Legislador, Zeah Grace; Legada, Loren Rose Lemana, Reuel John Lentija, Glyzza		
Institution	Central Philippine University		
Address of Institution	Lopez, Jaena Street Jaro Iloilo City		
Ethical clearance effectivity period:	September 12, 2023 to September 12, 2024		

PROGRESS REPORT

1. Start of study: November 2022
2. Expected end of study: May 2024
3. Number of enrolled participants: 3
4. Number of required participants: 3

5. Number of participants who withdrew: None
6. Deviations from the approved protocol:
7. New information (literature or in the conduct of the study) that may significantly change the risk-benefit ratio: None
8. Issues/problems encountered: Difficulty in finding a physician who utilizes telehealth post COVID19 Pandemic and difficulty in finding an available time to meet with them due to physician's hectic schedule.

Recommendations (For RERB use only)	
DECISION: (For RERB use only)	[☐] Ask for further information [☐] Noted and Accept report
Comments of Primary Reviewer (For RERB use only)	

RERB Primary Reviewer: (For RERB use only)

Signature over Printed Name

Date:

Researcher/s:

CHRISTINE ANNE GRACE T. LIBUNA
Signature Over Printed Name

LOREN ROSE C. LEGADA
Signature Over Printed Name

ZEAH GRACE L. LEGISLADOR
Signature Over Printed Name

REUEL JOHN E. LEMANA
Signature Over Printed Name

GLYZZA A. LENTIJA
Signature Over Printed Name

Date: 06/06/2024

Adviser:

VERNA LYNN H. DUEÑAS
Signature Over Printed Names

Date: 06/06/2024

G. FINAL REPORT

RESEARCH ETHICS REVIEW BOARD
CENTRAL PHILIPPINE UNIVERSITY
Lopez Jaena St., Jaro, Iloilo City, Philippines
329-1971 to 79 local 3336

FINAL REPORT FORM	RERB Form No. 13-1
	Version No. 01
	Date of Effectivity: 17 May 2023

INSTRUCTIONS TO THE RESEARCHER/s:
This form is required upon completion of the study. Obtain an electronic copy of this form and supply all information required in the space provided. This form shall be signed by the researcher and adviser before submission to researchethics@cpu.edu.ph

GENERAL INFORMATION

RERB Protocol Number	2023-232-UG-LIBUNA et al.	Date (DD/MM/YYYY)	06/06/2024
Protocol Title	Exploring Utilization of Telehealth Post-COVID19 Pandemic Among Selected Clinics in Iloilo: A Case Study		
Principal Investigator/s	Libuna, Christine Anne Grace T.		
Department/College	College of Nursing		
Contact No.	0947238398	*Email Address	christineannegrace.libuna-20@cpu.edu.ph
Co-investigator/s (if any)	Legislador, Zeah Grace; Legada, Loren Rose Lemana, Reuel John Lentija, Glyzza		
Contact No.	096121078407 09052729522 09295621212 09638026611	Email Address	reueljohn.lemana-20@cpu.edu.ph lorenrose.legada-20@cpu.edu.ph zeahgrace.legislador-20@cpu.edu.ph glyzza.lentija-20@cpu.edu.ph
Institution of Researcher/s	Central Philippine University		
Address of Institution	Lopez Jaena Street, Jaro Iloilo City		
Effective period of Ethical Clearance	From: September 12, 2023 To: September 12, 2024		
*(*for RERB)* Primary Reviewer/s			
Type of Study	☐ Clinical ☐ Epidemiology ☐ Observational study		
	☐ Document Review ☐ Individual based ☐ Genetic		
	☐ Social Survey ☒ Others, specify Case Study		
Review Status	☐ Full Board ☐ Expedited		

FINAL REPORT

1. Start/end of the Study: November 2022 to May 2024
2. Number of enrolled participants: 3
3. Number of required participants: 3
4. Number of participants who withdraw: 0
5. Deviations from the approved protocol: Title of the study was changed from " Exploring Utilization of Telehealth Post-COVID19 Pandemic among Selected Institutions in Iloilo: Qualitative Case Study" to " Exploring Utilization of Telehealth Post-COVID19 Pandemic Among Selected Clinics in Iloilo: A Case Study" ; The number of participants was changed from 5 to 3.
6. Issues/problems encountered: Difficulty in finding a physician who utilizes telehealth post COVID19 Pandemic and difficulty in finding an available time to meet with them due to physician's hectic schedule.

The following were the major findings in the study:

1. Telehealth serves as a transformative tool for delivering healthcare services remotely, with healthcare professionals emphasizing its broad scope and central role of technology. Definitions provided converge on the notion of telehealth as a medium for reaching patients beyond traditional face-to-face encounters. All statements align on telehealth's role in bridging the gap between patients and healthcare providers, making healthcare services more accessible and convenient through technology-enabled remote consultations.
2. The comprehensive evolution and utilization of telehealth services, emphasizing the diverse methods and platforms employed for remote healthcare delivery. It highlights the broad range of telehealth services, including telemedicine, teleconsultation, health education, and research, facilitated through various internet-based technologies and communication channels such as messenger, Viber, and TFD.
3. Emphasis on patient engagement, consent, and evaluation within telehealth processes. It highlights the structured approach to obtaining patient consent, ensuring transparency, and respecting patient autonomy in telehealth interactions. They underscore the importance of acknowledging patient intent, providing waivers for honest disclosure, and obtaining consent before conducting consultations, while also emphasizing the significance of patient feedback through evaluation forms to gauge the effectiveness of telehealth consultations. These statements collectively illustrate the ethical and effective delivery of healthcare services remotely, emphasizing patient-centered care and continuous improvement in telehealth practices.
4. The multifaceted approach to telehealth, emphasizing the use of various methods and platforms for delivering healthcare services remotely. The underscored importance of health education tools such as informatics, infographics, and recorded videos, the integration of research initiatives within telehealth, ensuring evidence-based practices and

continuous improvement in telemedicine services, as well as the breadth of services offered during medical consultations, including the issuance of medical certificates, laboratory requests, and patient education. These statements collectively illustrate the holistic approach to healthcare delivery within the telehealth framework, catering to both medical and educational needs. These insights underscore the significance of leveraging technology and multimedia tools to optimize patient care and outcomes in telehealth settings.

5. There is a significant surge in teleconsultation services during the COVID-19 pandemic, driven by the need to reduce the risk of COVID transmission and ensure public health safety and a notable subsequent decrease in utilization compared to the peak period. There is also an emphasis on the convenience and cost-effectiveness of telehealth services by seeking consultations from home and the associated cost savings for those in remote or underserved areas.
6. Privacy and security emerge as significant concerns highlighting the vulnerability of patient data to hacking and the ongoing efforts to safeguard confidentiality during teleconsultations. Another major obstacle is the lack of physical examination in telehealth encounters necessitating the development of specific guidelines to address this limitation. Bandwidth and internet issues also pose significant barriers to telehealth accessibility underscoring the challenges posed by slow or interrupted internet connectivity and power outages.
7. In exploring physicians' perspectives on telehealth adoption and areas for improvement within Telehealth Utilization and Adaptation, it becomes evident that individual attitudes and convenience play crucial roles in adoption patterns. Technological literacy and comfort with technology and importance of convenience for both doctors and patients in driving telehealth adoption are the major factors. Moreover, results shed light on various challenges and improvement opportunities within telehealth, including bandwidth limitations, involvement in app development, internet connectivity issues, and the need for increased advertising to enhance telehealth awareness.

Conclusions/Recommendations:

With the results discussed in Chapter IV, the following conclusions are made:

1. Telehealth emerges as a transformative tool, bridging the gap between patients and healthcare providers through technology-enabled remote consultations, enhancing accessibility and convenience in healthcare delivery.
2. Telehealth services showcase diverse methods and platforms, including telemedicine, teleconsultation, and health education, facilitated through internet-based technologies like messenger, Viber, and The Filipino Directory (TFD)..

3. Telehealth processes prioritize patient engagement, consent, and evaluation, ensuring transparency, respect for autonomy, and continuous improvement in remote healthcare delivery.
4. Telehealth adopts a multifaceted approach, integrating diverse methods and platforms for remote healthcare delivery. It emphasizes health education through informatics and videos, research integration for evidence-based practices, and comprehensive medical consultations, highlighting the holistic nature of telehealth in addressing both medical and educational needs.
5. The COVID-19 pandemic drives a significant increase in teleconsultation services for public health safety, subsequently witnessing a decrease post-peak. The convenience and cost-effectiveness of remote consultations from home are highlighted, particularly beneficial for individuals in remote or underserved areas, illustrating the evolving landscape and practical advantages of telehealth services.
6. Telehealth faces significant challenges regarding privacy, security, and the absence of physical examination capabilities, compounded by bandwidth and internet issues, highlighting barriers to accessibility and the need for robust guidelines.
7. Physician perspectives on telehealth reveal the pivotal roles of attitudes, convenience, and technological literacy in adoption. Challenges such as bandwidth limitations and internet connectivity issues underscore areas for improvement, alongside the need for enhanced advertising to boost telehealth awareness and utilization.

Recommendations:

Based on the results of the study, the researchers present the following recommendations:

Physicians. The researchers would like to suggest and encourage physicians to engage in training programs and workshops specifically designed to enhance technological literacy and proficiency in telehealth platforms. The researchers highly recommend conducting specialized training sessions, particularly targeting older physicians who may be technologically illiterate. These programs can provide hands-on experience and practical guidance tailored to the needs of healthcare professionals.

Healthcare Marketing Professionals. Implement targeted advertising campaigns aimed at increasing awareness of telehealth services among both physicians and patients,

highlighting the benefits and convenience of remote consultations while addressing concerns such as technological literacy and connectivity issues. Launch community-wide campaigns to educate individuals about the benefits and availability of telehealth services, particularly targeting those in remote or underserved areas.

Department of Health Personnel. The researchers recommend the development of a code of ethics and clinical practice guidelines (CPG) for telemedicine that will standardize and guide all licensed physicians in the practice and use of telemedicine.

Telehealth Service Providers. The researchers recommend the telehealth service providers prioritize optimizing their application interfaces. These improvements should aim to minimize reliance on strong signals and ensure compatibility with a wide range of phone models. By streamlining the application interface to operate efficiently with weaker signals, users in areas with inconsistent connectivity can still access telehealth services seamlessly. Moreover, catering to various phone models enhances inclusivity, allowing a broader population to utilize telehealth platforms regardless of their device specifications. Ultimately, these enhancements contribute to a more accessible and user-friendly telehealth experience, ensuring that individuals can easily access healthcare services regardless of their location or device capabilities.

Internet Service Providers. The researchers recommend the improvement of bandwidth to support the increasing demands of telehealth services. By prioritizing investments in infrastructure upgrades and technological advancements to enhance bandwidth capacity, internet service providers can significantly contribute to the effectiveness and reliability of telehealth services.

Future Researchers. Considering that our study was only limited to utilization of telehealth post COVID-19 pandemic by physicians, we suggest in-depth qualitative research to also explore the experiences, perspectives, and barriers faced by patients and community members regarding telehealth adoption and utilization.

7. Actions for dissemination of study results:

The findings and result of the study would be used to inform and educate the patients, health personnel, health administrators, policymakers, and future researchers regarding the status of telehealth implementation post COVID19-pandemic. The result of the study would be disseminated by emailing it to the corresponding beneficiaries together with the respondents of the study as soon as the study had been completely conducted. The email of the corresponding

respondents and beneficiaries would be taken during the interviews. The study would also be presented in the final defense, research forum and international research conference. Additional dissemination would occur through articles published in peer-reviewed journals.

Researcher/s:

CHRISTINE ANNE GRACE T. LIBUNA
Signature Over Printed Name

LOREN ROSE C. LEGADA
Signature Over Printed Name

ZEAH GRACE L. LEGISLADOR
Signature Over Printed Name

REUEL JOHN E. LEMANA
Signature Over Printed Name

GLYZZA A. LENTIJA
Signature Over Printed Name

Adviser:

VERNA LYNN H. DUEÑAS
Signature Over Printed Name

Date: 06/06/2024

H. INFORMED CONSENT

RESEARCH ETHICS REVIEW BOARD

RESEARCH ETHICS REVIEW BOARD
CENTRAL PHILIPPINE UNIVERSITY
Lopez Jaena St., Jaro, Iloilo City,
Philippines
329-1971 to 79 local 3336

INFORMED CONSENT FORM (ICF) TEMPLATE
(VERSION No. 02-2023)

1. KEY INFORMATION ABOUT THE RESEARCHERS

Title of the Study: Exploring Utilization of Telehealth Post-COVID19 Pandemic among Selected Institutions in Iloilo: Qualitative Case Study

Name of Researcher/s: Libuna, Christine Anne Grace; Legislador, Zeah Grace; Legada, Loren Rose; Lemana, Reuel John; Lentija, Glyzza; Ledesma, Bea Alessandra

Research Adviser: Prof. Verna Lynn Duenas

Department/College: College of Nursing

Institution: Central Philippine University

2. INTRODUCTION/BACKGROUND OF THE STUDY

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This study aims to explore the utilization of the telehealth post-COVID19 pandemic among selected institutions in Iloilo. The pandemic paved the way for the rise of telehealth (Monaghesh & Hajizadeh, 2020). For the general public, medical professionals, and COVID-19 patients, telehealth has evolved into a fundamental requirement, particularly during quarantine. It allows patients to consult a medical professional in real time for guidance on their health issues. However, now that we are shifting into the new normal, it has been demonstrated that telehealth or remote consultations do not only serve its purpose during the pandemic as this is still being used today — post-COVID19 pandemic.

3. PURPOSE OF THE RESEARCH

The purpose of this research study is to gather tangible, contextual, and in-depth knowledge regarding the implementation of telehealth in their respective areas post-COVID19 pandemic. The primary purpose of this qualitative study is to explore telehealth utilization among health personnel among selected institutions in Iloilo City. The findings and result of the study will be used to inform and educate the patients, health personnel, health administrators, policymakers, and future researchers regarding the status of telehealth implementation post COVID19-pandemic.

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The study will include four parts.

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You are chosen as a participant based on the following criteria: (a.
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d. Participant can either be male or female.
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Researchers will use the pre-defined list of open-ended questions as a guide and allow the conversation to flow naturally, probing for more information when necessary. Encourage the interviewee to expand on their responses. After the interview, thank the participant for their time and willingness to participate. Reiterate the importance of their contribution to your research.

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This study will be conducted *from October 2022 to April 2024.*

For interview:

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14. DECLARATION OF CONFLICT INTEREST

The researchers declare that there are no apparent conflicts of interest in the conduct of the study and there will be no circumstances that could influence the results.

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Electronic research materials, including data files, will be securely stored on encrypted and password-protected devices, with access limited to authorized personnel only. These materials will be retained for a specific period as stipulated by institutional and ethical guidelines, and once the retention period expires, secure data destruction

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Contact Number: 09612078407
Email address: christineannegrace.libuna-20@cpu.edu.ph

If you have questions pertaining to your rights as a participant, you may contact:

Joy G. Raso, PhD.
Chair, CPU Research Ethics Review Board
Email: researchethics@cpu.edu.ph
Phone: 329-1971 (local 3336)

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Print name of participant _____ Signature of participant

Date _____ MM/DD/YYYY

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4. Respect participant's decision if he/she ever wish to withdraw at any time under circumstance wherein he/she is uncomfortable.

I confirm that the participant was given an opportunity to ask questions about the study, and all the questions asked by the participant have been answered correctly and to the best of my ability. I confirm that the individual has not been coerced into giving consent, and the consent has been given freely and voluntarily.

Print Name of Researcher/person taking the consent CHRISTINE ANNE GRACE LIBUNA

Signature of Researcher/ person taking the consent _____

Date: 02/07/2024
MM/DD/YYYY

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Lopez Jaena St., Jaro, Iloilo City,
Philippines
329-1971 to 79 local 3336

INFORMED CONSENT FORM (ICF) TEMPLATE
(VERSION No. 02-2023)

1. KEY INFORMATION ABOUT THE RESEARCHERS

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Name of Researcher/s: Libuna, Christine Anne Grace; Legislador, Zeah Grace; Legada, Loren Rose; Lemana, Reuel John; Lentija, Glyzza; Ledesma, Bea Alessandra

Research Adviser: Prof. Verna Lynn Duenas

Department/College: College of Nursing

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Print name of participant GRACE FORMAN Signature of participant

_____ Date Feb 9, 2024 MM/DD/YYYY

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Print Name of Researcher/person taking the consent CHRISTINE ANNE GRACE LIBUNA

Signature of Researcher/ person taking the consent _____

Date: 02/09/2024
MM/DD/YYYY

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Contact Number: 09612078407
Email address: christineannegrace.libuna-20@cpu.edu.ph

If you have questions pertaining to your rights as a participant, you may contact:

Joy G. Raso, PhD.
Chair, CPU Research Ethics Review Board
Email: researchethics@cpu.edu.ph
Phone: 329-1971 (local 3336)

18. CERTIFICATE OF CONSENT

I have read the foregoing information, or it has been read and explained to me in a language/dialect I know and understand. I have had the opportunity to ask questions about it and any questions I have been asked have been answered to my satisfaction. I consent voluntarily to be a participant in this study.

Print name of participant FREYA ANGELA SILVOSA-CUNDER Signature of participant

Date 2/21/2024 MM/DD/YYYY

Statement by the researcher/person taking consent

I have accurately read out the information sheet to the potential participant, and to the best on my ability made sure that the participant understands that the following will be done.

1. Audio-visual recording of any part of or all research activities.
2. The questions that will be asked to the participants are limited to the relevance of the study.
3. Information from the participant will be gathered and analyzed for the study and will be treated with confidentiality.
4. Respect participant's decision if he/she ever wish to withdraw at any time under circumstance wherein he/she is uncomfortable.

I confirm that the participant was given an opportunity to ask questions about the study, and all the questions asked by the participant have been answered correctly and to the best of my ability. I confirm that the individual has not been coerced into giving consent, and the consent has been given freely and voluntarily.

Print Name of Researcher/person taking the consent CHRISTINE ANNE GRACE LIBUNA

Signature of Researcher/ person taking the consent

Date: 2/21/2024
MM/DD/YYYY

I. LETTER FOR PARTICIPANTS

Central Philippine University
Iloilo City, Philippines
College of Nursing
The First School of Nursing in the Philippines, 1906

October 26, 2023

Ma. Carmen S. Salcedo, MD, FPPS
Medical Clinic Coordinator
CPU MedClinic
Lopez Jaena, Jaro
Iloilo City, Iloilo, 5000

Dear Dr. Salcedo,

Greetings!

We, the fourth level, student nurses of Central Philippine University College of Nursing, are currently conducting a research entitled, "Exploring Utilization of Telehealth Post-COVID19 Pandemic among Selected Institutions in Iloilo: Qualitative Case Study."

The objectives of the study are as follows:

General Objectives:

In general, this study aims to explore telehealth utilization Post-COVID19 Pandemic among health personnel in selected institutions in Iloilo City.

Specific Objectives:

1. Examine the extent to which selected healthcare institutions in Iloilo have integrated telehealth services into their healthcare delivery systems following the COVID-19 pandemic.
2. Analyze how the utilization of telehealth has influenced the quality of patient care, patient outcomes, and patient satisfaction within the selected institutions.

In line with this, we would like to ask permission from your good office to conduct an interview with a healthcare professional who has experience with telehealth. Telehealth is an evolving field in healthcare, and I believe that understanding the perspective of medical practitioners is valuable for the successful implementation and improvement of telehealth services.

This interview will focus on their experiences, insights, and perspectives on telehealth services at CPU MedClinic. The interview will be conducted at a time that is most convenient for the physician and we are committed to ensuring minimal disruption to their daily routine. The interview is expected to take approximately 30 minutes to an hour and will be scheduled at the convenience of the doctor. We will also ensure that all the information shared during the interview remains confidential and is used solely for the purpose of the study. We understand the importance of protecting the privacy and professional responsibilities of your doctors and the institution.

Your favorable response regarding this matter is greatly appreciated. Thank you very much.

Respectfully,

LIBUNA, CHRISTINE ANNE GRACE T.
Group Leader

Noted by:

VERNA LYNN H. DUEÑAS, M.Ed., RN
Research Adviser

Approved by:

MELBA C. SALE, MAN, RN
Acting Dean, College of Nursing

Favorably endorsed & approved

MC SALCEDO, MD, FPPS
Lic. # 0078539

Central Philippine University
Iloilo City, Philippines
College of Nursing
The First School of Nursing in the Philippines, 1906

February 06, 2023

Dr. Grace J. Fernandez
Iloilo Doctors' Condo Clinic
West Ave, Molo
Iloilo City, 5000 Iloilo

Dr. Grace,

Greetings!

We, the fourth level, student nurses of Central Philippine University College of Nursing, are currently conducting a research entitled, "Exploring Utilization of Telehealth Post-COVID19 Pandemic among Selected Institutions in Iloilo: Qualitative Case Study."

The objectives of the study are as follows:

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Specific Objectives:

1. Examine the extent to which selected healthcare institutions in Iloilo have integrated telehealth services into their healthcare delivery systems following the COVID-19 pandemic.
2. Analyze how the utilization of telehealth has influenced the quality of patient care, patient outcomes, and patient satisfaction within the selected institutions.

In line with this, we would like to ask permission from your good office to conduct an interview about telehealth utilization Post-COVID19 Pandemic. Telehealth is an evolving field in healthcare, and I believe that understanding the perspective of medical practitioners is valuable for the successful implementation and improvement of telehealth services.

This interview will focus on their experiences, insights, and perspectives on telehealth services utilization of the physician. The interview will be conducted at a time that is most convenient for

the physician and we are committed to ensuring minimal disruption to their daily routine. The interview is expected to take approximately 30 minutes to an hour and will be scheduled at the convenience of the doctor. We will also ensure that all the information shared during the interview remains confidential and is used solely for the purpose of the study. We understand the importance of protecting the privacy and professional responsibilities of your doctors and the institution.

Your favorable response regarding this matter is greatly appreciated. Thank you very much.

Respectfully,

LIBUNA, CHRISTINE ANNE GRACE T.
Group Leader

Noted by:

VERNA LYNN H. DUEÑAS, M.Ed., RN
Research Adviser

Approved by:

MELBA C. SALE, MAN, RN
Acting Dean, College of Nursing

Central Philippine University
Iloilo City, Philippines
College of Nursing
The First School of Nursing in the Philippines, 1906

February 21, 2024

Dr. Freya Angela L. Salem-Cuarez
The Medical City Clinic
Benigno Aquino Ave, Mandurriao,
Iloilo City, 5000 Iloilo

Dr. Salem-Cuarez,

Greetings!

We, the fourth level, student nurses of Central Philippine University College of Nursing, are currently conducting research entitled, "Exploring Utilization of Telehealth Post-COVID19 Pandemic among Selected Institutions in Iloilo: Qualitative Case Study."

The objectives of the study are as follows:

General Objectives:

In general, this study aims to explore telehealth utilization Post-COVID19 Pandemic among health personnel in selected institutions in Iloilo City.

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1. Examine the extent to which selected healthcare institutions in Iloilo have integrated telehealth services into their healthcare delivery systems following the COVID-19 pandemic.
2. Analyze how the utilization of telehealth has influenced the quality of patient care, patient outcomes, and patient satisfaction within the selected institutions.

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This interview will focus on their experiences, insights, and perspectives on telehealth services utilization of the physician. The interview will be conducted at a time that is most convenient for

the physician and we are committed to ensuring minimal disruption to their daily routine. The interview is expected to take approximately 30 minutes to an hour and will be scheduled at the convenience of the doctor. We will also ensure that all the information shared during the interview remains confidential and is used solely for the purpose of the study. We understand the importance of protecting the privacy and professional responsibilities of your doctors and the institution.

Your favorable response regarding this matter is greatly appreciated. Thank you very much.

Respectfully,

LIBUNA, CHRISTINE ANNE GRACE T.
Group Leader

Noted by:

VERNA LYNN H. DUEÑAS, M.Ed., RN
Research Adviser

Approved by:

MELBA C. SALE, MAN, RN
Acting Dean, College of Nursing

J. CERTIFICATE OF GRAMMARIAN

COLLEGE OF ARTS AND SCIENCES
CENTRAL PHILIPPINE UNIVERSITY
Department of **L**anguages, **M**ass **C**ommunication, and **H**umanities

C E R T I F I C A T I O N

This is to certify that the research entitled **Exploring Utilization of Telehealth Post-COVID19 Pandemic Among Selected Clinic in Iloilo: A Case Study** by *Libuna, Christine Anne Grace, Legada, Loren Rose, Legislador, Zeah Grace, Lentija, Glyzza,* and *Lemana, Reuel John* was checked and verified for grammar and other mechanics of writing.

Issued this 16th of May, 2024.

RHYS DE LA BANDA CAMACHO, MA English (major in TESOL)
DLMCH Faculty
This University

K. TRANSCRIPTS

TRANSCRIPT DOCTOR A

Line 1: Telehealth, actually, is about the delivery of health services to those whom you might want to reach. Example, to be very specific, in this university when we talk about telehealth, this includes telemedicine, teleconsultation, and of course, health education, and even research through using internet or using any information technology as part of the delivery system or as part of the platform. Here at CPU, we actually post all our platforms for patients or potential patients to utilize, so telehealth would include, as what I have mentioned would include everything within the information technology available for them to seek health information or health services. We usually post our mobile numbers, emails, our messenger account or Facebook account, and any of which they can message so that the medical secretary can be able to cater to them. So once they have already logged into the system, okay, take for example messenger account, once they have already expressed their intent to seek consultation, the medical secretary will acknowledge it and give them a waiver for honest disclosure, and the consent to conduct or seek consultation, and then of course, once the patient agrees to it or signs the waiver, the medical secretary or sometimes the nurse, if there are multiple patients to be catered, the nurse or medical secretary will then touch that particular patient with the doctors on duty so that they can conduct the conversation or consultation. At the end of the consultation, once the prescription has been given, once medical counseling has been done or is already finished, an evaluation is also being signed by the patients for us to know whether the patient finds it effective or not. We also do evaluation of students before OJTs

through telehealth, and we follow a specific guideline for that so that even in the absence of physical examination, we can be able to spot as to whether there is already a time for us to require that particular patient to come in person so that we could check them personally. I already have mentioned it before, part of the telehealth would be teleconsultation or telemedicine. Teleconsultation is a part of telemedicine, right? And then we do health education by means of informatics or infographics, we also have recorded videos, which were streamed through social media during your orientation. I gave two series of lectures, and the physicians here also gave one lecture, having the three of them on board. We also have infographics or animated info with regards to teleconsultation, simple steps on how to do teleconsultation, we also have infographics on “pink eye” or conjunctivitis since conjunctivitis was also involved a few months back. We also have infographics on the importance of covid vaccination, and of course research, we also do research. One of the nurses is having her master’s degree and the thesis is also about teleconsultation. I’m also doing a thesis on teleconsultation. Difference is that there is a surge of course. This is self-explanatory. During the pandemic, there is a surge of utilization of teleconsultation primarily because this would lessen the chances of COVID transmission compared to post COVID or shall we say the decrease in COVID incidence wherein face to face consultation is not anymore as risky as that during the height of COVID.

Line 2: Because messenger is very accessible to students or even to staff. I think 80% of students have messenger accounts. If they have none, they could always get through Facebook and get a messenger account, and them email. Everyone has emails here considering this is a higher education institution, so everyone is

required to have emails, and phone, I think everyone has a phone, mobile, or otherwise landline. These are considerations if they don't have the luxury of internet or data, they can always call us through landline. If they don't have landline, they can call through mobile. If their internet is not stable, they could email. Any which way they could contact us.

Line 3: One of course is privacy. Since there would be three in a room where telehealth is being conducted. One is of course the secretary or the nurse, one is a doctor, and the other is the patient. Sometimes you could not assure the patient that there is only the two of us in the room and of course the data which could be accessed when the messenger account will be hacked or the email account would be hacked, so the privacy issue. And of course, there's the lack of the performance of a physical examination which is essential in the diagnosis of the disease. We are having regular review on the maintenance of patient's privacy, especially the techniques on safeguarding privacy of patients' during telehealth or teleconsultation and we usually check, because we usually are very sensitive in checking or asking questions so that if there's a need to really see the patient personally, we could advise them to come. We could shift our platforms from telehealth to actual or in person if there's a need following our conversation.

Line 4: Aside from the convenience of just seeking consultation at the comfort of your homes, this should reduce the expense of going to the physician, expense of transportation, and the ease where you cannot even go to the physician. Again, it would lessen the risk of contracting infectious disease. It could also cut down time to be spent waiting at the clinics or the emergency room, and it would give an

avenue for very close monitoring because at any point in time you could always contact at the time you're not feeling well, so monitoring becomes easier.

Line 5: The bandwidth. Well, this is a nationwide concern. Our internet, our bandwidth is actually very slow and sometimes interrupted and we have power outages, and modern information or technology would always depend on this. So, these are actually the main road blocks in successful telehealth delivery.

TRANSCRIPT DOCTOR B

Line 1: Telehealth is a medium wherein you can do consultation by means of virtual or aside from face-to-face. It all started when we had the pandemic, so if a patient would complain of cough or related to COVID 19, I would advise the patient to go online and then they can have the appointment on the schedule which I'm using a medium, the Filipino directory of Doctors (TFD) formerly known as PPD under MIMS. So, they do have the schedule through the secretary or they call wherein they can log there. Medical consultations then I can give medical certificates, then I can give them laboratory requests and patient education. The teleconsult has been part of the patient who have access to me, meaning to say, the continuum of patient care has already established two options. Aside from that I am also engaged in my practice as a teacher so sometimes I don't have my clinic. I'm not 24/7 here so in case of emergency, we can find somehow a time to do teleconsult in lieu of not having my clinic. I'm also engaged in government wherein in a government hospital, I head the geriatrics center wherein my schedule is not as fixed as I used to before, then it really helps for me to continue the patient's care by means of online. I'm also a coordinator of several HMOs which is I have young clients which are BPOs and even my patients who I had in post and pre COVID are still my patients now. I still utilize the said means of teleconsult. There's not much difference, it's already a part of my practice.

Line 2: As I've mentioned before, I'm using TFD, The Filipino Doctor. There are a lot of means online but I prefer TFD because it's a collaborations with MIMS so the good part is that its almost complete, its user friendly, and in terms of privacy

of course with the patient, there's also a consent from the patient, the process of doing the teleconsult wherein they have to look for me and after that schedule face-to-face or online and after which I have given them a schedule, the mode of payment is also given and then they will do the consent and then we do the teleconsult.

Line 3: Availability of my time online because when there is, in COVID, you always do most of teleconsult rather than doing clinics but nowadays, I'm back in my clinic, as you can see, I started 9'o clock until now (8pm) I'm still here. So the load of the patients goes more to the clinic but extension that I cannot accommodate then they are scheduled in teleconsult. I do explain to the patients when we started or even new patients, I would explain what kind of a doctor I am, so I'm not a 5 minutes doctor to start with. Meaning to say, I cannot do a 5 mins or 10 mins, I have to listen to them and then explain the medications. So that's the reason if you see while you're waiting, all my patients are patient enough to stay on and have the consultation because they are aware of how I am as a doctor in terms of patient-doctor relationship. So I think it doesn't matter, but they would say it's flexible. If I'm not available, then we can do the telehealth.

For example, when my secretary says I have 50 patients today and then we try to look into whom we can do online, that's why sometimes in between, depending on the necessity. If you notice, there's some sort of a break because there's a need for me to do the online because a patient needs the medication the soonest, so it's a matter of prioritizing.

Line 4: I still believe in using both in terms of the face-to-face and teleconsult because I have days that I'm also doing my learning, meaning to say, I go outside of Iloilo or abroad, even with the fast-paced internet, and when you have your sim, my business can go online. For me, I'm happy because the apps that are being used now for teleconsult is better than before because it's user friendly, it's more shortcut, meaning they can upload their laboratory unlike before, we have system in the office which is too taxing for me to do the storage of the laboratory and then do the scheduling. So, it really adds to a more organized process towards working with patients.

Line 5: First of all, it depends on the doctor. If the doctor is not going for teleconsult, second if they are literate, meaning to say technology savvy, then you can say that they were engaged in using telehealth, it depends. Not all of us are using teleconsult, so for me, the method of using the different forms of apps depends on the doctor but for me, in this instance, I'm one of the part of the beta of improving this teleconsult apps, because they acknowledge us or they would, as what I have called in this TFD, there's somebody monitoring and somebody from the head office, so they would say, "doc would you want to change anything?", or "do you want to improve anything?", which is the way. They are involved. So never stop. Nowadays, the TFD has announcement for the future convention, future conference, and then there's also medications updating in the medications. The good part is it's so easy for me because I'm concerned for the side effects. So when you have an array of medications, they would say that there is a drug to drug interaction. The patient on their email, when they receive that, they also have the listing which is for me at the moment, I'm contented with the way in the online, which is the one I'm using.

Some of the other doctors are only for prescription, in this all I have to do is go back, check for the record, resend, re-prescribe, and the date will be changed. It's user friendly for the doctor as well as the patient. Only problem is when you do the virtual using this system, you need a higher internet speed, that's why I utilize Viber or messenger outside for that. Because if you go inside, internet needs to be improved a little bit. The bandwidth is also a main issue because you cannot use the app online.

TRANSCRIPT DOCTOR C

Line 1: Telehealth is a consultation with patients using technology. It could be through a call, it could be through a text, a chat, it could also be through a video call or it could be through other platforms like MS Teams, Messenger, wherein you need a camera that you have to see your patient. And then teleconsult, it could be, how do I define it? Means that we can use in order to consult our patients without having them come to us face to face. I do telehealth through my private clinic as well as our clinic at Carelon. Carelon is a BBO. We are under ProServe Health Services Incorporated, which is also the mother company of the Medical City Clinic. So, we are doctors who are assigned in vehicle centers and because some of our patients are working from home and, of course, because we have very tight security and with regards to our health protocols at Carelon, we would usually use the teleconsult platform so that patients with symptoms don't have to go to clinic. Aside from Carelon, I also do teleconsult through more power. I am the company physician of MORE Power. So, for patients who have symptoms also or for patients that need consult and then I'm not available in the clinic because I only have limited time, no duty, so they can consult me through teleconsultation. The number of patients. Because, of course, there are more and more patients who would have respiratory symptoms then. So, of course, they would really opt, the company, aside from the patient, they would opt that the patients would consult in via teleconsult as compared to going on site with the risk of infecting other people on site. So, that's why there is an increase or there are more patients availing teleconsult then as compared to now. Now, actually, although we still get teleconsult patients, there's more decrease. We can say about 50% decrease. And usually, our teleconsultations right now the reason for

consult is different also. Because before, the reason for teleconsult is solely because of respiratory symptoms. As of now, because we cater to work-from-home agents or work-from-home patients, it does not have to be respiratory. It can be any consultation. There is a decrease with the use, with the utilization of teleconsultation as compared to before.

Line 2: For example, in Carelon, we use MS Teams. Okay, so in MS Teams, the video should be on. For MORE Power, I usually use Viber. Before, I also had, I had experience using PPD. I'm not sure if you're aware of PPD. It's a teleconsult platform. It's a teleconsult platform where in, but it's usually audio call. Also, I've had experience with Dr. Anywhere. It's a video call through Viber. So, those are the means. So, some, although I would shy away from the messenger, especially if the patient is, like for example, the company, I don't usually give out my messenger because messenger is not a formal. Although, same with Viber. But when we say messenger, the feeling of the patient is that they can just contact you anytime. So, at least if you give your specific, like Viber, it's like you can say, “I will not entertain you after that”. And then, of course, there are some patients who would really look for your personal account and daw medjo ma sabad na siya (and it’s a little bit bothersome). Personally, for convenience but it would depend on the company because in one company, there’s a prescribed one. And MS Teams is you can have your recording. I think that's the reason why they wanted to use MS Teams because everything could be recorded. Actually, the same with Google Meet and Zoom. You can have your conversation recorded and then you can backtrack it for future use. Viber, it's because that's their mode of communication in the office. They use Viber. So, that's why I also have to use Viber because amo na ila main nga ano (that’s their main), way of

communicating online. What else? For PPD before because that's the prescribed teleconsult platform. So, amo na ila (that’s their) main program. So, we have to abide with that. But personally, first, if I were to choose, it would be for my convenience and also the convenience of your patient. Because sometimes you have to look into the, if you're using something that would need a video call, you have to think of the load, the Wi-Fi, the reception of your patient. So, usually, just chat. Actually, one convenience is if I were to choose for myself, it's chat because you can go over your conversation. You can have pictures. Because I think this will be one of your questions. The integrity of your conversation. Sometimes if it's just a phone call, they can just say anything. And it would be hard for you to backtrack your conversation. And sometimes you need proof, especially if you work in a company. You need proof that this is what he said. So, convenience, that's my choice. But if you work for other companies, you select what they prescribed.

Line 3: In the company, technically there’s no issue. Because especially if they're working from home, their internet connection is being paid by the company. So, they don't have a reason to not be able to contact us because they are paid. But for other patients, if they're outside, the signal is not good. Sometimes it's really hard, especially if they're in bukid (mountain areas) or somewhere. Actually, there are areas here in Mandurriao that the cell signal is not that good, so, calls cannot be heard properly. Viber is allowed because some uses someone else’s Wi-Fi. The signal is not really good, so, I think that's still really the issue that can happen with the signal. And others can always say, “I don't have load, Doc.” or “I don't have money to buy load”. Yes, they can always say that they don't have money to buy load and cannot use Wi-Fi. That will be difficult especially if we just

rely on the cell signal of the call, I think it's also a challenge. In one way or another, it affected. But you can always look for other options if you really cannot understand each other through call. Then you text. You text, and if you don't get a choice, you load it. For others, of course, I don't think there's really an effect because, like I said, the company pays for their internet connection. So, it's secured. So, usually, we have no problem with that. But if the patient is just using his or her internet, it's affected. But so far, I have not experienced very big inconvenience. We can still talk. If we cannot call, we chat. We text.

Line 4: It's still very convenient, especially if the demographics of your patient because not all patients can just come to the city, that's one. There are a lot of patients who live in the areas like malayo bala ang areas (areas that are remote), for example, us in our company, we have to cater to teleconsultations because some of the agents are in Roxas and some of the patients are in Aklan, so teleconsultation is still important. Also, if you're working in a company setting as an occupational health physician, you cannot just let anyone come in the production floor that is still not cleared. So, if your patient has respiratory symptoms, you have to make sure of that first before they go in. You have to make sure that they really don't have symptoms. So, it's better to clarify that through calls. And it is not allowed that if they have symptoms, they will just go there since it's for the safety of everyone. It's better to still use teleconsultation actually because although we can say that the pandemic is over, the pandemic, yes, but COVID is not, because we still have COVID patients. So, one way to ensure that the pandemic will not happen again is to safeguard. Though, you are the gatekeeper. You have to gatekeep your patients. So, if they have symptoms, it's better to make a call because we ourselves are also exposed. So, at least via

phone, and they say, Doc, I have fever, I have cough, I have these other symptoms. You can say, “don't come here”. Because some will still go to their workplaces, work areas, they will go to other people with cough, and then later on they decide to go to the clinic, so it's too late already. The virus or bacteria has already been spread. And then you will discover later on that he has had these symptoms for the past two to three days already, but he still feels that he can go to work and then just went for consultation afterwards. If there’s someone with symptoms, the option should be directly for teleconsult. We could save the workplace. So, for us, I think it's still better to have teleconsult. Because not only with COVID, we still have pneumonia, we still have TB, which are also very infectious. So, it’s not only with COVID.

Line 5: The poor internet connection, I think that's one. That’s really it, because unlike in other places, the Wi-Fi connection is very stable. It's very easy, actually. But here in Iloilo, we don't have a specific platform that’s for Iloilo only. Usually, they are apps, or they are platforms from NCR or from other countries that are just adapted here in Iloilo. Because some of the doctors are from Iloilo, but are working for people not from here. So, for us, in the programs, in the nitty-gritty, so far, there’s none here for Iloilo. But the issue is really in the internet, the Wi-Fi connectivity, the internet connectivity, the signal in our cell sites.

Advertising, that’s another thing. In Iloilo, it's not that super advertised, right? The teleconsult. Some people just know the teleconsult that their company provided. I had teleconsult patients before, during the pandemic, my patients are not from here. From Manila, from Cavite, from CDO, but not here in Iloilo. Most of the people availing the teleconsult are not from Iloilo. In Iloilo, the Ilonggos would

usually just still go to the doctors for their consultation. But maybe, if it's advertised, the people are educated, maybe the teleconsultation will grow.

L. SUMMARY OF CORRESPONDENCE AND SUB-CORRESPONDENCE

Table 1

Correspondence 1	Correspondence 2	Correspondence 3
Telehealth processes, Workflow, Components	Impact, Challenges, and Concerns of Telehealth	Telehealth Utilization and Adaptation
1.1. Definition and Scope of Telehealth	2.1. Surge During the Pandemic	3.1. Doctor's Perspective and Adoption
1.2. Platforms and Accessibility	2.2. Convenience and Cost Reduction	3.2. Involvement in Improvements
1.3 Patient Engagement and Consent	2.3. Privacy and Security	
1.4 Evaluation and Follow-up	2.4. Lack of Physical Examination	
1.5 Teleconsultation and Telemedicine	2.5. Bandwidth and Internet Issues	
1.6 Health Education and Research		

M. ESTIMATED BUDGET

ITEM NO.	DETAILS	AMOUNT
1	Rim Bond Paper	240.00
1	Plagiarism Scan 200/member	1200.00
1	Print of chapters 1-3	150.00
1	Ethics Review (Undergraduate)	1500.00
2	Soft Bound of Chapters 1-3	500.00
	Fare for giving out letters	200.00
	Fare for Conduct of Interview	500.00
	GRAND TOTAL:	4290.00

N. CURRICULUM VITAE

Overview

Name: Loren Rose C. Legada

Age: 23

Address: Brgy. Ungka II, Pavia, Iloilo

Bachelor of Science in Nursing Level 3, currently taking up units in Nursing Research 1

Education

Bachelor of Science in Nursing

Relevant Experience

Study conducted in Junior High School

Title: Apple Cider and Sugar-Apple: A Natural Remedy for Head Lice

Currently conducting research on:

Title: Exploring Utilization of Telehealth Post-COVID19 Pandemic among Selected Institutions in Iloilo: A Case in Point

Took units in Research - Junior High School'

Took units in Research - Senior High School

Took units in Nursing Research - BSN Year 3

Overview

Name: Zeah Grace L. Legislador

Age: 22

Address: Brgy. Buray, Oton, Iloilo

Bachelor of Science in Nursing Level 3, currently taking up units in Nursing Research 1

Education

Bachelor of Science in Nursing

Relevant Experience

Study conducted in Junior High School

Title: Mechanical Properties of Plastic Strips Made from Cassava (*Manihot esculenta)* and Corn (*Zea mays*) Starch (Experimental)

Study conducted in Senior High School

Title: Effectiveness of Pulverized Malunggay (*Moringa oleifera*) Leaves on Wound Healing Compared to the Commercial Povidone-iodine (Experimental)

Currently conducting research on:

Title: Exploring Utilization of Telehealth Post-COVID19 Pandemic among Selected Institutions in Iloilo: A Case in Point

Took units in Research - Junior High School

Took units in Research - Senior High School

Took units in Nursing Research - BSN Year 3

Overview

Name: Reuel John E. Lemana

Age: 23

Address: Cadelva Subdivision, Dunggon C, Mandurriao, Iloilo City

Bachelor of Science in Nursing Level 3, currently taking units in Nursing Research 1

Education

Bachelor of Science in Nursing

Relevant Experience

Study conducted in Junior High School

Title: Apple Cider and Sugar-Apple: A Natural Remedy for Head Lice

Study conducted in Senior High School

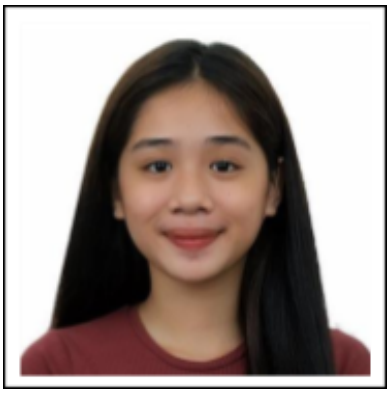
Title: Perception on Senior High School Graduates as Assessed by West Visayas State University College Teachers

Title: Family Influence and Academic Strand Choice of Grade 11 Students of West Visayas State University

Took units in Research - Junior High School

Took units in Research - Senior High School

Took units in Nursing Research - BSN Year 3



Overview

Name: Glyzza A. Lentija

Age: 22

Address: Brgy. Tagbak, Jaro, Iloilo

Bachelor of Science in Nursing Level 3, currently taking up units in Nursing Research 1

Education

Bachelor of Science in Nursing

Relevant Experience

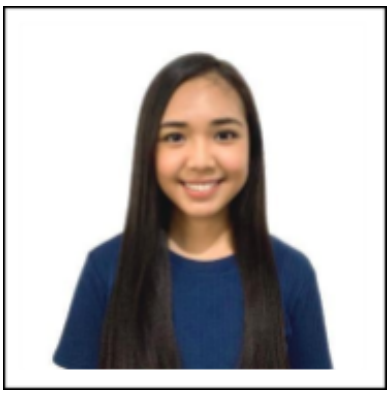
Currently conducting research on:

Title: Exploring Utilization of Telehealth Post-COVID19 Pandemic among Selected Institutions in Iloilo: A Case in Point

Took units in Research - Junior High School

Took units in Research - Senior High School

Took units in Nursing Research - BSN Year 3



Overview

Name: Christine Anne Grace T. Libuna

Age: 21

Address: Brgy. San Isidro, Jaro, Iloilo

Bachelor of Science in Nursing Level 3, currently taking up units in Nursing Research 1

Education

Bachelor of Science in Nursing

Relevant Experience

Study conducted in Junior High School

Title: Termicidal Effect of *Citrus aurantium* and *Capsicum anuum L* Extracts on *Odontotermes oblongaus* (Experimental)

Study conducted in Senior High School

Title: Sensory Acceptability of Crenate Crab (*Thalamita Crenata)* Kroepeck (Experimental)

Title: Water Assessment of Brackish Water at Isla Kapispisan, New Washington,Aklan (Descriptive-Exploratory)

Currently conducting research on:

Title: Exploring Utilization of Telehealth Post-COVID19 Pandemic amongSelected Institutions in Iloilo: A Case in Point

Took units in Research - Junior High School

Took units in Research - Senior High School

Took units in Nursing Research - BSN Year 3

Research Adviser

Overview

Name: Verna Lynn H. Duenas

Age: 50

Address: Jaro, Iloilo City

Education

Bachelor of Science in Nursing, Bachelor in Elementary Education, Master in Education

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Relevant Experience

Research Author, Presenter:

Nutritional Status of Preschool Pupils in Public Day Care Centers 2014

Assessment of Health Skills of Barangay Health Workers: Basis for Health Skills empowerment 2015

Maternal Nutritional Knowledge and Preschoolers Nutritional Status among 4P's Beneficiaries 2016

O. SCHEDULE OF ACTIVITIES

ACTIVITIES	October 2022				November 2022				December 2022				January 2023				February 2023				March 2023				April 2023				May 2023				June 2023			
	Week				Week				Week				Week				Week				Week				Week				Week				Week			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Presentation of research title																																				
Proposal preparation, review and approval																																				
Advising and finalization of research proposal																																				
Submission of research proposal to adviser																																				
Title defense																																				
Revision of research proposal																																				
PowerPoint making for pre-oral defense																																				
Pre-oral defense																																				
Proposal revision																																				
Filling out of RECS forms																																				
Ethics review submission																																				

ACTIVITIES	November 2023				December 2023				January 2024				February 2024				March 2024				April 2024				May 2024				June 2024				July 2024			
	Week				Week				Week				Week				Week				Week				Week				Week				Week			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Interview simulation																																				
In-depth interview																																				
Transcribing interview																																				
Data analysis																																				
Plagiarism scanning																																				
Submission for final defense																																				
PowerPoint making for pre-oral defense																																				
Final oral defense																																				