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**AN ANALYSIS OF THE AHPCSA TELEHEALTH AND TELEMEDICINE
GUIDELINES PUBLISHED DURING COVID-19 IN 2020 FOR
CHIROPRACTORS**

A dissertation submitted to the Faculty of Health Sciences, University of
Johannesburg, as a partial fulfilment for the Master's Degree in Technology,
Chiropractic

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DEDICATION

I would like to thank my extended family members and siblings who have played a vital role in supporting, encouraging and motivating me throughout this journey. I thank you for always believing in me, trusting in my capabilities and encouraging me to strive for the best.

I would like to dedicate this research study to my father and dearest husband Eesa who have given me unconditional support, love, encouragement and motivation throughout this journey of my studies and research. It is with all your support that I have been able to complete this dissertation. Thank you for always being my pillar of strength. Through all the tears, laughter and sleepless nights, you have always believed in me and because of that I am able to look at a bright future ahead. My father, Fazal, it is all your late night conversations about morals and ethics that have guided and moulded me into the young lady that I am. I am forever grateful for the father I have.



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To my family and friends, I thank you for your continuous support, love and motivation you have given me through the years to complete my degree and dissertation. I am forever grateful.

ABSTRACT

Background:

In 2020, the World Health Organisation (WHO) declared Covid-19 as a pandemic. In South Africa, on 24 March 2020, the president of the Republic of South Africa announced that the country would be placed in a total lockdown from 27 March 2020 in which no persons were allowed to operate businesses unless they were healthcare workers or in some other essential business concerns. As set out in an extraordinary policy decision of the executive committee of the Allied Health Professions Council of South Africa (AHPCSA) of 25 March 2020, AHPCSA-regulated practitioners and therapists were able to receive patients using a telehealth/ telemedicine modus, this decision suspending a previous AHPCSA 2011 decision which disallowed the practice. In clarification of the AHPCSA executive committee extraordinary policy decision, the AHPCSA Registrar issued a notification on 26 March 2020 indicating that patients could be received, but in essential cases only, namely in emergencies only, at the registered place of practice on a face-to face basis. In all other cases, the reception of patients was required in terms of the telehealth/telemedicine modus according to the AHPCSA published Telehealth and Telemedicine Guidelines. The restriction on receiving patients in cases of emergency only was lifted on 1 May 2020 pursuant to a subsequent extraordinary AHPCSA executive committee policy decision on 29 April 2020, but the AHPCSA Telehealth and Telemedicine Guidelines remain in force for AHPCSA-regulated practitioners and therapists to receive patients. The research question must then consider whether these AHPCSA Guidelines included similar recommendations to those of other countries, and if these Guidelines could be supported by published literature. It remains important that, despite the method of practice used, Chiropractic care is required to ensure that the fundamental rights of patients were still respected, namely those of dignity, privacy, confidentiality and informed consent.

Aim:

The aim of the study was to analyze the AHPCSA Telehealth and Telemedicine guidelines recommended in response to the Covid-19 pandemic. This qualitative, descriptive study design used document analysis to conduct an in-depth analysis of the AHPCSA Telehealth and Telemedicine Guidelines published in other countries as well as published literature in other healthcare fields.

To achieve this aim, the following objectives used were:

1.2.1 Compare AHPCSA Telehealth and Telemedicine Guidelines to the guidelines that have been published by other Chiropractic associations worldwide.

1.2.2 Use published literature in other healthcare fields to test the Telehealth and Telemedicine requirements in the AHPCSA guidelines.

Method:

This is a qualitative, descriptive study design using document analysis as described by Bowen (2009) to conduct an in-depth analysis of the AHPCSA Telehealth and Telemedicine Guidelines. Documents used included guidelines published by other Chiropractic associations worldwide, as well as literature published on Telehealth and Telemedicine in other healthcare disciplines. This research method allowed for documents to be selected with regard to telehealth and telehealth communications guidelines set out for chiropractors around the world which was accessed across the following sources: PubMed, Science Direct, EBSCOhost, Wiley Online Library and SpringerLin. This in turn allowed for the development of themes and sub-themes that were identified within this research study.

Results:

The results from this study may suggest that when comparing the guidelines published by AHPCSA to the other three countries used in this study, they all yielded similar results. Identification of the themes and sub-themes were similar however not all four countries had provided its chiropractors with sufficient information on each of these themes. When

appraising Australia's information on telehealth, it is informative enough so that Chiropractors have a good understanding when using telehealth in their practices. Canada's approach to the guidelines differed to that of the other three countries in which theirs was more patient-centered. Despite South Africa having an extensive guideline list, certain matters were not covered in their Guidelines which were found in the other countries.

Conclusion:

When analysing all the data used in this research study, it is noted that all four countries had similar themes and sub-themes identified in their guidelines. South Africa did not have key themes in their guidelines. From research concluded regarding those themes, they have a pivotal role in shaping the way telehealth is used. The counties under review should engage in information exchange to achieve a base-line competency standard for the chiropractic profession for the reception of patients in any telemedicine or telehealth modus.



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CHAPTER ONE

INTRODUCTION

1.1 General Introduction

According to the Oxford Dictionary, telehealth is the provision of healthcare remotely by means of telecommunications technology (Telehealth, 2020). This can be carried out by means of real time video visits where there is no personal doctor-patient contact and is conducted in a more remote setting. In previous years practicing telehealth medicine and telehealth communications was not allowed in South Africa as decided by the Allied Health Professionals Council of South Africa (AHPCSA). However, given the recent Covid-19 pandemic the medical profession has had to look at alternative forms of treating and consulting with their patients. This has resulted in the extraordinary AHPCSA executive committee decision being passed by the AHPCSA that practicing telehealth medicine and telehealth communications is allowed. While bulk emails ("letters") were sent to all registered practitioners and therapists, these legal decisions were firstly published on the AHPCSA website and subsequently promulgated in the Government Gazette. This was to entail that those professions, including Chiropractic adhered to these guidelines while utilizing this form of treating and consulting patients.

Other countries have faced similar struggles in practicing during the pandemic and similarly published guidelines on the use of telehealth. The research question became if the Telehealth Guidelines published by the AHPCSA included similar recommendations to the other countries, and if these recommendations could be supported by published literature. It remains important that, despite the method of practice used, Chiropractic care had to ensure that the fundamental rights of patients were still respected, namely dignity, privacy, confidentiality, and informed consent (Mullinder, ex officio, 2020).

Telehealth and Telemedicine are closely related in their services that they provide. According to the Oxford Dictionary, telehealth is the provision of healthcare remotely by means of telecommunications technology (Telehealth, 2020).

Telehealth is the delivery of health information for healthcare professionals and makes use of technologies and internet services to provide patient care (Cranford, 2020). Telehealth offers a broader spectrum of remote healthcare services such as provider training, administrative meetings, and continuing medical education, in addition to clinical services.

Telemedicine is a subset of telehealth, difference being that telemedicine refers to the use of electronic software and electronic communications to provide healthcare services to patients at a distance without the need for an in-person visitation. Telemedicine makes use of secured real-time video calling when consulting with patients.

Bringing regard to the current technological status in today's world, and the fact that due reference is made to the world currently being in the fourth industrial revolution (4IR), the implementation of telemedicine, and telehealth holistically, has become very much attainable, as the basic platforms in which such implementation takes place- WhatsApp, Zoom and Microsoft Teams, to name a few, is almost practically accessible to everyone.

1.2 Aims and Objectives of the Study

The aim of the study was to analyze the AHPCSA Telehealth and Telemedicine guidelines recommended in response to the Covid-19 pandemic. This qualitative, descriptive study design used document analysis to do an in-depth analysis of the AHPCSA Telehealth and Telemedicine guidelines published in other countries as well as published literature in other healthcare fields.

To achieve this aim, the following objectives used were:

- 1.2.1 Compare AHPCSA Telehealth and Telemedicine Guidelines to the guidelines that have been published by other Chiropractic associations worldwide.
- 1.2.2 Use published literature in other healthcare fields to test the Telehealth and Telemedicine requirements proposed in the AHPCSA guidelines.

1.3 The Possible Outcomes of this Study

The possible outcome of the study is to determine if the guidelines developed by the AHPCSA compares with what is recommended worldwide by healthcare regulators. By doing this it would equip the healthcare professionals with a better understanding and a thorough way of implementing telehealth and telemedicine in their practice. This way any opportunity for negligence, misdiagnosis and potential lawsuits can be avoided.



CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

In 2019, the world was faced with many challenges linked to the spread of the Severe Acute Respiratory Virus (SARS-CoV2), more commonly referred to as Covid-19. The virus was first detected in Wuhan, China in 2019 and spread rapidly across the world replace with thus resulting in an official classification as the infection being a pandemic.

The virus is thought to spread from person-persons via inhalation of droplets when a person sneezes, coughs, or talks, or via touching surfaces that have the virus and then touching ones' eyes, mouth and nose. Due to the virus having the ability to spread rapidly especially in the workplace, confined spaces and crowded places, it has resulted in many people far and wide in the world being affected by this virus. From this one could see how it spreads from one person to the next, resulting in a pandemic throughout the world.

This has changed the way the world operated. Many countries around the world have had to put the safety of its people before anything else. This meant implementing hard lockdowns, limitations of people in confined spaces, only essential workers allowed to travel to work, social distancing, wearing of masks when leaving the home, and sanitizing or washing the hands more frequently. In South Africa, a hard lockdown was implemented on the 26th March 2020 in which 5 alert levels were integrated. Each level meant that restrictions, limitations, and curfews were set in place.

Table 2.1 South Africa's Alert Levels and Descriptions (Friedman, 2020)

Alert levels	Description
Level 5	Drastic measures such as limited movement, essential item retail stores were allowed to trade, as well as no gatherings were allowed. Essential and healthcare workers were allowed in the workplace. These measures were set in place to contain the virus and save lives.
Level 4	Extreme precautions to limit community transmission and outbreaks while allowing for some activity resumed.

	Restaurants could operate only for delivery, IT and stationery stores could operate, travelling within the province was allowed only during curfew hours.
Level 3	Restrictions were eased for returning to the workplace and social gatherings were permitted.
Level 2	Physical distancing and restrictions on leisure and social activities were eased.
Level 1	Most of the normal activities can be resumed with the necessary precautionary measures to be followed at all times.

With lockdowns and restrictions set out by many countries, healthcare professionals have had to change the way they consulted with their patients. Due to chiropractors not being termed as essential in certain countries, the respective statutory health councils, or healthcare regulators had to consider alternative ways in which patients could be treated effectively. This enabled a large number of chiropractors to make use of telehealth and telemedicine as an alternative method to consulting, diagnosing, treating and advising their patients.

2.2 The Chiropractic Profession

The chiropractic profession is defined by the World Federation of Chiropractic (WFC; 2001) as a health profession that is concerned with the diagnosis, treatment, and prevention of mechanical disorders of the musculoskeletal system, and the effects of these disorders on the function of the nervous system and general health. There is an emphasis on manual treatments including spinal adjustment and other joint and soft-tissue manipulations.

As the chiropractic profession is a hands-on profession, and required patient-doctor interaction, treating patients are of utmost importance to the caregiver. The doctor provides a detailed and systematic consultation with each patient. A thorough history is usually taken on the first consultation, coupled with an intensive examination conducted to determine the cause of the problem, thereafter a suitable diagnosis and treatment is provided to the patient. As each patient differs with their complaint so does the treatment (Northbridge Chiropractic, 2019).

The chiropractic adjustment is a technique delivered to a patient during the treatment process. This entails moving of a joint that does not allow for full movement in a specific direction. While the adjustment is being delivered, a cavitation or popping sound could also be heard. This is not the actual cracking of bones but rather the collapse of a gas bubble (80% CO₂) formed by the low pressure in the joint synovial fluid as the 2 surfaces are separated through a high velocity, low amplitude direction specific motion (Cassidy et al., 2013).

Additional treatment methods offered by chiropractors in conjunction with the primary adjustment include thermotherapy, cryotherapy, deep tissue massage, cross friction, interferential current and ultrasound (Table 2.2).

Table 2.2 Summary of additional treatment provided by Chiropractors trained in SA

Treatments	Methods & Tools Used
Deep Tissue Massage	This is done using oil and contact between the patient and practitioner over the muscles that are causing discomfort and pain (Deep Tissue Massage and Other Chiropractic Techniques, 2020).
Thermotherapy	This is the application of heat to an area on the patient so as to alleviate pain. This can be done using a heat pack or hot water bottle (Heat Therapy - On The Go Chiro, n.d)
Cryotherapy	This is the application of a cold substance to the patients' body using an ice pack or ice cubes (Hopkins, n.d).
Cross Friction	This makes use of the practitioner's hands and oil which is applied to the skin of the patient. This is done at right angles to the muscle, ligament or tendon to assist in healing (Hyde,2013)
Interferential Current	This makes use of electronic pads applied to the skin of the patient while a current passes through. It requires a machine, leads, and electrode pads (Robbins n.d.).
Ultrasound	The use of an ultrasonic head and ultrasound gel used on the skin of the patient. This requires ultrasound machines, ultrasound head and gel (Denton, 2019).
Manual Adjustive Therapy	Drop pieces on the bed, physical contact by the patient and practitioner on the joints (Cassidy et al., 2013)

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Manual Adjustive Therapy	Drop pieces on the bed, physical contact by the patient and practitioner on the joints (Cassidy et al., 2013)

From the above, it can be seen that viruses have the potential to spread very quickly between the patient and practitioner as the profession is hands-on and requires close contact with the patient. Ramsden et al. (2019) showed that microorganisms can easily be spread between patient, doctor and treatment table using GloGerm™ simulating the movement of microorganisms.

At the end of a treatment session with the chiropractor, advice is usually provided so as to assist the patient in a faster recovery. This advice entails patient specific exercises, modification of daily activities around the workplace and at home, as well as home remedies such as heat or cold therapy, as taught in South Africa (Schubbe, 2020).

Given that the current Covid-19 pandemic, alternative methods had to be considered for treating and assisting patients. Many chiropractors around the world have resorted to using telehealth to assist in the betterment of their patients.

2.3 Telehealth Communications

Telehealth is defined by the World Health Organization (WHO; 2010) as “the delivery of health care services, where distance is a critical factor, by all healthcare professionals using information and communication technologies for the exchange of valid information for diagnosis, treatment and prevention of disease and injuries, research and evaluation, and for the continuing education of health care providers, all in the interests of advancing the health of individuals and their communities.”

Telehealth communications could be an accessory tool to utilize given the Covid-19 pandemic. It allowed for calls to be made without the need for face-to-face consultations. Telemedicine is the use of electronic information and communications technologies to provide and support health care when distance separated the participants (Field, 1996). Both these terms have been used interchangeably within this research.

As a result of lockdowns and restrictions set in place by many countries, practicing as a health professional has come with challenges. This has led many to make use of

telehealth. Using telehealth medicine and telehealth communications allowed for the practitioner to consult, treat, and provide advice to patients. For those persons who require assistance from a medical professional from the comfort of their home could now benefit from telehealth communications.

Making use of telehealth comes with its own set of regulations however many countries did not allow their practitioners to utilise telehealth. Therefore guidelines have been set in place to make the use of telehealth possible, more effective and safer (Puskin, Johnston & Speedie, 2006).

2.4 Use of Telehealth in other Disciplines

Disciplines such as Physiotherapy and Psychiatry, who may not have been seen as frontline workers, have been able to make use of telehealth to assist their patients during alert levels 5 and 4 in South Africa. Physiotherapists made use of telehealth to consult with their patients and prescribed self-treatment techniques as well as home exercises for their patients to do. Some also made use of the platform Doxy.me to consult with patients. Many have found relief during the period in which no face-to-face consultations were allowed (Danhauser, 2020).

Telepsychiatry was implemented during the lockdown period in South Africa. Psychiatrists and Psychologists were able to consult with their patients especially during this trying period so as to assist their patients remotely. Patients were satisfied with their treatments done via video conferencing rather than face-to-face and found that their follow up treatment yielded better results than being consulted face-to-face. Telepsychiatry has also been successful in child psychiatry, depression, dementia, schizophrenia, suicide prevention, post-traumatic stress, panic disorders, substance abuse, eating disorders and smoking prevention (Wynchank and Fortuin, 2010).

2.5 South Africa's Response to Telehealth Communications during Covid-19

In South Africa practicing telehealth was not allowed as previously decided in 2011 by the AHPCSA. This is a statutory health council that governs health professionals. Professions governed by the AHPCSA include Aromatherapy, Ayurveda,

Chiropractic, Homeopathy, Osteopathy, Phytotherapy, Reflexology, Therapeutic Aromatherapy, Therapeutic Massage Therapy, Therapeutic Reflexology and Unani-Tibb.

The AHPCSA is a legislative council that started in 1982 that promotes and protects the health of the public in the following ways:

- Manage, administer and set policies relating to the professions registered with the AHPCSA.
- Investigate complaints relating to the professional conduct of practitioners, interns and students.
- Administer the registration of persons governed by the AHPCSA.
- Set standards for the education and training of intending practitioners; and
- The AHPCSA is also responsible to advise the Minister of Health and the National Department of Health on matters as they relate to the allied health professions and to communicate to the Minister of Health matters of public importance acquired during its functions (The Allied Health Professions Council of South Africa, 2021).

The AHPCSA stated on the 16th November 2011 in a promulgated board notice that no form of telemedicine may be practiced by any means and if practiced, would result in disciplinary action according to Sections 23-30 of the Allied Health Professions Act 63 of 1982 (as amended) (Mullinder, ex officio, 2020). However, as of 25th March 2020, an extraordinary AHPCSA executive committee decision published on the AHPCSA website and subsequently promulgated in response to the Covid-19 South African State of Disaster, which permitted the use of telehealth and telemedicine, under promulgated Telehealth and Telemedicine Guidelines.

This change has altered the way in which chiropractors in South Africa practice and has led to the diversifying of their methods of treatment and means of accessibility, making it an alternative option for their patients. As a result, healthcare professionals took this as an opportunity to continue working remotely in assisting and benefiting their patients within the manner permitted by the AHPCSA guidelines. These guidelines were set out by the council to inform chiropractors in utilising this form of communication with patients correctly and effectively. This way, the standard amongst all practicing South African chiropractors would be of the same standard.

These guidelines provide additional information as to how telehealth could be implemented thoroughly seeking to avoid insofar as possible any negligence on the part of the chiropractor, whilst still being thorough in treatment and diagnosis, through the utilisation of real time video calling.

2.6 Other Countries Response to Telehealth

In other countries, medical professions had to consider the current Covid-19 pandemic. To limit the spread of the Coronavirus, countries have had to implement restrictions to slow the rate of spread of infection amongst its people. Restrictions were implemented where there were complete lockdowns, limited travel and only essential employment was allowed. With such strict restrictions set in place for weeks in many countries around the world, practicing as a medical professional came with difficulties. This has caused for a change in how practitioners would continue to practice without breaking the laws set out by their respective countries.

Chiropractors in New Zealand were unable to practice under strict level 3 conditions although they were able to make use of telehealth as a means of consulting with their patients. Alert level 3 meant that no persons were allowed to leave their home unless for essential personal movement such as work or school. Businesses were not allowed to operate if they required any personal close contact with others (Covid19.govt.nz, 2020).

Chiropractors in Australia were able to operate provided the patient is a non-routine care patient. Only patients who urgently needed to be seen by a chiropractor were able to attend their appointments under stage 4 restrictions. Chiropractic clinics followed through with the strict protocols set in place and have completed an online learning course regarding infection control training from the Australian Government Department of Health (Wellbeing Chiropractic, n.d.).

The topic of chiropractors being an essential worker is quite debatable in many parts of the world as some countries or states have declared that chiropractic falls under essential workers while others differ (Table 2.3). Practicing as a chiropractor from the workplace became difficult, and therefore resulted in many resorting to the use of

telehealth communications with their patients. This new method of consulting, diagnosing and treating patients virtually has come with guidelines and regulations that have been set out by certain health councils.

Table 2.3 Chiropractic classified as Essential or Non-Essential as taken from Johnson et al. (2020)

Essential worker	Non-essential worker
Texas, USA	Singapore
Oregon, USA	New York, USA
Australia	Canada
Brazil	United Kingdom
South Africa (only emergency case patients could be seen)	Greece

In South Africa, due the alert levels being implemented in increments, it was only at level 3 were Chiropractors allowed to consult patients. During alert level 5, no patients were allowed to be consulted, unless in the case of an emergency. In all other instances, telehealth was to be used.

In Texas, the board of chiropractic examiners confirmed chiropractic care as an essential service. The Texas board of chiropractic examiners issued guidelines as to the appropriateness for chiropractic care on April 30 2020 in which a statement was made that only licensees should provide essential services for patients with current or recurrent complaints of pain and disability that alters the patients' ability to carry-out their daily activities or affects their quality of life. As of May 1st 2020, updated orders included that licensed chiropractors could provide wellness care but should continue to adhere to safety and prevention, best practices specified in the most current advice from the Centres for Disease Control (Johnson, 2020).

Canada implemented an Emergency Response Act on April 11th 2020 in which all non-essential services had to be closed immediately. Chiropractors were required to close their offices, except for limited weekly hours for treating only patients with urgent musculoskeletal needs. On March 24th 2020, chiropractors could no longer go in for consultations however chiropractic regulatory authorities enabled chiropractors to provide telehealth visits, outlining standards for virtual practice (Johnson, 2020).

New York was the epicentre for Covid-19 which resulted in healthcare professionals closing their practices. Only emergency patients were seen to, however once face-face consultations stopped, telehealth consultations were implemented to assist patients with advice on self-care, home exercise, and ergonomics (Johnson, 2020).

These are just some of the countries that stated whether chiropractic was essential or not. However, this has not stopped how chiropractors have resorted to assisting their patients by making use of telehealth communications.

2.7 Telehealth Guidelines

Guidelines are usually put in place to assist people in maintaining a specific standard. This ensured that everyone following guidelines was enabled to complete their task or job effectively leaving little to no room for negligence. Those practitioners who comply with the licensing rules, document appropriately and follows the same standards of care that they would for in-person treatments do not create additional malpractice risks when offering their services virtually (Pratt, 2019). In the healthcare system there too, are guidelines. The main reason guidelines could benefit patients was that the care they received would be of quality and of similar standards to the rest of the country and the world. According to the WHO (1997) guidelines are generally defined as “systematically developed statements to assist practitioners and patients make decisions about appropriate health care for specific circumstances.” Guidelines are “tools” to help decision-makers make better decisions and therefore it is essential that both development and implementation strategies are clearly focused on the “end user” decision-makers.

Clinical practice guidelines are developed as evidence based as those writing these guidelines need to ensure that it is effective and would provide an improvement in the quality of care for the patient. Before writing guidelines for the healthcare profession, one needed to look at the following to ensure there was no biased opinion, it was factual and evidence based. As time goes by these could be modified to suit the needs of current day technology and development. In formulating the guidelines, the following needed to be taken into account:

- be based on a systematic review of the existing evidence,
- be developed by a knowledgeable, multidisciplinary panel of experts and representatives from key affected groups,
- consider important patient subgroups and patient preferences, as appropriate,
- be based on an explicit and transparent process that minimizes distortions, biases, and conflicts of interest,
- provide a clear explanation of the logical relationships between alternative care options and health outcomes, and provide ratings of both the quality of evidence and the strength of recommendations, and
- be reconsidered and revised as appropriate when important new evidence warrants modifications of recommendations (Graham *et al.*, 2011).

Once guidelines have been written and set out for the healthcare system it makes working and training a lot easier. Due to telehealth continuously changing, information and guidelines set out needed to continually be reviewed so that they were current and up to date. This ensured the reliability and validity of the technology being used, before implementing it, as a routine form of care.

With a thorough set of guidelines developed for medical professionals, using telehealth as a means of consulting with patients will be easier as the tools are readily available, and the regulations can be followed through completely. This enables the practitioner to implement telehealth in their practice utilizing the best possible methods to yield the best of results when consulting, diagnosing and treating their patients. Prior to implementing telehealth, the practitioner should seek out training for using telehealth in the best of manners and not only abiding by the rules and regulations set out (Pratt, 2019).

2.7.1 Tools and software that could be utilised

The practise of telemedicine relies on access to technology, something that is ever changing. With technology being used more in the healthcare system as of recently due to the Covid-19 pandemic, it is important to note a few things before choosing an appropriate software. These tools used need to be secure, reliable, cost effective and user-friendly to both the doctor and patient.

It is recommended that certain basic hardware is required for telehealth communications to begin in ones' practice (Table 2.4). Hardware requirements for the patient are very similar to that of the practitioner when it comes to a stable internet connection, a device that has a built-in microphone and a camera to allow for video-calling. However, as patients come from different areas, not all have access to these resources making it difficult for them to use telehealth as a form of consulting with their practitioner.

Table 2.4 Hardware required for telehealth communication (Cambridge Brain Sciences)

Endpoints: making use of a smartphone, computer, laptop needs to be compatible with the software that one wishes to use.
Network Hardware: A stable internet connection is required between the patient and the doctor. The network of choice needs to be reliable
Webcams
Workstation

Similarly, choosing the correct software is important for appropriate telemedicine. These systems are summarised in Table 2.5, these are some of the software systems that could be used in South Africa by health professionals for telemedicine. The practitioner and patient both need software requirements when making use of telehealth. In Table 2.6, the software requirements are briefly described.

Table 2.5 Software systems that could be considered for telemedicine

Name	Characteristics	Website
Cliniko	Features include multi-platform online booking, scheduling, billing and invoicing, patient histories, real time alerts, and statistical reporting.	https://www.cliniko.com/ .
Continuous Care	It includes text consultations, practice management, native mobile apps for iOS and Android, a patient portal, custom website domains, and remote monitoring	https://www.continuouscare.io/features/patient-health-mobile-app/
Doxy.me	Features included virtual waiting room management, notifications, screen sharing, group calling, file transfer and image capture.	https://doxy.me/en/
InSync	This platform can be tailored to suit the needs of healthcare professionals within the behavioural health, substance abuse, Ob/Gyn, paediatric therapy, primary care, and physical therapy specialties.	https://www.insynchcs.com/telemedicine-software

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Table 2.6 Software Requirements for telemedicine for the patient (altexsoft, 2020)

Software Requirement	Description	Explanation
Real time video calling	Real time video calling where there is no need for patient-doctor interaction.	Real time video calling entails using a platform that guarantees compliance with data privacy policies.
Store and forward	Ability to transmit any digital information especially radiographic images which can assist in diagnosing the patient.	Due to the flow of data exchanging between the patient, practitioner, and relevant doctors, a platform must be used that is secure, and will enable the doctor to store data making it easily accessible preventing the delay in treating and diagnosing patients effectively.
Remote patient monitoring	Used to monitor patients remotely with regards to their health and management of chronic conditions.	Mobile applications are the link between the doctor and the patient. This system is dedicated to send alerts, analysis, and reports with all the relevant data to the doctor. It is used to assist patients with chronic illnesses.

2.7.2 Do chiropractors in South Africa and other countries have guidelines for telehealth?

Chiropractors in South Africa have guidelines that have been set out for them by the AHPCSA within 2020 regarding the use of telehealth to assist in the consultation, examination, diagnosing, and treatment of their patients. These guidelines are used to protect the profession seeking to avoid insofar as possible any negligence on the part of the chiropractor when consulting patients while using telehealth. The guidelines were to ensure an effective implementation of telehealth.

2.7.3 Do chiropractors in other countries have guidelines for telehealth?

Chiropractors in other countries also have guidelines set out for them by their respective health councils so as to make use of telehealth services correctly (Allied Health Professions Australia, 2020). These guidelines were extensive allowing for the practitioner to make informed decisions when treating their patients. Ensuring that one follows the guidelines allowed for the practitioner to consult in an effective manner seeking to avoid insofar as possible any negligence on the part of the chiropractor or patient negligence. This allowed for a smoother experience between the doctor and the patient.

Some of the other countries which have set out guidelines for chiropractors are Australia, Canada, New Zealand. These countries were chosen for this study based on their specificity with regards to telehealth, supplementary information was provided to ensure that all aspects regarding telehealth are understood in its entirety by the practitioner. In Appendix E a list of articles and websites that were included or excluded have been provided to show why these countries were used.

2.8 Conclusion

As seen from the above literature, it would be useful in the maintenance of health standards internationally to compare how the guidelines published by the AHPCSA compare to the guidelines and recommendations set out for chiropractors in other countries. This forms the basis of the current study and will be discussed in the chapters to follow.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This was a qualitative, descriptive study design using document analysis as described by Bowen (2009) to conduct an in-depth analysis of the AHPCSA Telehealth and Telemedicine guideline. Qualitative text or document analysis has evolved into one of the most used qualitative methods across several disciplines (Kuckartz, 2014; Mayring, 2010). Its straightforward structure and procedure enable the researcher to adapt the method to their needs (Rasch, 2020). Documents used included guidelines published by other healthcare regulators empowered by legislation worldwide, as well as literature published on telehealth and telemedicine in other healthcare disciplines.

This research method allowed for documents to be selected with regard to telehealth and telehealth communications guidelines set out for chiropractors around the world which was accessed across the following sources: PubMed, Science Direct, EBSCOhost, Wiley Online Library and SpringerLin. This has allowed for the possibility to create themes and sub-themes relating to guidelines within the chiropractic profession around the world. This in turn would offer additional opportunities to conduct further research studies on the data that was collected in this research study.

3.2 Sample Selection

Documents were selected based on their relevance to telehealth and telemedicine being practiced during the Covid-19 pandemic under specific guidelines set out by the respective chiropractic health councils. Once documents were selected and read through, more information was then sifted through so as to see which articles are best suited to compare AHPCSA Telehealth and Telemedicine guidelines to the guidelines that have been published by other chiropractic associations worldwide. Thematic analysis was used to assist in pattern recognition of the documents and data collected. Triangulating the data collected, it assisted in expanding on the findings from all the sources as well as it assisted in theory building (Bowen, 2009).

By analysing the published guidelines by the healthcare regulators empowered by legislation including AHPCSA, information was then grouped into themes and sub-themes which was used to discuss topics of similar focus. Using these documents assisted the researcher in providing an in-depth meaning to the guidelines provided so that each point in the guidelines was understood correctly leaving no room for any misunderstanding and seeking to avoid insofar as possible any negligence on the part of the chiropractor. The academic merit of the themes and sub-themes discussed used academic articles published in relation to or other medical fields.

The countries selected for this research study included, South Africa, New Zealand, Australia and Canada. These 4 countries were chosen as this is a minor dissertation, as well as these countries had set out specific guidelines for chiropractors to implement and make use of telehealth in a way that could compensate for being unable to have an in-patient consultation. Additional articles from each of these countries were found that supplemented these guidelines. These articles aided the chiropractor with a better understanding of how telehealth can be implemented in detail.

3.3 Inclusion Criteria

For documents to be selected and utilized for this study, the documents needed to be with regard to telehealth guidelines from chiropractic associations and chiropractic health councils around the world. The articles needed to be from a reputable source in which documents could not be edited and are of an evidence-based site. These sites included publication platforms such as PubMed, ScienceDirect, EBSCOhost, Wiley Online Library and SpringerLink. Broader spectrum information was ascertained from Google itself.

3.4 Reliability and Validity of the Documents

By making use of document analysis, trial runs are particularly important as they ensure that the reliability and validity of the research is always maintained. They do not only show which codes work and which do not, though they help to eliminate any information that is not credible (Rasch, 2020). By using document analysis for this research study, the researcher was able to provide an in-depth description to the aim

of the study. Documents help to develop meaning and it gives insight to the research problem, and they serve to provide data on the context of the study.

3.5 Data Analysis

The table hereunder describes how the data was analyzed and found to be most suitable for the research study. In chapter four, a thorough discussion is provided pertaining to the analysis of the documents and data collected. The following criteria were used to describe the results obtained. Each theme and sub-theme were described using the following criteria explained in the flow diagram below.

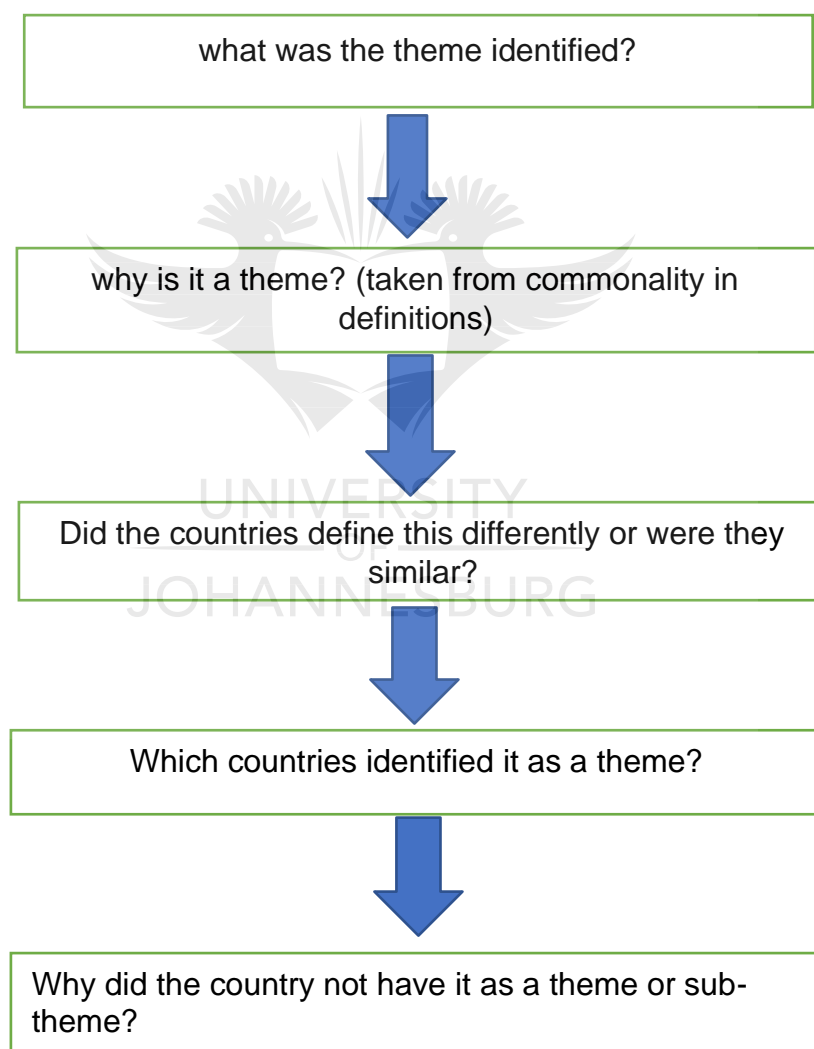


Figure 3. 1 Flow diagram used to describe the results obtained in chapter four

Table 3.1 Recommended steps for document analysis as described by Rasch (2020)

Steps	Meaning
1. What is the research question?	What is the reason for this research?
2. Collect & Sample the Data	What type of method will best answer the research question?
3. Select and Prepare the Data	Select the data that is fitting for this research
4. Coding	Develop themes & sub-themes from the documents
5. Reliability	Others to test the reliability of this research
6. Analyse & Compare	What noticeable patterns has the researcher identified? And what role does it play in answering the research question.
7. Interpretation & Presentation of Findings	Interpret and present the data in a way that is transparent and not biased.

3.6 Ethical Considerations

Approval to conduct this study was obtained from the University of Johannesburg, Faculty of Health Sciences Higher Degree Committee (HDC) (Appendix A), accompanied by approval from the Research Ethics Committee (REC) (Appendix B). No individuals were required for the participation in this research study; therefore no confidentiality or anonymity was required.

CHAPTER FOUR

DATA ANALYSIS

4.1 Introduction

This chapter presents the results obtained for the research study. A total of 3 countries' guidelines have been included for comparison with the South African guidelines. The countries selected were New Zealand, Australia and Canada. Only 3 countries were chosen as this is a minor dissertation, as well as these 3 countries had guidelines set out for chiropractors to make use of telehealth and additional articles were found that supplemented the guidelines. The data will be presented as the themes and sub-themes identified followed by a comparison of the guidelines in terms of these themes and sub-themes.

4.2 Document Selection

The documents selected for the research were based on its relevance to the study as well as its specificity to the Chiropractic profession around the world. The AHPCSA released its guidelines with regards to the practicing as a Chiropractor using telehealth as an additional method for consulting given the Covid-19 pandemic. This has led to researching and comparing of the AHPCSA guidelines to the guidelines proposed by other countries and to determine how the guidelines compare. Only Chiropractic Telemedicine or Telehealth guideline documents which proved to be relevant to the study were used. Based on this selection the documents listed in Annexure E from New Zealand, Australia and Canada were included for comparison with the South African guidelines. Reasons for the exclusion of other documents are also given in the table.

4.3 Grouping of Themes and Sub-Themes

Each of the four countries guidelines that have been used in this study were grouped into themes, sub-themes and definitions looking for the commonality and emphasis amongst the four countries guidelines. In total 17 themes were identified between the four countries guidelines (Table 4.2) although not all the countries had the same

number of themes and sub-themes (Table 4.2). To define the themes and sub-themes it was looked at whether the countries had set definitions for the themes and sub-themes and interestingly not all the countries had definitions for each of the themes and sub-themes (Table 4.3). This will however be dealt with in the sections to follow. Please note that for each section the number of guidelines that refer to a specific trait or aspect will be counted and given as (n=x).

Table 4.1 Number of themes and subthemes identified amongst the countries

COUNTRY	THEMES	SUBTHEMES
South Africa	14	8
New Zealand	13	7
Australia	15	7
Canada	14	5



Table 4.2 Themes and Sub-themes Identified Amongst the Four Countries

	Themes and Sub-themes	South Africa	New Zealand	Canada	Australia
1	Code of Conduct	Theme	Theme	Not used	Theme
1.1	Privacy	Sub-theme	Sub-theme	Not used	Sub-theme
1.2	Confidentiality	Sub-theme	Sub-theme	Not used	Sub-theme
1.3	Identify practitioner and patient	Sub-theme	Sub-theme	Not used	Sub-theme
2	Expectations of a telehealth consult discussed with patient	Theme	Theme	Not used	Theme
2.1	Assess patient according to information provided	Sub-theme	Sub-theme	Sub-theme	Sub-theme
2.2	Documents/imaging/blood results to be exchanged via electronic means	Sub-theme	Not used	Not used	Not used
3	Limitations of a telehealth consult discussed with patient	Theme	Theme	Theme	Theme
4	Effectiveness of treatment to be of a face-to-face standard and explained to the patient	Theme	Theme	Theme	Theme
5	Recording of consultations	Theme	Theme	Theme	Theme
6	Recording of health records	Theme	Theme	Theme	Theme
7	Physical Requirements for a telehealth consult	Theme	Theme	Not used	Theme
8	Clear and effective communication	Theme	Theme	Theme	Theme
9	Thorough history and observation conducted	Theme	Theme	Theme	Theme
10	Informed consent	Theme	Theme	Theme	Theme

10.1	Given on/before the consult	Sub-theme	Sub-theme	Sub-theme	Sub-theme
10.2	Patient to agree to the terms of a telehealth consult	Sub-theme	Sub-theme	Sub-theme	Sub-theme

Table 4.2 continued Themes and Sub-themes Identified Amongst the Four Countries

	Themes and Sub-themes	South Africa	New Zealand	Canada	Australia
10.3	Patient to understand the exchanging of information will be done via video calling	Sub-theme	Sub-theme	Sub-theme	Sub-theme
10.4	Proposed treatment discussed	Not used	Not used	Theme	Theme
11	Referrals	Not used	Theme	Theme	Theme
12	Fees	Not used	Not used	Theme	Theme
13	Assessing for red flags/triage	Theme	Theme	Theme	Not used
14	Secure and recognized software	Theme	Theme	Sub-theme	Theme
15	Self-management for the patient	Theme	Not used	Theme	Not used
16	Monitoring progress and follow up treatments	Not used	Not used	Theme	Theme
17	Medication/prescribed exercises/physical activity	Theme	Not used	Theme	Not used

Table 4.3 Definitions found for each theme and sub-theme identified

Themes and Sub-themes	South Africa	New Zealand	Australia	Canada
Code of Conduct	Yes	Yes	Yes	Yes
Privacy	Yes	Yes	Yes	Yes
Confidentiality	Yes	Yes	Yes	Yes
Identify practitioner and patient	No	Yes	Yes	Yes
Expectations of a telehealth consult discussed with patient	No	Yes	Yes	Yes
Limitations of a telehealth consult discussed with patient	No	Yes	Yes	Yes
Effectiveness of treatment to of a face-to-face standard	No	Yes	Yes	No
Recording of consultations	No	Yes	Yes	No
Physical Requirements for a telehealth consult	Yes	Yes	Yes	Yes
Clear and effective communication	No	Yes	Yes	Yes
Thorough history and observation conducted	Yes	Yes	Yes	Yes
Informed consent	Yes	Yes	Yes	Yes
Given on/before the consult	Yes	Yes	Yes	Yes
Patient to agree to the terms of a telehealth consult	Yes	Yes	Yes	Yes
Fees	Yes	No	Yes	Yes
Referrals	Yes	Yes	Yes	Yes
Secure & Recognized software	No	Yes	Yes	Yes
Self-management	No	Yes	Yes	Yes
Follow up treatments	No	Yes	Yes	Yes
Medication/prescribed exercises/physical activity	No	Yes	Yes	Yes

Theme 1: Code of conduct

The first theme identified was code of conduct and placed emphasis on how the Chiropractor should always maintain the privacy, confidentiality and dignity of each patient. When comparing the definitions for this between the countries the common theme is that moral (n=1), ethical (n=3) and integrity (n=1) should be the main characteristics maintained when dealing with the patient. Code of conduct was identified as a theme for three of the four guidelines investigated namely South Africa, New Zealand and Australia.

Canada did not have it stipulated within their guidelines. This was due to the guidelines being very different in its approach to the use of telehealth. The approach was more of a patient-centered one making use of the biopsychosocial model, targeting and treating yellow flags that were identified in the consult rather than regulations on how telehealth may be used for an effective consult. Despite Canada not mentioning it in their guidelines, a definition was found in their code of ethics regarding code of conduct. This is important to remember that although a different treatment approach may be considered the main code of ethics and guidelines must always be adhered to.

Sub-theme 1.1: Privacy

Privacy was identified as a sub-theme under the code of conduct. All four countries had definitions regarding this sub-theme and when looking at the definitions provided by each of the countries, the similarities between each of them focused on maintaining the privacy and confidentiality of the patient, only overriding this if the need arises and having sufficient space around oneself so as to maintain the privacy of the patients' health information. Canada did not include this within their guidelines as their approach to implementing telehealth was different and focused on a patient-centered approach. This sub-theme focused on maintaining the privacy and confidentiality of each individual patient (n=2), overriding this if there is a need, example being referred to another healthcare provider (n=2), and providing sufficient space so that the privacy of the patient is not compromised in any way (n=2).

Sub-theme 1.2: Confidentiality

Confidentiality was the second sub-theme to be identified and was found amongst South Africa, New Zealand and Australia's guidelines, however, this was not mentioned in Canada's guidelines. The approach for using telehealth in Canada was different in comparison to the other 3 countries where their approach was focused on assisting the patient in the best possible way to yield the best outcome for the treatment prescribed. Confidentiality and privacy are closely linked to each other and the definitions given by each of the 4 countries used in this study focused on maintaining the privacy and confidentiality of the patient, only overriding this if the need arises and having sufficient space around oneself so as to maintain the privacy of the patient's health information being discussed during the consult.

Sub-theme 1.3: Identify patient and practitioner

Identifying the patient and yourself as the chiropractor before the consult was the third sub-theme to be identified. This was identified in the guidelines written for South Africa, New Zealand and Australia where Canada did not include this in their guidelines. Canada, Australia and New Zealand all had definitions for the above sub-theme however South Africa did not have this as a definition. Emphasis was placed on identifying the patient (n=3), identifying yourself as the practitioner (n=3), and confirming the patients name, address, date of birth (n=2) and gender (n=1) like one would do for a face-to-face consult.

Theme 2: Expectations of a telehealth consult discussed with the patient

The second theme identified was the expectations of a telehealth consult that needed to be discussed with the patient. This was chosen as a theme as the Chiropractor needs to explain to the patient how the consult would differ from that of a normal face-to-face consult. This was to be done prior to the consult so that the patient is aware of the changes that a telehealth consult offers. When comparing the definitions between the four countries, the commonality identified amongst them were the to ensure that patients fully understand what a telehealth consult entails, and the timeframe for the consult would need to be discussed. This was identified as a theme in the guidelines set out for South Africa, New Zealand and Australia.

Canada did not include this within their guidelines as their approach to implementing telehealth differed from the other 3 countries. Despite not including this in their guidelines, they have a definition regarding this theme whereas South Africa does not. In this definition they make mention of the timeframe being discussed with the patient which includes the model of care, the patients goals and expectations should also be discussed. This ensures that any misunderstandings and uncertainties regarding telehealth consults can be resolved prior to the consult allowing for a smooth consult and treatment on the day.

Sub-theme 2.1: Assessing the patient according to the information provided

Assessing the patient according to the information provided was the first sub-theme to be identified under the expectations of a telehealth consult. No definition in particular was found for this sub-theme however it was identified as a sub-theme in all four countries. From the guidelines it is clear that the practitioner can only treat that which the patient complains of. The limits that a telehealth consultation offers limits the chiropractor in their treatment as they can only treat that which can be seen.

Theme 3: Limitations of a telehealth consult discussed with the patient

The third theme identified in the guidelines of the four countries used was the limitations that a telehealth consult may have and is required to be discussed with the patient. This theme placed emphasis on the fact that the telehealth consult should be conducted in such a manner that the consult is the same or of similar standard to that of a face-to-face consult. The patient needs to be made aware of the fact that no hands-on treatment will be offered via the telehealth consult however the models of care will be maintained. When looking at the definitions for all four countries, New Zealand, Canada and Australia had a similar definition which entailed explaining to the patient that the standard of care and the consult would be like that of a face-to-face consult. The limitations was identified as a theme amongst all four countries.

South Africa did not have this as a definition which is something that could be added as the patient needs to understand how the telehealth consult differs from that of a face-to-face consult. This is discussed in more detail in chapter 5.

Theme 4: Effectiveness of the treatment to be like that of a face-to-face consultation

The fourth theme to be identified was maintaining the effectiveness of a treatment as though it were a face-to-face consult. This ensures that when consulting, treating and diagnosing the patient using telehealth, the same professionalism that would be upheld during a face-to-face consult would be maintained when doing a virtual consult. This was identified as a theme amongst all four countries however South Africa and Canada do not have definitions for this theme. The commonality amongst New Zealand and Australia with regards to this theme is that the standard of care should be maintained when using telehealth and should not be compromised in any way. This should be explained to the patient so that they are at ease knowing that their consult would benefit them without the hindrance of a virtual method being used.

Theme 5: Recording of consultations

The fifth theme that was identified amongst the four countries was the recording of the consults. This is to be explained to the patient and consent is required. This was identified as a theme amongst all four countries. Emphasis is placed on the fact that the patient needs to understand that all information will be exchanged via the video call and that all protocols to maintain privacy will be according to the Act set out by the country so as to ensure safety when using and storing data online. There are no definitions found for South Africa and Canada although New Zealand states that patient should understand that all information will be exchanged electronically and that there will be no interaction between the healthcare professional and the patient. Australia mentions that the chiropractor should comply with the Australian Privacy Principles, federal privacy legislation (the Privacy Act 1988) and jurisdictional privacy regulations that govern electronic storage and transmission of client information.

Theme 6: Recording of health consultations.

This was the sixth theme identified in which the chiropractor is expected to have a comprehensive recording done for the consult. This means that all that was done for the consult from the beginning until the end should be documented extensively leaving no room for any negligence. This was identified as a theme amongst all four countries. There are no definitions regarding this theme from any of the four countries however

Australia and Canada have additional information regarding this theme. According to Australia the chiropractor should always maintain clear, appropriate, factual, objective and accurate health records that are essential to continue with the good care of patients (Allied Health Professions Australia, 2020). Canada states that a chiropractor should keep a patient file for each patient, showing the name and address, the dates seen, an adequate history and particulars of physical examinations, radiographic examinations, investigations ordered and the results of same, the diagnosis made, and the treatment prescribed. Clinical records must be accurate, legible and comprehensive. It is important to maintain clinical records for all provided services in accordance with the requirements for in-person care (Canadian Chiropractic Association, 2020).

Theme 7: Physical requirements needed for a telehealth consultation

This was the seventh theme identified amongst the 3 other countries. Emphasis was placed on the accessibility of such requirements for each patient. This being, using a webcam or camera (n=2), having good lighting, headphones or a microphone (n=3) and a stable internet connection (n=2). This was identified as a theme by all four countries however South Africa does not have a definition regarding this theme. Despite this being identified as a theme, the definitions that have similarity are based on the patient and the chiropractor having headphones, a stable internet connection and a webcam or camera. Canada had a slightly different approach to this and that was because their guidelines were mainly patient-centred and that meant their requirements focussed on the limitations a patient may present with such as, physical disabilities (hearing and vision deficits), does their condition allow for a telehealth consult or do they need to be referred to the emergency department, and any mental health concerns preventing them from using telehealth.

Some physical requirements that both the patient and the practitioner require are discussed hereunder:

- Requires sufficient data

Sufficient data is required by both the practitioner and the patient when using telehealth as a means of consulting. According to a study done in South Australia comparing broadband fiber and 3G mobile data, it was found that the quality of the

video calls, audio, video pixilation and failed calls were higher. In the guidelines written by the AHPCSA, they mention that the upload and download speed should not be less than 3mbps. Unfortunately, those living in rural areas are not as fortunate as those who have a middle-upper class income as the price for internet and mobile data are hefty (Caboz, 2020). This is due to the poor infrastructure and electricity shortages that Africa has. There are also varying internet upload and download speeds between different platforms such as Zoom, WhatsApp video calls and Microsoft teams.

➤ Requires a quiet room

Quiet rooms isolated from the rest of the home are ideal when consulting as privacy and confidentiality of the patient is maintained at all times. Due to the nature of a chiropractors' work, when a patient is exposing the area of discomfort while maintaining their modesty, it can be done in a quiet room without the patient feeling shy or embarrassed if there were people around. Unfortunately, for those individuals who live in homes that are extremely small and space is limited, like in the rural area, using telehealth may be difficult and not a viable option.

➤ Requires a computer and headphones

A computer, laptop, or smartphone is required when using telehealth as the consult is a real-time video call. The camera is required to be turned on at all times during the consult so that the practitioner and the patient can have an effective consult and discussion. When using a computer, a webcam can be used provided it is compatible with the device. Headphones and earpieces are recommended when using telehealth as this allows for only the practitioner and the patient to be in the consult without any persons overhearing. This once again protects the privacy and confidentiality of the patient.

➤ Good lighting

Good lighting is needed when using telehealth as the nature of the chiropractors' job entails seen the area of concern on the patient. Example a red, hot swollen area may

indicate vital information to the chiropractor. The area should be well-lit and bright enough so that the chiropractor is able to provide a better diagnosis and treatment. These are some points to remember when considering what good lighting should be:

Front Lighting: Light yourself from the front with soft lighting. Most lamps would suffice. Place a soft light (like a light with a shade) in front of you but behind the web camera.

Avoid Rear Light Sources: Light sources from behind, such as a window, will make you look like a faceless shadow. Avoid or turn off lights that are behind you.

Minimize Other Lighting in the Room: Other lighting in the room may create weird shadows. Turning off other lighting in the room will help you look better in your video (L. Doan, 2020)

➤ Professionalisms

It is imperative that the practitioner remain professional at all times when using telehealth. The same manner that the chiropractor would conduct themselves in a face-to-face consult is the same way in which a telehealth consult should be conducted. The room that the chiropractor uses should look professional especially the area that would be in the video call, the chiropractor should be dressed appropriately, as well as the equipment and tools that would be used as demonstration for the patient should be close by and within hands reach.

Theme 8: Clear and effective communication

This is the eighth theme to be identified amongst all four countries and emphasis was placed on maintaining a clear and effective channel for communication (n=2). The definitions focused on discussing with the patient the process of the consult and keeping the discussion clear so as to be effective. South Africa did not have a definition for this theme even though this was identified as a theme within their guidelines. Canada's approach to the definition was different to Australia and New Zealand as they focused on seeing if this form of treating and consulting would be effective for their patients and allowing their patients to look at the evidence-based research before committing to using telehealth.

Theme 9: Thorough history and observation

This was the ninth theme identified amongst the four countries investigated in which the chiropractor is expected to do a thorough history taking and observation when consulting with their patients. Emphasis is placed on establishing the patient's current medical condition (n=3), past medical history (n=3) and doing a thorough physical observation (n=2) of the patient. This was identified as a theme in all four countries. The definitions focussed on establishing the main complaint, the patient's current medical conditions and their past history. South Africa did not have a specific definition outlining the above theme however they had additional points that can be used when conducting the consult so as to ensure that a thorough history is taken before treating the patient.

Theme 10: Informed consent

Informed consent was the tenth theme that was identified. This required the chiropractor to obtain consent from the patient prior to the actual consult. When looking at the similarities between the country's definitions, emphasis was placed on gaining consent before the initial consult (n=3). All four countries have identified the informed consent as a theme which led to additional sub-themes being identified especially when using telehealth. All four countries have a definition regarding this theme.

Sub-theme 10.1: Given on/before the consultation

Obtaining consent was identified as a sub-theme. This was due to the fact that when using telehealth the chiropractor was required to obtain consent from the patient either before the consult or on the day of the consult. This was identified as a sub-theme amongst all four countries and all four had definitions regarding this. When looking at the similarities between the country's definitions, emphasis was placed on gaining consent before the initial consult (n=3).

Sub-theme 10.2: Patient to agree to terms of a telehealth consultation

Agreeing to the terms of a telehealth consult was identified as a sub-theme amongst all four countries. New Zealand, Australia and Canada had definitions regarding this sub-theme in which emphasis was placed on obtaining consent verbally before the

consult and was required to be documented (n=2) and the other was using video technologies to communicate and exchange information between the patient and the chiropractor (n=1). South Africa did not have a definition for this sub-theme.

Sub-theme 10.3: Patient to understand the exchanging of information will be done via video calling

The third sub-theme to be identified under informed consent was the patient understanding that information will be exchanged via a video call. This was identified as a sub-theme amongst all four countries. When looking at the definitions only New Zealand stipulates that the patient is to understand that information regarding their medical condition and history will be discussed via video calling. The other three countries do not have this as a definition.

Theme 11: Referrals

Referral of the patient is the eleventh theme that was identified. The chiropractor is expected to act in the best interest for their patients when referring them (n=2) so as to ensure a better treatment outcome especially if the care is out of the scope of practice for the chiropractor, as well as collaboration with other medical professionals to ensure the continuity of care for the patient (n=2). This was identified as a theme for Australia, New Zealand and Canada however South Africa did not have this stipulated within their guidelines. All four countries had definitions pertaining to the referring of their patients and the similarity noticed amongst the four countries was that of acting in their best interest when referring the patient and referring the patient out when the persons condition is out of the scope of practice for a chiropractor.

Theme 12: Fees

Discussion of fees was the twelfth theme to be identified and emphasis was placed on discussing financial matters with the patient prior to the consult. This entailed explaining to the patient if there would be a reduction in fees while using telehealth as its not a hands-on treatment or if the charges would remain the same. This way any misunderstandings that the patient might have will be cleared up prior to the consult. Canada and Australia have this as a theme however South Africa and New Zealand

did not have this stipulated within their guidelines. Australia, Canada and South Africa mention in their definitions that the financial matters need to be discussed with their patients, however New Zealand does not have a definition regarding this theme.

Theme 13: Red flags/triage

This was the thirteenth theme to be identified amongst the countries used in this study. It was identified as a theme in 3 countries excluding Australia. This theme emphasized on identifying any medical condition whereby the patient is required to be referred to a different healthcare professional or the emergency department. Red flags do not permit the chiropractor to continue with their treatment plan for the patient as their medical condition requires conventional care. These red flags are usually picked up on history therefore highlighting the importance of conducting a thorough history taking. Some examples of red flags are stroke, cauda equina syndrome, fracture and a tumor. There are no definitions found for this theme.

Canada approached this within their guidelines however they stipulated that yellow flags should also be identified when taking the history of the patient. These yellow flags are focussed on psychiatric conditions and a decision should be made by the chiropractor whether the patient requires a referral or co-management. Modifiable barriers should also be addressed and this entails reassuring the patient their Musculo-skeletal condition will improve and explaining to them the importance of maintaining movement and keeping active during the Covid-19 lockdown period.

Theme 14: Secure and recognized software

Secure and recognized software is the fourteenth theme that was identified and emphasis was placed on complying with the privacy laws when using telehealth (n=3). This was identified as a theme amongst 3 countries and a sub-theme in Canada's guidelines. This was found as a definition in New Zealand, Canada and Australia where emphasis was placed in maintaining the laws of privacy when using telehealth communications. South Africa did not have this as a definition.

Theme 15: Self-management

Self-management was the fifteenth theme that was identified in the guidelines for South Africa and Canada. New Zealand and Australia did not have this within their guidelines. This theme meant that the self-management for the patient should be discussed with them before ending the consult (n=3). New Zealand, Australia and Canada placed emphasis in their definitions regarding self-management that this should be discussed with the patient so that they understand what is expected of them. However this was not found as a definition in South Africa.

Theme 16: Follow-up treatments

Scheduling a follow up treatment was the sixteenth theme that was identified. This theme highlighted the importance of scheduling a follow-up treatment with the patient. When comparing the definitions between the countries, emphasis was placed on scheduling a follow-up treatment (n=3) and reviewing the treatment plan once again with the patient (n=1). This was found as a definition amongst all the 3 countries used in this study excluding South Africa. Follow-up treatments was identified as a theme in Canada and Australia whereas New Zealand and South Africa did not have this in their guidelines despite New Zealand having a definition for scheduling follow-up treatment.

Theme 17: Prescribing physical activity and exercises

This was the seventeenth theme identified which emphasized on the treatment plan for the patient. This included physical activity, exercises specific to each patient and medication and modification of ergonomics. The definitions focussed on the treatment plan being discussed with the patient (n=3). This was identified as a theme in South Africa and Canada, whereas New Zealand and Australia did not have this in their guidelines for telehealth. Despite South Africa having this within their guidelines there was no definition provided, although New Zealand, Australia and Canada all have definitions regarding this theme.

CHAPTER FIVE

DISCUSSION

5.1 Discussion of Data

Comparison of the South African guidelines to that of New Zealand, Canada and Australia showed that 17 themes and 7 sub-themes could be identified between the guidelines from the different countries for the use of Telemedicine. From the data presented it can be seen that South Africa shared many of the themes and sub-themes within their guidelines compared to the other three countries. Of the themes and sub-themes not included in the AHPCSA guidelines, only 7 themes were not found in the AHPCSA guidelines. Table 5.1 summarizes a selection of these themes and sub-themes that could be considered for inclusion into the guidelines.

The first of these are in relation to referrals and the sharing of patient information (Table 5.1 Theme 1). According to a study done by Harno and colleagues (2000) on the effectiveness of referring patients between primary and secondary care, it was found that clinical effectiveness was improved, direct costs lowered and productivity increased when referring patients to other healthcare professionals (Harno *et al.*, 2000). The patient should be made aware that their medical history will be discussed with another healthcare provider and that they must be comfortable with this before referring them.

When considering chiropractic fees it has been reported from observation and evidence-based articles that this theme is one that may be vital when using telehealth (Table 5.1 Theme 2). Patients need to be informed if the consultation will be covered by the medical aid, including any additional data costs the patient may incur. The chiropractor has a few points to consider before creating any changes in the fee such as the location, server being used and what condition is being treated (Hayes, 2015). By informing the patient of such changes it can avoid any unnecessary misunderstandings that could arise between the patient and the chiropractor.

Table 5.1 Themes not found or addressed in South Africa

Themes	Reason it may be added to the guidelines
1. Referrals	When referring the patient to another healthcare professional in telehealth, the patient should be made aware that all their medical information that was discussed during their consultation with the chiropractor would be shared electronically with another healthcare professional.
2. Fees	The patient should to be made aware of any changes in the fee with regards to new consultations or follow up treatments when using telehealth to avoid any unnecessary misunderstandings that could occur between the patient and the chiropractor.
3. Expectations of a telehealth consultation	Discussing the expectations of a telehealth consultation with the patient prior to the consultation ensures that they are aware that their virtual consultation may differ from that of a face-to-face consultation. The patient needs to express their expectations of the consultation to the chiropractor, which allows any misunderstandings to be cleared up before consulting.
4. Limitations of a telehealth consultation	Discussing the limitations that a telehealth may offer with the patient ensures that they are aware that the consultation is not hands-on and however, the same standard would be maintained. If there were any other limitations that technology may have, this needs to be mentioned to the patient.
5. Recording of consults	Patients need to provide the chiropractor with consent regarding the acceptance of a recording been taken during the consultation. The patient needs to be assured that the privacy of their consult will be kept confidential and safe. By recording the consultations, it avoids further calling from patients who may have misunderstood their treatment plan.

Table 5.1 continued Themes not found or addressed in South Africa

Themes	Reason it may be added to the guidelines
6. Secure and recognized software	Choosing a secure and recognized software for telehealth ensures that the Chiropractor will adhere to the stipulated guidelines set out by the professional council and that the software complies with the relative protective legislation. The patient should be comfortable with the chosen software used allowing them the comfort knowing that their privacy and confidentiality is maintained (Medical Protection, 2020).
7. Clear and effective communication	Maintaining clear and effective communication is vital when using telehealth as patients have a better understanding as to what the practitioner has said. This may enhance communication skills of the Chiropractor as it shows that the chiropractor is well prepared for the virtual consultation and is able to provide the patient with sufficient information that is effective to have a successful telehealth consultation and treatment outcome.

When using telehealth, the expectations of a telehealth consultation should be considered (Table 5.1 Theme 3). From observation and evidence-based articles, this is an important theme that may be considered when using telehealth. Discussing the expectations between both the patient and practitioner when using telehealth may provide the patient with the understanding that the consultation differs to that of a face-to-face consultation. By discussing the expectations, practitioners could build on their patient relationships and maintain their practices during, and beyond Covid-19. Developing a virtual health strategy now is imperative to long-term success (Morgan, 2020). Another theme that may be discussed with the patient prior to the consultation are the limitations that a consultation may have. In an article written by Morgan in 2020 regarding the successful use of technology in the healthcare sector, this theme may play an important role when using telehealth. The patient should understand that the consultation would not be hands-on and would be very different to that of a face-to-face consultation; however, the same standard would be maintained. If there were any other limitations that technology may have, this needs to be mentioned to the patient.

Recording the consultations requires consent from the patient (Table 5.1 Theme 4). In an article written by Gruessner in 2015, doctors found that recording helps patients remember important medical information, it protects the practitioner legally and could help patients, family, and caregivers comply with physician recommendations. When patients cannot remember a treatment plan because their diagnosis is overwhelming, the video recording helps. From observation, additional understanding as to why recording consultations are required may benefit both the patient and practitioner. This theme may be vital when using telehealth as the Chiropractic profession is hands-on with the patient, and information discussed during the consultation needs to be done so in a manner that maintains the safety and privacy of each patient.

From research done regarding the usage of secure software for telehealth, this theme may be considered when using telehealth (Table 5.1 Theme 6). By using a secure and recognized software, it ensures that the privacy and confidentiality of the patient is maintained. In a study done by Garg and Brewer in May 2011 regarding the security of telehealth, details is provided as to why one should utilize secure software when using telehealth as using a secure platform, as patients are more likely to be transparent with their ailment rather than omitting vital information. The consultation

should provide the patient with the same level of comfort a face-to-face consultation would offer (Garg & Brewer, 2011). The patient should be comfortable with the chosen software used allowing them the comfort knowing that their privacy and confidentiality is maintained (Medical Protection, 2020).

Another theme that can be considered when using telehealth is maintaining clear and effective communication when engaging with the patient (Table 5.1 Theme 7). By using simple terms when communicating with the patient, it enables the patient in understanding the questions, and treatment explanations. In an article written by Rothwell *et al.*, 2011, it was found that patients required additional explanations or understanding to what was said by the practitioner which could be attributed to non-contact consultations (Rothwell *et al.*, 2011). By not engaging in effective and clear communication with the patient, telehealth may not be used in the future and could easily lead to misdiagnosis and negligence. When a practitioner develops telephonic communication skills, it shows that the chiropractor is well prepared for the virtual consultation and is able to provide the patient with sufficient information that is effective to have a successful telehealth consultation and treatment outcome.

These points highlight the important themes that, from observation, have a positive impact when implementing telehealth services as an alternative to face-to-face, consultations especially during this Covid-19 pandemic period. The themes and sub-themes that have been identified within this research study, from all four countries, could aid one another in implementing telehealth effectively, thereby benefiting the chiropractic profession with the use of telehealth. In this manner, telehealth could be implemented in the best of ways, and particularly more effectively, to achieve the best possible outcome for patients.

CHAPTER SIX

CONCLUSION

6.1 Conclusion

From this study, it could be concluded that all four countries had yielded similar results regarding the identification of the themes and sub-themes. When looking at the definitions, code of ethics and code of conduct articles from Australia, Canada and New Zealand, it gave insight as to how telehealth may be implemented. These documents provided supplementary information that elaborated on the guidelines. In essence, additional information pertaining to the guidelines provides practitioners with the knowledge on how telehealth may be implemented in a safe and effective manner. South Africa, New Zealand and Australia had a similar approach to the guidelines that a chiropractor should follow when implementing telehealth although Canada's approach differed. Canada's approach to the guidelines was patient-centred and focused on how to provide the patient with the best possible treatments to yield the best outcomes. By drawing information from multiple countries that have guidelines regarding telehealth for its chiropractors could aid one another in implementing real-time video calling in a safe and effective manner making it a viable option for the future.

6.2 Limitations of Current Study

A limitation of this study that needs to be considered is that guidelines from only three other countries were included for comparison. It has been shown in the document what other guidelines are available and can be included for future studies. For this study, only three countries were included as it is a minor dissertation however there are other countries that have set out guidelines for its Chiropractors that should be included in future studies. For the purpose of this study fewer countries were used to compare AHPCSA's guidelines to allow for a more comprehensive comparison rather than having too many themes or sub-themes that may not be vital for the implementation of telehealth.

6.3 Recommendations

Based on the findings of the study, the following recommendations are made pertaining to future research, similar to this study, which may be conducted in the future.

1. The study should include an expanded data analysis, particularly the analysis of protocols and guidelines enlisted by more countries, other than those used in this study.
2. An analysis by means of a survey of patients from vast nationalities, who have been exposed to telehealth, analysing the experience encountered by these patients, thereby ascertaining the effectiveness of telehealth.
3. A study regarding the need for educating Chiropractors in respect of the use of telehealth.
4. A study regarding the rehabilitative knowledge Chiropractors have to educate patients without the use of hands-on treatments.



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APPENDIX A: HIGHER DEGREES COMMITTEE



FACULTY OF HEALTH SCIENCES

HIGHER DEGREES COMMITTEE

HDC-01-68- 2020

16 September 2020

TO WHOM IT MAY CONCERN:

STUDENT: KARODIA, A
STUDENT NUMBER: 201407812

TITLE OF RESEARCH PROJECT: An Analysis of the AHPCSA Telehealth and Guidelines
Published during COVID -19 in 2020

DEPARTMENT OR PROGRAMME: CHIROPRACTIC

SUPERVISOR: Prof TG Barnard **CO-SUPERVISOR:** Dr C Hay

The Faculty Higher Degrees Committee has scrutinised your research proposal and concluded that it complies with the approved research standards of the Faculty of Health Sciences; University of Johannesburg.

The HDC would like to extend their best wishes to you with your postgraduate studies

Yours sincerely,


Prof A Temane

Chair: Faculty of Health Sciences HDC

Tel: 011 559 6972

Email: annict@uj.ac.za

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APPENDIX B: RESEARCH ETHICS COMMITTEE



FACULTY OF HEALTH SCIENCES RESEARCH ETHICS COMMITTEE

MHREC Registration: REC 241112-035

ETHICAL REVIEW WAIVER LETTER (RECX 0.0)

Student/Researcher Name	Aamina Karodia	Student Number	201407812
Supervisor Name	Prof. TG Barnard	Co-Supervisor Name	Dr C Hay
Department	Chiropractic		
Qualification	M.Tech Chiropractic		
Research Title	AN ANALYSIS OF THE AHPSCA TELEHEALTH AND TELEMEDICINE GUIDELINES PUBLISHED DURING COVID-19		
Date	9 September 2020		

The research proposal with details above has been granted a waiver of the requirement to undergo ethical review. Please note the following:

1. This is not an ethical clearance letter. A waiver of the requirement to undergo ethical review means that the research proposal will not be reviewed, and thus cannot be approved ethically.
2. If it is envisaged at any point that the research methods will be amended, a Research Proposal Amendment Application Form (REC 8.D) must be completed and submitted to the REC Secretariat prior to the research being amended even if a waiver has been granted. Amendments to research may only be carried out once a new waiver or (if applicable) ethical clearance letter is issued. See Section 12 of the REC Standard Operating Procedures.
3. The requirement for ethical clearance renewal and closure is also waived.

The REC wishes you all the best for your studies.

Yours sincerely,

A handwritten signature in black ink, appearing to be 'C Stein'.

Prof. Christopher Stein
Chairperson: REC
Tel: 011 559 5564
Email: cstein@uj.ac.za

RECX 0.0 – Faculty of Health Sciences
Research Ethics Committee

Secretariat: Ms Rulisaani Petersen
Tel: 011 559 6073 email: rpeterson@uj.ac.za

APPENDIX C: TURNITIN DIGITAL REPORT



turnitin

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AN ANALYSIS OF THE AHPCSA TELEHEALTH AND TELEMEDICINE
SUBMITTED FOR ASSESSMENT ON 25 JUN 2021

Author: AF KARODIA
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APPENDIX D: TURNITIN ORIGINALITY REPORT

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APPENDIX E: INCLUSION AND EXCLUSION OF ARTICLES USED TO OBTAIN RESULTS

COUNTRY	DOCUMENT TYPE	NAME OF ARTICLE	INCLUDED/EXCLUDED	REASON
South Africa	Article	Guidelines: Telehealth and telemedicine as a result of South African State of Disaster	Included	These are the guidelines for the use of telehealth that was published by the AHPCSA as a result of the South African State of Disaster.
	Article	Role of Telemedicine in Healthcare during the COVID-19 Pandemic in the Developing Countries	Excluded	Informative article to read regarding the need for telehealth in developing countries
	Article	Guidelines for telehealth in South Africa	Excluded	Interesting read to compare AHPCSA guidelines to the Health Professionals Council of South Africa
	Article	National Government Gazette	Included	Defintions regarding the themes and sub-themes were found in this article.
Australia	Article	Australian Health Practitioner Regulatory Agency	Included	Guidelines for Australian Chiropractors making use of telehealth were found in this article
	Article	Guidelines for technology based consultations	Included	Details pertaining to the guidelines were elaborated on in detail
	Online pdf document	Telehealth Guide for allied health professionals	Included	Additional information was provided for chiropractors using telehealth
	Online Booklet	Code of Conduct	Included	Definitions of themes and subthemes were in this article which assisted in providing further detail pertaining to the guidelines set out for Chiropractors in Australia.
	Article	Peoples experiences and satisfaction with telehealth during the Covid-19 pandemic in Australia	Excluded	This article gave insight to the Australian peoples experiences when they used telehealth as a means of consulting with their practitioners.
	Online pdf document	Good medical practice: a code of conduct for doctors in Australia	Excluded	This article was informative however it applied to doctors in general rather than focussing on chiropractors in particular
	Article	Telehealth consultations in general practice during the pandemic lockdown	Excluded	Information given in this article expressed the positive outcome that telehealth had although certain aspects such as privacy, communication development needs to be refined to eventually have telehealth as a viable option for the future.

New Zealand	Article	Policy and Guidelines	Included	The guidelines for New Zealand Chiropractors making use of telehealth was found in this document
	Online pdf document	Code of Ethics	Included	Defintions and additional information was provided regarding the implementation of telehealth within ones practice
Canada	Website	Canada Telehealth Guidelines, Evidence based recommendations	Included	The guidelines for Canadian Chiropractors were published on this website
	Online pdf document	Code of Ethics	Included	Description of themes and subthemes were identified within this document
	Online pdf document	Telehealth visits	Included	Detailed description of the guidelines were outlined within this article.
	Article	Clinical Summary-Telehealth	Excluded	Information given was to facilitate the chiropractor in implementing telehealth. A brief overview rather than an in-depth explanation.



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APPENDIX F: DEFINITIONS OF THEMES AND SUB-THEMES

THEME/SUB-THEME	SOUTH AFRICA	NEW ZEALAND	AUSTRALIA	CANADA
Code of conduct	Practitioners have moral and ethical duties to others and society given that the fundamental premise of any healthcare professional is the recognition that responsibility is owed to the patient first and foremost, as well as to society, to other health professionals, and to self	Chiropractors should strive to attain the highest degree of professional competence and integrity in the application of chiropractic care. Chiropractors should aim to use appropriate clinical judgment and management to seek the best outcome for their patients.	The code of conduct for chiropractors seeks to assist and support chiropractors to deliver appropriate, safe and effective services within an ethical framework.	The ethical foundation of the practice of chiropractic consists of those established moral obligations which ensure the dignity and integrity of the patient and the profession.
Privacy	In professional relationships with patients, treat personal and/or private information as confidential, unless overriding reasons confer a moral right to disclosure.	The practitioner will provide appropriate space to enable private and confidential consultation and discussion to take place, to the exclusion of all others both aurally and visually.	Chiropractors have ethical and legal obligations to protect the privacy of people requiring and receiving care. Patients have a right to expect that chiropractors and their staff will hold information about them in confidence, unless release of information is required by law or public interest considerations	Ensure that the communication technology used and the physical location of both the chiropractor and the patient does not compromise the privacy and confidentiality of the patient's personal health information
Confidentiality	In professional relationships with patients, treat personal and/or private information as confidential, unless overriding reasons confer a moral right to disclosure.	The practitioner will provide appropriate space to enable private and confidential consultation and discussion to take place, to the exclusion of all others both aurally and visually.	Chiropractors have ethical and legal obligations to protect the privacy of people requiring and receiving care. Patients have a right to expect that chiropractors and their staff will hold information about them in confidence, unless release of information is required by law or public interest considerations.	ensure that the communication technology used and the physical location of both the chiropractor and the patient does not compromise the privacy and confidentiality of the patient's personal health information

Identifying patient and chiropractor	NOT FOUND	Ensure you verify the identity of the client before providing care and yourself by confirming the name, address, gender and date of birth.	Identifying yourself and the patient as one would do before a face-to-face consult.	Confirming the patients name, date of birth and address
Expectations of a telehealth consult discussed with patient	NOT FOUND	Before conducting a telehealth consultation, the physicians should ensure patients understand how the consultation will proceed which includes the timeframe for the consult, out of pocket charges and options for care.	Make sure clients fully understand what telehealth entails, how it will be used in their individual circumstances and how you are going to safeguard their privacy and confidentiality.	The length of time you expect the consultation to be as well as that it might be longer than normal due to technology being used.
Limitations of a telehealth consult discussed with patient	NOT FOUND	If, because of the limits of technology, the same standard of service cannot be provided as an in-person consultation then the patient must be advised of this limitation.	Telehealth consultations should always be conducted in accordance with best practice clinical standards and models of care that apply to face-to-face consultations.	The limitations of these appointments, such as the inability to perform hands on assessment or treatment.
Effectiveness of treatment to of a face-to-face standard	NOT FOUND	If, because of the limits of technology, the same standard of service cannot be provided as an in-person consultation then the patient must be advised of this limitation.	Telehealth consultations should always be conducted in accordance with best practice clinical standards and models of care that apply to face-to-face consultations.	NOT FOUND
Recording of consultations	NOT FOUND	Where the chiropractor and patient use information and video conferencing technologies to communicate with	Allied health professionals using telehealth technology must comply with the Australian Privacy Principles, federal privacy legislation (the Privacy Act	NOT FOUND

		each other and visual and audio information are exchanged in real time, but the chiropractor and patient are not physically present in the same consultation room. A video consultation can be conducted between a chiropractor and patient in the presence of another health practitioner, or it can be conducted with no health practitioner support at the patient's end.	1988) and jurisdictional privacy regulations that govern electronic storage and transmission of client information.	
Physical requirements:	Stable internet connection Device with a microphone Video compatibility Headphones Good lighting	The software and hardware specifications for telehealth will vary depending on individual circumstances. For basic videoconferencing with patients, the following hardware is recommended: • a webcam and microphone • speakers (or headphones) • internet connection.	switching mobile phones off or to silent mode minimising background noise using a mobile phone headset if required speaking clearly, without raising their voice and one at a time (if more than one person is participating) sitting so that all participants can be seen adjusting the camera or lighting	Physical requirements and limitations that can prevent the use of telehealth are: Do they have access to the required technology? Can they use it? • Do they have any physical conditions that will prevent them from being able to use this type of technology (e.g. vision or hearing deficits, physical disabilities) • Is their condition conducive to this type of appointment? (e.g. is it too severe, are there any red flags that require an emergency referral) • Do they have any mental health or psychological issues that may be

			conditions so that you can see their face clearly	aggravated by this type of interaction?
Clear and effective communication	NOT FOUND	To always discuss with the patient the process of the consult including effective communication during the consult.	An important part of the chiropractor–patient relationship is effective communication.	Assessing if this form of consulting and treating is appropriate for the patient and allowing them the opportunity to explore the evidence -based research for telehealth and its uses. Ensure you discuss this with your patients and give them the option for this type of care.
Thorough history and observation	Take a full history of the patient. Observe the patient for obvious anomalies Establish the chief complaint Obtain the history of presenting illness, associated signs and symptoms Obtain full medical history, if not already on file Obtain family, personal and social history Establish medication review. Establish whether the patient has any allergies or intolerances. Obtain a detailed review explanation of the symptoms of the patient. Observations: e.g. breathing, sputum.	A chiropractor should provide an evaluation of the patient's condition and expected progress based on the case history and assessment to the patient or authorised person.	establish the patient's current medical condition and past medical history, and current or recent use of medications, including non-prescription medications	Before any chiropractic techniques are used, a chiropractor must conduct a direct physical examination of the patient's area of complaint, and obtain an adequate initial history before treating the patient.
Informed Consent Given before	Informed consent to the treatment must be obtained before a treatment commences and the principle of	Informed consent from the patient, or authorised person, must be obtained before commencing	Informed consent is a person's voluntary decision about healthcare that is made with the knowledge and	Obtain consent to provide services virtually. Before commencing examination or treatment, a

Patient to agree to telehealth consult	informed consent during the treatment must also be applied. NOT FOUND	chiropractic management. Where the chiropractor and patient use information and video conferencing technologies to communicate with each other and visual and audio information are exchanged in real time, but the chiropractor and patient are not physically present in the same consultation room.	understanding of the benefits and risks involved. Can be given verbally but this must be documented in the patient's health record.	chiropractor will obtain the patient's informed consent. NOT FOUND Obtain consent to provide services virtually Refer to and comply with your regulatory college requirements with respect to informed consent.
Fees	In terms of Section 6(1) of this Act every healthcare provider must inform a user of: the benefits, risks, costs and consequences generally associated with each option	NOT FOUND	Informed consent about healthcare also includes informed consent about financial matters.	Before providing telehealth services, a chiropractor must inform the patient of any applicable fees.
Referrals	Act in your patients' best interest when making referrals and providing or arranging treatment or care.	Chiropractors should recognise patients' rights to co-operation between their health providers to ensure quality and continuity of care.	Many chiropractors work closely with a wide range of other practitioners, with benefits for patient care. Effective collaboration is a fundamental aspect of good practice when working with other practitioners.	The chiropractor is responsible for making an appropriate referral where they determine that imaging reports they have ordered includes findings or recommendations outside the scope of practice for chiropractic
Secure and recognized software	NOT FOUND	Any device, software or service used for telehealth must be secure, only allowing the intended recipients to receive and record, and be	Practitioners must ensure that their chosen telecommunications solution meets their clinical requirements, their	The efforts you have taken to ensure that the technology platform you use complies

		fit for use. It must preserve the quality of the information or image being transmitted.	patient's or client's needs and satisfies privacy laws.	with privacy regulations.
Self management	NOT FOUND	Self-management to be discussed with the patient prior to the end of the consult.	To discuss with the patient prior to the close of the consult, reviewing the management plan for the patient.	advice and counseling on matters related to the condition of the spine or other joints of the body and the associated tissue, the nervous system and the overall health of the individual prior to the end of the consultation.
Follow up treatments	NOT FOUND	At the end of each consultation, the physician should clearly inform the patient of the time and date of their next appointment, or other follow-up plans, and whether the consultation will be conducted in person or via videoconference.	Summarising what was discussed and agreeing on the next steps for the patient's management.	Provide follow-up consultation and care as appropriate.
Medication/exercises prescribed	NOT FOUND	You may issue a prescription, including repeat prescriptions, only when you are satisfied that the medicines or treatment are in the patient's best interests.	Summarising what was discussed and agreeing on the next steps for the patient's management.	Advice and counseling on matters related to the condition of the spine or other joints of the body and the associated tissue, the nervous system and the overall health of the individual

APPENDIX G: SOUTH AFRICA'S GUIDELINES



ALLIED HEALTH PROFESSIONS COUNCIL OF SOUTH AFRICA

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Telephone: (012) 349 2331 Facsimile: (012) 349 2327

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25 MARCH 2020

GUIDELINES: TELEHEALTH AND TELEMEDICINE AS A RESULT OF SOUTH AFRICAN STATE OF DISASTER

1. The Allied Health Professions Act 63 of 1982 as amended ("the Act"), the Regulations in terms of the Allied Health Professions Act of 1982 as amended ("the Regulations") and the Code of Ethics in terms of Section 54(9) of the Regulations No. R.127 of 12 February 2001 to the Allied Health Professions Act, Act 63 of 1982, as amended (the Code of Ethics") have reference.
2. In order to achieve the objectives of the Act, being inter alia to *assist in the promotion and protection of the health of the population of the Republic* during the declared State of Disaster by President Cyril Ramaphosa on 15 March 2020 and in order to protect the health of the practitioners and therapists themselves, health care providers which include AHPCSA-registered practitioners and therapists, are informed by the **EXTRAORDINARY AHPCSA POLICY DECISION: TELEHEALTH AND**

TELEMEDICINE AS A RESULT OF THE SOUTH AFRICAN STATE OF DISASTER, published at www.ahpcsa.co.za on 25 March 2020, that they may practice telehealth and/or telemedicine.

3. In order to ensure health care services are still being provided during this national period of shutdown and during the Covid-19 pandemic and to achieve the objects of the Act to protect the health of the public and all practitioners and therapists, the following guidelines must be adhered to during the period which practitioners and therapists are entitled to practice telehealth and telemedicine.
4. As per the Universal Declaration of Human Rights (as per the World Health Organisation – “WHO”) which recognizes “*the inherent dignity*” and the “*equal and unalienable rights of all members of the human family*”, it is important that when practicing telehealth and telemedicine, the fundamental rights of patients must be respected, namely ***dignity, privacy, confidentiality and informed consent***.
5. The practice of telehealth and/or telemedicine may be used for new and current patients of the practitioner or therapist.
6. In order to practice telehealth and/or telemedicine, the informed consent of the patient must be obtained prior providing the service. The informed consent must include but is not limited to the following information:
 - 6.1. The patient must expressly understand and confirm that he/she agrees that the practitioner or therapist may engage via a telehealth consultation.
 - 6.2. That the patient understands that the consultation will be done via video/internet conferencing technology and that he/she agrees thereto.
 - 6.3. The purpose of the telehealth consultation is to assess and treat his/her condition, subject to the information provided by the patient.
 - 6.4. The telehealth consultation is done through a two-way video link-up whereby the practitioner can see the patient’s image on the screen and hear his/her voice.
 - 6.5. The patient is at liberty to ask questions and seek clarification of the procedures and telehealth.
 - 6.6. The patient may at any time ask that the telehealth consultation be stopped.

- 6.7. The patient acknowledges the risks of telehealth consultation in respect of the technology use or assessment made by the practitioner or therapist when vital information regarding the problem is not disclosed by the patient.
- 6.8. Any paperwork exchanged will likely be provided through electronic means.
- 6.9. During the telehealth and/or telemedicine consultation, details of his/her medical history and personal health information will be discussed through the use of interactive video.
- 6.10. The consultation will be recorded.
7. Physical requirements for a telehealth and/or telemedicine consultation:
 - 7.1. Stable internet connection (upload/download not under 3mbps).
 - 7.2. Computer with webcam and integrated microphone.
 - 7.3. Quiet and professional area in which to conduct your virtual session.
 - 7.4. Headphones to ensure privacy.
 - 7.5. Being professionally dressed.
 - 7.6. Good quality lighting.
8. Only recognized and secure online software may be used in order to protect and guarantee the privacy and confidentiality of a patient.
 - 8.1. The software must have the ability to record all consultation in order to ensure that all consultations are recorded and added to patient records.
 - 8.2. The software must be secured from end-to-end in an effort to ensure that all patient information is protected.
 - 8.3. Full regard must be given to the Protection of Personal Information Act of 2013 in that practitioner and therapist must conduct themselves in a responsible manner when collecting, processing, storing and sharing a patient's personal information.
9. During a telehealth and/or telemedicine consultation, the practitioner or therapist must attend to the following:
 - 9.1. Take a full history of the patient (if not concluded before and being documented on the patient's file).
 - 9.2. Observe the patient for obvious anomalies.
 - 9.3. To triage those who are in need of hospital care from those who can be managed via telemedicine.
 - 9.4. Establish the main / chief complaint.

- 9.5. Obtain the history of presenting illness, associated signs and symptoms.
 - 9.6. Obtain full medical history, if not already on file.
 - 9.7. Obtain family, personal and social history.
 - 9.8. Establish medication review.
 - 9.9. Establish whether the patient has any allergies or intolerances.
 - 9.10. Obtain a detailed review / explanation of the symptoms of the patient.
 - 9.11. Observations: e.g. breathing, sputum quality and other as may be relevant.
 - 9.12. Take the vital signs that are able to be taken. This can be explained to the patient prior to the consultation taking place so as to adequately prepare the patient and further it needs to be explained to the patient (verbally and as per the informed consent to be signed) that the patient accepts full responsibility of the accuracy provided of the vital signs. This can be done in the following ways:
 - 9.12.1. Temperature taken by the patient himself / herself;
 - 9.12.2. Pulse rate: This can be described manually to the patient or, if they use such devices, wearable fitness trackers which have been shown to produce reliable and valid data readings, such data may be provided by the patient.
 - 9.12.3. Respiration rate: Observation by the practitioner during consultation.
 - 9.12.4. Blood pressure: If the patient has assistance or is able to obtain a blood pressure device, then it can be screened.
10. Any advice and/or prescription of medication will be in accordance with the SAHPRA and AHPCSA guidelines.
 11. Medication can be sent/couriered to the patient or collected with appropriate protocol to prevent cross infection.
 12. Any suggested treatment regimen is limited to only that which a patient may reasonably understand correctly and to be able to carry out safely.



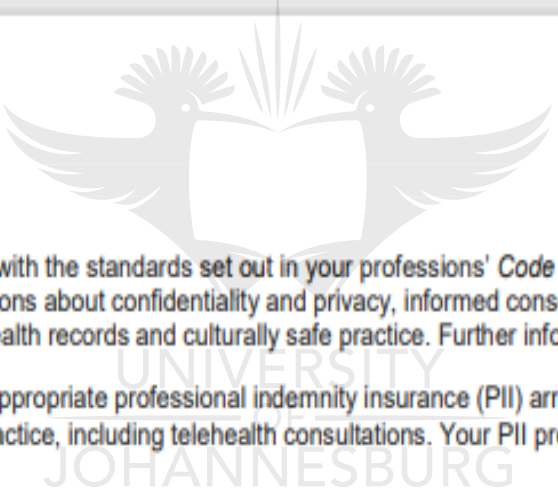
DR LOUIS MULLINDER

APPENDIX H: AUSTRALIA'S GUIDELINES

4. What are the National Boards' expectations of practitioners using telehealth to provide healthcare?

The National Boards have the same expectations of practitioners using telehealth to provide patient consultations/patient services as they do when practitioners are delivering services face-to-face. When providing telehealth services, the National Boards still expect that:

- You will practice in accordance with your National Board's regulatory standards, codes and guidelines, specifically that you will:

- 
- act in accordance with the standards set out in your professions' *Code of conduct* or equivalent including expectations about confidentiality and privacy, informed consent, good care, communication, health records and culturally safe practice. Further information is provided below.
 - ensure you have appropriate professional indemnity insurance (PII) arrangements in place for all aspects of your practice, including telehealth consultations. Your PII provider can advise you about your PII coverage.

- You are aware of and comply with:
 - state and territory legislative requirements including (but not limited to) authorities that regulate health records
 - privacy legislation and/or any other relevant privacy requirements
 - when appropriate, the use of government health and prescription monitoring services such as Prescription Shopping Programme, SafeScript, My Health Record, Healthnet, and
 - any other relevant legislation and/or regulatory requirements.

5. How does the Code of conduct apply to telehealth?

The *Code of conduct*¹ for a health profession is a key part of each National Board's regulatory framework to protect the public and support the other objectives of the Health Practitioner Regulation National Law, as in force in each state and territory (the National Law).

Your profession's *Code of conduct* defines the National Board's expectations for practitioners' professional conduct, including the importance of maintaining a high level of professional competence in order to provide the best healthcare. These codes are also intended to let the community know what they can expect from practitioners.

They provide guidance on the National Board's expectations of what constitutes good practice and includes guidance about:

- delivering safe and quality care
- effective communication
- confidentiality and privacy
- informed consent
- health records
- culturally safe and sensitive practice
- patients who may have additional needs
- working collaboratively with other practitioners, and
- insurance.

It is the Board's expectation that this guidance would be applicable to practitioners providing telehealth services or traditional face-to-face services.

You have a professional responsibility to be familiar with your profession's *Code of conduct* and apply it to your practice, including when using telehealth.

6. How can I deliver safe, effective health services via telehealth?

You can deliver safe, effective health services via telehealth by adhering to the same principles you apply when providing care during a face-to-face consultation. The list below is not exhaustive but is designed to provide you with some high-level guidance about what you should do to safely and effectively use telehealth.

¹ Each National Board's *Code of conduct* is available on the Board's website, accessible via: www.ahpra.gov.au.
For medical practitioners, the Medical Board of Australia's [Good Medical Practice: a code of conduct for doctors in Australia](#).
For psychologists, the Australian Psychological Society's [Code of Ethics](#).
For nurse and midwives, the Nursing and Midwifery Board of Australia's [Code of conduct for Nurses](#), [Code of Conduct for Midwives](#) and [Standards of Practice](#).

Using telehealth to advise or treat patients/clients

- Assess whether telehealth is safe and clinically appropriate for the patient or client, particularly noting the limitations of telehealth, and whether a direct physical examination is necessary to provide good care.

At the beginning of a telehealth consultation

- Identify yourself and confirm the identity of your patient or client.
- Provide an explanation to your patient or client of what to expect from a telehealth consultation.
- Ensure information is provided to clients and patients in a way they understand, and that informed consent is obtained, in particular, in relation to fees, proposed treatment and if you are recording the consultation.
- Ensure you protect your patient or client's privacy and their rights to confidentiality, particularly if you are working from home.

During a telehealth consultation

- Ensure you effectively communicate with your patient or client to establish their current condition and past health and medication history. Use qualified language or cultural interpreters where needed.
- Ensure the standard of care provided in a telehealth consultation meets the same required standards as care provided in a face-to-face consultation.
- Ensure you maintain clear and accurate health records of the consultation.

Ensure continuity of care

- Make appropriate arrangements to follow the progress of your patient and inform their general practitioner or other relevant practitioners of the treatment provided, including any medications prescribed.
- Keep other practitioners informed of the patient or client's condition and the treatment you have provided when you are sharing the care of the patient.

7. What technology can I use to deliver telehealth?

No specific equipment is required to provide telehealth services. Services can be provided through telephone and widely available video calling apps and software such as Skype, FaceTime, Duo, GoToMeeting and others.

As the [MBS website](#) explains, free versions of these applications (i.e. non-commercial versions) may not meet applicable laws for security and privacy. Practitioners must ensure that their chosen telecommunications solution meets their clinical requirements and satisfies privacy laws.²

8. Where can I find further information about telehealth?

The Medical Board of Australia has developed [Guidelines for technology-based patient consultations](#) to inform medical practitioners and the community about the Medical Board of Australia's expectations of medical practitioners who use telehealth.

All state and territory health departments have developed information and resources about telehealth.

The Department of Health's [MBS website](#) has information specific to the new temporary bulk-billing items for COVID-19.

APPENDIX I: CANADA'S GUIDELINES

Evidence-based recommendations that can be delivered through virtual chiro care include:

1) Ensure care is patient-centered.¹⁰⁻¹³

- Use a biopsychosocial approach to care that takes into account the individual patient's context.
- Listen attentively to patients' concerns, health goals, values and preferences.
- Communicate effectively and engage in shared decision-making with the patient.
- Offer preparatory recommendations prior to the appointment (e.g., comfortable clothing that allows ease of movement and visual inspection, and space and flooring for exercise prescription).

2) Screen for risk factors of serious pathology ("red flags")

- Conduct a thorough history and document contemporaneously.
- If risk factors are present, refer the patient to the appropriate healthcare provider or services. Examples include suspicion of infection, malignancy, fracture, inflammatory causes of pain, severe and progressive neurological deficit (including cauda equina syndrome) and serious conditions that can present as musculoskeletal pain (such as aortic aneurysm).

3) Assess barriers to recovery (psychosocial factors, "yellow flags")

- Screen for anxiety, depressive symptoms, sleep disturbances, fear/kinesiophobia catastrophizing, recovery expectations, and expectations of passive treatment. Patients with these findings may require co-management or referral.
- Be aware of the patient's context – "yellow flags" may worsen during a period of crisis and/or further exacerbate pain (see examples of assessment tools at <https://www.ccgj-research.com/outcomes-psychosocial>).

- Address modifiable barriers.
 - Educate and reassure patients about the benign and self-limiting nature of their musculoskeletal condition and the importance of maintaining activity and movement.
 - Reassure patients that it is normal to feel some anxiety, distress or anger.
 - Listen to the patient's concerns, discuss them and adjust their care plan accordingly.

4) Conduct a clinical examination

- Conduct a thorough health interview and document contemporaneously.
- Use patient-reported questionnaires and outcome measures (see examples <https://www.ccgj-research.com/outcomemeasurements>).
- Conduct a physical examination. While there are limitations to the lack of a hands-on physical exam possible with virtual chiro care, a modified exam may allow for a clinical impression and for an initial treatment plan to be started. A modified exam may include:
 - Observing the patient's appearance and emotional status (e.g., does the patient look well, unkempt, worried, well-rested, intoxicated; any signs of physical trauma?)
 - Observing the patient's posture, range of motion, movement patterns, and muscle strength.
 - Asking the patient to self-palpate or self-examine under your guidance. You may send instructional photos or videos to facilitate this.
 - You may recommend to the patient that it may be helpful to have a family member present during the examination (in case the patient falls, etc.)
- Once major pathology has been ruled out; and based on the interview and modified physical examination, you may classify the patient's condition (e.g., non-specific neck or back pain, shoulder strain).

5) Provide patients with education/information about their condition and self-management strategies

- Communicate your clinical impression.
- Communicate the patient's apparent progress (for subsequent visits).
- Communicate your recommendations.
- Promote shared understanding and shared decision-making regarding the patient's care plan.

6) Address physical activity and exercise

- Prescribe exercise (e.g., maintenance of usual activities, mobility, range of motion, stretching, strengthening, aerobic or general exercises).
- Demonstrate and/or observe performance of exercise.
- Provide written, image or video exercise references (see examples <https://www.ccgj-research.com/pr-vidiosandforms>).

7) Address supportive self-management strategies and factors contributing to the patient's experience

- Educate patients on up-to-date public health measures related to the current pandemic (as outlined by our national and provincial health authorities e.g., <https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/health-professionals.html>).
- Educate patients on self-management strategies, such as:
 - Promoting healthy lifestyle behaviours (e.g., being active, proper nutrition and sleep) / behaviour modification
 - Active coping strategies for pain, anxiety, stress, and depressive symptoms
 - Address sleep disturbances
 - Teach mindfulness practices
 - Teach pacing activities
 - Help patients locate online social support programs
- Support patients to self-manage through techniques such as cognitive behavioural therapy (CBT) and motivational interviewing (or refer to other healthcare providers qualified in providing these services).
- Provide resources (see examples at <https://www.ccgj-research.com/patient-resources>).
- Many of the behavioural components of self-management are not only potentially helpful for managing pain and musculoskeletal conditions, but also for emotional distress related to the current pandemic.

8) Monitor patient progress

- Remind patients to contact you or another healthcare provider if certain signs and symptoms ("red flags") occur (see patient handouts as examples <https://www.ccgj-research.com/self-management-resources-handouts>).
- Ask the patient's permission to follow-up with them as appropriate (suggest timeframes).
- Evaluate patient progress using validated outcome measures (see examples <https://www.ccgj-research.com/outcomemeasurements>). These include pain intensity, function, quality of life, and self-rated recovery.

APPENDIX J: NEW ZEALAND'S GUIDELINES

3. TELEHEALTH SCOPE OF PRACTICE

This standard applies to chiropractors registered in New Zealand and practising telehealth in New Zealand and/or overseas, and chiropractors who are overseas and provide health services through telehealth to patients in New Zealand. In both these instances, the chiropractors must be registered and hold a current Annual Practising Certificate (APC).

4. PROVIDING CARE

1. Any device, software or service used for telehealth must be secure, only allowing the intended recipients to receive and record, and be fit for use. It must preserve the quality of the information or image being transmitted.

The Board expects the treatment provided to a patient in another location meets the same required standards as care provided in an in-person consultation.

This includes standards relating to:

- patient selection, identification, cultural competence, assessment, diagnosis, informed consent, maintaining the patient's privacy and confidentiality, updating the patient's clinical records and communicating with the patient's relevant primary care provider in a timely manner (unless the patient expressly states that the details of the telehealth consultation are not to be shared with their primary care provider), and follow-up.
 - If, because of the limits of technology, the same standard of service cannot be provided as an in-person consultation then the patient must be advised of this limitation.
2. It is particularly important that consideration is given to whether a physical examination would add critical information before providing treatment to a patient or before referring the patient to another health practitioner for services such as diagnostic imaging. If a

physical examination is likely to add critical information, then it should not proceed until a physical examination can be arranged. In some circumstances, it may be reasonable to ask another health practitioner in the patient's locality to conduct the physical examination. In those instances, it is important that the patient's informed consent be obtained and communicated clearly for that arrangement, and the referring chiropractor is available to answer any queries.

3. The patient consent must be obtained prior to commencing any form of telehealth.
4. The telehealth method used for consultation must be noted.
5. When working with or receiving reports from telehealth providers, chiropractors should ensure that the above standards are followed and must notify that telehealth provider, their management and other appropriate reporting channels if there are concerns about the quality of care being provided.

5. PROVIDING CARE TO A PATIENT LOCATED OUTSIDE NEW ZEALAND

Chiropractors providing care from New Zealand to patients in another country:

- remain subject to New Zealand law;
- may be subject to other legal obligations, requirements or liabilities in the location where the patient is located;
- may also be subject to the jurisdiction of authorities in the patient's home country;
- may be liable if the patients are assisted to contravene that country's laws or regulations, for example, any importation and possession requirements; and
- legal advice should be sought in that country, if necessary.

6. INSURERS AND THIRD-PARTY PAYERS

Chiropractors must understand and abide by the policies or recommendations of insurers or third-party payers regarding telehealth. If the insurers or third-party payer policy is unclear, they should be contacted before any assessment and treatment are undertaken.

7. RELATED RESOURCES

These guidelines need to be read in conjunction with the Board's:

- [Competency-Based Professional Standards for Chiropractors](#);
- [Standards of Cultural Competence Policy](#);
- [Code of Ethics](#).

Please also refer to:

- [The Code of Health and Disability Services Consumers' Rights](#);
- [Royal Australasian College of Physicians' Telehealth Guidelines and practical tips](#);
- [NZ Telehealth Resource Centre](#).