Promise and Peril: applying ethical principles in telehealth practice to improve service delivery for clinicians and patients.

By

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Bachelor of Arts (Honours)
Master of Business Administration
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Thesis
Submitted to Flinders University
for the degree of

Doctor of Public Health

College of Medicine and Public Health
16 February 2022

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List of Abbreviations

ACI	Agency for Clinical innovation
ACRRM	Australian College of Rural and Remote Medicine
ADHA	Australian Digital Health Agency
AHANZ	Allied Health Aotearoa New Zealand
AHMAC	Australian Health Ministers' Advisory Council
AHPA	Allied Health Professions Australia
AHPRA	Australian Health Practitioner Regulation Agency
ANF	Australian Nursing Federation
ATHS	Australasian Telehealth Agency
ATS	American Telemedicine Society
CTE	Centre for Telehealth Excellence
CTS	Canadian Telehealth Society
DAA	Dieticians Association of Australia
DHHS	Department of Health and Human Services
ETSI	European Telecommunications Standards Institute
EU	European Union
HCNSW	Health Consumers New South Wales
ICT	Information and Communication Technologies
NDIS	National Disability Insurance Scheme
NIFTE	National Initiative for Telehealth
OTA	Occupational Therapy Australia
RACGP	Royal Australian College of General Practitioners
RACP	Royal Australian College of Physicians
RANZCP	Royal Australian and New Zealand College of Psychiatrists
SCTT	Scottish Centre for Telehealth and Telecare
THVCP	Telehealth Victoria Community of Practice
UK	United Kingdom
USA	United States of America
WHO	World Health Organisation

THESIS SUMMARY

Telehealth practice is the provision of health services to patients by clinicians who are not in the same physical location, through utilisation of information and communications technology. Telehealth can provide benefits to patients, providers, and the health system holistically, through improved access, availability, and efficiency of quality health care, as a complement to face-to-face consultations. Aging populations, technological advancements and the advantages of telehealth are predominant drivers increasing investment and demand. The global COVID-19 pandemic in 2020 was a “gamechanger” for telehealth practice, as clinicians and patients sought safe ways to continue providing or accessing care.

Evaluations of telehealth programs have focussed on the “Promise” of telehealth – improved efficacy, efficiency, and clinical outcomes, ignoring or minimising the potential “ “ “ Perils” – the potentially negative, harmful, or unethical implications of service delivery

The central research question of this thesis is “How can applying ethical principles in telehealth practice improve service delivery for clinicians and patients? This question is answered using a mixed methods approach, combining a structured literature review, a document analysis and a qualitative study of practitioners and patients. Beauchamp and Childress’ Principles of Biomedical Ethics (2013) framework was applied to define ethical principles and sub-themes.

There were four secondary research questions:

1. **What ethical issues exist in telehealth practice?**

Data was obtained from published literature between 1980-2019, by searching the Cochrane, MEDLINE, Scopus, Web of Science, PubMed and CINAHL databases. Analysis identified a small number of qualitative studies which identify relevant ethical issues associated with telehealth practice, and subsequently discuss their potential impact on service quality from the perspective of patients, carers and healthcare professionals. However, there is limited research on how ethical principles are incorporated into telehealth practice.

How are ethical principles discussed in telehealth guidelines?

Data was obtained through purposive sampling of telehealth practice guidelines from four representative groups. Twenty-five documents were analysed using Framework methodology. The use of ethical terms, the context of ethical principles, and the concepts of emerging ethical themes were identified in the documents, then analysed and discussed. It is clear the application of ethical principles is proposed, advised, or recommended in telehealth guidelines.

3. **How are ethical principles experienced in practice by telehealth patients and clinicians?**

Analysis using grounded theory methods was conducted on data obtained from interviews with 20 telehealth practitioners and patients. Ten practitioners were selected primarily through a telehealth community of practice membership. Ten patients were selected from a health consumer advocacy organisation membership, and additionally through social media. Analysis revealed that practitioners and patients experienced situations or instances associated with ethical principles in providing or receiving health services via telehealth. Those reported experiences ranged from marginally to significantly different.

4. **How can ethical concerns in telehealth practice be challenged or re-negotiated through new knowledge?**

Further qualitative analysis compared the results of the studies and summarised theory, new knowledge, and implications for practice. Bespoke guidelines, communities of practice, intra- and cross-discipline audit and coaching, and mandated training were identified as key knowledge translation approaches.

In conclusion, applying ethical principles in telehealth practice can enhance benefits, reduce harms, improve equitable access and strengthen relationships between clinicians and patients. This will contribute to the growth and sustainability of cost effective and high-quality services in the broader health system.

DECLARATION

I certify that this thesis:

1. does not incorporate without acknowledgment any material previously submitted for a degree or diploma in any university; and

2. to the best of my knowledge and belief, does not contain any material previously published or

written by another person except where due reference is made in the text.

Signed:

Date: 17th October 2021

MANUSCRIPTS CONTRIBUTING TO THIS THESIS

1. Keenan AJ, Tsourtos G, Tieman J
   The Value of Applying Ethical Principles in Telehealth Practices: Systematic Review
   J Med Internet Res 2021;23(3):e25698
   doi: 10.2196/25698PMID: 33783366

2. Keenan AJ, Tsourtos G, Tieman J
   Promise and peril-defining ethical telehealth practice from the clinician and patient perspective: A qualitative study
   DIGITAL HEALTH 2022; 8: 20552076211070394.
   doi: 10.1177/20552076211070394

ACKNOWLEDGEMENTS

I would like to thank my supervisors, Dr. George Tsourtos and Professor Jennifer Tieman for their ongoing support, patience and inspiration during my candidature, and Flinders University and the College of Medicine and Public Health. I would also like to acknowledge the contribution of an Australian Government Research Training Program Scholarship in undertaking this research.

I would like to thank the telehealth patients and clinicians who took part in the research, the Telehealth Victoria Community of Practice and Anthony Brown and the staff at Health Consumers New South Wales.

I would also like to acknowledge the support and advice from my husband Thomas, on what has been a shared journey.

CHAPTER 1 - Introduction

1.1 Introduction

This dissertation examines how applying principles of biomedical ethics in practice can improve telehealth service delivery for clinicians and patients. I will specifically consider the ethical principles of *autonomy*, *nonmaleficence*, *beneficence*, and *justice,* and the related concepts and rules of *professional-patient relationships*[1].

This question is important to public health as the use of information and communication technologies (ICT), including telehealth, to deliver health services becomes more prevalent globally. Governments, private health services, clinicians and health consumers are all seeking to reduce the cost of health provision, while maintaining or increasing both access to services and clinical quality. Telehealth and telemedicine promise a “huge potential for patients and society as a whole” in improving the “quality of diagnosis, treatment and quality of life throughout the patient management process”[2].

It is predicted the global telehealth market will reach $14.26 Billion by 2024 from $3.48 billion in 2017. The rise in the aging population, technological advancements and the advantages of telehealth are the predominant drivers increasing investment and demand for this type of service in healthcare [3].

In Australia, as in other parts of the world, the global COVID-19 pandemic that began in 2020 was a “gamechanger” for telehealth practice[4]. Government funding that had previously restricted telehealth use to predominantly rural and remote healthcare, was significantly expanded to specialists and allied health professionals in urban areas. Described as “a measure to ensure safety for patients and practitioners during the COVID-19 pandemic”, it was designed to allow more patients to “receive essential care by video conference or telephone during the coronavirus pandemic”, and lessen the risk of the virus spreading[5].

If we accept that, given the perceived benefits of telehealth and likely future advances in digital health technology, it is “here to stay”, the question then becomes, how will it be used and who will benefit? Most evaluations of telehealth programs have focussed on the “Promise” of telehealth such as improved efficacy, efficiency, and clinical outcomes. This approach ignores or seeks to minimise the possible “Perils”, the potentially negative, harmful or unethical effects of telehealth service delivery [6]. Evidence suggests that ignoring ethical impacts of telehealth on patients can lead to reduced engagement, non-compliance with care regimens and even harm.[7]

The European Commission Consumers, Health, Agriculture and Food Executive Agency has noted that although telehealth and telemedicine have been discussed for nearly forty years,

> *…even if today the technology and social conditions for its uptake are met, there is still a lack of evidence to support it. When taking national decisions affecting directly the health of the population, decisions need to be taken on the basis of scientific facts. At present, we lack this base of evidence to prove the effectiveness of telemedicine.*[2]

1.1.1 Background to the Research

I chose to research how applying ethical principles in practice can improve telehealth service delivery for clinicians and patients as a result of firsthand experience of the low awareness of ethical issues in service delivery to vulnerable patients in Australian community care. My experience was that poor preparedness and lack of skill by telehealth clinicians resulted in stress and confusion for patients, non-compliance with treatment, and ultimately, failure of the service. Patients were allocated a telehealth service when their preference was for face-to-face, no specific guidelines or evaluation tools were provided to clinicians, and the process was apparently designed primarily to maximise the profitability of the service.

The research findings are particularly important for Australia, and indeed, for the rest of the world, because of the continued investment of government and private health services in the use of digital technology to deliver healthcare. The health ecosystem of Australia is that of a developed, western democratic nation where access to healthcare is relatively straightforward and equitable, with formal health systems in place at national, state, and community levels. Originally intended to increase access to care and specialist services by rural and remote populations at a reduced cost, the recent global pandemic has defined a new and greater role for telehealth. In July 2020 Australia's Health Minister acknowledged that the "dramatic explosion" in the use of telehealth had been "a key element of the fight against COVID-19"[8], and committed to developing the capability within the health system:

> *Telehealth has been enthusiastically accepted by doctors and patients alike. I hope and intend for telehealth to be a positive legacy of this crisis and am already engaged with the medical community in planning a long-term future for telehealth*[9].

I brought to the research a background in human-centred design and health economics and experience in the use of telehealth in community nursing organisations. My links to the research context were my exposure to telehealth service provision, primarily through video provision of medication management as part of chronic disease management programs delivered on behalf of state governments by not-for-profit organisations. My experience was that clinicians fail to understand or address ethical issues in the design and delivery of these programs, resulting in patients experiencing harm, disengaging from the process or becoming "non-compliant". It has been suggested that the home environment of individuals, which provides comfort, familiarity of surroundings and a "safe harbour" in both sickness and health, can be negatively impacted by "obtrusive" technologies or installations, resulting in a detrimental effect on both the psychological state and well-being of the patient [10]. Research on home telehealth compliance found that once patients feel "empowered" by home telehealth they are "far more likely" to comply with the service. However, if they feel telehealth "hinders their daily lives" or is a "burden" that is intrusive or creates feelings of dependency, then non-compliant behaviours are more likely to occur [11]. This leads to reduced efficiency and quality in the service as well as impacting on clinician and patient satisfaction.

My intention, therefore, was to uncover and explore how ethical principles are incorporated into telehealth practice generally, and through the use of appropriate knowledge transfer methodology, seek to improve the effectiveness and experience of telehealth service delivery for both practitioners and consumers.

The structure of the dissertation is: an introduction that outlines the background, development of the research question and four sub-questions; a review of the current literature; a document analysis; a qualitative study; discussion of the findings; a framework for knowledge translation, and a conclusion, recommendations, and acknowledgments.

1.2 About Telehealth

1.2.1 Defining Telehealth and Telemedicine

The emergence and continual growth of ICT and their use in healthcare has created a number of platforms for service delivery and interaction between patients and health professionals, including “telehealth”, “telemedicine” “digital health” and “m-health”. The World Organisation Centre for Europe described “digital health” as:

> …a broad umbrella term encompassing e-health, as well as developing areas such as the use of advanced computer sciences (for example, in the fields of “big data”, genomics and artificial intelligence)[12].

Fatehi et al. (2020) noted in their systemic review of digital health definitions that there is “no agreed upon definition” for this term[13]. Due to “to different perspectives of academia, scientific institutions, industry, and individuals,” there is a lack of “a precise definition” of digital health. They identified thirteen separate “components” of a “digital innovation health ecosystem”, including:

> e- health, m-health, health 2.0, telehealth and telemedicine, public health surveillance, personalized medicine, health promotion strategies, self-tracking, wearable devices and sensors, genomics, medical imaging, and information systems[13].

“Telehealth” and “telemedicine” are sometimes distinguished by the former describing health services delivered by, for example, nurses or allied health professionals as well as doctors, and the latter describing services delivered by general practitioners or specialist doctors. “Telehealth” may include the use of ICT to support long-distance clinical health care, patient and professional health-related education, public health, health research and health administration[14, 15]. Non-medical health professionals who are not bound by avowed declarations, such as the Hippocratic Oath taken by doctors, are still generally expected to adhere to ethical standards. For example, one of the purposes of the Code of Ethics for Australian nurses is to “indicate to the community the human rights standards and ethical values it can expect nurses to uphold”[16].

For the purposes of this review the two terms are considered synonymous, and the definition of “telehealth” is that as derived from the criteria outlined by the World Health Organisation (WHO)[17] :

1. That the purpose of telehealth practice is to provide clinical support to patients by health care professionals including nurses, doctors, pharmacists, and allied health professionals.
2. That it connects users who are not in the same physical location. For example, between clinical settings such as hospitals and medical practices and community settings such as homes or residential care facilities.
3. That it involves the use of various types of ICT such as telephone and video.
4. That its purpose is to improve health outcomes.

Given the growing use of mobile devices such as smartphones and tablets by the general population in many facets of their everyday lives, it is important to distinguish between m-health and telehealth. The key difference is that m-health is *user-directed* and can occur without the involvement of a clinician, whereas telehealth is *clinician-directed,* and cannot. Telehealth refers to all instances of healthcare via the use of modern technology, whereas m-health refers to the concept of mobile self-care — consumer technologies like smartphone and tablet apps that enable consumers to capture their own health data, without a clinician's assistance or interpretation[18].

1.2.2 Telehealth in the Context of Public Health

The practice of utilising ICT in the delivery of health services, including diagnosis, treatment, and prevention of disease, has grown significantly over the last twenty years. The World Health Organisation (WHO) noted in developing their *Health Telematics Policy for Global Health Development*, the potential for ICT programs to provide effective, equitable and efficient healthcare delivery globally, particularly in developing and third world nations[19]. In developed nations, however, Governments perceive ICT applications as a more cost-effective way to deliver some health services compared to traditional face-to-face methods. In the last decade, the use of ICT to deliver health services has grown into a "rich tapestry" of applications with governments in wealthy and poorer nations alike seeking to reduce the health care spend and improve efficiency by incorporating the use of telephone, video, remote monitoring or online methods [17].

In Australia, both State and Federal governments have recognised that telehealth can provide benefits to patients, clinicians, and the health system overall, through improved access, availability, and efficiency of quality health care, as a complement to face-to-face consultations. While telehealth delivery has focused on increasing equity of access for patients in rural and remote areas, there is a growing investment in its broader uptake in metropolitan areas, in the support of hospital avoidance initiatives as well as specialist services such as burns, infectious diseases, lung transplant and HIV services. As noted in the *New South Wales Health Telehealth Framework and Implementation Strategy for 2016–2021*, as new services are developed, there is an expectation that "consumer-focused" telehealth technologies will be enablers for "managing rising demand for health services with fewer resources, while achieving a high quality of care"[20] .

1.2.3 Telehealth Policy Development - International Examples

The drivers of the development and deployment of telehealth strategy and policy vary between jurisdictions, regions and countries and reflect the social and political environments of those governments and societies. Like other health innovations involving technology, telehealth is promoted as a way to address the existing financial challenges within the public and private sector that are exerting significant pressure on health, care and support models. The need for new and different approaches to prevention, enablement and to supporting independence, wellbeing, self-care and self-management is also a driver, particularly in countries with more socialist policy agendas. Telehealth is also seen as a vehicle to generate efficiencies and add value through more flexible use of workforce capacity and skill mix and by reducing wasteful processes, travel and minimising access delays.

In Australia drivers include the significant differences between the health outcomes for advantaged and disadvantaged, particularly indigenous, Australians; a large ageing population; the increasing incidence of chronic disease; increasing consumer demand for more costly, complex, and technologically advanced procedures, and the supply and distribution of skilled health sector workers.

Australian Health Ministers, through the Australian Health Ministers' Advisory Council (AHMAC) developed the first "e-health" strategy in 2008, focused on establishing foundations in four key areas:

1. **Data Integration and Access** - Implementing the national 'health information highway' infrastructure and rules to allow information to be seamlessly accessed and shared across the Australian health system
2. **Finance and Funding** - Stimulating investment in high priority computer systems and tools that can deliver tangible benefits to Australian consumers, care providers and health care Managers
3. **Engagement and Adoption** - Encouraging health sector participants to adopt and use high priority systems and tools as they become available
4. **Governance** - Establishing an E-Health governance regime to enable effective coordination and oversight of national E-Health activities.

In arguing for a national approach, AHMAC noted it will be "significantly more cost effective" to develop these foundations **once** at a national level rather than duplicating effort and expenditure across Australian States and Territories. It suggests that any deviations in approach to standards, protection legislation and identifiers across the country will pose a "direct risk" to the Nation's ability to exchange health information seamlessly and securely. It also cites "strong international evidence" that nations such as New Zealand, England, Scotland, Denmark and Canada have **only** made "significant E-Health progress at a national level" once they have established appropriate E-Health foundations [21].

In the United States of America (USA), similar complexity of a federated system means differences in payment and coverage for telehealth services in the public and private sector, as well as different policies across states, remain a barrier for widespread telehealth use. Policy development has focused on funding arrangements, licensure portability across states for providers, and ensuring safe telehealth participation for patients through privacy and data security laws, policies and procedures. The American Hospital Association reports that the use of telehealth in hospitals has grown rapidly, with the percentage of hospitals fully or partially implementing computerized telehealth systems increasing from 35% in 2010 to 76% in 2017. Despite this, they are advocating for the Federal government to "do more to increase the use of telehealth", specifically in expansion of Medicare coverage, resolution of legal and regulatory challenges that hinder the provision of telehealth services, additional federal research on the cost-benefits of telehealth and improved access to broadband technology for rural areas[22].

In Scotland, telehealth and telecare have been greeted with a degree of enthusiasm by government and some policy agencies as a technology that fits well with the modernisation of their health systems. It is seen as a more cost-effective way of delivering healthcare compared to more traditional face-to-face methods, as well as more convenient and acceptable to patients. A 2011 audit by the Scottish Telehealth Centre noted that "Scotland is the only country in Europe that has both a national organisation with a specific remit for telehealth and a national strategy for telehealth"[23].

The European Union (EU) has provided guidance to member states on the development of digital health policy, including telehealth, for a number of years. In its first European Union-wide assessment it notes that although EU policy makers "have undertaken a number of successful initiatives to facilitate telemedicine adoption", further interventions for "speeding up adoption and the realisation of benefits" are needed. These include boosting research by investing in "large-scale experiments" to evaluate the impact of a wider deployment; programs to raise awareness with both patients, doctors, and facilitating reimbursement[2].

1.2.4 Telehealth in Australia

Historically, funding of telehealth programs in Australia at the Federal level had focused on improving equity and access to care, particularly in rural and remote areas. Rebates through the national insurance scheme Medicare are available for video consultations between medical specialists and patients who are located in "telehealth eligible areas". Eligibility criteria includes a proximity rule of fifteen kilometres by road between a patient and a specialist, consultant physician, or consultant psychiatrist, that must apply at the time of the telehealth consultation. Exceptions exist for patient living in an eligible residential aged care facility, or those part of Aboriginal health services. Most State Governments have invested in funding telehealth initiatives, projects and disease-specific programs at the local health service level, including cancer services, chronic disease management programs, paediatrics, respiratory medicine, endocrinology and genetics, burns, infectious disease, lung transplant, orthopaedics, gastroenterology, dialysis and HIV services[24].

Progress in establishing a separate National telehealth strategy had been slow, and at the time of my research commencing, had not progressed further than inclusion in much broader policy initiatives. The Australian Digital Health Agency (ADHA) was established in 2016 and is responsible for "national digital health services and systems, with a focus on engagement, innovation and clinical quality and safety". The Agency's key remit was the establishment of a national electronic health record, and it has developed a *National Digital Health Strategy,* which outlines six strategic priorities and a framework for action up to 2022. Telehealth is mentioned as a "priority health reform area", included in "digitally-enabled models of care that drive improved accessibility, quality, safety and efficiency". The strategy references the establishment of two year "test bed" projects to "inform the national roll-out of innovations across Australia, ensuring that all Australians can benefit"[25]. In 2020 the ADHA published a *National Digital Health Workforce and Education Roadmap*, as an adjunct to the *Strategy*, which provides a basis for "understanding the digital capability requirements of all those involved in the healthcare system including the health workforce, volunteers and health consumers"[26]. They note that the COVID-19 pandemic has led to "a significant uplift in technology adoption – specifically telehealth" in Australia. Clinicians and health systems worldwide have been "racing to adopt virtualised treatment approaches that obviate the need for physical meetings between patients and health providers". In July 2020 Australia's Health Minister acknowledged that the "dramatic explosion" in the use of telehealth had been "a key element of the fight against COVID-19"[8], and committed to developing the capability within the health system:

> *Telehealth has been enthusiastically accepted by doctors and patients alike. I hope and intend for telehealth to be a positive legacy of this crisis and am already engaged with the medical community in planning a long-term future for telehealth[9].*

In 2017 the Australasian Telehealth Society (ATHS) described telehealth as offering the "scaffolding" for delivering a blend of both "new models of care" and "enabling technologies" necessary to address the "unprecedented projected growth" in the need for healthcare services. They have called for a National Strategic Plan for the further development of Telehealth services in Australia to set "targeted, purposeful and efficient directions “within a “single ‘strategic’ reference document”. In acknowledging that telehealth service evolution “critically depends” on the acceptance by health consumers they noted:

> *Telehealth will not succeed unless consumers have access to it and find value in it. We should assess what consumer access and attitudes to Telehealth are, so that solutions can be built in ways which are sympathetic to and supportive of consumer needs and aspirations* [27]*.*

The future of telehealth then lies in adoption of appropriate clinical practice, and in partnering with consumers to understand their experience. It is also “acknowledged broadly” in Australia that “ethical issues have also been arising through the greater use of digital health solutions”. In order to achieve the “confident and beneficial” use by both clinicians and patients, digital technologies such as telehealth must be “underpinned by appropriate ethical frameworks”[26].

1.3 About Ethical Principles

1.3.1 Defining Ethical Principles

The framework for the definitions, concepts and principles of health ethics used in this review is that provided by Beauchamp and Childress, described as “*the set of pivotal moral principles functioning as an analytic framework of general norms derived from the common morality”*. The **“**common morality” is shared by all person committed to morality, defined as “*norms about right and wrong human conduct that are so widely shared that they form a stable social compact”*. The common morality is

> *….applicable to all persons in all places and we rightly judge all human conduct by its standards, and violation of these norms is unethical, and will both generate feelings of remorse and provoke the moral censure of others*[1].

Beauchamp and Childress divide these four moral principles further into related concepts or sub-themes for discussion, and I have included, as they do, the “obligations” of veracity, privacy, confidentiality, and fidelity in the context of professional-patient relationships. This is important because it is recognised that patients and health providers, especially doctors, "are really attached to their usually longstanding personal relationship". Telehealth, with technology "acting as an intermediate", is perceived to "potentially jeopardise" those relationships, producing behaviour that may be unethical.[2] Table 1.1 summarises the framework:

Table 1.1 Framework of Ethical Principles

Moral Principle/Concept	Definition	Related Concepts
Respect for Autonomy	Self-rule that is free from both controlling interference by others and limitations that prevent meaningful choice	- Choice - Informed consent
Nonmaleficence	The obligation to abstain from causing harm	- Not inflict evil or harm
Beneficence	The moral obligation to act for the benefit of others	- Utility - Positive beneficence
Justice	Fair, equitable and appropriate distribution of benefits and burdens	- Distributive justice
Professional-Patient Relationships	Relationships in clinical practice, research involving human subjects and public health	- Veracity - Privacy - Confidentiality - Fidelity

1.3.2 Ethical Principles in the Context of Public Health

In considering that public health programs involving ICT such as telehealth are more likely to cause some degree of harm (maleficence) or restrict liberty of action (autonomy), development of a framework for ethical service delivery should also contemplate "both means and ends". This is why concepts of fidelity (trust and openness) and veracity (truthfulness about motivations and risks), as part of evaluating the professional-patient relationship, are as critical as the four moral principles[29]. Beauchamp and Childress (2013) also acknowledge that ethical decision-making in public health is not straightforward and often involves the "balancing" of one or more principles against another:

> *It is rarely the case that we can directly apply a principle to resolve a tough problem. We will almost always be engaged in collecting evidence, reasoning, and specifying general principles. This is how problems should be treated and how progress can be made in health care ethics. From this perspective, the four principles form only a starting point—the point where the practical work begins.*[1]

1.3.3 Ethical Principles in Telehealth

The EU has noted that research on the patient and provider experience of telehealth and telemedicine found that “participants perceived financial interests rather than humane considerations drove the introduction of ICT in healthcare. Yet, the latter constitutes the prime emotional motivator for healthcare professionals”[2]. This finding is at odds with many evaluations of telehealth services that report high patient and provider satisfaction. How might these two positions be understood or reconciled?

A review of the literature suggests that the provision of “ethical” service delivery may be challenged, complicated, or more varied through ICT methods compared to traditional face-to-face care models[7]. This “ethical conundrum” in the use of telehealth contrasts the “uniquely positive impact” that it can have on patients and healthcare providers with the “potential for harm and abuse” that may occur [30]. Long-established ethical and legal considerations in healthcare such as consent, privacy, and confidentiality, are complicated by the addition of concerns relating to patient autonomy, the potential altered nature of the professional-patient relationship, the lack of the human touch in providing care via telehealth, and the medicalisation of the home environment through the provision of technological hardware such as videophones or tablets. Cornford and Klecun-Dabrowska (2001) have noted that as telehealth grows, providers need to address questions that go well beyond the medical and clinical context and address broader issues, including telehealth being the “best” option for healthcare delivery [31]. The ADHA has noted that “a consistent view of the ethical principles underpinning safe and appropriate use of digital health will aid all health sector participants”. They advise that a “one-size-fits-all approach” will not address all clinical situations and contexts, and research to understand and prioritise “how ethical foundations are applied in practice should focus on areas where the risks to patients and consumers are greatest”. Subsequent focused development of “more granular” ethical guidelines in these areas should “promote adoption and prevent harm”.[26]

Understanding the potential gaps and risks in the current ethical approach to telehealth practice can improve the design and delivery of a fast-growing and cost-effective method of health service delivery, ultimately increasing patient access and participation, and improving clinical outcomes and effectiveness.

1.4 About this Thesis

1.4.1 Research Questions and Structure

To determine an appropriate research question, a literature search was undertaken in March 2016 that resulted in thirty-nine papers being included in the analysis stage. Very few studies were identified that clearly address or describe how ethical considerations are, or may be, incorporated into telehealth practice, whether in the home, community, or medical environment. A number of studies have noted the urgent need to do so, suggesting that ethical issues which have been "long ignored" in telehealth and telemedicine research "now represent some of the most significant barriers to its large scale implementation"[32], and that home telehealth providers should "anticipate the need for leading the industry in revision of standards"[33].

Therefore, the overarching research question – ***"How can applying ethical principles in practice improve service delivery for clinicians and patients?*** "–considers how ethical principles are identified, addressed and managed in telehealth practice from both a patient and clinician perspective. There are four secondary research questions:

1. What ethical concerns exist in telehealth practice?
2. How are ethical principles discussed in telehealth guidelines?
3. How are ethical principles experienced in practice by telehealth patients and clinicians?
4. How can ethical concerns in telehealth practice be challenged or re-negotiated through new knowledge?"

These questions need to be addressed in order because the first defines the current *evidence base*, the second examines *prescribed approaches* to clinical practice, the third explores *what is actually occurring* in practice, and the fourth discusses *how practice may be improved*, based on the findings of the previous three. Figure 1.1 below shows the structure of enquiry:

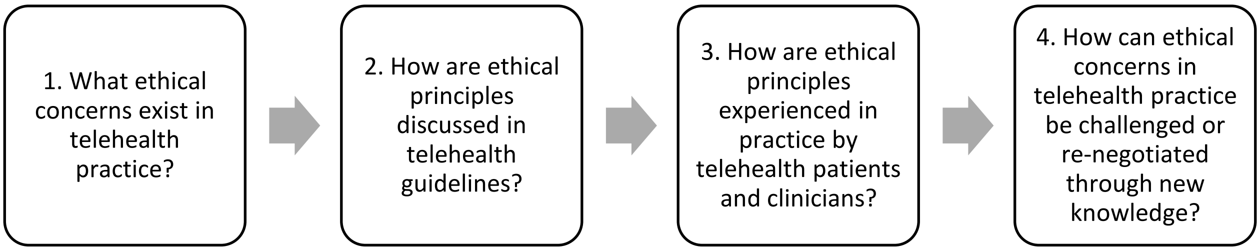


Figure 1.1 Structure of Enquiry

1.4.2 Research Outline

Four related stages were undertaken within this thesis:

1. **A structured literature review,** to determine the current evidence base in academic research.
2. **A document analysis,** to examine how ethical principles are incorporated or discussed or in documents relating to telehealth application guidelines, practices, or service delivery.
3. **A qualitative study** to explore the experience of telehealth patients and practitioners to examine perceptions, views, interests, and concerns.
4. **Application of knowledge translation theory,** to incorporate knowledge exchange in the research process, and dissemination of the findings.

1.4.3 Methodology

1. **Literature review** [7] - a structured literature review was undertaken to provide a critical overview of existing research into the incorporation of ethical principles into telehealth practices. Six databases were searched between March 2016 to May 2016 and again in December 2020, to provide the benefit of currency. A combination of broad terms ("ethics, ethical, health and care") with the restrictive terms of "telehealth and telemedicine" was used in keyword searches. Thematic analysis and synthesis of each paper was conducted, aligned to the biomedical ethics framework developed by Beauchamp and Childress[1].

2. **Document analysis** - Identification of telehealth practice guidelines through purposive sampling of published sources and grey literature such as health service guidelines and work procedure documents. Application of a “Framework” process, incorporating familiarisation of the material, indexing of data, developing a thematic framework, charting, and mapping and interpretation of the findings[34] .
3. **Qualitative study[35]** - Grounded theory methods were used in the qualitative study of the clinician and patient experience of ethical principles in practice. The methodology was influenced by Glaser and Strauss’ 1967 theory[36], by Corbin and Strauss’ 2008 work[37], and by constructionist approach of Charmaz (2006) [38] . I used theoretical sampling, simultaneous data collection and analysis, coding of categories from data, and memo-writing in the process.

4. **Knowledge translation** – I firstly defined what comprised *new knowledge* in ethical telehealth practice, by comparing the emerging theory from my research with the existing evidence base. I then examine theory of knowledge translation in health and compare existing approaches in telehealth practice. I then propose strategies for knowledge translation process that will support access to new knowledge to improve ethical telehealth practice.

The epistemology underpinning the research was a constructionist approach, utilising the generative nature of grounded theory methods are in data collection and analysis. The theories and concepts that results from my research are *constructed* by myself as a researcher out of the stories “*constructed* by research participants who are trying to explain and make sense out of their experiences”.[37] Ethics and healthcare can be a somewhat emotive subject, and I recognise that as a researcher, I bring my own perspective, experience and personal views into the research. I adopted a field diary as a reflexive method to assist me in critically monitoring and understanding “the role of the self” in the research. This aided in assessing and making adjustments about my interviewing style, how personal experiences can shape how interviews unfold, and potential judgements about others that may intrude on the process [39].

1.4.4 Outline of Chapters

Chapter two is a systematic literature review of the existing research into the incorporation of ethical principles into telehealth practice. Gaps in the literature are identified, providing a rationale for conducting a document analysis of how ethical principles are discussed in telehealth guidelines.

Chapter 3 is a document analysis of telehealth guidelines, frameworks and instructions drawn form a purposive sample and answers question 2.

Chapter 4 answers research question 3 concerning the experience of telehealth clients and practitioners in Australia through analysis of the findings from the qualitative study.

Chapter 5 answers question 4 through summarising theory, new knowledge, and implications for practice. Effective knowledge translation strategies are explored and defined. It summarises the research findings, discusses the limitations of the research program and suggest directions for future research. The chapter and this thesis conclude with advice those designing and implementing telehealth services

CHAPTER 2 – Ethical principles and telehealth: review of the literature

2.1 Introduction

In Chapter 1 I defined *telehealth,* and gave an outline of policy contexts, potential for future growth, and challenges to sustainability. A framework was provided for the approach to ethical principles in the context of this research. In this chapter I will provide a critical overview of the existing research into ethical principles and telehealth practice through a systemic review[7].

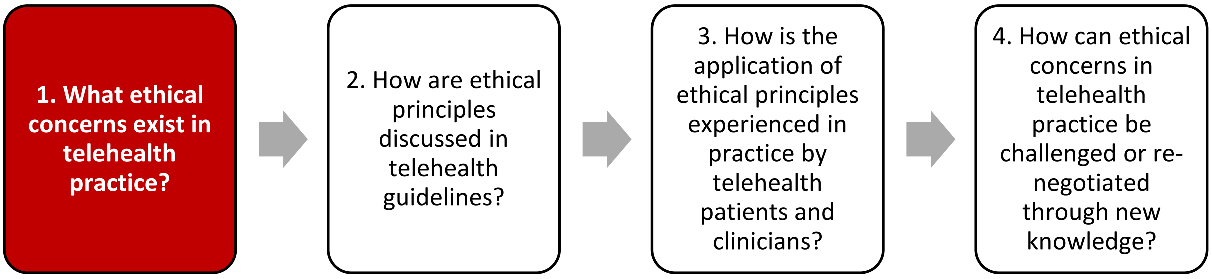


Figure 2.1 Structure of Research Questions

2.1.1 Aims of the Review

The specific aims of this literature review were:

1. To understand and summarise the available research findings, debates, and limitations of telehealth and biomedical ethics
2. To identify additional literature not covered by this review and to update the evidence with recently published articles.
3. To synthesise the findings using the ethical principles framework discussed in Chapter 1, in a way that is useful for those involved in telehealth practice.

2.2 Methods

2.2.1 Search Strategy

Literature reviewing ethics and telehealth was sought using the following sources:

1. Peer-reviewed electronic sources, the Cochrane Database of Systematic Reviews, Medical Literature Analysis and Retrieval System Online (MEDLINE), Scopus, Web of

Science, PubMed, and Cumulative Index to Nursing and Allied Health Literature (CINAHL) databases were searched between March 2016 to May 2016 and again in December 2020 to provide the benefit of currency. The Cochrane database was included to obtain control trials or any clinical studies that have been undertaken relevant for inclusion in this review. Medline, CINAHL and PubMed were chosen as comprehensive databases of peer reviewed studies from the disciplines of medicine, nursing (particularity community nursing) and allied health such as psychology, which are most commonly associated with telehealth practice. Scopus and Web of Science were also included to supplement the results with studies from the social sciences and humanities, particularly philosophy and sociology, which had the potential to provide studies from an ethical, rather than a clinical or technological perspective. Studies using both qualitative and quantitative methods were included in the search criteria.

2. The terms used in the search were the words “ethics, ethical, health, telehealth, telemedicine and care”. A combination of broad terms (“ethics, ethical, health and care”) with the restrictive terms of “telehealth and telemedicine” was used in keyword searches. For example, the search string for PubMed was (((((telehealth) AND (telemedicine)) AND (ethics)) OR (ethical)) AND (health)) OR (care), using the Title/Abstract field. .
3. The final time period was restricted to studies published from after January 1980 or the last 40 years (1980-2019), as the use and evaluation of these telehealth and telemedicine methods of health care delivery are reasonably modern and reflect the development and evolution of ICT. Although 1980 was chosen as the commencement year for the search process to allow for the identification of the highest number of relevant studies, the earliest paper returned through the search is from 1995. The online search was limited to articles that were published in English.
4. Grey Literature: Search engine Google was used to search Internet sites, identify any relevant ‘grey’ literature, such as conference presentations that were not uncovered in the database search.
5. Literature considered eligible for inclusion and critical appraisal are studies that:
    a. examine or discuss a relationship between health or medical ethics and the delivery of health services.
    b. connect patients and providers in different physical locations.

c. use ICT.
d. have the purpose of improving health outcomes.

Studies relating to the ethical use of digital health service delivery methods that do not include the interaction with a health professional through telephone or video were excluded. For example, studies that ***solely*** focussed on the use of sensor and assistive technologies in the home or the use of mobile health (m-health) applications on mobile phones and tablets by patients alone. However, papers that included telehealth services as well as non-telehealth services together as part of the study were included. Duplicate studies were removed.

6. The proposed research question on the incorporation of ethical principles into telehealth practice would examine what types of ethical principles, frameworks or evaluation processes (if any) are in place and being used by telehealth practitioners as part of the implementation of a telehealth program. The final papers reviewed at the full text screen stage satisfied the further inclusion criteria in that they:

   a. Identify or discuss ethical principles in relation to telehealth practice **OR**
   b. Identify or discuss ethical dilemmas or challenges in telehealth practice **OR**
   c. Identify or discuss an ethical framework for telehealth practice

   To be included at the full text screen the papers had to identify or discuss the ethical principles, frameworks or evaluation processes that reflect the framework criteria provided by Beauchamp and Childress (2013) in that they must include at least one or more of the following ethical concepts in relation to telehealth practice: autonomy, nonmaleficence, beneficence, justice and the professional-patient relationship [1].

2.3 Results

Figures 2.2 and 2.3 illustrate the flow of the citations reviewed. The majority, or 94% (4057/4337) of the citation results from the first search from the period January 1980 to December 2016, as shown in Figure 2(a), were derived from CINHAL and the Web of Science databases.

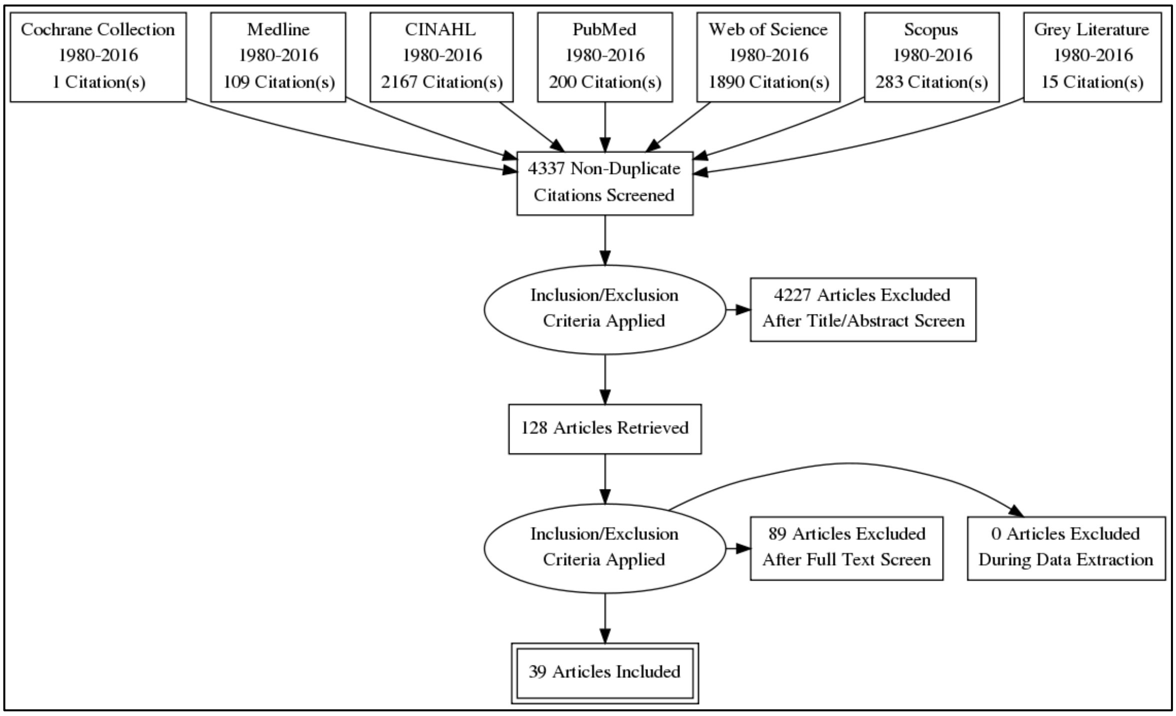


Figure 2.2 Flow of the citations of the systematic review 1980-2016

The majority, or seventy-five percent (1047/1394) of the citation results from the second search of the period January 2017 to December 2019, as shown in Figure 2(b), were derived from PubMed and SCOPUS databases.

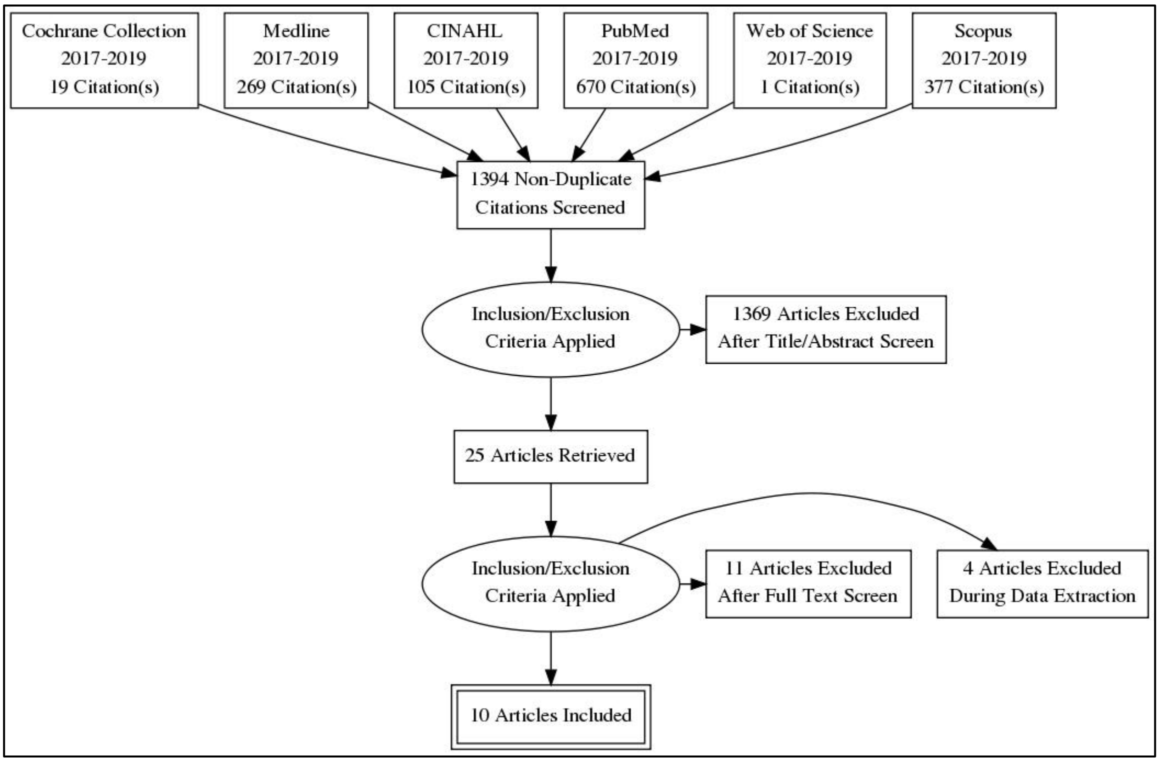


Figure 2.3 Flow of the citations of the systematic review 2017-2019

2.3.1 Coverage

The majority of the first results came from CINHAL and Web of Science, which reflects the content of these databases consisting predominantly of research from the nursing, allied health, and social science disciplines. Pub Med and Medline produced fewer results, but these citations proved to be more relevant to the search terms, particularly in regard to the application of health and medical ethics *in practice*. The initial Cochrane Collection search produced only one citation of a reviewed controlled trial which was excluded further on in the process as it did not meet the second stage inclusion criteria. The second search produced 19 citations which indicates more clinical control trials have been undertaken regarding health ethics and telehealth practice since 2017.

2.3.2 Search Results

5731 non-duplicate articles were included for application of inclusion/exclusion criteria used at Abstract/Title screening stage. Forty-nine articles were included in the analysis stage and incorporated into a data extraction table (Appendix A)[10, 31, 33, 40-85]. As the literature search did not identify any clinical studies and the number of original qualitative research studies was low at eight, a thematic analysis approach, searching across the data to “find repeated patterns of meaning” was applied[86] . The analysis and synthesis of each paper was conducted using both inductive and deductive reasoning. The initial data search results were analysed first, then the second. The results were combined for the discussion. The papers are organized in accordance with the type of study involved and the ethical principles, frameworks or evaluation processes identified or discussed in each one, relevant to the five principles of biomedical ethics. Also recorded in the data extraction table are any ethical sub-themes present, in addition to the core five under examination.

The types of studies obtained through the literature search were:

a) Qualitative research including focus groups and/or interviews with nurses, general practitioners, medical specialists, allied health providers and other health professionals involved in telehealth practice. These types of study were in the minority, representing 20% of the total.

b) Systematic reviews, which were either reviews of existing studies or reviews of reviews, represented 80% of the papers.

Eight of the included studies have used qualitative methods to collect data including an ethnographic study, interviews or focus groups. Six of the studies involve patients and/or carers and/or nurses and other health professionals. The remaining papers are systematic reviews or research incorporating existing literature. Six recommend an ethical framework, code of conduct or system of evaluation for the ethical provision of telehealth services. One-fifth of all papers included were from 2017 onwards, indicating an increasing interest in telehealth ethics, even prior to the COVID-19 pandemic. Table 2.1 summarises the themes and the distribution of the discussion by article.

Table 2.1 Inclusion of Ethical Principles by Article

Ethical Principle	**Article by Author and date**	**% Of each ethical principle across all articles:**
Autonomy	Botrugno 2019[42]; Chaet et al. 2017[87]; Clark et al. 2010[45]; Cornford and Klecun-Dabrowska 2001[31]; Demiris et al. 2006[10]; Draper and Sorell 2013[47]; Eccles 2010[48]; Fisk and Rudel 2014; Fleming et al. 2009[50]; Glueckauf et al. 2018[51]; Heintz et al. 2015[52]; Holmstrom and Hoglund2007[53]; Kaplan and Litewka 2008[56]; Korhonen et al 2015[58]; Langarizadeh et al. 2017[59]; Layman 2003[60]; Loute and Cobbaut 2017[61]; Magnusson and Hanson 2003[62]; Mort et al.2015[63]; Nelson 2010[65]; Nesher and Jotkowitz 2011[66]; Newton 2014[67]; Palm et al. 2013[68]; Parks 2016[69]; Percival and Hanson 2006[70]; Perry et al. 2010[71]; Roman et al. 1997[33]; Rutenberg and Oberle 2008[73]; Sävenstedt et al. 2006[75]; Schermer 2009[76]; Sethi et al. 2012[77]; Skar and Soderberg2018[79]; Sorell and Draper 2012[80]; Stowe and Harding 2010[89].	69%
Nonmaleficence	Chaet et al. 2017; Clark et al. 2010; Cornford and Klecun-Dabrowska 2001; Eccles 2010; Fleming et al. 2009; Glueckauf et al. 2018; Gogia et al. 2016[40]; Humbyrd 2019[54]; Iserson 2000[55]; Langarizadeh et al. 2017; Loute and Cobbaut 2017; Magnusson and Hanson 2003; Nesher and Jotkowitz 2011; Perry et al. 2010; Roman et al. 1997; Rutenberg and Oberle [74]2008; Sarhan 2009[74]; Sävenstedt et al. 2006; Skar and Soderberg 2018; Nelson et al 2013; Voerman et al. 2017[82]; Willems 2005[84].	41%
Beneficence	Chaet et al. 2017; Clark et al. 2010; Cornford and Klecun-Dabrowska 2002; Eccles 2010; Holmstrom and Hoglund 2008; Iserson 2000; Loute and Cobbaut 2017; Magnusson and Hanson 2003; Nesher and Jotkowitz 2011; Perry et al. 2010; Roman et al. 1997; Rutenberg and Oberle 2008; Shea 2008[78]; Skar and Soderberg 2018; Nelson et al 2013[64]; Voerman et al. 2017; Willems 2005.	39%

Ethical Principle	Article by Author and date	% Of each ethical principle across all articles:
Justice	Botrugno 2019; Chaet et al. 2017; Clark et al. 2010; Cornford and Klecun-Dabrowska 2001; Demiris et al. 2009[4610]; Eccles 2010; Fleming et al. 2009; Heintz et al. 2015; Holmstrom and Hoglund 2008; Humbyrd 2019; Langarizadeh et al. 2017; Layman 2003; Loute et al. 2017; Magnusson 2003; Nelson 2010; Palm et al. 2013; Perry et al. 2010; Skar and Soderberg. 2018; Nelson et al 2013.	39%
Professional-patient relationships	Botrugno 2019; Barina 2015; Chaet et al. 2017; Cheshire 2017; Clark et al. 2010; Demiris et al. 2009; Draper and Sorell 2013; Fleming et al. 2009; Gogia et al. 2016; Humbyrd 2019; Iserson 2000; Kluge 2011[57]; Korhonen et al 2015; Langarizadeh et al. 2017; Nelson 2010; Pols 2010[7263]; Roman et al. 1997; Sävenstedt et al. 2006; Skar and Soderberg 2018; Stanberry 2001[81]; Stowe and Harding 2010; Voerman et al. 2017; Wade et al. 2012[83]; Willems 2005.	53%

Overview of Acquired Studies and Themes

The broad search strategy yielded 49 initial results, but analysis determined few studies that describe how ethical considerations are or may be incorporated into telehealth practice, whether in the home, community, or medical environment. While a small number of qualitative studies identify relevant ethical issues associated with telehealth practice, and subsequently discuss their potential impact on service quality from the perspective of patients, carers and health professionals, there is scant research on how ethical principles are incorporated into telehealth practice [51, 53, 62, 63, 70-72, 75, 83]. Several studies propose ethical frameworks, codes of conduct or guidelines for telehealth service delivery that may be applied or followed by health professionals, but they provide little discussion, evidence or evaluation of how these recommendations are being used to establish or improve ethical telehealth practice[31, 33, 52, 55, 59, 63].

2.3.3 Autonomy

Autonomy was the predominant ethical principle discussed in the literature with 69% of the authors identifying or discussing it in relation to telehealth practice. Within this primary theme several subthemes emerged including consent, individual choice, independence, empowerment, control and self-determination[10 69, 77]. Two qualitative studies in Sweden found that autonomy can be both improved and diminished through the use of telehealth by increasing the freedom for the elderly to remain living in their own homes, while also potentially contributing to increased isolation and older people "being made captive" in their homes[75] [70]. This issue of telehealth seeking to improve autonomy but actually having the *opposite* effect was noted in a United Kingdom (UK) study which found that, while the introduction of telehealth as part of a home telecare service for older patients can "drastically improve their autonomy", it may also lead to an increased reluctance to move out of the home environment for even a small amount of time and thus reduce independence [71].

A qualitative study of tele nurses identified issues relating to gender-specific and cultural concerns affecting autonomy and independence specific to females accessing care. A further Swedish study involving patients and families found accessing education, information, and support at a time convenient to patients could increase autonomy and a sense of independence. [53] [62].

Recommendations for maintaining or improving autonomy in telehealth practice recognise that the concepts of choice and independence are not simple, particularly for older or more vulnerable patients, and decisions about what improves autonomy "takes place in a complex and changing context" [47]. Heintz et al reduce the concept of autonomy to the patient's ability to give informed consent or participate fully in decision making[52]. Palm et al (2013) recommend an ethical assessment design comprising five questions relating to patient autonomy, including co-design, behavioural adjustments, understanding of the system and control under different usage scenarios, whether it enhances independence and if so, "is this a desirable development?"[52, 68]. While a reduction in autonomy may be unavoidable for some telehealth patients, particular older users who are more accepting of "traditional" healthcare models, wherever possible the "loss should be minimised" [63] [88]. Layman notes that the methods of data collection, storage and manipulation used with telehealth may threaten patient autonomy if it becomes the primary source of information, and recommends a "multipronged approach" to incorporation of ethical principles in practice, including regulations, standards, codes of conduct, and codes of ethics [60]. The implications for ethical telehealth practice from the perspective of autonomy then are that care should be taken to robustly assess the impact on patients from a number of standpoints to reduce the potential risk.[80]

2.3.4 Nonmaleficence

41% of the papers identify or discuss the ethical principle of nonmaleficence, or preventing harm, in relation to telehealth practice. Examples of telehealth's ability to actively promote safety are identified, including telephone or video lines left "open" for providers to check on a patient at regular intervals acting as a security guarantee against harm occurring in the home, or the mode of delivery lowering the risk in patient care because of the lack of physical proximity of the healthcare worker to the patient [33, 62]. The potential for harm is more prevalent however, and includes telehealth equipment such as videophones situated in the home having the effect of stigmatising a person and causing shame or embarrassment; the possibility that professional carers may choose the remote communication rather than delivering care in person in difficult or high needs cases may put clients at risk; and an "undue burden" may be imposed on unwell or frail patients who find the technology intrusive or do not fully understand it's use [71, 75]. An ethnographic study in the Netherlands with nurses and their patients found that "the feeling of safety and security the patients experienced, may not always have been realistic" due to nurses having to make value judgements about the types of information that were most important during telehealth sessions[72] .

Sarhan (2009) links confidentiality, non-maleficence and the professional responsibility of practitioners to ensure patients are protected from "emotional, spiritual, social or material" harm, while Willems (2005) notes that using telehealth instead of traditional methods of healthcare may lead to families and carers being "loaded with more and different responsibilities"[74] [84]. Nesher and Jotkowitz (2011) suggest that the additional layers of technology may compromise patient care by adding complexity and obscuring the most important information from clinicians [66]. The responsibility to "respect, preserve and defend the patient's dignity" has also been identified and linked to person-centred practice and user-driven design as core to ethical telehealth services [79]. A recent study of Psychologists' telebehavioral health practices noted that over half of survey respondents reported "inadequate skills in managing crisis situations in the context of online practice", including managing suicide risk [51]. The implications for practice here are that potential "harms" are not straightforward or easy to discern and may not be captured in established procedures or service evaluation tools.

2.3.5 Beneficence

39% of the papers included identify or discuss the ethical principle of beneficence, or "being disposed to act for the benefit of others "[1], in relation to telehealth practice. These authors all note that telehealth has the potential to benefit people by providing assurance, increasing an individual's confidence in managing their health and reducing the dependence on professional carers or family[45, 48, 55]. Improving access, quality of healthcare availability and increased continuity of care are additional examples of telehealth increasing beneficence [45], as is the ability of patients to be treated in familiar surroundings rather than hospitals [84]. While Beauchamp and Childress (2013) note that "obligations to confer benefits can be linked to the goal of morality itself, and is an "implicit assumption" in the actions of medical professionals ,the principle of beneficence *informs* rather than determines or justifies other moral principles [1]. Thus an *ethical* telehealth practitioner is one who provides information that empowers patients to act in their own best interest, and the wide availability of the telephone system in the majority of countries offers a greater capacity for the patients to control their own care [73 33]. From the perspective of families and carers, Magnusson and Hanson (2003) found that the use of telehealth can deliver beneficence by providing them with "education, information and support which would directly help them in their individual caring situation" [62]. In developing and implementing telehealth policies and guidelines then, it may enhance practice to be able to clearly articulate the benefits to both patients and providers in design and delivery, so that telehealth remains "a support system for well-defined needs and not be pushed as an engineering solution to health" [40] .

2.3.6 Justice

39% of papers identified or discussed the ethical principle of justice in relation to telehealth practice. Justice is most discussed in relation to fairness concerning equal access to telehealth technology balancing the needs of the individual with those of the wider community, ensuring not to disadvantage one group in favour of another [71]. Examples are given where the key advantage for providing telehealth – access to care for marginalised communities – is negated by the affordability of the technology or creates additional barriers for “at risk” patients [54] [67]. In the case of mental health services, Nelson et al (2013) note that the criteria set by mental health professionals that high standard equipment only be used, can impact the ability of some localities to make telehealth services available[64]. Nesher and Jotkowitz (2011) suggest that communities most in need of telehealth services – rural areas – are likely to be least able to afford them[66]. Perry et al note the distinction between “individual level” and “system level” equity, arguing that benefits derived from the use of telehealth can positively impact in other areas of social care [71]. Demiris et al (2009) point out that proving underserved older adults access to services should not be done solely as a cost-saving exercise that “deprives patients of face-to-face consultations”[46]. Fleming et al (2009) argue that special skills in telehealth delivery should be developed to ensure access for elderly patients in nursing homes – the “underserved” – as well as ethnic minorities[50]. When considering “justice” in relation to developing a telehealth practice questions related to equal access and fair distribution of the technology, and whether a digital or information “divide’ exists should be used to guide the implementation of telehealth services in practice [68]. Models should be evaluated, not just in terms of resource allocation, but also in relation to “the principle of human value” as well as any current legislation against discrimination.[52] . Botrugno (2019), in examining the argument for telehealth to underpin greater distributive justice in health care, advises against accepting ‘technological determinism’, arguing instead for a “plan of analysis through which critically assess the implications of telehealth”.[42]

2.3.7 Professional-Patient relationships

53% of the papers identify or discuss the potential “disruption” of the relationship between health professionals and their patients, with several sub-themes emerging including *confidentiality*, *privacy*, and *fidelity* [59] [57] [58] [81]. The lack of the “human touch’ in care has been identified as a key concern in providing health services remotely although, the importance of this may vary between disciplines such as tele dermatology, where it may be low, and telepsychology, where it may be much greater [46]. As more health services are delivered in “the virtual realm” rather than in physical proximity the risk increases of “creating a distance between touch and care” [41]. Fleming et al (2009) suggest that telehealth should not be used to replace the traditional face-to-face methods of healthcare delivery “that remains crucial to healing" but rather should be viewed as a supplementary method to improve care and treatment [50].

The undermining of trust between patients and their health care providers is discussed within the ethical sub-theme of *fidelity*, with Chaet et al (2017) asserting that the practice of medicine is "inherently a moral activity, founded in a covenant of trust between patient and physician" which must be sustained [87]. Trust and mutual respect may be challenged between patients and providers in a telehealth environment, particularly if the two have never met in person as, through "words and nonverbal actions the patient and the physician establish a relationship of trust that is essential to good medical care" [44, 65]. The notion of not just trust but "*sound* trust" is raised in relation to telehealth, whereby additional actions or behaviours are required by health professionals to win public trust " in the face of the conflicting interests that are at stake"[82]. Trust may also be undermined by the "scepticism" or caution generated by unfamiliar equipment being directed towards the health professional as well, or by the reluctance of patients to speak freely in the presence of such equipment, due to privacy or communication concerns [78 89]. Savenstedt et al (2006) link the use of technology to the notion of "superficial care" arising from the "superficial" relationship created by the replacement of face-to-face care with remote care, but also notes that communicating through the use of telehealth may reduce loneliness in people who otherwise would have few options for interaction [75]. Finally, Wade et al (2012) found that patients may in some cases find a telehealth communication setting more "protected" and feel they were more likely to be listened to by the health provider, but also suggested palliative care patients may suffer through a less quality therapeutic relationship, as well as family groups [83]. The implication is that care should be taken around context and patient preferences for the relationship with telehealth practitioners when designing services.

2.3.8 Limitations

Limitations noted during the implementation of the search strategy were: (1) broad search terms such as "ethics" and "ethical" may have resulted in not identifying relevant papers that used similar but different terms such as "moral", "virtue/virtues" or "values"; (2) hand searches of journals specifically dedicated to studies on the use of ICT in health care may have provided additional suitable studies for inclusion; (3) several studies that were identified for inclusion at the first stage were not able to be obtained in their entirety, and consequently could not be assessed for the second stage or included in the results.

2.4 Discussion

The goal of this literature search and analysis was to give an overview of the current ethical considerations in the use of telehealth. The broad search strategy initially yielded many initial results but analysis of these resulted in very few articles that actually describe how ethical considerations are or may be incorporated into telehealth practice, whether in the home, community or medical environment.

I have argued that the ethical principles included in the bioethical framework as presented by Beauchamp and Childress (2013) of autonomy, beneficence, nonmaleficence, justice and professional-provider relationships are relevant in the context of telehealth practice, and evidence presented in the literature review has supported this [1, 7]. Several sub themes have also been identified, which indicate that telehealth practice creates new and additional ethical considerations, such as the lack of human touch, the nature of care, and the medicalisation of the home environment, which do not apply in traditional methods of healthcare delivery.

While the literature searches returned a small number of studies when qualitative methods have been used to identify relevant ethical issues associated with telehealth practice, and subsequently discuss their potential impact on service quality and effectiveness from the perspective of patients, carers and health professionals, there is limited evidence on how ethical principles are currently incorporated into telehealth practice[908].

A number of articles suggest frameworks, codes of conduct, guidelines or ethical codes for telehealth practice that may be applied or followed by telehealth nurses, general practitioners or specialist doctors, but provide little discussion, evidence or evaluation of how these recommendations are being used to establish or improve ethical telehealth practice[63] [10] [52, 63] [49].

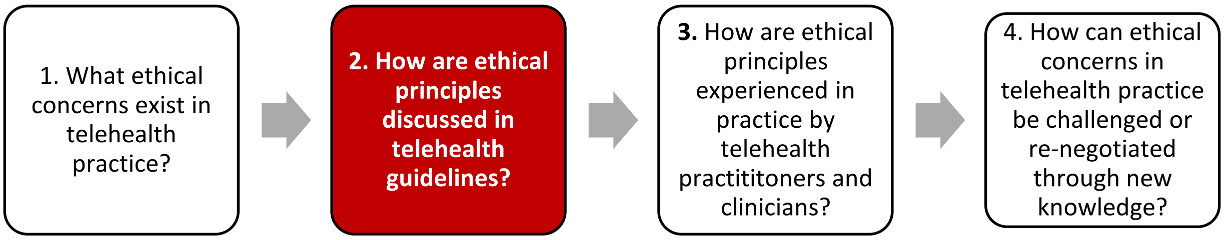
Fleming et al (2009) have stated that “technology is inherently neither ethical nor unethical. Rather it is the *intent and means by which the technology is implemented* that impacts the question of appropriate utilization” [50]. The study by Wade et al (2012)examined how telehealth service providers perceived and addressed ethical, medico-legal and clinical governance matters arising from service delivery, and identified issues such as privacy and security, consent and choice, empowerment, access to care and the patient-provider relationship[83]. Limitations noted by the authors were the small sample size involved – only one manager or clinician from each service interviewed - and that the views of patients, carers and external providers were not considered. It was also noted that although no harm to patients had been identified from the issues revealed, management of the potential ethical problems had been done in *an "ad hoc" rather than systematic manner* [83].

From a global public health perspective, as Clark et al (2010) note, "telemedicine is a new and innovative way of providing access, quantity and quality health care to all people. Failure to acknowledge this fact and increase research in this area is ethically irresponsible and morally objectionable"[45]. The literature review and analysis has identified gaps in the evidence of how ethical principles are incorporated into telehealth practice and support the logical structure of this thesis in considering how ethical principles are identified, addressed and managed in practice, from both a patient and health provider perspective. In the next chapter I address the secondary research question - h*ow are ethical principles discussed in telehealth guidelines?* - by examining how ethical principles are incorporated, discussed, or referred to in documents relating to telehealth application guidelines, practices or service delivery.

CHAPTER 3 – Ethical principles in telehealth guidelines: a document analysis

3.1 Introduction

In defining telehealth and outlining its policy contexts, potential for future growth, and challenges to sustainability in Chapter 1, and in Chapter 2 providing a critical overview of the existing research into the incorporation of ethical principles into telehealth practice, I will now examine how ethical principles are discussed in clinical guidelines. Figure 3.1 below show the logical structure of the research questions, and the stage to be addressed in this Chapter.



1. What ethical concerns exist in telehealth practice?

2. How are ethical principles discussed in telehealth guidelines?

3. How are ethical principles experienced in practice by telehealth practititoners and clinicians?

4. How can ethical concerns in telehealth practice be challenged or re-negotiated through new knowledge?

Figure 3.1 Structure of Research Questions

This is important for two reasons. Firstly, as the literature review highlighted, ethical principles are important in the delivery of telehealth and the evidence indicates some gaps in our understanding. Secondly, clinicians, organisations, public health bodies and broader health jurisdictions themselves have acknowledged that telehealth and telemedicine are different to traditional health service methods of delivery and require separate and unique guidelines for practice. Recently (2016), in the United States context, it was reported that:

> *Telehealth is no longer a fad or a health care add-on. The American Medical Association is about to establish ethical guidelines for telemedicine and telehealth, which means the mainstream now accepts it as part of the health care continuum of care. As reported by Forbes, the AMA's ethical governing body will meet over the next few days to discuss, among other matters, an ethical structure that caregivers engaged in telemedicine can follow and* ***feel like they've done the right thing****. The AMA is basically saying it's time to focus on telehealth services before they become so widespread and diverse that setting standards would prove difficult. In an AMA report that sets the agenda for the sessions, the AMA's Council on Ethical and Judicial*

> *Affairs says, "Although physicians' fundamental ethical responsibilities do not change,* ***the continuum of possible patient-physician interactions in telehealth/telemedicine give rise to differing levels of accountability*** *for physicians*[91].

Understanding then, what the "right thing" looks like in telehealth delivery leads to the broader question about how clinical guidelines are developed, from whose perspective and from what, if any, ethical considerations. For example, there is the suggestion that guidelines are developed to educate users about the "benefits and limitations of telemedicine and to provide them with a set of recommendations about what, based on published evidence, are the most effective, efficient and safe ways to provide patient care incorporating telemedicine technologies and methods"[92]. This can be contrasted with the argument that, from an ethical perspective, public health practice "increasingly requires appreciation of the complementary roles facts and values play in making and justifying decisions" [93].

While clinicians, nurses, doctors and other health staff are trained to give credence to evidence-based practice and intervention effectiveness, scientific evidence does not always nullify or overshadow other sources of evidence or appeals to emotions, interests, and values**.** Barret et al (2016) argue that two fundamental elements of public health practice often serve to conceal value assumptions: shared core values amongst clinicians who deliver health services, and standard practice**.** They suggest that sharing values can "render them invisible as assumptions, until they unexpectedly become contested"[93]. For example, a shared value among nurses may be that *telehealth is beneficial because it provides patients greater autonomy, choice and control over how and when they receive care*. "Unwelcome surprises" can occur when interventions that presuppose core values affect stakeholders who do not share those values. For example, when patients experience telehealth not as a way to increase their autonomy, choice or control, but as a way to reduce services to save money or remove preferences they value, such as face-to-face care. They further suggest that the "routine use of evidence-based standards" or "dictating facts" can conceal underlying value assumptions. If developed and tested to address a known health problem, for example, management of type two diabetes, an intervention's purpose and effectiveness is taken for granted. However, even standard practices presume certain values, goals, and obligations in health practitioners which (even when implicit), "form a necessary bridge between knowledge and action". Though standard practices *implicitly* incorporate ethical principles, they seldom raise ethical challenges. An ethical framework or approach in public health can therefore provide a process to determine and justify a course of action in implementing new interventions such as telehealth, recognising that "to those accustomed to rigorous research methods and evidence-based standards of practice, navigating the world of ethical values and rules can be perplexing" [93].

Finally, as Krupinksy and Bernard (2014) note, while there is a large body of evidence supporting telehealth's utility and benefits, "the field spans health, as well as technological, economic, and social/organizational communities. Consequently, there are differences in approaches and norms for conducting telehealth. We must reconcile these differences if telehealth is to become an integral part of the health care system".[92] Examining how ethical principles are incorporated into telehealth guidelines, frameworks and procedural documents used to design and deliver services then, is an appropriate starting point to identify and discuss some of these differences in practice.

3.2 Methodology

A document analysis approach was engaged to answer the second research question of "How are ethical principles discussed in telehealth guidelines?" to enable the collection and analysis of a comparable group of documents used to guide telehealth practitioners in their work. The objectives are:

1. To identify telehealth practice guidelines through published sources and grey literature such as health service policies and work procedure documents
2. To apply a "Framework" process, incorporating familiarisation of the material, indexing of data, developing a thematic framework, charting, and mapping and interpretation of the findings[34].

A "process of evaluating documents in such a way that empirical knowledge is produced and understanding is developed" [94], was undertaken using purposive sampling. A "Framework" analysis methodology, developed by Ritchie and Spencer (2002), which originated in the context of conducting applied qualitative research in social policy, was used. This analytical applied research approach is appropriate because the aim is to improve ethical telehealth practice through meeting “specific information needs” and providing “actionable outcomes”[34]. The questions that need to be addressed from this study of how ethical principles are discussed in telehealth guidelines are both *contextual* (identifying the form and nature of what exists) and *diagnostic* (examining the reasons for, or causes of, what exists). A framework analysis was useful because it provides a structured, accessible and timely process for reviewing documents regarding policies and clinical guidelines, whereby a dualistic inductive and deductive approach can be used. Some of the themes and codes have already been pre-selected based on the principles of biomedical ethics provided by Beauchamp and Childress (2013) and the literature review presented in Chapter 2 [1, 95]. Others emerged through the generative nature of grounded theory, relying on the “creative and conceptual ability of the analyst to determine meaning, salience and connections” between and across the data [34]. I will now discuss each of the five key stages of the Framework approach, familiarization with the data, identifying a thematic framework, indexing, charting, and mapping and interpretation, in relation to research question.

3.3 Method – a Framework approach

3.3.1 Inclusion Criteria and Familiarisation

Ritchie and Spencer (2002) note that when selecting data for Framework analysis, “it is vital that the researcher ensures that a variety of sources, time periods and cases are selected” dependent on time and resource availability [96]. In Chapter 2 I noted that telehealth and telemedicine peer-reviewed articles were not particularly numerous, and grey literature was limited. An online search was conducted through the internet search engine Google. Documents were purposefully selected for inclusion in the study if they had an implicit or explicit purpose of providing a policy or guideline framework for establishing or implementing telehealth, telemedicine or telecare services. The search string used was telehealth OR telemedicine OR telecare AND guidelines OR framework OR policy AND implementation. Documents included in this study were only in print form and in English and were selected by considering their ease of accessibility to the average consumer, based on the search string. Reviews, book chapters and articles in peer-reviewed journals were excluded. The sample consisted of 25 resources from 16 different organisations and ranged in date from 2003 to 2020.

The first step in Framework analysis, which is described as *familiarisation*, was then carried out by reading and reviewing each document to become familiar with their range and diversity to "gain an overview of the body of material gathered" [96]. All 24 documents were read and notes were taken based on a number of criteria relevant to the research question to ensure as a researcher I became aware of "key ideas and recurrent themes"[96]. Firstly, what was the *context* of the document – why was it written, and why now? Secondly, what was the *purpose* of the document? Were there any references to ethical principles in the overview, vision or purpose statement, and if so, which principles? Thirdly, what were the *circumstances* of the document coming about and were there any ethical implications implied or explicitly stated in context? Finally, *for whom* was the document written, the intended audience? Was it for policymakers, health bureaucrats, technical leads, doctors, nurses, or other health professionals, such as allied health?

Documents were then allocated to categories or sets in the qualitative analysis tool NVivo version 12, based on the role and jurisdiction of the author/publisher within the health policy/ practice hierarchy, to facilitate analysis. The four sets identified are:

1. **Global or Regional Authorities** – defined as documents from jurisdictions that include one or more separate countries, with documents originating from the EU. There were two documents included in the sample from this category [97, 98]. These documents are important for my research questions because they are examples of a large multi-nation organisation attempting to both persuade and mandate the importance of telehealth services across disparate cultures. governments and modes of delivery of health services. The first, issued in 2008 by the European Telecommunications Standards Institute (ETSI), targets *stakeholders involved in the design, development, procurement and deployment of telecare services,* and has a user experience design focus. Its purpose is to drive the acceptance and adoption of telecare in Europe through an improved user experience via "the best possible" user interface and accessibility implementations. This is necessary because the population of Europe, growing older and living longer but increasingly with functional limitations, nevertheless expect "freedom of choice, mobility and personal attention" from health services. Satisfying their needs through traditional health care service delivery would lead to a considerable cost increase, at a "questionable quality" [98]. The second document, a Code of Practice for telehealth

services issued 6 years later by the EU-sponsored TeleSCoPE Project, focuses instead on providing “reassurance” around quality and safety for telehealth service providers and their staff; users of telehealth services and their carers; organisations that procure or commission telehealth services; and governments and strategic agencies concerned for health and support service provision. This document encourages telehealth services to “adopt approaches by which more people are encouraged to take greater responsibility for their own health”. It’s overall message however, is that the successful development of telehealth services will be underpinned by the building of ***trust*** - the trust of clinicians; health, social care and support practitioners; service users and carers – emphasising that the “call for such trust” has come from the European Commission, governments in member states, clinicians and both patient and service user representative organisations [97]. The comparison of the messaging in these two documents suggest a shift from the importance of user acceptability and experience to persuading providers not just of the benefits of telehealth, but also of the lack of risk to them.

2. **National, state, or local authorities** – documents developed as policy or procedural documents from national or regional health services or government health boards. Documents were found from Canada, Australia, the USA and New Zealand, and range in date from 2003-2020. Twelve documents were included in this category [99-110]. When exploring their context, purpose, audience and circumstances, this group can further be divided into *strategic* and *operational* documents. The 2 strategic documents, originating from Canada and US, are products of broad, multi-stakeholder consultative processes and focus on proving direction for policymakers at state and health service level, acknowledging that telehealth presents an opportunity to “help achieve the triple aim of better health care, improved health outcomes and lower costs” while also reducing “health disparities for aging and underserved populations” and “costs and burdens” for patients [109]. The nine operational documents focus on the provision of telehealth to rural and remote communities, a reflection to some degree of funding models, particularly in Australia. They also emphasize the benefits telehealth can bring in supporting health workers in isolated areas noting it can “facilitate the sharing of

knowledge between health service providers in different geographical locations, as well as across areas of speciality" and suggesting that health professionals will "undoubtedly benefit from increased peer support, training and education options"[103]. The Victorian State Government also suggests to the clinicians, executives and administrators who are the target audience for its guide on establishing a successful telehealth service that it can enable consumers to "become more involved in their care and in health service planning" as well as "improve the health outcomes of the population as consumers take on the responsibility for managing their health using telehealth "[106].

3. **Professional Bodies** – documents developed by telehealth practitioner representative organisations such as colleges and associations for the guidance of their Members. These came from Australia and the United States. There are ten documents in this category[111-120]. They focus on guidelines for providers who are *delivering* health services directly to patients– GPs, specialist consultants, nurses and midwives – many of them in response to funding decisions made by national or state level bodies. For example, the Royal Australian College of General Practitioners (RACGP) issued its *Standards for general practices offering video consultations* in 2012 to "support the implementation" of Medicare item numbers for telehealth consultations by GPs, cautioning it's members that this should be seen as "an alternative option for consulting, and not a quick 'fix add-on' to existing services or a lesser alternative to a face-to-face consultation", but also acknowledging there would be circumstances where "a video consultation will certainly be better than no consultation at all" [115]. A year later, an Australian nursing and midwifery body issued similar guidelines for their members, noting that "nurses in general practice, midwives, nurse practitioners, eligible midwives" will provide "a percentage of these rebatable Telehealth services", therefore the "importance of standards and guidelines for the use of Telehealth is paramount in guiding and supporting nursing and midwifery practice for the future" [112, 113]. With funding becoming available for these services, it is likely an imperative arose to then provide them, with guidelines and standards perhaps being approached in an ad hoc manner. A national telehealth advisory committee formed in 2016 noted that "Telehealth is a means of delivering healthcare across many different clinical settings. One set of standards or

guidelines cannot cover all of these in detail”, producing instead a framework, “guidelines for guidelines” as it were, to provide “health and medical colleges, clinicians and health care organisations with a common approach to the development of craft specific guidelines to assist members in the establishment of quality telehealth services”. With the appearance of the COVID-19 pandemic in 2019, many allied health services in Australia were required to provide telehealth consultations almost overnight as government funding became available for many providers for the first time, and many patients were not able to access face-to-face services. This is illustrated by guidelines being developed specifically for allied health providers such as physiotherapists, psychologists, occupational therapists and dieticians [116, 118, 119]. Allied Health Professions Australia (AHPA) note in their 2020 Guidelines that while the COVID–19 health crisis “resulted in a rapid transition to this mode of delivery for many providers”, there are “particular aspects” of telehealth that must be considered” to protect patients and ensure care is still delivered in a safe and effective manner”[118]. While the Dieticians Association of Australia (DAA) developed their first practitioner guidelines in 2016, they were updated in 2020, and acknowledge that although “dietetic services are well suited to the medium of telehealth”, in particular weight management, type 2 diabetes self-management, management of nutrition-related chronic disease and malnutrition, telehealth consultations can “pose a number of limitations and risks not present in in-person consultations”[116]. Occupational Therapy Australia (OTA) also published guidelines in 2020, acknowledging a “growing interest” in using telehealth to provide occupational therapy services. They advise that while OTA supports the use of telehealth services that are “client centred, evidence based, fit for purpose” and within the scope of clinical practice, they also note that that as a “relatively new” method of service delivery there are “gaps in evidence, policy or precedent to guide these services” which makes telehealth “susceptible to certain online risks”[119].

4. **Individual Health Services** – documents provided by local health services for the use of practitioners delivering telehealth services to patients in a localised geographic area. These are more procedural or “work instruction”-type documents, found from the UK, and there is one included in the sample[121]. These types of documents are used in

operational settings and are generally not published outside of a particular clinic or service, they are developed for the use of clinicians directly. The one that has been able to be sourced is from the East London NHS Foundation Trust in the UK. It is for the use of its Telehealth and Primary Care teams to be able to "assess the level of (telehealth) intervention required, utilising (telehealth) as an adjunct to existing services in order to meet the increasing demand for health care and also to promote self-care", ensuring a "coordinated management approach to use, implementation, training and monitoring"[121]. This document also emphasises the benefits of telehealth as noted elsewhere for both patients - significantly reduces the barriers commonly experienced by rural and remote patients, residents of aged-care facilities, people with mobility difficulties and those living in remote Indigenous communities – and health providers - supporting training and education, and encouraging "stronger relationships" between the physician and other healthcare providers[121].

The familiarisation step of the Framework process has confirmed that ethical principles exist to some degree in all of the documents in the sample. Themes and statements around autonomy (self-care, choice), beneficence and non-maleficence (quality and safety), justice (access and equity) and the professional-provider relationship (communication and trust) have all been noted to be present. I will now turn to outlining the approach to the next stage – identifying a thematic framework.

3.3.2. Identifying a thematic framework

The purpose of a thematic framework is to filter and classify the data in the document sample, based on the key issues, concepts and themes that have been expressed. As this research was designed around "a priori" issues – the principles of biomedical ethics discussed by Beauchamp and Childress (2013) – these will guide the thematic framework in this case. However, it is at this stage that there is an opportunity to revisit these principles and unpack their meaning, to capture nuances and more detailed meanings and interpretations, to help guide or refine the coding of the data. This assists in ensuring that the original research question is being fully addressed, but also allows the application of "both logical and intuitive thinking. It involves making judgments about meaning, about the relevance and importance of issues, and about implicit connections between ideas"[34].

The thematic framework that has already been identified concerns the biomedical principles of autonomy, justice, beneficence, non-maleficence, and the professional-provider relationship, the source of which is “the most general and basic norms of *the common morality*” which is “applicable to all persons in all places, and all human conduct is rightly judged by its standards”.[1] *The common morality* contains “standards of action” such as “don’t kill”, “tell the truth”, “prevent harm or evil from occurring”, which are also “rules of obligation”, necessary to “ameliorate or counteract the tendency for the quality of people’s lives to worsen or for social relationships to disintegrate”[1]. While the five principles have been broadly defined, for the purposes of applying Framework analysis, sub-themes or components of each principle have also been identified and added to the analysis process:

1. ***Autonomy***, which is at “a minimum” described as “self-rule that is free from both controlling interference by others and limitations that prevent meaningful choice, such as inadequate understanding”[1]. In the context of telehealth, it is the allowing of patients to act with self-determination and providing them with meaningful choices in relation to telehealth services. The *autonomous* person acts freely in accordance with a self-chosen plan, while *the person of diminished autonomy* is in some material respect controlled by others or incapable of deliberating or acting on the basis of his or hers desires or plans. Two conditions are deemed essential for autonomy to exist: ***liberty*** (independence from controlling actions influences) and ***agency*** (capacity for intentional action). For example: depending on the context we might be able to correctly describe the act of signing a consent form for a procedure such as a telehealth service as of placing trust in one’s physician (or nurse) and therefore an act that autonomously authorises the physician to proceed. However, even if this claim were accurate, the act is not an autonomous authorisation of the procedure because this person lacks material information about it. Autonomous actions are those then where “normal choosers” act (1) intentionally, (2) with understanding and (3)without controlling influences that determine their action. The principle of respect for autonomy can be stated as a negative obligation - requiring that autonomous actions not be subjected to controlling constraints by others, and as a positive obligation - respectful treatment in disclosing information and actions that foster autonomous decision making. Autonomy obliges health professionals to “disclose information, to probe for and ensure understanding and voluntariness and to foster

adequate decision making".[1] In constructing the thematic framework then, both C*hoice* and *Informed* C*onsent* are included as sub-themes in *Autonomy*.

2. ***Nonmaleficence*** broadly refers to *doing no harm* through the provision of health care through ICT platforms such as telehealth. Doctors must take an oath to avoid doing harm to their patients "above all". Beauchamp and Childress (2013) further define *harm* in the sense of being a "thwarting, defeating or setting back of some party's interest", but note that a harmful action "is not always wrong or unjustified". However, the obligations of non-maleficence of a health professional are not just to not ***inflict harms*** on patients but also to not ***impose risk of harms***, and to take due care. Negligence is the absence of due care in two types of situations (1) intentionally imposing unreasonable risks of harm and (2) unintentionally but carelessly imposing risks of harm. Both types of negligence are morally blameworthy. In constructing the thematic framework then, *Not inflict evil, or harm* is included as a sub-theme in *Nonmaleficence*.

3. ***Beneficence*** relates to the prevention or removal of harm and the promotion of good. Beauchamp and Childress (2013) note that beneficence has long been treated as "a foundational value—and sometimes as *the* foundational value" —in health care ethics, that "no demand is more important in taking care of patients", with the welfare of patients being medicine's "context and justification". The specific obligations of beneficence in health care rest on a health professionals' assumption of obligations through "entering a profession whereas general beneficence is directed at all persons". Beneficence further means that health professionals must not simply refrain from harmful acts but must take ***positive*** steps to help others. They must also consider ***utility*** - the balancing of benefits, risks and costs to produce "the best overall results"[1]. In constructing the thematic framework then, *Positive Beneficence* and *Utility* are included as sub-themes in *Beneficence.*

4. ***Justice***. Beauchamp and Childress (2013) note that while there is no single principle of justice in their approach to biomedical ethics, rather there are "several principles, each requiring specification in particular contexts". However, common to all theories of justice is the "minimal formal principle" of ***equality***, that "like cases should be treated alike, or, to use the language of equality, equals ought to be treated equally and

unequals unequally"[1]. They discuss the "decent minimum" , a right of access to obtain specified goods and services which every entitled person has an equal claim, universal accessibility to fundamental heath care and health-related resources. They emphasise not just *justice* (fairness or entitlement) but also *distributive justice* (fair, equitable and appropriate distribution of benefits and burdens). In constructing the thematic framework then, *Distributive Justice* is included as a sub-theme in *Justice*.

5. ***Professional–patient relationships*** emphasise the provision of accurate information about telehealth by providers to patients, and an obligation to promote mutual understanding. Beauchamp and Childress (2013) further characterise and explain the elements of the professional-patient relationship through four component themes – ***veracity*, *privacy*, *confidentiality* and *fidelity***[1]. ***Veracity*** is defined as the "accurate, timely, objective and comprehensive transmission of information", as well as the way "the professional fosters the patient's understanding". Essentially about the role of trust in relationship between health professionals and patients, veracity includes the truth of communications, both written and verbal. It is similar to autonomy but different, because it concerns the "respect owed to persons beyond informed consent" including obligations of " fidelity, promise-keeping and contract", and the promise that when health professional communicate with patients they will "speak truthfully and not deceive listeners" [1] .

   With ***Privacy*** , Beauchamp and Childress (2013) suggest that definitions of privacy are too narrow "if they focus entirely on limited access to information about a person", and instead divide privacy into five domains: [1]

   1. Informational privacy – access to personal information.
   2. Physical privacy – which focuses on persons and their personal spaces and also known as locational privacy.
   3. Decisional privacy – which concerns personal choices.
   4. Proprietary privacy - which highlights property interests in the human person e.g., in a person's image.
   5. Relational or associative privacy - family and other intimate relations within which individuals make decisions in conjunction with others.

They argue that *privacy*, as” limited access”, extends to” bodily products and objects intimately associated with the person as well as to the person’s intimate relationships with others”. In applying privacy policies, health providers should define the zones that are considered “private and not to be invaded”, as well as identifying “interests that legitimately may be balanced against privacy interest”, as well as who has access “through which means and to what aspect” of the patient. With telehealth increasingly being applied through video platforms that intrude visually into patient physical surroundings and home lives the aspect of what is actually seen by providers compared to what is required or wished to be seen may cause embarrassment, conflict or distress to both participants.

A breach of ***Confidentiality*** is argued to occur only if a health provider to whom the information as disclosed “fails to protect the information or deliberately discloses it to someone” without the consent of the patient”. Beauchamp and Childress (2013) do note that in circumstances where third parties face “serious harm”, infringement of “prima facie rules and rights of confidentiality can be justified”.

Finally, ***Fidelity*****,** or *professional fidelity or loyalty*, has been traditionally conceived as giving the patient’s interest priority in two respects. Firstly, that the health provider removes self-interest in any situation that may conflict with the patient’s interest and, secondly, that the health provider favours the patient’s interest over third-party interests. Such “divided loyalties” may typically occur when fidelity to patients “conflicts with allegiance to colleagues, institutions, funding agencies, corporations or the state”. A breach of fidelity exists then, when an impartial witness would determine that a health provider’s “judgements, decisions, or actions are at risk of being unduly influenced by his or her personal interest”, such as financial interest or friendship. This may occur for example, when a health service pressures providers to favour or “push” telehealth consultancy for patients when this is a financial or cost-saving objective of the organisation but may be contrary to the patient’s expressed wishes or clinical need.

In constructing the thematic framework then, *Veracity*, *Privacy*, *Confidentiality* and *Fidelity* are included as sub-themes in *Professional-Patient Relationships.*

Figure 3.2 summarises the thematic framework, including both the principles and sub-themes, to be used in the document analysis.

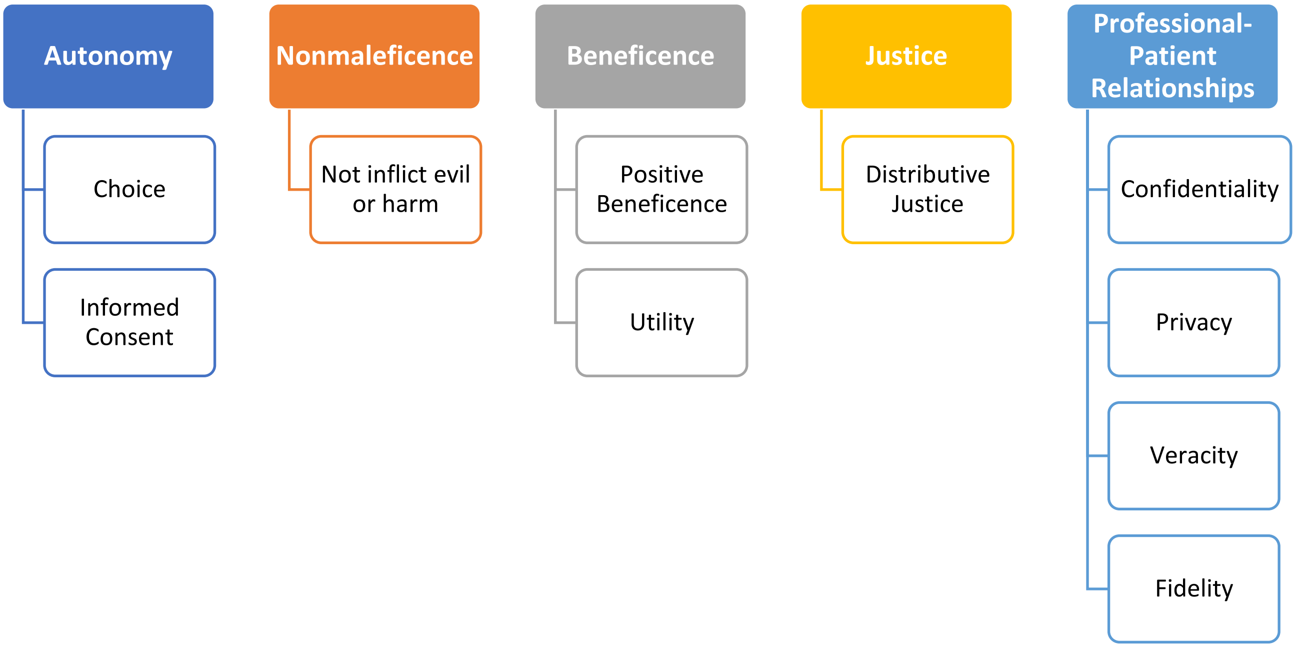


Figure 3.2 **Thematic Framework of Ethical Principles and Sub-Themes**

3.3.3. Indexing

'Indexing' is the third stage in the Framework process "whereby the thematic framework or index is systematically applied to the data in their textual form".[34] The sample set of 25 documents were uploaded to NVivo, and an initial word search for the term "ethics" and the stemmed term "ethical" was undertaken across all documents to understand how prevalent the topic or concept of ethics was in telehealth guides overall, to determine which documents have the most or least references to ethics in the context of telehealth, as well as explore the use, context and meaning of those terms within the sets of documents. The full documents were then read, and text highlighted and coded to the relevant themes and sub-themes as defined above. Ritchie and Spencer (2002) note that "applying an index is not a routine exercise as it involves making numerous judgements as to the meaning and significance of the data". While identifying and highlighting "patterns and associations" within the data is subjective, systemising the process through a qualitative analysis tool adds rigour, as others can “see for themselves how the data are being sifted and organized” and repeat the process to compare findings[34] .

3.3.4 Charting, mapping, and interpretation

In *Charting*, the fourth stage, each indexed piece of data is then “lifted from its original textual context and placed in charts” of the ethical themes and sub-themes defined in the thematic framework[96] , noting that the data can still be traced back to its original source and context, with cases kept in the same order of sets for each chart, based on the document hierarchy outlined in 3.3.1. Managing and summarizing the data in this way is described as a “vital aspect” of the analysis process[95] .

The concluding stage, mapping and interpretation, involves the analysis of the key attributes of the data as displayed in the charts. Ritchie and Spencer (2002) note that this process produces a “schematic diagram of the event/phenomenon thus guiding the researcher in their interpretation” of the data set,[34] as well as providing an awareness and clarity of the aims of qualitative analysis, which are “defining concepts, mapping range and nature of phenomena, creating typologies, finding associations, providing explanations, and developing strategies”[34] .

To reiterate, the Framework methodology enables generative analysis and comparison of how different regional authorities, countries, professional bodies, and services define, communicate and recommend approaches to ethics and telehealth to their audiences in guideline documents, while being grounded in the context, assumptions and purpose of the groups that wrote them. The approach also provides rigour, being comprehensive, systematic (“allowing methodological treatment of all similar units of analysis”) and accessible to viewing and judgement by other researchers[96]. I will now turn to discussion of the findings from this process, beginning with defining where and how the term “ethics” appears in the document cohort and then discussing prevalence and context of each of the five ethical principles.

3.4 Results and Discussion

3.4.1 Prevalence and context of *ethics* terminology

The term "*ethics*" and the stemmed word "*ethical*" appeared an average of 8.3 times in 63%, (15/24) of the documents analysed. Table 3.1 below summarises the prevalence and distribution of these terms.

Table 3.1 Prevalence and Distribution of Ethics Terminology in Document Sample

Cases	**Distribution of Ethics Terminology**				
Document Group	Number of documents	Number where *ethics* appears	Percentage of Group	Number of references	Average per document
1. Global or regional authorities	2	2	100%	39	18
2. National, state, or local government	12	5	50%	47	9.4
3. Professional bodies	10	8	73%	38	4.75
4. Individual services	1	0	0	0	0
Total	**25**	**15**	**63%**	**124**	**8.3**

The highest prevalence and distribution of the terms "*ethics*" and "*ethical*" is found in the two documents in Group 1, both originating from the European Union, with all documents containing references and the highest average incidence per document at 18. The ETSI guidelines contain 28 references, including a dedicated section on ethics guidelines comprising generic principles, research, design and development, and service provision. Reference to e*thics* also appears in sections about user's trust, privacy and confidentiality, legal aspects, user education and research. They also define what is meant by ethics clearly:

> *Within the social care domain, ethics can be considered in terms of two basic principles: 1) the universal duty of good care i.e., the use of expertise to protect the well-being of clients; and 2) the universal duty to respect the autonomy of the client* [98].

The second document in this Group, The European Code of Practice for Telehealth Services, contains eleven references to ethics, defining the framework it outlines as enabling and encouraging "telehealth service providers to plan and manage their services in inclusive and ethically appropriate ways" and including ethical principles as one of the nine components of the framework, containing five clauses. These clauses include: a mission statement of the telehealth services, which must be posted on the service website, updated annually, and provide a clear direction for the service "which is in accordance with the ethical principles that apply to service provision in the healthcare field"; as well as a declaration of conflicts of interest by executive and senior managers, which "links with the ethical foundations that underpin telehealth services". *Ethics* is also referred to in a section on staff training, noting that "quality" of staff relates directly to their "aptitude for the work undertaken", including understanding the reasons for "such ethical principles being in place, and demonstrate their accordance with these when fulfilling their roles within the telehealth service"[97]. The purpose of including ethical principles in these documents therefore is to not just highlight the need for ethics to be embedded in telehealth services operationally, but also to link these operational practices with the broader concepts of the *common morality* which "encompasses many standards of conduct, including moral principles, rules, ideals, rights and virtues"[1].

In the second Group within the document analysis, those guidelines provided by national, state, or local bodies, the terms *ethics* or *ethical* occur in 50% of documents, with an average of 9.4 references per document, roughly half the number that appear in the regional group. While 47 instances were found in total, 33 of these or 70%, are found in just one document, the Canadian Society for Telehealth's (CST) *National Initiative for Telehealth (NIFTE) Framework of Guidelines 2003*. In this document Ethics is included under Organizational Leadership and contained within its own subsection along with privacy, confidentiality, security, and informed consent. The term *ethics* is defined within the document as meaning "standards of conduct that are morally correct"[108]. The authors note that while "the same ethical principles that apply in any face-to-face patient/client interaction apply to telehealth encounters", they acknowledge the "special nature of telehealth". They support the need of individual health services to review existing codes of ethics to "determine if they include these and other telehealth-specific ethical considerations." They also note that over two thirds of service providers who contributed to the development of the guidelines stated that "their organizations did not have a telehealth-specific code of ethics for telehealth personnel" instead "relying on their organizations' existing codes of ethics and/or legal guidelines". The purpose of including ethics in this document therefore is to acknowledge the differences that may apply to telehealth service delivery and to recommended services develop telehealth-specific ethics framework.

Two documents in this group contain six references to *ethics* or *ethical* in the text, the next highest frequency. One of these is also from Canada and covers 6 health services within the province of British Columbia. The authors note that the 2003 NIFTE guidelines were used as a" measure for alignment" in developing these clinical guidelines. Their focus however, from an ethical perspective, is on professional-patient relationships. This is to ensure the "integrity and value of the therapeutic and workplace relationships" are maintained, "professional standards governing health and medical professions" are upheld, and telehealth meets " the standards of quality and safety as for face-to-face services"[100]. The second document with 6 references is from the Australian state of New South Wales and is the *Telehealth in Practice Guide (2019)*, developed by the Agency for Clinical Innovation (ACI). It outlines "critical success factors, at the model level, for effective telehealth-enabled models of care" under five operational headings and includes the following in the Planning section, under Service Delivery and Value:

> *Medico-legal, privacy, ethical and other regulatory frameworks are assessed to determine whether they pose critical barriers to the delivery of telehealth services and relevant issues are addressed*[122]*.*The further references to *ethics* in this document occur in relation to ethics approval for research rather than the application of ethical principles in service delivery.

The State Government of Victoria Department of Health and Human Services mention *ethics* only once in their *Critical success factors: how to establish a successful telehealth service (2015) ,*in relation to clinical forums being a mechanism for the development of telehealth "clinical governance arrangements, clinical standards, ethics and quality assurance"[106]. The American National Conference of State Legislatures Partnership Project on Telehealth, in their 2014 *Telehealth Policy Trends and Considerations* also contains only one reference, this in specific reference to the professional-patient relationship, noting that "providers' ethical responsibilities remain the same" with telehealth, but "differences in possible patient-provider interactions in telehealth have brought accountability and the patient-provider relationship to the forefront in discussions about telehealth safety" [109].

In Group 3, that of the professional bodies, almost three quarters of the documents contain references to *ethics* and *ethical*, however, the average number of references is less than five, with one document, Australia's College of Rural and Remote Medicine's (ACRRM) 2016 *Telehealth Advisory Committee Standards Framework* containing 37% (14/38) of references. These cover informed consent, the obligation of GPs to provide emergency care, ensuring privacy and security of patient records, and ethical conduct in human research[111]. There are eight references to *ethics* or *ethical* in the Royal Australian and New Zealand College of Psychiatrists' (RANZCP) *Professional Practice Standards and Guides for Telepsychiatry (2013).* Standard 4 is concerned specifically with ethical considerations, including that Telepsychiatry practices should be "aware of ethical principles" in their delivery of services, without specifying what these are. They also recommend the incorporation of "organisational values and ethics statements" into practice administrative policies and procedures[117]. The Australian Nursing Federation (ANF) Nursing and Midwifery Telehealth Consortia's 2013 *Telehealth Standards: Registered Nurses,* contains five references, centred on recommendations that telehealth nurses should practice "within a professional and ethical nursing framework" and "in accordance with the nursing profession's codes of ethics and conduct", without suggestions any additional or modified approaches with this particular model of care[113]. The remaining five documents contain three or less references, including the need for organisations providing telehealth services to "responsibly include and address" regulatory and ethical requirements [107], and for practitioners to ensure they "adhere to the same ethical standards and codes of conduct that apply to them as health professionals, regardless of whether they are using digital technologies to deliver care"[118, 119]. These documents, then, focus not so much on the *common morality* which is noted in the Regional group, but rather "moral norms that bind only members of specific communities or special groups such as physicians, nurses, or public health officicals"[1].

The single document in Group 4, the individual health service, contains no reference to the terms *ethics* or *ethical*.

The first step of the indexing process has identified that two-thirds of the documents sampled contain references to the term's *ethics* or *ethical*, and that there is great variance between the groups in terms of context, explanation, and discussion across the groups, ranging from comprehensive in the case of the regional authority group, to completely absent int the individual services group. However, just because the specific terms *ethics* or *ethical* are not found in the documents does not mean ethical principles are not included in these guidelines. Many of these documents, in particular ones produced by the professional bodies where one could expect practical guidelines, refer telehealth practitioners to overarching professional standards or codes of conduct, containing "general norms such as those in the common morality" [1].

3.4.2 Indexing, charting, and mapping of ethical principles.

I will now refer the indexing, charting, mapping, and discussion of each of the ethical principles in the thematic framework in 3.1 above. Firstly, the indexing process was applied to the full documents which were read, and text highlighted and coded to the relevant themes and sub-themes using NVivo software version 12, and charts were created to aid analysis and interpretation. Summaries of the chart data have been produced for the five ethical principles, and for each principle and their sub-themes, drawn from the thematic framework". In accordance with Ritchie's recommendations the cases (i.e. the documents groups) are "*always kept in the same order for each subject chart, so that the whole data set for each case can easily be reviewed" [34].* Table 3.2 summarises the distribution by case (group) of text coded to the thematic framework.

Table 3.2 Distribution of Coded Text to the Thematic Framework

Cases	**Thematic Framework**					
Document Group	**Autonomy**	**Nonmaleficence**	**Beneficence**	**Justice**	**Professional - Patient Relationships**	**Total**
1 Global or regional authorities	15	9	13	1	10	48
2 National, state or local	17	7	11	5	19	59
3 Professional body	18	11	9	2	16	56
4 Individual Service	12	1	7	3	2	25
Total	**62**	**28**	**40**	**11**	**47**	**188**
% of total	**33%**	**15%**	**21%**	**6%**	**25%**	**100%**

In considering this chart it is helpful to recall that each ethical principle contains sub-themes which have been coded separately and aggregated into the summary chart above. Those sub-themes are:

1. **Autonomy** – choice, informed consent.
2. **Nonmaleficence** – not inflict evil or harm.
3. **Beneficence** – positive beneficence, utility.
4. **Justice** – distributive justice.
5. **Professional-patient relationships** – confidentiality, privacy, fidelity, veracity.

188 sections of text were coded across the document sample with autonomy containing the highest number of incidences at 33%, followed by professional-patient relationships at 25%, beneficence at 21%, nonmaleficence at 15% and justice at 6%. In terms of distribution of the coded text across the document groups, the highest incidences were in the national, state, or local authorities with 31% and professional body groups with 30% followed by the regional authorities at 26% and the individual service at 13%. Figure 3.3 shows the distribution of coded text to the thematic framework:

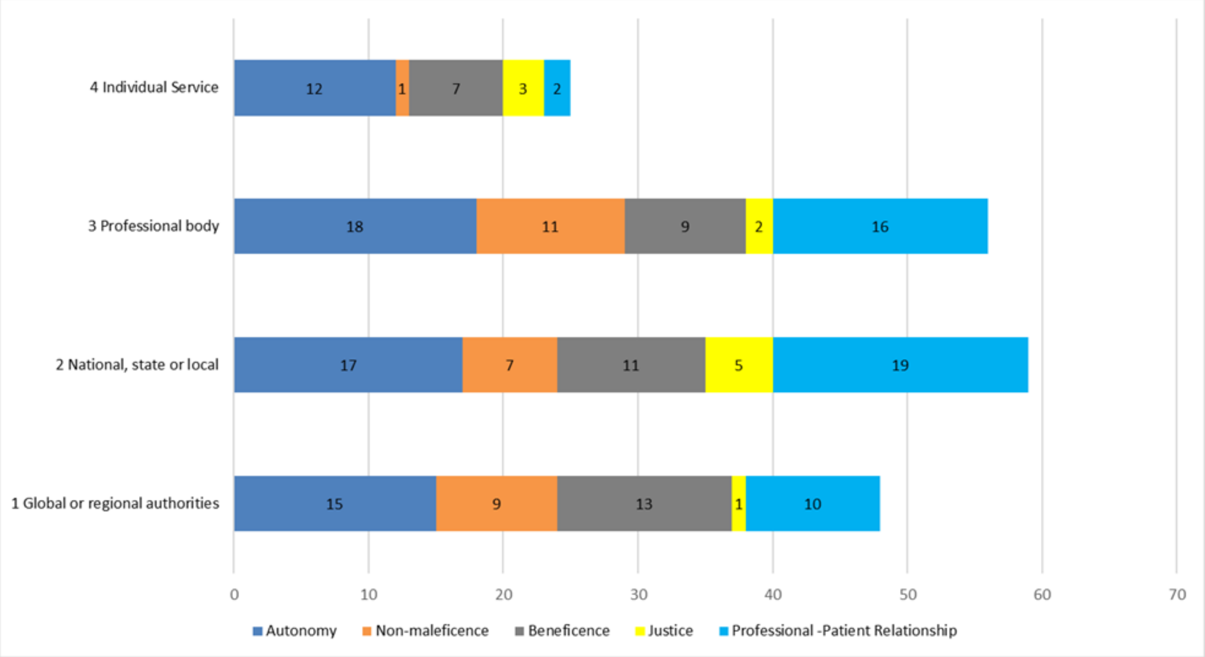


Figure 3.3 Distribution of Coded Text to the Thematic Framework

I will now discuss each ethical principle and their corresponding sub-themes in turn.

3.4.3 Autonomy

Table 3.3 summarises the distribution and prevalence of text coded to the theme and sub-themes of *autonomy*.

Table 3.3 Distribution of Coded Text to the Principle and Sub-Themes of *Autonomy*

Cases	Thematic Framework: Autonomy and sub-themes			
Document Group	**Autonomy**	**Choice**	**Informed Consent**	**Total**
1 Global or regional authorities	6	5	4	15
2 National, state or local	6	5	6	17
3 Professional body	5	6	7	18
4 Individual Service	3	4	5	12
Total	**20**	**20**	**22**	**62**

The principle and sub-themes of *autonomy* are evenly distributed both in terms of the document groups, and the themes themselves. In 3.3.2 above I discussed the two conditions deemed essential for autonomy to exist: *liberty* (independence from controlling actions influences) and *agency* (capacity for intentional action)[1]. In understanding how these conditions may appear separately to the sub-themes of *choice* and *informed consent*, both in terms of context and purpose have coded them separately in the document text as the primary theme of *autonomy*.

Some documents discuss autonomy in the context of telehealth *empowering* clients, with empowerment being defined clearly "as a process through which people gain or are afforded greater control over decisions and actions affecting their lives".[97] Empowerment is discussed both in terms of advising staff to present telehealth as a tool for independence rather than as "an outward sign of dependency on external services and aids" [98], and as empowering patients with the knowledge of their current status. A benefit of this approach is to avoid the stress of potentially frequent visits to Emergency [121] that may come through ignorance, or lack of access to a clinician. *Self-care* is another theme which occurs in supporting people with chronic conditions in "acquiring the skills and habits of self-management needed to achieve the best outcomes in terms of their health[121], to be "actively involved" in their health care condition, and foster a "sense of ownership" regarding their wellbeing "and that of their community" [101].

The *engagement* of patients in the design and delivery of their services is another theme that arises, with guidelines advising providers that “the coordination, scheduling and support processes are to be addressed from the patient’s perspective [121]” and that services should “in all aspects” of the operation, “give due consideration to the views, opinions and choices of their service users and carers [97]. *Partnership* is also mentioned in the context of patients “working collaboratively” with telehealth practitioners in “defining how the equipment will be used for them” [121], as is acknowledging patient expressing specific preference for a telehealth consultation as part of care delivery[117]. Finally, both liberty and agency are discerned in the recommendation that patients “must be advised that they are free to leave the service at any time”[121].

Choice

The sub-theme of *choice* - that autonomous actions not be subjected to controlling constraints by others[1] – is most often found in telehealth guidelines in the context of patients choosing between telehealth or face-to-face consultation. There are two main aspects to this. The first is a predominantly *clinician-directed* view of choice where health and care professionals should “assess how appropriate a telecare system would be to the client” before ensuring “their clients are aware of the alternatives to telecare”[98] . Telehealth practitioners are advised that although video consultations have the benefit of a service “without the personal inconvenience and cost of travel from home” , there will be patients who “prefer to attend face-to-face consultations with specialists, and this choice should be respected”[115]. Practitioners should have an understanding of when “good” care is undermined by the use of technology or other factors associated with a telehealth model. If they are unable to provide a service to the “same standard as an in person consultation”, they must ”advise the patient or client of this”[110], to allow then to make an informed choice. The second view of choice which appears in telehealth guidelines is that of *patient-driven* choice with the concept of “optionality” being discussed, combined with the requirement that practitioners support a patient choice to “opt out” of a telehealth service. Clinicians are advised to ensure patients know that “access to a face-to-face consultation is never denied if they opt out of or don’t wish to receive care via telehealth[100]. They should be, assured that “receiving a service via Telehealth is optional” and should they decline their decision "will not prejudice their consultation and they will still receive the best standard of care practicable"[105].

Informed consent

Autonomous actions occur when " normal choosers" act with understanding, and for this to occur health professionals are obliged to "disclose information, to probe for and ensure understanding and voluntariness and to foster adequate decision making"[1]. The East London NHS Foundation Trust note in their 2015 *Telehealth Policy* that:

> *At the centre of the model are "informed patients, making choices and giving feedback" and this underlines the fact that telehealth is an option for care that must be adequately explained so that a patient is in a position to make an informed choice to accept or reject it if offered[121].*

This requirement includes making sure patients are fully informed with regards to the "limitations" of a virtual consultation, without providing further detail on what these may be. The American Telemedicine Society (ATS) advises that telehealth practitioners must, "inform and educate the patient in real-time of all pertinent information" including "discussion of the structure and timing of services, record keeping, scheduling, privacy and security, potential risks, confidentiality, mandatory reporting, billing", and any other information specific to the "nature" of their telehealth service[107]. The European Code of Practice for Telehealth Service also provides a comprehensive list of information telehealth services need to provide to ensure users and carers "may exercise informed choices" about taking part. *"Informed choices"* in this example requires that information must be "timely, clear and comprehensive" and cover "the manner of service operation, arrangements for termination of or withdrawal from the service" and "all applicable charges and costs"[97]. Allied health professionals in Australia are advised to "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"[118].

Issues of patient *capacity* and *competence* are addressed in a number of guidelines, where this may impact either understanding on the part of the patient, or the ability of the practitioner to gauge the extent of the understanding. ETSI note that potential telehealth clients should "possess the cognitive abilities to understand the implications of their decision”,[98] while the Royal Australian College of Physicians (RACP) advise that in cases where the patient “is not competent and does not have the capacity to give consent, consent should be obtained in the same way as in a face-to-face consultation”. In these circumstances practitioners should arrange for consent to be given by a “family member or friend who has the requisite legal authority to give consent on the patient’s behalf”[114].

Conversely, CST 2003 guidelines suggest that while “no one would argue that informed consent is one of the foundations of ethical health care”, the issue of consent and how it applies to telehealth is “a highly controversial area”. The requirement for *expressed consent* is subject to whether telehealth is considered simply a “tool” for the provision of health care or a “distinct method” for the delivery of health care.[108] This is the only set of guidelines that makes such an assertion and may be due to the (relatively) early period when the document was written, a country-specific context or cultural factors. The British Columbia guidelines of 2015 advises that telehealth providers must explain to patients “what to expect, privacy and confidentiality measures in place, and the client’s right to refuse care” via telehealth, and in the event there is “just reason for recording a clinical event, consent must be obtained”[100].

3.4.4 Nonmaleficence

Table 3.4 summarises the distribution and prevalence of text coded to the theme and sub-themes of *nonmaleficence*. This theme is most prevalent in the Professional Body group, although it also appears in the first and second groups, while only one reference was noted in the Individual Service group.

Table 3.4 Distribution of Coded Text to the Principle and Sub-Themes of *Nonmaleficence*

Cases	**Thematic Framework: Nonmaleficence and sub-theme**		
Document Group	**Nonmaleficence**	**Not inflict evil or harm**	**Total**
1 Global or regional authorities	4	5	9
2 National, state or local	1	6	7
3 Professional body	6	5	11
4 Individual Service	1	0	1
Total	12	16	28

Nonmaleficence broadly refers to *doing no harm* through the provision of health care, but the obligations of non-maleficence of a health professional are not just to not inflict harms on patients but also to *not impose risk of harms*, and *to take due care*[1]. Again, several contextual themes have been identified with this principle and sub-theme during the coding process, including *adverse effect on care*[98], *client advocacy*[112], *harm to others*[98], *risk of distance*[115], *cultural safety*[112], *compliance*[107, 121], and *clinical safety*[113].

The ETSI guidelines of 2008 state that telehealth or telecare systems should not "adversely affect the delivery and user experience of existing services provided to clients" particularly in relation to a corresponding reduction in services such as carer support that an introduction of the service may lead to. Health care professionals should identify this possibility and determine "whether this would be acceptable to the client or appropriate given the client's circumstances", including considering whether this may lead to increased isolation. Nor should the introduction of telehealth "create ethical issues for the provision of existing services which the client may rely upon" [98]. The ANF also note that, the technology is a "means to care", not a replacement for care, or the information provided by nurses and midwives.[113] They further advise that while nurses and midwives should consider which clients may benefit from the method of care delivery "where possible", they also have a responsibility to *actively advocate* for their client when telehealth on-line video consultation is deemed "not suitable or where the person is uncomfortable using this care modality" [112].

In addition, the impact that introducing telehealth services might have on individuals who provide formal and informal care to the client such as "other health/care professionals, care workers, relatives, friends, neighbours and voluntary organizations", and how that may in turn affect the care received by the client, should also be considered and any "negative impact on the carer or care by the client should be avoided"[98].

RACGP advises that general practitioners need to be mindful of the "unique risks involved in consultations where the specialist and the patient are at different locations", and the importance of general practices to" identify these risks and determine how they should be managed"[115]. They recommend establishing protocols and training in the areas of dual-care duty of care, patient safety, the clinical appropriateness of a video consultation decisions, consent to the presence of third parties, video consultation etiquette, communication protocols, clinical handover within the practice, current evidence base for video consultations, with specific reference to patient safety, and the evaluation of video consultation services. Training should be regularly reviewed and updated to "reflect advances in technology, advances in the evidence base for telehealth care services, patient and other stakeholder feedback and advice from professional and regulatory bodies[115].

The theme of *cultural safety* is raised in some guidelines, not just in relation to the" inherent power "of the health professional or doctor role and the "potential that power has to impact on people from other cultures", but that this inherent power "could be amplified with use of technologies". In the cases of nurses and midwives providing telehealth services, the aim should be to ensure "nothing unsafe - physically, emotionally, culturally, spiritually - will happen to the person because of their culture". This responsibility for cultural safety and respect rests with the practitioner "rather than the person receiving care[112]. Cultural safety or awareness is also mentioned in regard to video consultations, with practitioners advised to look out for "particular sensitivities about personal images and the recording of personal images"[120].

Compliance, along with appropriate training and supervision of practitioners is also emphasised, including compliance with codes of conduct, industry protocols," relevant local, state and federal legislation, regulations, accreditation and ethical requirements for supporting patient/client decision-making", as well as criminal and other mandatory background checks [121] [107] [98].

A number of aspects of *clinical safety* are noted in the document analysis. The Australian Health Practitioner Regulation Agency (AHPRA) cautions practitioners to "ensure that you do not attempt to provide a service which puts patient or client health or safety at risk"[110], while Allied Health Aotearoa New Zealand (AHANZ) advise that telehealth consultations "can pose challenges and risks not present in in-person consultations" particularly when there has been no prior in-person contact between the practitioner and the client [123]. They identify establishing rapport with the client, conducting any physical examination, recognition of emotion, cultural responsiveness and client concerns about data safety and security as specific areas where care should be taken. For dieticians, this poses unique challenges with "assessing physical signs associated with nutritional deficiencies, and in taking accurate and reliable anthropometric measurements", which may lead to an incorrect or incomplete understanding the of the client's clinical condition, however using videoconferencing instead of telephone consultations “may allow for some assessment of physical signs and emotion”. [116, 123] Other potential clinical risks noted in guidelines include: *risk of misidentification* and exposure to care and intervention not intended for the client as a result of not correctly identifying clients may result in a range of adverse events such as the client receiving information meant for a different person[100]; assessing and managing the likelihood of an adverse event or deterioration in a patient’s condition, for example if the client has a high incidence of falls, is emotionally distressed or has unexpected health issues[119] ; ensuring, in the case of telepsychiatry, that there are no “absolute contraindications” to patients being assessed using telehealth [117]. AHPA caution that “musculoskeletal or exercise-based activities may require a larger space at the client’s end or place the client at risk of falls”, while a person seeking mental health services “may become emotionally distressed”[118] . They advise that while video consultation may still be used in these circumstances, “the client should be informed and given the option of having someone present for support or seeking a face-to-face consultation” instead. Finally, there is also a risk that “certain providers” could deliver care without “the proper medical history or information, which could endanger patients and also jeopardize the growing tele-health field” [97].

3.4.5 Beneficence

Table 3.5 summarises the distribution and prevalence of text coded to the theme and sub-themes of *beneficence*. As the data indicates, references to beneficence in the documents are found in all groups, appearing most frequently in the Global/Regional group and less so in the others, particularly in the Individual Service group.

Table 3.5 Distribution of Coded Text to the Principle and Sub-Themes of *Beneficence*

Cases	**Thematic Framework: Beneficence and sub-themes**			
Document Group	**Beneficence**	**Positive beneficence**	**Utility**	**Total**
1 Global or regional authorities	4	8	1	13
2 National, state, or local	1	8	2	11
3 Professional body	1	8	0	9
4 Individual Service	0	6	1	7
Total	**6**	**30**	**4**	**40**

Beneficence relates to the prevention or removal of harm and the promotion of good. This further means that health professionals must not simply refrain from harmful acts but must take ***positive*** steps to help others, which is ***positive beneficence***. While discussion relating to beneficence occurs in all the document groups, particularly in national, state and local authorities, the sub-theme of positive beneficence dominates. Beauchamp and Childress (2013) identify a number of "prima facie rules of obligation" that support this principle, including protecting the rights of others, preventing harm and removing conditions that will cause harm to others, helping people with disabilities and rescuing persons in danger. Health professionals must also consider ***utility*** - the balancing of benefits, risks and costs to produce "the best overall results"[1] .

Beneficence is conveyed in the telehealth guidelines generally as providing *good* care, *safe* care or *quality* care. This is often expressed as *suitable care* for clients, that meets their individual needs or circumstances, and is assessed on a "case-by-case" basis. This is care that supports" the health, well-being and independent living" of the client, respects the client's "decisions, dignity, integrity and preferences" and takes into account the "personal motivations and preferences of each client"[98]. In acknowledging that a video consultation is "not exactly the same as a face-to-face service and there are some inherent limitations" AHPA advise practitioners to consider whether a "valid and reliable assessment" of a client's condition can be made via video conferencing, and whether a patient's care "can be meaningfully supported using this medium"[118]. Practitioners are also advised to "assess (and regularly re-assess) whether telehealth is safe and clinically appropriate" for clients, "particularly noting the limitations of telehealth", and whether a "direct physical examination" is necessary to provide good care[110].

A second contextual theme that emerges from the documents is that of *reasonable care*. This is also expressed as meeting the *standard* of care or the *appropriate* care. It is necessary to determine what this standard is and if it can be met through telehealth:

> *…. "reasonable" standard of care (considering context, location and timing) delivered via telehealth should be at least equivalent to the standard expected in traditional health care delivery, where such a comparator exists. If the "reasonable" standard of care cannot be met, the telehealth professional needs to address what is the alternative for care and decide if it is acceptable to proceed [108].*

The ANF advise their members that prior to commencing a telehealth on-line video consultation for a client, “the nurse or midwife must be satisfied that the standard of care delivered via this technology is “reasonable””, meaning that it should be at “least equivalent to any other type of care” that can be delivered to the client. If “reasonable” care cannot be provided through telehealth, the nurse or midwife should suggest an “alternative type of health care delivery/service” to the client and their medical specialist, “ for example face-to-face encounter or emergency room visit”[112].

Positive beneficence

The obligation of positive benevolence in telehealth guidelines is expressed in a number of contextual ways including *consistency*[123], *rights and responsibilities*[105, 107], *training*[97, 121], *continuous improvement*[110] and *supporting clients with disabilities*[116, 118]. AHNZ advise that telehealth providers should “ensure services are consistent with the standards of care delivered in person”, including:

> *…standards relating to client selection; identification; cultural responsiveness; assessment; diagnosis; consent; maintaining the client’s privacy and confidentiality; updating the client’s clinical records; communication with other health clinicians involved in the client/patient’s care; and follow-up.*

Clients should be advised if “ because of the limits of technology” a service of the “same standard as an in-person consultation ” is unable to be provided [123].

The ETSI states that “the nature of telehealth services should be such that people who access or use them will be able have their human rights and dignity protected”,[97] while the ATS guidelines require that services “shall have a mechanism in place for ensuring that patients and health professionals are aware of their *rights and responsibilities* with respect to accessing and providing health care via telehealth technologies”, including the process for lodging complaints[107]. The Western Australian Government details these patient rights and responsibilities, as “including but not limited to” being treated with respect, dignity and consideration for their privacy, being given appropriate and easily understood information about telehealth, participating in decisions about their care and treatment[105].

Guidance and training for practitioners is discussed, including education, training/orientation, licensure, and ongoing continuing education/professional development, to "ensure the necessary knowledge and competencies for safe provision of quality health services", and the attendance at refresher training when new technology is introduced [107]. Some guidelines also recommend training for clients and carers in order to "enhance their understanding of the service and the technologies/equipment concerned" and, where appropriate "shall be given before and at the point of service commencement"[97].

Continuous improvement is mentioned in some guidelines, for example, the AHPRA *Telehealth guidelines for practitioners*, [110]in relation to providing benefits to others, particularly in relation to understand the client experience, although this appears only recently. In the 2020 *Telehealth Guide for Allied Health Professionals*, practitioners are advised that "It is also a good idea to have regular patient evaluation if video conferencing is going to be an ongoing part of your practice" either through a follow-up phone call after a consultation or by providing a feedback mechanism such as a survey [118]. They suggest gathering data on elements such as the information and instructions provided prior to the consultation, the quality of video and audio, and any technical difficulties, the quality of care and information provided, their willingness to have a telehealth video consultation in the future, and how the service could be improved[118].

Helping persons with disabilities, the final contextual theme regarding positive beneficence, is in relation to clients who may need "additional supports to access telehealth". Some examples noted are clients who have specific challenges participating in telehealth "due to the 'remote' nature of the consultation, or the requirements of the technology used"[116]. This includes people who are vision- or hearing-impaired or have an intellectual disability and, while "this does not mean that these people should be excluded from telehealth options, extra steps and precautions must be taken to ensure a successful outcome"[118]. This theme is particularly prevalent in recent guidelines for allied health practitioners who have previously relied on the physical presence of clients, such as physiotherapists and occupational therapist. They suggest that when consulting a physical examination via video, for example, practitioners may need to "ask extra questions to compensate for the loss of face-to-face contact". They also suggest that "physical changes may be less apparent during video consultations, or it may be more difficult to assess changes in mobility”. In these situations they recommend adaptations to normal practice such as “provider-directed physical examination and patient self-examination”[118].

Utility

The sub-theme of *utility* occurs infrequently in the guidelines, with only four references noted in the document analysis. Telehealth is often discussed in strategy or policy document in terms of its ability to reduce overall healthcare costs and improve access to care. Only four sections of text were coded to utility and may can be divided into two contextual themes, those of *economic* utility and *social/environmental* utility. In terms of economic utility, AHANZ note that increased adoption of telehealth “offers significant benefits to allied health clinicians and their clients/patients, including better access to health services, and more efficient use of health resources”[123]. The ETSI argue that as the number of “dependent citizens”, particularly the aged, in society is increasing, the “maintained delivery of traditional health care services to these user groups would lead to a considerable cost increase, at a questionable quality”[98] .

The guidelines for British Columbia health services note two factors that can lead to increased social/environmental utility specific to remote areas. They suggest that as well as improving staff “recruitment and retention in remote locations by reducing professional isolation, improving access to continuing professional development, and providing easier access to support”, telehealth adoption can improve the environment by “reducing CO^2 emissions by reducing physicians and clients travel requirements”[100].

3.4.6 Justice

The principle of Justice encompasses “fair, equitable and appropriate treatment in terms of what is due or owed to persons” and also *distributive justice*, or the fair, equitable and appropriate distribution of benefits and burdens [1]. This sub-theme occurs the most infrequently in all document groups. Table 3.6 summarises the distribution and prevalence of text coded to the theme and sub-themes of *justice*.

Table 3.6 Distribution of Coded Text to the Principle and Sub-Theme of *Justice*

Cases	**Thematic Framework: Justice and sub-themes**		
Document Group	**Justice**	**Distributive justice**	**Total**
1 Global or regional authorities	1	0	1
2 National, state, or local	4	1	5
3 Professional body	2	0	2
4 Individual Service	1	2	3
Total	**8**	**3**	**11**

Justice is most often discussed in telehealth guidelines in relation to *access to care*[100, 116, 123] and the *resource burden* of travel and/or time[106, 115] and also by *equity of choice*[97, 123]. While access to care is highlighted in relation to clients or patient living in remote or isolated areas it can apply to anyone who identifies with "a sense of isolation and a lack of access to healthcare" [101].

Access for patients can include factors such as specific health services they need not being provided locally or that "the lack of transport, other commitments, or physical impairment may make attending appointments during work hours difficult" [123] [100, 116]. Access to care provided by telehealth can also reduce disruption and cost for clients and families, decrease or remove the need to travel to access health services, improve the choice of providers and lower waiting times for health services[106] [115].

Equity of choice is discussed in relation to people who may not have lived in remote or rural areas but are living with and managing long-term conditions. These people, as well as others, will "increasingly wish to access services that help them adopt and manage appropriate lifestyles" and "convenient access to care[123]. It is necessary that "healthcare and support services should be accessible to a wide range of people – whether at home, in school or college, in the workplace or out and about in the wider community"[97] .

Distributive justice

Only two documents in the sample specifically refer to the context of distributive justice, The United States' National Conference of State Legislatures Partnership Project on Telehealth, *Telehealth Policy Trends and Considerations* (2015) considers that although telehealth "does not increase the size of the provider workforce" it can produce a fairer distribution of benefits and burdens through better distribution of providers "by creating efficiencies and extending the reach of existing providers" [109]. The East London NHS Trust notes that the use of telehealth where appropriate can “minimise the waste of time and resource consumed by face to face interaction where the patient would prefer support to be provided remotely and where this support can be done effectively”[121].

3.4.7 Professional-Patient Relationships

Table 3.7 summarises the distribution and prevalence of text coded to the theme and sub-themes of *professional-patient relationships*.

Table 3.7 Distribution of Coded Text to the Principle and Sub-Themes of *Professional-patient relationships.*

Cases	Thematic Framework: Professional-patient relationships and sub-themes					
Document Group	**Professional -Patient Relationship**	**Confidentiality**	**Fidelity**	**Privacy**	**Veracity**	**Total**
1 Global or regional authorities	2	1	3	1	3	10
2 National, state, or local	7	4	0	5	3	19
3 Professional body	5	3	2	6	0	16
4 Individual Service	0	1	1	0	0	2
Total	**14**	**9**	**6**	**12**	**6**	**47**

Professional-patient relationships includes the provision of *accurate information* about telehealth by providers to patients, and an obligation to promote *mutual understanding,* and includes the “rules” of *confidentiality, privacy, fidelity and veracity*[1].

The Province of British Columbia define and discuss the professional-patient relationship in their 2015 guidelines, noting that practitioners need to ensure and maintain the “integrity and value” of such relationships, as well as “uphold professional standards governing health and medical professions” [100]. Communication skills and behaviours regarding telehealth modes of care delivery are highlighted in a number of guidelines, including ensuring that practitioners are trained to “communicate with clients according to their abilities and preferences” and the “use of client's primary language such as sign language”. The ETSI require that telehealth services should ensure that staff are “of good character and demonstrate informed, empathetic and non-judgemental approaches" towards clients and carers[97]. The CST outline specific actions that should be taken around communication and behaviours in telehealth settings, including familiarisation of staff with "appropriate video/telephone behaviours" ensuring they "are able to multi-task i.e. use equipment and stay focused on the patient/client", undertake education/orientation in "telehealth communication skills" and also provide clients with "education/orientation to the telehealth process and communication issues", prior to their first consultation[108].

Comfort and *rapport building* should be undertaken prior to the first consultation with a patient, as "the person's experience and comfort with the use of video and computers will be variable and impact on their likelihood to embrace the concept of using telehealth"[101] .Nurses and midwives are advised that "active and reflective listening skills are considered pivotal" to ensure "all relevant information is obtained from the person or family and carers, and interpreted, to assist the person to articulate their needs/ issues" to doctors and specialists"[112].

Privacy and confidentiality

Privacy (access to information about a person) and *confidentiality* (protection of that information)[1] are often discussed in the same sentence in telehealth guidelines as though they are interchangeable. The ETSI took care to define and explain these two concepts separately in their 2008 guidelines:

> *Privacy can be defined as the ability of an individual or group to keep their lives and personal affairs out of public view, i.e., to control the flow of sensitive information about themselves. Confidentiality is more concerned with the responsibility of individuals, companies or organizations that may collect and store such information on others, and the need to ensure that only authorized individuals are allowed access to that information* [98].

Privacy then, is *the right of the client* and confidentiality is the *duty of the service provider*. They also highlight the vulnerability of data that is "transmitted on the internet and stored on the web" advising services that "set up web portals for health and/or provide health advice on the internet" should pay particular attention to "privacy rights and the confidentiality of client data"[98].

The CST note that while a "duty of confidentiality is owed to the patient", maintaining it in a telehealth setting "poses more challenges than in the usual health care environment". These include the "unique combination of patient data, video imaging, recording, and electronic clinical information generated between two or more sites" combined with an "increased number of individuals involved in care"[108] . Australian Dieticians are advised to introduce quality standards in their practice to "safeguard the sending and receiving of information in text, audio and visual formats, and incorporate measures that enhance benefits, minimise risk and ensure authentication" and to ensure information transferred via electronic means is safe and secure"[116].

Privacy is discussed across a number of *dimensions,* with *physical privacy* highlighted by some organizations. The ATS advise that physical space used for telehealth consultations should be "secure, private, reasonably soundproof, and have a lockable door to prevent unexpected entry" with conversations unable to be heard "by others outside of the room where the service is provided". The RACP recommends that practices should have "a system" to ensure that there are "no interruptions at the specialist and patient ends of the consultation", including that patients at home are "in a quiet room where they will not be disturbed", and alerting other staff at their practice location that they are conducting a telehealth consultation and asking not to be disturbed".[114]

Technology security is a significant dimension of privacy in telehealth and is discussed both in terms of the *features* of the hardware and software used and their *safety*. Privacy feature should include "audio muting, video muting, and the ability to easily change from public to private audio mode" and should be available "to both the provider and the patient". Providers have a duty of care not only to develop an understanding of "the technologies available regarding computer and mobile device security" but also to "help educate the patient with respect to such issues as privacy and security options[22]. Patients need to be confident that "their privacy is adequately protected and systems are secure" [106] and also should be provided with information "about the potential limitations of IT security, provided by third parties" [117].

Proprietary privacy, or "privacy relating to a person's body"[1], such as their image, is raised in the context of recording telehealth consultations. Session recording should initially "be disabled", then there must be a "valid and clinically appropriate" reason for recording and practitioners must fully inform the patient and receive their consent before proceeding. Recordings must also be stored securely[114].

Veracity

Veracity is about the role of trust in relationship between health professionals and patients, and includes the truth of communications, both written and verbal[1]. Although there are relatively few references to veracity in the document sample, there are a couple of contextual themes that can be discerned. The first of these is *information deception*[97, 98, 109] which relates to the communicated purpose of the telehealth service that may be offered to clients, and to its nature. The ETSI advises providers that if objective of "researching, developing or deploying a telecare system is to reduce the amount of human input into a client's health/care regime" then this should be "clearly stated"[98] . In telehealth, as with other modes of care, patients should trust that providers will offer necessary information for patients to make decisions about care[109].

The European Code of Practice for Telehealth also warns against positioning a telehealth service in a false light to patients:

> *Services shall not promote or market their wares by preying on fear, omitting important or giving misleading or unsubstantiated information. The vulnerability of some users and carers is such that they will be at higher risk in relation to their health and well-being. Neither the extent of that risk, nor the anticipated benefits of telehealth, shall be exaggerated*[97]*.*

The second contextual theme that appears in relation to veracity is concerned with the *transparency* of a telehealth consultation and trust in its privacy, particularly when multiple clinicians are involved. Health professionals at both ends of the consultation advised to make their identities known, and to confirm the identity of each patient at the commencement of each session, as well as be clear to patients when video and audio links are to be closed[105 97].

Fidelity

Fidelity relates to practitioners giving the patient's interest priority in respect of removing self-interest in any situation that may conflict with the patient's interest and favouring the patient's interest over third-party interests. In the document sample it is referred to most commonly in relation to conflicts of interest and also in collaboration and partnership between providers. The 2014 *European Code of Practice for Telehealth Services* states that "the declaration of and openness regarding conflicts of interest links with the ethical foundations that underpin telehealth services" requiring that all staff should declare and register any "conflicts or potential conflicts"[97], while the East London NHS Foundation Trust requires staff to be "transparent about and avoid or manage conflicts or potential conflicts of interest that relate to their activities, involvement and/or shareholdings in or outside of the telehealth service"[121].

In relation to collaboration and partnership, fidelity is mentioned in the context of supporting information sharing, optimised continuity of care for patients and professional development for providers. Both the RACP and AHPA suggest that, wherever possible "where a local healthcare provider is already involved in the patient's care, physicians should support the continuation of the patient's relationship with the local healthcare provider[114 118].

3.5 Discussion

Following familiarisation, indexing, coding, and charting, the contents of the documents have been "sifted and charted according to core themes", enabling the pulling together of "key characteristics of the data, and to map and interpret the data set as a whole"[34]. Throughout the analysis thirty-three "emergent categories, associations and patterns" have been noted and discussed, and these are mapped and summarised in Table 3.8. The data is arranged in three theoretical levels. The first level shows the thematic framework or "general and comprehensive norms of obligation" that has been used to guide the indexing process. The second level shows the ethical subthemes or rules "more specific in content and more restricted in scope" that have been charted[1]. The third level details the emerging concepts that have been identified and can be used to "provide explanations and develop strategies"[96].

Table 3.8 Summary of Thematic Framework, Sub-Themes and Emerging Concepts

	Sub-themes			
Autonomy	**Liberty and Agency**	**Choice**	**Informed Consent**	
Emerging Concepts	1. Empowerment 2. Self-care 3. Engagement 4. Partnership	5. Clinician-directed 6. Patient-driven	7. Informed consent 8. Capacity and competence	
Nonmaleficence	**Not inflict evil or harm**			
Emerging Concepts	9. Adverse effect on care 10. Client advocacy 11. Harm to others 12. Risk of distance	13. Cultural safety 14. Compliance 15. Clinical safety		
Beneficence	**Positive beneficence**	**Utility**		
Emerging Concepts	16. Consistency 17. Rights and responsibilities 18. Training 19. Continuous improvement	20. Supporting clients with disabilities 21. Economic utility 22. Social/environmental utility		
Justice	**Distributive justice**			
Emerging Concepts	23. Access to care 24. Resource burden 25. Equity of choice			
Professional-Patient Relationships	**Confidentiality**	**Privacy**	**Veracity**	**Fidelity**
Emerging Concepts		26. Data complexity 27. Dimensions of privacy 28. Technology security	29. Comfort and rapport 30. Information deception 31. Transparency	32. Conflict of interest 33. Continuity of care

3.5.1 Limitations

One of the limitations of this document analysis was the small number of operational service level guidelines that were able to be sourced, with only one being included in the sample. This limits the ability to assess how recommendations at a regional, national, state or even professional body level are being accessed, interpreted, and applied in practice. To develop useful strategies, methodologies, or tools for applying ethical principles in telehealth practice it is necessary understand not just how health professionals are advised about the guidelines, but how they experience them in practice. Biomedical ethical theorists including Beauchamp and Childress (2013), and Richardson (2000) discuss the process of “specification” in relation to the way “general principles become practical instruments for moral reasoning”[1], recognising the “highly general character of the principles and rules that they invoke and of the gap that therefore arises between them and the guidance of action” in particular circumstances[124].

Kuziemsky et al (2020) examined three “macro level” examples of telehealth guidelines and concluded that “clear differences emerged between the ethics guidelines and the practitioner perspectives” due to published guidelines largely focusing on “macro level issues related to technology and maintaining data security” while “practitioner concern is focused on applying the guidelines to specific micro level contexts”[125]. Therefore, what is recommended at regional or national level, or even by a professional body, will not necessarily become influential or even useful at a local operational level, unless it is possible to “narrow the scope” by “spelling out where, when, why, how, by what means, or by whom the action is to be done or avoided”[124]. In the next chapter I will explore and discuss how ethical principles are experienced in practice by telehealth practitioners and patients.

3.5.2 Conclusion

In answering the second research question of “how are ethical principles discussed in telehealth guidelines”, several inferences can be made:

1. **Ethics is relevant to telehealth practice**. As the terms *ethics/ethical* occur in two-thirds of the telehealth guidelines sample it can be inferred that ethical principles are perceived to be relevant to telehealth practice.

2. **Ethics in telehealth is not clearly defined**. Although ethics and ethical principles are discussed there is often a lack of definition as to what ethics mean, with practitioners referred back to established professional standards or codes of conduct, developed for more traditional models of care delivery.

3. **Telehealth *is* different.** There is a broad acknowledgement, particularly in documents at the regional, national, and also professional body level, of the “special nature” of telehealth compared to face-to-face health service delivery.

4. **There is less prominence closer to practice**. The distribution and prevalence across documents indicate that the more operationally focused guidelines become, the less ethics is discussed.

5. **Ethical frameworks are needed.** Some guidelines acknowledge the need for telehealth-specific ethical frameworks to be developed as part of operationalising a telehealth service.

6. **Ethical principles are discussed.** The 5 ethical principles can be identified in all the document groups to varying degrees, predominantly at the national, state, and local level, and also at the professional body level.

7. **Emerging concepts can be identified.** Analysis of the context of the discussion of ethical principles in the document groups identified 33 emerging concepts that align directly to the five ethical principles, even if they are not explicitly denoted or explained as such.

8. **Telehealth guidelines advise the use of ethical principles in practice.** In identifying, discussing, and aligning the use of ethics, the context of ethical principles and the concepts of emerging ethical themes in the 24 documents, it is clear that the application of ethical principles is proposed, advised, or recommended in telehealth guidelines.

CHAPTER 4 – Ethical principles in telehealth practice - a qualitative study

4.1 Introduction

The first research question of this thesis has been addressed by the literature review document analysis in Chapter 2, and the second research question by the document analysis in Chapter 3. The third research question is examined by a qualitative study aimed at gaining an understanding of how ethical principles are experienced in practice by both telehealth practitioners and telehealth clients. Figure 4.1 shows the structure of the research questions, and the stage to be addressed in this Chapter.

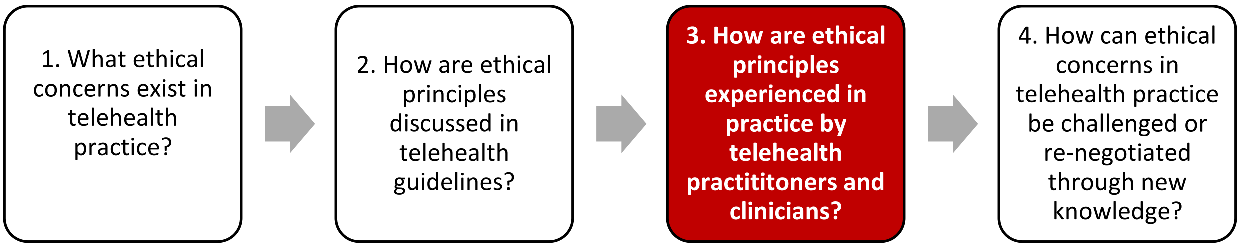


Figure 4.1 Structure of the Research Questions

The study considers the following aspects of the research question:

1. What is the experience of ethical principles by telehealth practitioners?
2. What is the experience of telehealth principles by telehealth patients?
3. What are the differences and similarities between the reported experiences of the two groups?
4. What theory can be developed about applying ethical principles in telehealth practice?

The study was undertaken by conducting semi-structured interviews with clients of telehealth services, and with clinicians providing telehealth services. This chapter provides a description of the theoretical framework and methods applied, an analysis of the findings, and a comparison of the similarities and differences between the two groups.

4.2 Methodology

4.2.1 Grounded theory methods

In Chapter 3, Framework methodology[34] was used to analyse the document sample, and I presented this as a grounded theory approach, as the process and steps undertaken were “used to expose and explore theoretical categories”[38], relevant to the ethical principles under consideration, albeit aligned to an *a priori* thematic framework. In the qualitative study presented in this chapter, the methodology was influenced by Glaser and Strauss’ (1967) theory[36], by Corbin and Strauss’ (2008)work[37], and by the constructionist approach of Charmaz (2006)[38] .

Glaser and Strauss (1967) proposed the use of grounded theory in sociological research to address the conflict they saw “concerning primary of purpose” in the field, which reflected “the opposition between a desire to generate theory and a trained need to verify it”[36]. They argued for the need to generate theories that could be understood by “laymen” that would “fit and work” in the real world. Rather than the “opportunistic use of theories that have dubious fit and working capacity” , theory developed using grounded methods “is destined to last” as it is “too intimately linked to the data and cannot be completely refuted by more data or replaced by another theory”.

The fundamental core then, of grounded theory as a qualitative methodological approach, is that “theory development does not come “off the shelf”, but rather is generated or “grounded” in data from participants who have experienced the process[37]. Grounded theory gives researchers a means to examine their research analytically, so that they will be equipped with “new ways of understanding” the experiences of their participants”[86] .

According the Glaser and Strauss (1967) , the process of generating theory from grounded methods contains particular steps that researchers must undertake, or elements of the approach that must be applied, including comparative analysis, theoretical sampling and the use of coding and memo-writing[36]. These elements are summarised in Figure 4.2:

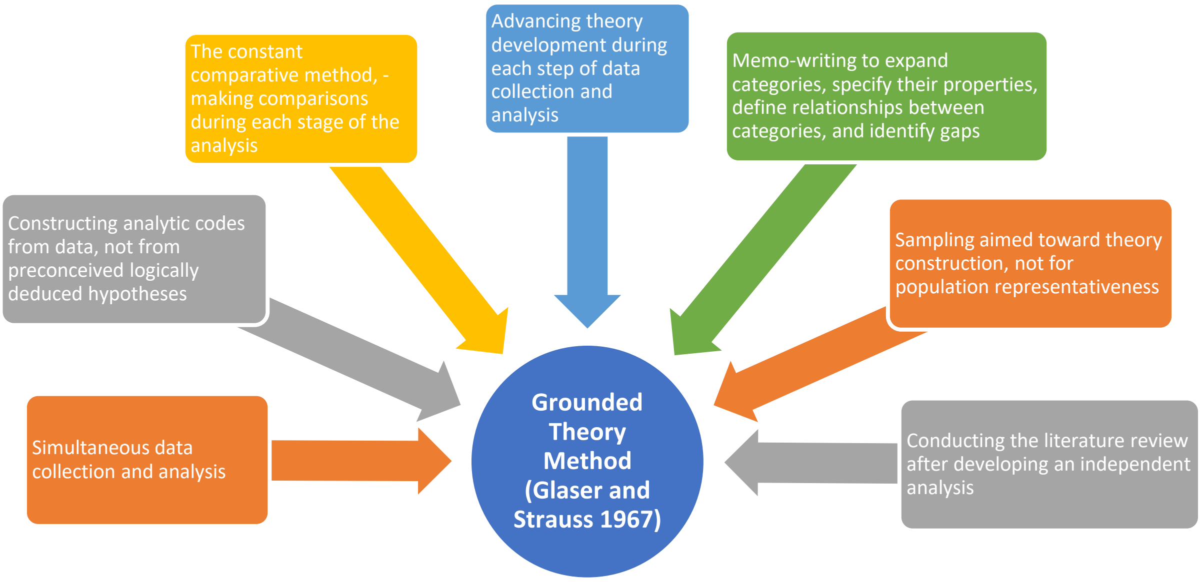


Figure 4.2 **Elements of Grounded Theory Method[36].**

While the process of generating theory as provided by Glaser and Strauss (1967) is described as an "ever developing entity and not a perfect product"[126] , it is still a systemic approach with "particular steps" to follow in analysing data, including theoretical sampling and breaking the data analytically to "determine what produced" codes and categories[86]. Charmaz (2006) has suggested the use of less structured and more flexible methods of applying grounded theory, viewing grounded theory methods as "a set of principles and practices, not as prescriptions or packages"[38]. She instead defines a constructionist method of applying grounded theory that contains "flexible guidelines, not methodological rules, recipes, and requirements" which allows the researcher some influence over what is discovered.

While Glaser and Strauss (1967) discuss discovering theory as "emerging from data separate from the scientific observer", Charmaz (2006) that that neither data nor theories are discovered. Instead, researchers construct grounded theories "through our past and present involvements and interactions with people, perspectives, and research practices"[38]. She also acknowledges that the researcher has a major role in the process, through making decisions about the categories throughout the process, bringing questions to the data, and advancing "personal values, experiences and priorities[127]."

I have adopted a flexible, more constructionist approach to applying grounded theory in data collection and analysis, adopting some of the methods prescribed by Glaser and

Strauss (1967), but not all. I have used theoretical sampling, simultaneous data collection and analysis, coding of categories from data, and memo-writing. As Charmaz (2006)notes, methods are only tools that can be used in the process of exploring and discovering experiences and phenomenon of interest, however “how you collect data affects which phenomena you will see, how, where, and when you will view them, and what sense you will make of them.[38]”

4.2.2 Sampling

The sampling criteria for the research was limited to adult participants only. Practitioners were required to have delivered health services on multiple occasions to clients/ patients via telephone and/or video methods for at least three months prior to the study. Patients/clients were required to have received health services via telephone and /or video methods on multiple occasions over a minimum period of three months prior to the study. “Health services” were defined as consultations delivered by allied health or medical practitioners, including general practitioners (GPs) or specialists, in either public or private practice. Theoretical sampling, a key element of grounded theory, aimed toward theory construction, not for population representativeness, was used. Glaser and Strauss (1967) define theoretical sampling in *Discovering Grounded Theory* as:

> *The process of data collection for generating theory whereby the analysist jointly collects, codes and analyses his data and decides what data to collect next and where to find them, in order to develop his theory as it emerges.*[36]

Two specific concepts are relative to conducting appropriate theoretical sampling. The first is *selecting comparison groups*, and the second is *theoretical saturation*.

Selecting comparison groups

I have already stated that the purpose of the qualitative study is to understand and compare the experience of ethical principles in practice by both telehealth practitioners and clients. These groups were initially chosen due to the lack of evidence in the literature of the experience of both groups, which means that the groups chosen had both “common factors and relevant differences” with both being involved in telehealth service delivery, one group as providers of a service and one groups as receivers. The original study design was to recruit telehealth practitioners and clients from the same health service in order to gather data, test assumptions and develop a potential knowledge transfer model to improve practice within a defined operational environment. In principle support for partnering was given by a suitable organisation in October of 2018, however by March of 2019 they had withdrawn their interest in the project. Reasons given included funding restraints, lack of Executive support, working condition negotiations with clinical staff and the small volume of services being delivered via telehealth at that time. As there were few other organisations that could participate, further options were then explored, including different sampling strategies for practitioners and clients. Practitioners were instead recruited primarily from a telehealth community of practice, and patients from a health consumer group. This change in recruitment strategy led inadvertently to an environment that could support the use of grounded theory methods, especially theoretical sampling, much more stringently than the original research design.

Selecting groups in the way described above fits a criteria of “ structural circumstance” rather than that of “ theoretical purpose and relevance”.[36] Glaser and Strauss (1967) propose instead the “ongoing inclusion of groups” whereby the “fullest possible development” of categories and their properties “is achieved by comparing *any* groups, irrespective of their difference or similarities” . The barriers to finding research participants in one single organisation, where practitioners and clients are experiencing essentially the same structural type of service, was one of “pre-planned inclusion and exclusion”. This is important if “accurate evidence is the goal” but can also “hinder the generation of theory”, in which “non-comparability of groups is irrelevant”[36]. The approach then became one of selecting groups from the same substantive “class” – that of telehealth practitioners or clients- regardless of whether they are found within a single service, or practice.

A search for telehealth client consumer groups identified state-based organisations that had established health consumer networks where participants for the study could be sourced. The largest of these was Health Consumer New South Wales (HCNSW), a membership-based, independent, not-for-profit organisation, who “promote and practice consumer engagement”. They also act to “ create meaningful partnerships between consumers, the health sector and policy-makers”[128]. They were approached and agreed to support recruitment of telehealth clients.

A similar search was undertaken for telehealth provider organisations or networks that were membership-based and supported research or permitted access to researchers. Membership-based organisations were chosen for two main reasons, firstly because they gave access to a diverse pool of frontline practitioners who were involved in the direct delivery of healthcare and could be accessed through multiple rounds of sampling without having to seek further permissions. Secondly, there was reduced vested interest compared to telehealth groups linked to suppliers of technology. The organisation chosen was the Telehealth Victoria Community of Practice (TVCP) which “enables collaboration among members of the Victorian health workforce who are involved in implementing, supporting, managing and evaluating telehealth access to their health services”[129].

To ensure a diverse sample as possible, particularly in relation to the type of health services being delivered and received, social media platforms were searched for relevant groups or pages. LinkedIn and Facebook were chosen as having the relevant professional (provider) and social (client) networks, and a final ethics modification was approved in October 2020.

4.2.3 Ethics approval and Recruitment

The study was approved by the Flinders University Social and Behavioural Research Ethics Committee in December 2018. Three modifications were granted in August 2019, August 2020, and October 2020 to allow additional recruitment methods to be used.

Telehealth practitioners were recruited through the organisations and networks detailed above from August 2020 to December 2020; additionally, one provider was recruited from the HCNSW sample in August 2019. Telehealth clients were recruited through the organisations and networks detailed above from August 2019 to December 2020. Table 4.1 summarises the recruitment process for the study.

Table 4.1 Summary of Research Participant Recruitment Process

Sampling Source	Time Period	Telehealth Providers Recruited	Telehealth Patients Recruited
Health Consumers NSW Newsletter and website	Round 1: August 2019 Round 2: November 2020	1 0	4 5
Victorian Telehealth Community of Practice	Round 1: August 2020 Round 2: October 2020	3 5	0 0
Social Media – LinkedIn and Facebook	October 2020	1	1
Total		10	10

To recruit telehealth practitioners, I first applied to join the TVCP Member forum, and once accepted, posted a request for research participants on the general discussion board. I provided an outline of the study and attached an information sheet. Interested people were asked to contact me directly via my institutional email, or by telephone. Once contacted, there was a preliminary discussion to understand their telehealth experience, scope of practice and location. A consent form was then provided, and a time scheduled for a sixty-minute interview. To recruit telehealth patients, I approached HCNSW and obtained permission from their CEO to recruit for the study. I followed their health consumer participant recruitment process, providing an outline of the study, the information sheet and contact details. I also set up a webpage with more information about myself as a researcher, and the project, and provided the link. Once contacted, there was an introductory discussion over telephone and/or email, to understand their telehealth experience, including the type of services they had used, and the duration of their involvement. A consent form was then provided to those who met the sampling criteria, and a time scheduled for a sixty-minute interview.

The logic of grounded theory entails going back to data and forward into analysis. Subsequently, you return to the field to gather further data and to refine the emerging theoretical framework[38]. The recruitment process, although time consuming and seemingly disjointed, facilitated theoretical sampling by allowing the cumulation of data, with each sample building " upon previous data collection and analysis, and in turn contributing to the next data collection and analysis"[37] , as well as having other positive impacts on the depth and rigour of the research.

Firstly, the disparate sources of the participants resulted in providers being recruited from a number of different health service practices including clinical psychology, paramedicine, physiotherapy, occupational therapy, and neuropsychology, which would not have occurred if a nursing organisation had been used as originally conceived. Clients also had a more varied experience, with telehealth services predominantly funded for rural and remote area medical services prior to the pandemic. This gave the benefit of variation in the experiences as well as making the research relevant to a wider group of practitioners. It also permitted variance in the settings of experiences – i.e., urban as well as rural and remote, and the length of time practitioners had been involved in telehealth delivery, ranging from 3 months to 6 years.

Secondly, the sixteen-month gap between interviews commencing and being completed overlapped with the emergence of the COVID-19 pandemic in Australia, corresponding to what Corbin and Strauss (2008) would identify as a "fortuitous event"[37]. While a pandemic would not be considered as such in any other context, it did allow for the discovery of "new and uncharted areas", with clinicians and patients who had never used telehealth before now participating in it. This resulted in a significant increase in the number and variety of telehealth services being delivered and exposed many more practitioners and patients to telehealth as a mode of healthcare. The study had the benefit of exploring telehealth ethics from the perspective of those who had been involved pre-COVID and those who, in a sense, had telehealth forced upon or" opened up" to them, either as providers or clients.

Thirdly, rather than being an "in-house" project with a specific health services organisation, the use of more public sources of participants – websites, newsletters, forums, social media – engaged a much wider audience in the conversation about telehealth ethics, regardless of whether they took part in the study.

While the study design combined with the ability to take advantage of a fortuitous event strengthened the theoretical sampling approach, there were some practitioners who were identified as "theoretically relevant" that could not be accessed or recruited as part of the participant groups – general practitioners and medical specialists. Corbin and Strauss (2008) note that researchers using theoretical sampling should not be overly concerned about this situation as " rarely will a researcher find two or more events or incidents that are identical", therefore if "incidents and events are compared on the basis of concepts rather than looking at the data in a "descriptive" sense, theoretical sampling is taking place "regardless of how the data is actually gathered"[37].

Theoretical saturation

The selection of both the type and number of comparison groups through theoretical sampling facilitates the application of another core element of grounded theory – theoretical saturation. Glaser and Strauss (1967) define saturation as meaning that a researcher has become "empirically confident" that no additional data can be found that will further develop properties of a category. Corbin and Strauss (2008) suggest that this occurs when "the major categories show depth and variation in terms of their development", noting however that it also "denotes a development of categories in terms of their properties and dimensions, including variation and possible relationships to other concepts"[37]. As categories emerged through the interviews, they were in some cases revisited with participants to explore their meaning further or, were used to augment the questions in the next round of recruitment. For example, the theme of *privacy* is mentioned strongly in the literature review [10, 33, 42, 45, 46, 50, 51, 55, 57, 62, 63, 65, 68-71, 74-76, 79-81, 83] , but how the category of *privacy* emerged in the initial telehealth client interviews was quite different in terms of context and perception. Theories about privacy as an ethical principle in telehealth service delivery developed from exploring this further in subsequent interviews. This process will be discussed further as part of the data analysis section.

4.2.4 Data Collection

Practitioners and patients were invited to initial interviews of up to an hour; in some case second interviews were also conducted, either as part of a clarifying process or to explore categories that had emerged in analysis of previous interview transcripts. Charmaz (2006) notes that intensive qualitative interviewing fits grounded theory methods "particularly well" as both grounded theory methods and intensive interviewing "are open-ended yet directed, shaped yet emergent, and paced yet unrestricted"[38].

Corbin and Strauss (2008) note that while interview and observational guides are not as relevant with theoretical sampling as they are to structured forms of research "because they tend to evolve and change of the course of the research", there are still some practical reasons why this may be required

:

> *..a researcher cannot get through a human subject or research proposal committee without an indication of the questions that will be asked, or observations to be made, the purpose for which is the protection of human subjects[37].*

Semi-structured interviews were conducted in Australia and commenced with introductory questions about how the participant came to be delivering or receiving a telehealth service and for how long. A "can you talk me through how…" format, allowing participants to choose "where they want to start" and "which parts of the story they want to emphasise"[86], was used.

These were followed by a series of broad open-ended questions to "invite detailed discussion of the topic" and to encourage "unanticipated statements and stories to emerge"[38]. In designing the questions, there was implicit alignment to the ethical principles of autonomy, beneficence, nonmaleficence, justice, and professional-patient relationships. These exact terms were not used explicitly however, to avoid direct questions that may cause confusion due to the relative obscurity of terms like "non-maleficence", and also to avoid leading questions. Instead, terms such as "good", "safe", "easy" , "like" and "dislike" were used to allow participants to bring their individual perspective and interpretation to the fore which then facilitated the uncovering of new elements or constructs of each principle. This approach may be perceived as "forcing the data into a preconceived framework" and therefore counter to the fundamental principle of grounded theory that a researcher should be "constructing analytic codes and categories *from data*, not from preconceived logically deduced hypotheses"[36]. However, Charmaz (2006) argues that while "tensions between data collection strategies and what constitutes 'forcing' are unresolved in grounded theory", grounded theorists often begin their studies with "certain guiding empirical interests" and " general concepts that give a loose frame to these interests" [38]. Table 4.2 shows how the interview questions were aligned to the ethical principles.

Table 4.2 Alignment of Interview Questions with Ethical Principles

Example Interview Question	Aligned Ethical Principle(s)
How do you think using the telehealth program provides good care for clients?	Beneficence Non-maleficence
How does being on a telehealth program help you assist clients with their daily living?	Autonomy Beneficence
What do you like about using the telephone/video to see and talk to the clients?	Beneficence
What don't you like about using the video monitor to see and talk to the clients?	Non-maleficence
How comfortable are you using the video technology	Beneficence
How easy or difficult do you find communicating with the client through the video phone?	Professional-patient relationship
How safe do you feel using the video technology?	Non-maleficence
How do you think the telehealth service is helping clients stay where they want to live?	Autonomy Justice
How much choice do you feel clients have in whether or not to receive care through the telehealth service?	Autonomy

For the first round of sampling, the same questions were asked of practitioners and clients; for clients, the terms were reversed, making them the object rather than the subject of the question. As part of the process for ethics committee approval of the questions, an independent health consumer advocate reviewed and provided feedback on them to use with client participants. In the second and subsequent round of interviews the initial questions were supplemented with questions relating to "concepts derived from analysis" of the first round, either by extension or addition. For example, no questions about "practitioner training" were included in the initial question list for providers but during data analysis of the first round this emerged as a category and was therefore included in the next round as a topic in the question list and explored with the next round of interviews. The interviews were conducted over Zoom, Skype or telephone and were audio-recorded, and transcribed into text narratives providing suitable "rich data" which is "detailed, focused, and full" generating "solid material for building a significant analysis"[38].

4.2.5 Data Analysis

The data analysis followed grounded theory methods and was a dualistic inductive and deductive approach. Transcripts were analysed during an iterative process of simultaneous data collection and analysis[36]. All interview transcripts were uploaded to NVivo and read alongside the audio recording of each interview to check for accuracy, and ensure they were written verbatim. Different interpretations between three analysts, one female higher degree student, and one male and female academic, were triangulated to add rigour to the methods. Memos were written for each transcript, as to “explicate and fill out categories” and define the key themes, concepts, thoughts and feelings for each participant[38]. The final version of each transcript was then coded in three separate steps, in order to shape an “analytic frame” from which to build the analysis[38]. The three steps in the coding method were aligned with grounded theory methodology and comprised open coding, axial coding, and selective coding.

Step one comprised an “open coding” process, where each line or section of coding was examined to determine “what was happening in the data, what processes are taking place and what theoretical category they imply”[86]. This process involved both assigning specific codes to data, and in vivo coding where sections of verbatim text were then used as codes. For example, a defined category like “patient acceptance of technology” was assigned as a code as it emerged from the data, and relevant text from subsequent transcripts added to it. Verbatim comments such as “I don’t think telehealth can be unethical, clinicians are”, and “if (patients are) disclosing then clearly they feel comfortable” were also used as codes.

Step 2 comprised an “axial coding” process - a “focused, selective phase that uses the most significant or frequent initial codes to sort, synthesize, integrate, and organize large amounts of data”, to create new categories or expand existing ones. Corbin and Strauss (2008) define axial coding as a method for “crosscutting or relating concepts to each other”[37] linking categories but also elaborating them.

Step 3 involved the comparison and alignment of categories with a core category of the theoretical framework. Each elaborated category from Phase 2 was aligned to either autonomy, beneficence, nonmaleficence, justice or the professional-patient relationship, depending on which principle has the greatest explanatory relevance and the highest potential for linking the other categories together[86]. Figure 4.3 summaries the data analysis method.

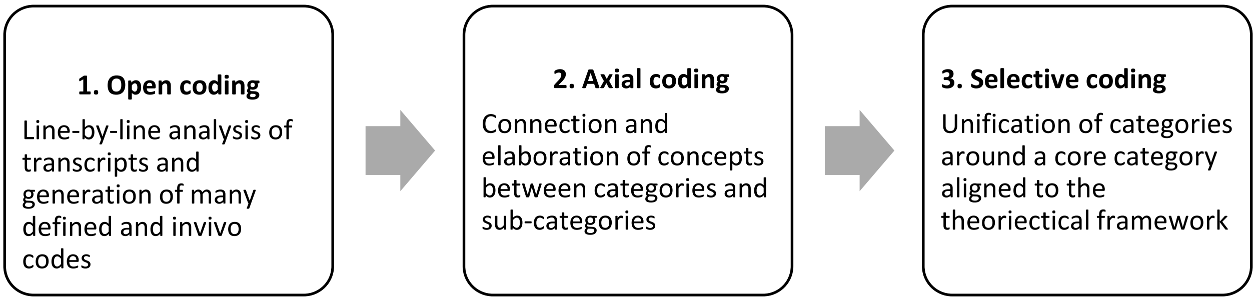


Figure 4.3 **Summary of Data Analysis Method**

4.3 Results – the Practitioner Experience

Ten telehealth practitioners were interviewed between October 2019 and December 2020. Results of the data analysis are presented by first tabling the participant background, area of clinical practice, and length of time practicing telehealth. I will briefly discuss how participants became involved in telehealth, to provide context, followed by the presentation of the data categories, aligned to the ethical framework. Table 4.3 summarises the participant characteristics.

Table 4.3 **Characteristics of Telehealth Practitioner Participants**

ID #	Practice type	Time practicing telehealth	Service type
1	Paramedicine	2 years	Rural and remote public ambulance service; South Australia
2	Physiotherapist	10 years	Urban private practice; Victoria
3	Physiotherapist	6 months	Urban, public outpatient clinic; Victoria
4	Physiotherapist	6 months	Urban, public outpatient clinic; Victoria
5	Occupational therapist	9 months	Urban, rural, and remote, not-for-profit service; Victoria
6	Clinical Psychologist	9 months	Urban private practice; South Australia
7	Clinical Psychologist	9 months	Urban private practice; South Australia
8	Clinical Psychologist	5 years	Urban, rural, and remote private practice; South Australia
9	Clinical Neuropsychologist	3 months	Urban, public outpatient clinic; Victoria
10	Clinical Psychologist	4 years	Urban, rural, and remote private practice; Queensland

The participant sample was sourced from five practice types, with experience ranging from ten years to three months, across three regions of Australia. Six of the ten had only commenced telehealth practice as a response to the COVID-19 pandemic, predominantly in urban public hospital outpatient services or private practice, where face-to-face consultations had to cease. This meant a significant change to the way they practiced:

> *My role was a grade 2 physio in an outpatient musculoskeletal clinic and originally that role was just seeing outpatients face to face. And then once everything sort of unfolded, with COVID cases, we had to close the face-to-face clinics and generally we transitioned to a completely 100% telehealth clinic. So, all assessments and reviews were virtually over a phone call or telehealth.* (Practitioner 3)

The remaining four had been delivering telehealth in predominantly rural or remote areas for a number of years, some taking the opportunity of broader public funding for telehealth to expand their practices into urban areas.

> *…. I've had a lot of experience from training other people to use telehealth in their role and listening and giving them feedback to develop their telehealth skills. And then since COVID-19, I've been using telehealth myself because we were suddenly allowed to as a private physio practitioner.* (Practitioner 2)

Data analysis of the practitioner interviews followed the method described in 4.2.5. Open coding resulted in 103 separate categories of data. Axial coding produced thirteen categories that are detailed in Figure 4.3. Selective coding aligned the categories with the ethical principles of the theoretical framework[1]. The predominant principles, or core categories, that emerged from the data were *beneficence*, including *positive beneficence* and *utility*, and *non-maleficence*, including *not inflict evil or harm*. Both had four aligned Phase 2 categories or 29% each of the data coded. T*he professional-patient relationship,* including *confidentiality, privacy, veracity,* and *fidelity*, was the next highest with 21%. *Justice*, including *distributive justice*, and *autonomy*, including *choice* and *informed consent,* had only one aligned category each, or 8%. Figure 4.4 summarises the coding and categorisation of practitioner qualitative data. I will now discuss each category in turn.

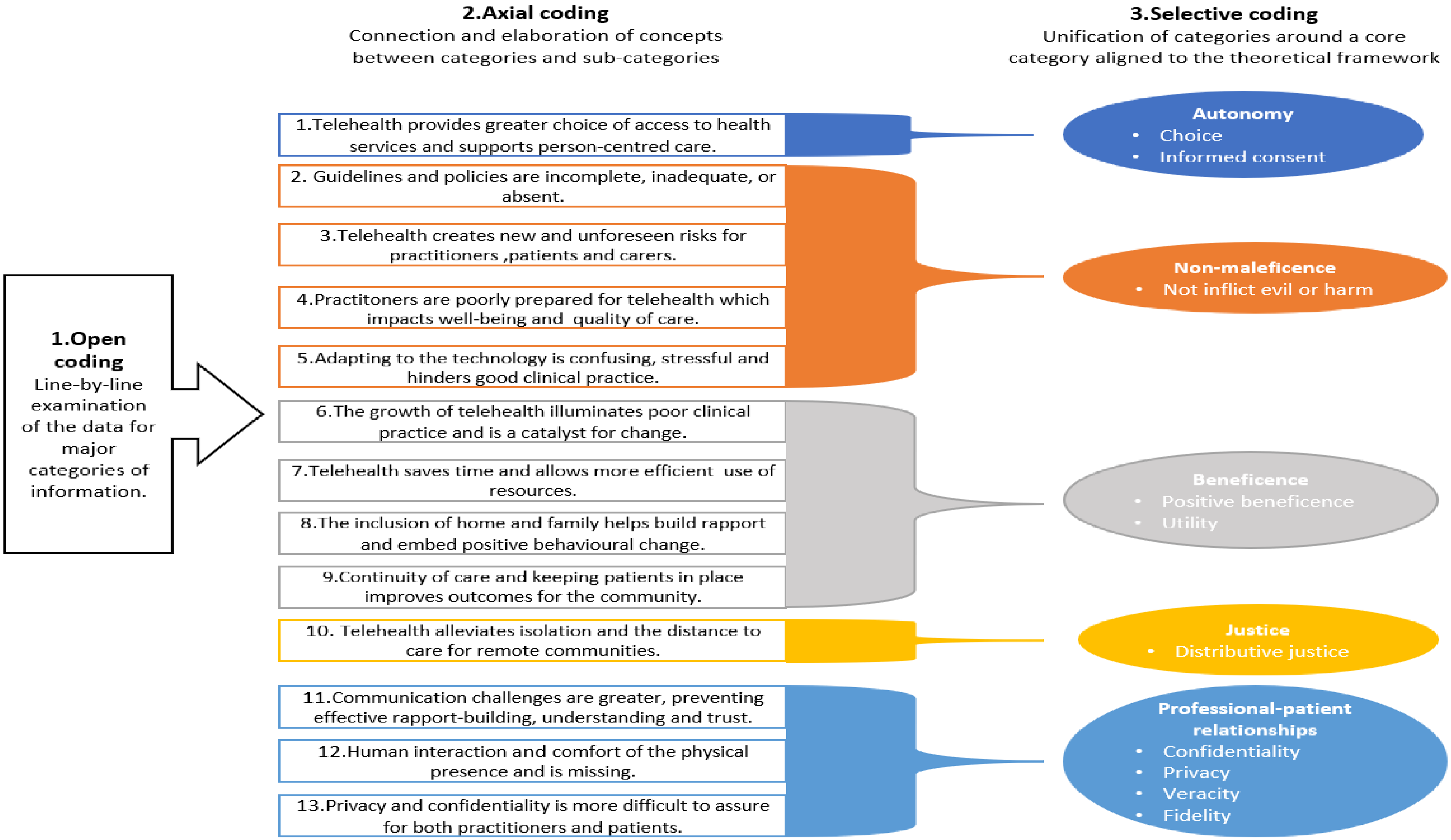


Figure 4.4 Coding and Categorisation of Practitioner Data

4.3.1 Autonomy

There was one category identified from the coding of practitioner data subcategories for *autonomy*, shown in Figure 4.5:

Figure 4.5 Categorisation of Practitioner Data for *Autonomy*

Telehealth provides greater choice of access to health services and supports person-centred care includes themes of patient-centred services, client acceptability, self-care, introducing patients to telehealth, and ease of use. Choice is expressed by practitioners in terms of patient comfort with the technology:

> *…. we have given patients that option as to whether or not they would like to be assessed by telehealth or whether or not it's in person. And sometimes those that have said, no, if we have initially a paramedic in the area who can be with them when we set up the tele link, I find they embrace it a little bit better because there's actually someone with them talking them through it as opposed to them having to sort out the technology themselves.* (Practitioner 4)

Psychologists mentioned choice in the context of *comfort, independence,* and *security* for clients, especially for those who normally wouldn't be comfortable in a clinical setting:

> *…Clients seem more relaxed and comfortable over telehealth, and I want them to be more relaxed and comfortable, it gives me a truer sense of what is going on with them and they are more open.* (Practitioner 9)

> *…I've got both options available, and some people would definitely prefer face to face partly for that additional sense of privacy to some people, like people who have got issues with their relationship say, they're not comfortable to discuss that at home when the person might be there, even in another room or whatever. That's just not going to be comfortable for some people. So, they'd much prefer to just come in and be very independent, either from their homes or from their work situation…..* (Practitioner 6)

As well as those who may be stressed by the *process* of accessing care:

> *I think it takes away the stress of people one, to get to your office location, trying to find parking, coming to a new environment, particularly ones that may slightly on the spectrum, they've already got that level of social anxiety* …. (Practitioner 8)

Choice was also reported by clients to have options not just in terms of how they access services but the *breadth* of those services, with telehealth enabling access to a much wider range of practitioners:

> *…..using the Eyre Peninsula as an example, people aren't just limited to seeing me. I hope they still do, but they could engage a psychologist in Mount Gambier. They have greater access given the availability of telehealth.* (Practitioner 8)
>
> For physiotherapists client comfort results in improved relationships:
>
> *…telehealth is really convenient for the patient, and I think it builds a bit more of a relationship and more of an alliance because they're able to attend their appointments out of the comfort of their own hom*e. (Practitioner 4)

Patient *acceptance of technology* is also raised in relation to choice and control. Practitioners acknowledge that for some demographic groups, particularly older people or those who are vulnerable, telehealth is a challenge:

> …w*ith the older patients, it's pretty tricky when they're not technology savvy, like they accidently mute the call, they can't turn on the video, they can't flip the camera. They don't have a phone that's up to date. So, it doesn't run the software properly. And, of course, they're people that are not travelling particularly well. So, they may not be up to learning how to do that.* (Practitioner 8)

One psychologist noted that some of her "reluctant" patients eventually agreed to use telehealth because it was the only way to access care, deciding they "needed the help more than they disliked using the technology". This was also true of remote indigenous communities who "initially found the technology quite confronting" but over time became more familiar and comfortable with using it:

> *..they actually think it's fantastic because some of them have got quite complex health conditions, but it means that they don't have to travel and stay away from their family and friends, they can actually have that service provided to them pretty much in their own homes*. (Practitioner 1)

Patient-centred care was mentioned in the context of disability services where practitioners emphasised not providing “a one size fits all approach”, but rather “really trying to accommodate what our client's preference was”. This behaviour supports the principle of autonomy in both allowing patients to act with self-determination, and providing them with meaningful choices in relation to telehealth services:

> *…we're primarily a National Disability Insurance Scheme (NDIS) provider, we tend to kind of go back to the client and it's about their choice of control. So, it really does depend on whether the client themselves are open to the idea of telehealth and telepractice and receiving their services in that way*. (Practitioner 5)

Finally, a physiotherapist who had been involved in delivering telehealth services for over ten years, and training others to do so, felt that person-centred care had “global definitions” which,

> *….basically, in a nutshell says that you're delivering a service that takes into account the individual needs, circumstances, beliefs, and attitudes and of the person in front of you.* (Practitioner 2)

However, while health professionals generally “all absolutely have an intention to deliver a service that's tailored to their client”, how they achieve that,

> *…is just left up to the clinician to work out, and in fact there is a whole science behind person centred care and a whole evidence base behind person centred care about what it is, what, what, what it should include.* (Practitioner 2)

4.3.2 Nonmaleficence

Nonmaleficence means that telehealth practitioners must not inflict harms on patients, and also must not *impose risk of harms* and take *due care*. There were four categories identified from the coding of practitioner data subcategories for non-maleficence, shown in Figure 4.6:

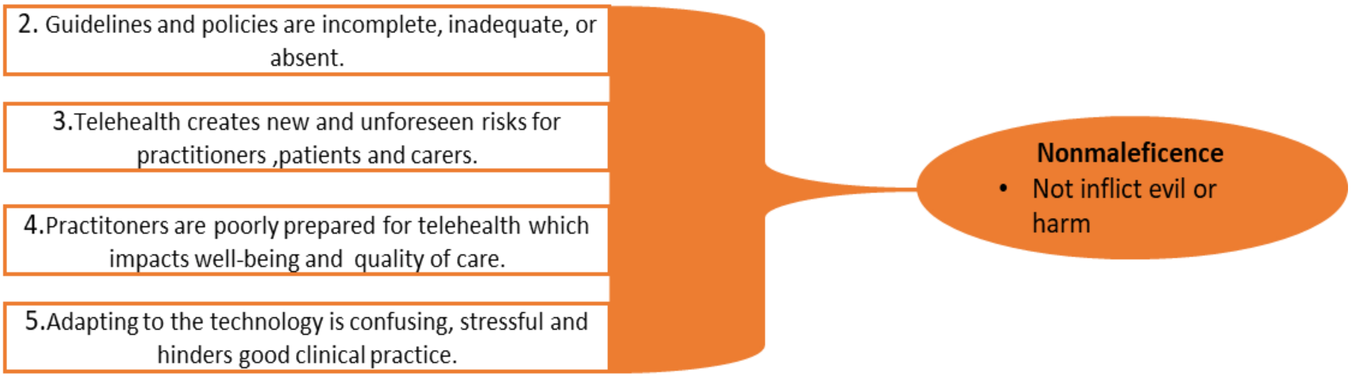


Figure 4.6 Categorisation of Practitioner Data for *Nonmaleficence*

Guidelines and policies are incomplete, inadequate, or absent included themes of policies, guidelines, legal issues, and accountability. All practitioners commented that, regardless of how long they had been practicing, telehealth guidelines, policies and protocols were incomplete, inadequate, or simply lacking altogether:

> *..the ambulance service is actually still developing its policy, so it's only got a fairly small arena at the moment. So, our guidelines cover certain conditions but if those conditions are outside of our guidelines, then we need to call in someone like an extended care paramedic or intensive care paramedic or one of our ambulance services doctors to do that.* (Practitioner 1)

When COVID-19 restricted the use of face-to-face care, practitioners looked to their professional bodies for guidance, or accessed tutorials or training from platform providers, with mixed results:

> *…because there weren't any guidelines - I did look at the protocols that were written up by us from the Australian College of Rural and Remote Medicine, but also I had to speak with a lot of the psychiatrists that had delivered up services via telehealth.* (Practitioner 10)

> *… I think the Health Direct tutorial was quite useful, to have someone show what the different functions are, how to troubleshoot a few things, how to make the most of it. But even now, we don't quite have our processes down, we don't quite have a structure to it, and I think, we're all doing it a little bit different. And just in terms of process , what*

> *do you say at the start of the call, what are we sending to the patients?. It all happened very quickly. No one really had time to prepare the structure for us.* (Practitioner 4)

For occupational therapists providing orientation and mobility services to visually impaired clients, the lack of an overarching professional association was problematic:

> *..because it's so niche there's sort of like a loose association that looks after everything. And they put out a statement. It was really quite broad. It was more like "use your professional discretion as to where it's appropriate to deliver telepractice". A lot of professional associations, high-level government bodies and hospitals were putting out quite a bit of telehealth guidance at the beginning. We found that pretty much none of it was appropriate for our cohort. And we do feel quite alone in terms of not knowing where to go to for that kind of advice, there was not much that we can just kind of grab, adapt it and go from there.* (Practitioner 5)

Telehealth creates new and unforeseen risks for practitioners, patients and carers included themes of *patient and clinician safety*, *the therapeutic space* and *carer's fatigue*. In terms of patient safety, some practitioners thought they still need to be checking "exactly the same safety issues as they would normally". In telehealth, "any inkling" that the people they are seeing, or the topics of conversation that they are discussing "might have safety implications, needs to be addressed and discussed within the first five minutes". Safety is also often mentioned in terms of practitioners' ability to control the home environment, what they see and hear, and what they can influence:

> *…especially with people with mental health issues, in isolated areas, sometimes even over a telelink, you can't always gauge the emotion of the person or what they might do. It's always in the back of my mind that there may be something dangerous or something going on that I don't have much control over. I guess you rely on the person on the other end of the phone to give you that honest opinion. And hopefully they're not putting themselves in a dangerous area.* (Practitioner 1)

Scenarios that had not been encountered in practice before increased anxiety about how to manage unforeseen events and situations:

> *…a lot of negatives were raised at the beginning. A lot of concern, particularly around what you might see the back of the screen in people's pictures, family members walking by, or children, you know, we abide by child safe principles. So those were significant concerns at the beginning. There was a lot of trepidation around that.* (Practitioner 5)

Knowing exactly where patients *are* and how to get help to them if necessary was concerning for psychologists:

> *… I did have one situation of a police officer who contacted me one night, while I was on my way home, and said that she was out in her car and saw no future prospects or purpose for herself. She confirmed that she was suicidal, but she refused to tell me where she was. Fortunately for me, she kept her phone on after that call ended and they were able to triangulate that and find her. If you were dealing with somebody who was living remotely, that would take a lot longer.* (Practitioner 7)

Some suggested that telehealth actually "democratizes" psychological counselling, not just through reducing barriers of geography but by benefiting specific client groups. For example, "those people who are so severely unwell that they just can't drag themselves to a to a psych's office", or people who have agoraphobia. With so many people working remotely during the COVID-19 this has:

> *…. maybe made people much more at ease with doing remote counselling sessions. And perhaps people view in these much-changed times that it's safe. Safer than being outside and coming to a psychologist's office*. (Practitioner 8)

Others mentioned that maintaining close and informed relationships with referrers was crucial for safe telehealth care, and the building of trust between clinicians and vulnerable people:

> *.. I was on the session with a lady. She wasn't in the great space. She then started cutting and sort of harming. So, I called up the GP while I was on the session with her and said, "Can you just do a visual? She comes in, just actually check her over for me. So, it's about having those relationships. And I think that in itself creates a more meaningful relationship between the GP referrer, the client themselves, and you as the clinician, it then creates a greater circle of trust for them.* (Practitioner 10)

Telehealth can have the effect of forcing people to find a safe space for themselves that is a “therapeutic space” within their home, providing a “layer of safety” to be able to talk freely. If a safe space cannot be found, practitioners can gain an insight into some of the issues that a client may not express, leading to more effective and personal care:

> *… if they are at home and there's lots of things going on and they can't talk freely, that then also opens up that sort of rapport building to say,” hey, I noticed this, I'm just checking on you while we're away from the video”, and actually truly ensuring their safety.* (Practitioner 10)

Managing risk with telehealth is mentioned both in terms of *patient and practitioner safety*. Those working with the visually impaired found they had to reduce services because of their client cohort, and only offer “quite standard things”. This was predominantly where environments are particularly dangerous, such as trying to board a train, or use public transport, or there is not the physical support of a family member or carer.

Paramedics manage risk by ensuring a face-to-face meeting first with telehealth clients to understand their history and asses them, prior to setting up a telelink. Providing counselling for clients in rural and remote areas means extra considerations need to be put in place around risk management because “it's much more difficult to get somebody to them”:

> *…I would always be a little bit more concerned about if that person were living, say, in a rural or on a very remote property, especially if they had access to firearms. So, there's a much greater risk with that community than there would be with somebody who was living in a city.* (Practitioner 7)

The potential that they may not be able to “control a situation” was also a concern for psychologists, and making sure they were able to contact, and emergency person was extremely important:

> *… you can't contain them in the way that you would contain them in a room, they could just walk off. And that's why right up front I ask for the emergency contact. So, it's implicitly saying to the person, “if you're going to make threats to yourself, I have a line of action”.* (Practitioner 10)

Unreliable technology or connections means practitioners have to be prepared for situations to suddenly deteriorate:

> *.. I suppose it gives you that little bit more stress because you've got to think a bit quicker when you're on the telehealth just in case the phone line goes down. And so, you're sort of making sure that you've got them at the right place and where they actually are at the time. Gets my heart rate going a bit faster than what it would face to face. It's a bit of an adrenalin rush for the day.* (Practitioner 10)

The safety of the practitioner was also raised, particular with those who had recently become involved with telehealth. Physiotherapists agreed that telehealth was safer for them than face-to-face sessions:

> *..anything can happen face-to-face, you could have someone who's aggressive, and you can have all sorts of things.* (Practitioner 4)

> *..sometimes if the patient is getting a bit agitated in the clinic, then you might feel like, oh, we've got to step back a little bit, for physical safety.* (Practitioner 3)

> *..in terms of my own safety, I'm much safer being here than I am being face to face with someone. So, from my point of view, the clinician's safety aspect, it's probably enhanced.* (Practitioner 2)

Some practitioners were uneasy about "not knowing what's on the other side in terms of filming, taking photos, recording", and feeling unsafe because of that. Others felt more secure by not disclosing any personal information such as their location, or that they were working from home during sessions.

The concept of *carer's fatigue* was mentioned in relation to visually impaired clients, as the preparation of materials for sessions, normally done by a therapist, had to be done by someone in the client's home:

> *…making sure that that person knew what they needed to do to help set up for a successful session was additional communication to not only the client, but the client's support person, whoever that was. And a few practitioners did kind of say like, "oh, gosh, like we're quite weary of carer's fatigue, we don't want to impose too much on someone's carer, or family member, on top of everything else". That was something that*

> *they flagged. But we didn't at that time put together sort of any mitigating strategies around that.* (Practitioner 5)

Practitioners are poorly prepared for telehealth which impacts well-being and quality of care included themes of introduction to telehealth, training, confidence, choice, and challenges. If practitioners are poorly prepared for telehealth, the quality of care they are able to deliver, and potentially their own welfare can be negatively impacted. How practitioners were introduced to telehealth varied widely. For some it developed out of general government policy and funding changes in relation to access to health care for rural and remote areas, due to the "difficulty of getting clinicians up to those regions". Psychologists who were flying into to regional areas to visit clients, then changed some of their practice to offer telehealth, and refined their processes over time. For a rural ambulance service, paramedics were not consulted about the introduction of telehealth and had to develop their own ways of working:

> *..we'd been told that there'd be telehealth, in the major rural hospitals and at some of the stations, but it kind of just happened, and the first couple of times when we were linked in it probably wasn't as good as what it is now. As a paramedic on the road, we don't have a lot of input into it and when we first started, it was a quite ad hoc.* (Practitioner 1)

For physios working in public outpatient clinic, their introduction to telehealth came as a response to the COVID-19 pandemic. They describe it as being somewhat chaotic and stressful, particularly in relation to telling patients "Sorry, this is the end":

> *..one day we came to work, and they said, "that's it, we have to close everything, start calling people". I think because it all happened so quickly with COVID everyone was just focused on getting the function up. And then I think we all felt that it was a sort of "the blind leading the blind rule", just doing what we felt was right.* (Practitioner 4)

Practitioners were worried about the "blow back" from patients and concerns about how they would transition , as well "the whole technology aspect", and the "overwhelming" nature of the change:

> *…I'm pretty good with technology generally, but there's always that element of doubt. I remember it was stressful at the time because it was such a big change. Just calling patients and chatting over the phone, everything is different to face to face. I feel like there wasn't a part that I wasn't worried about*. (Practitioner 3)

For some psychologists, the pandemic threatened their livelihoods if they were not able to “pivot” to a different model of care, facing the options of having to “retire or resign because of the lockdown and no opportunity of work”. One found she could offer sessions later in the day, or evening, which suited clients such as teachers better, but had to learn from scratch. She described the experience as being “a bit of a learning curve“ with “a few terrifying moments”. (Practitioner 6)

Choice for practitioners on when to use telehealth is governed by protocols and risk mitigation both prior to and during the pandemic. For paramedics, it has to be “within certain parameters” and in line with their scope of practice:

> *…we don't personally have a lot of choice. We can't just say “we'd like to do a telehealth”. I myself don't have a lot of scope of practice, but some of the other providers do further up the line. So, it is getting used to the technology and knowing the differences – my preference is always face to face, but that’s not always available.* (Practitioner 1)

Even during the pandemic, public orthopaedic outpatient clinics were still running “a very small amount” of face-to-face sessions. This can be due to language barriers or being “not quite sure what's happening” with patients, requiring some “some face-to-face input”. They do have “a bit of a criteria” to apply in making the decision to bring a patient in “in the context of COVID” :

> *… we’ve got to weigh-up - do they have a lot of comorbidities? Are they a person at risk? Do we really need to bring them to hospital? Otherwise, it’s probably the ones who were in a high amount of pain and not able to really participate much with us over telehealth because of this. I would want to see them face to face to assess, and to see if we can change that within that session.* (Practitioner 4)

As mentioned in **efficiency**, choosing when to offer telehealth can be aligned to resource availability, using it “as a tool for the workforce who are feeling the pressure of trying to be everywhere at once”:

> *….you do get clients who are a bit more demanding, they start to monopolise someone's time. And yet it becomes hard for the individual practitioner to juggle and push back, so telepractice is a really great way for them to be able to say, “I’m servicing your need, but I don’t have to physically get in the car and go and see* you”. (Practitioner 5)

Training is a crucial aspect of preparing for telehealth, and most practitioners accessed either little or no formal training, or training that was inadequate. A paramedic described their training as “very little - really just a half an hour in-service training package online”. While some received “orientation to the platform” they were to use, most learned through their own and their peer’s “shared knowledge”:

> *… in passing in meetings, you might say, “well, this works really well”, or “does anyone else have this problem? How do we get around it?”, it was quite informal. Because I have only come into telehealth recently, I have gone to the Internet, where there's some videos and podcasts of people talking about telehealth and what they find is good. I think for us, we don't really know what works and how to make the most of it at this point, we are trying to make it up as we go*. (Practitioner 4)

Due to the suddenness of lockdowns and the need to get telehealth service up rapidly, the lack of training and formal processes resulted in “shock and doubt” for some:

> *…there was lots of back and forth around “ are we doing this right?” or “maybe we should do this?”, because it was just so out of the blue, not formalized. There was lots of, “oh, are you doing this? We've been doing this” between junior and senior physios. So, there were lots of unknowns.* (Practitioner 3)

Initially, practitioners used platforms that were easy to access, where “*a colleague who had used it, sort of just demonstrated it*”. This was predominantly *Zoom* or Microsoft *Teams*, which may have been used for internal meetings in the past, when there was “less pressure for everyone to be on top of it”. As practices transitioned to more bespoke platforms, provided by government organisations like *Health Direct*, more comprehensive training was organised:

> *…we had a big screen up and we went through how to use the platform. We had a fake patient who was in all of these videos So we could see exactly what it would look like on both ends, and went through a streamlined approach, which I found really good, with some written instructions and processes. There's an abundance of information now that we can refer to*. (Practitioner 4)

A physiotherapist who has been practicing and training others for ten years commented that most telehealth training "focuses *totally on teaching health professionals to use the technology".* While this is a *"great start"* it's also a *"wonderful opportunity for health professionals thrown out of their comfort zone"* to change the way they practice overall:

> *..you can adapt 90 percent of what you do to the platform. You've just got to think it through. The beauty of introducing telehealth is that clinicians are often responsive, and they think, "oh, I need some training". And so, it's a wonderful opportunity to upskill them both in technology and how to actually restructure their conversations, to make it a lot easier for them and easier for the client. And when you do that, you get a "win-win", because they suddenly realize that telehealth works equally as well as when they're face-to-face.* (Practitioner 2)

Self-care was also reported by Practitioner 10 as a mandatory requirement in telehealth training. This was due to the additional layers of complexity added by technology and the need to be more attuned to verbal, rather than physical cues, resulting in greater "mental fatigue".

Adapting to the technology is confusing, stressful and hinders good clinical practice included themes regarding the type and quality of technology, and which to use, technical support and back up. Making decisions about which platforms to use in telehealth consults involves weighing up factors such as accessibility, cost, ease of use for clinicians and patients, reliability, and security from hacking. The predominant platforms used were *Zoom*, *Skype*, *Health Direct,* and Microsoft *Teams,* and applications like *Facetime* and *WhatsApp.* For delivering services in schools, *WebEx* was used. In the public health clinics, the Health

Direct platform became the preferred option and is generally seen as providing good functionality for practices like neuropsychology:

> *…with the Health Direct platform, I can see them, it’s not just telephone. I can share screens, use a whiteboard for doing tests, draw things and can get them to touch things. But there are limits to what I can do – I can’t share physical material.* (Practitioner 9)

Zoom has been widely used, because of its accessibility and it’s seen as more reliable with “better quality and fewer dropouts”, although security levels are problematic. For psychologists in group practice, the decision on what technology to use was often left up to the individual clinician as “everybody sort of had a different view, and they decided not to impose a particular program”. For some, the change to telehealth because of COVID-19 was “overnight” and decisions often “quick and panicking”:

> *…we all suddenly had to embrace this new way of working. I think maybe the concerns about security were overlooked in favour of providing an ongoing service for people. We didn't want to leave people in the lurch. So, my practice still uses Zoom.* (Practitioner 6)

In many practices, clinicians have found themselves having to act as both technology advisors and trouble-shooters for clients:

> *..our practitioners did find that it was quite challenging to kind of quickly learn and adapt to get an idea of how each platform would best work. And for people with low vision or blindness as well, knowing the keyboard commands, that's been really important for the practitioners to be able to quickly advise and troubleshoot ahead of a session. In hindsight, we should have had someone more tech-related jump in rather than using a practitioner who's quite specialised.* (Practitioner 5)

This has a broader impact on individual businesses:

> *….some of the older clients, they don't know how to link in, they have to download all these various things. They don't know how to do that. So, you have to be across so many different things to be able to then direct them on how to use it. You can't help but then run late and you have to then space your appointments out differently as well.* (Practitioner 10)

Practitioners in rural and remote areas have had to be especially nimble in ensuring clients can access the technology, including having back-up plans for when the internet performance is poor:

> *… up in central Queensland, you've got places with very poor reception. Some days there's issues with their internet service going down, in which case then I'll link in at the GP surgery and just ask - "there seems to be an issue up that way today, can they come in and use one of the rooms in the clinic?* (Practitioner 10)

Paramedics find themselves "going back to how we used to do it" if the technology fails. This means trying to continue the call though a "normal telephone link" or

> *…if it's someone in an isolated area, and we have a paramedic near the area we will pay them a face-to-face visit. We don't want to leave it because if it's something where they need to check in on someone every day, their condition can change quite considerably in 24 hours, and we can't get that link up. But it means that some of the crews might be traveling in an hour or two to get to a patient in a rural or an isolated area.* (Practitioner 1)

4.3.3 Beneficence

There were four categories identified from the coding of practitioner data subcategories for beneficence, shown in Figure 4.7:

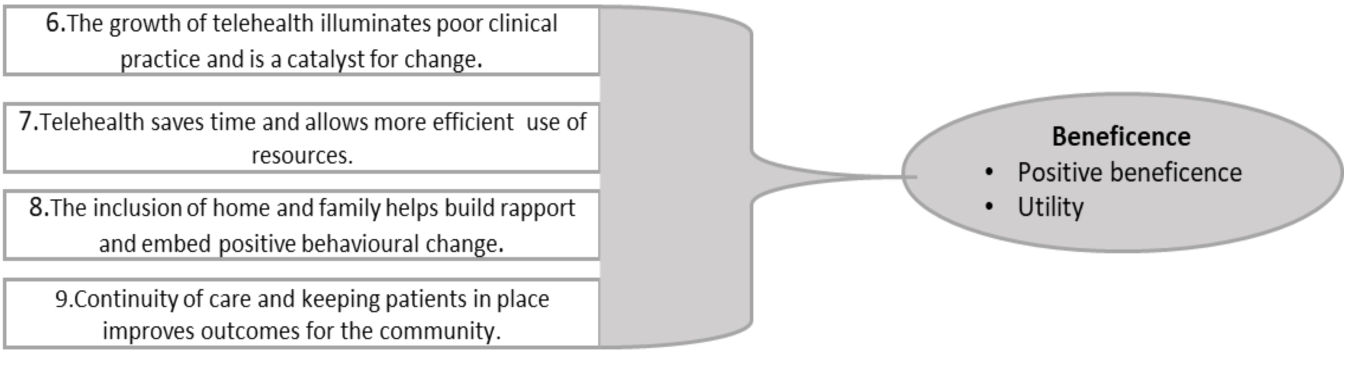


Figure 4.7 Categorisation of Practitioner Data for *Beneficence*

The growth of telehealth illuminates poor clinical practice and is a catalyst for change included themes around the differences between face-to-face and telehealth clinical practice, improving practice and the evidence base for telehealth. There was some disparity in comments around whether telehealth practice required different *clinical* skills or not, with a Physiotherapist who had been practicing for ten years stating that:

> *……the very incorrect assumption that most services make when they think about transitioning to a telehealth consult, is that the way practitioners are practicing currently can just be transferred and will be as effective via a different modality, and for all sorts of reasons, you can't make that assumption. Telehealth is a platform, Telehealth itself, is not an intervention, it's just a delivery vehicle and you can deliver excellent care and appalling care via telehealth.* (Practitioner 2)

She strongly felt that "the modality is immaterial, the content of the consult depends on the skill of the practitioner", suggesting that "it's possible to deliver fabulous telehealth services and appalling telehealth services", because "that's the variety of clinical practice that's out there in the community". One of the "massive issues" that also exists in face-to-face practice and had become "very obvious" in the growth of telehealth, is with documentation and recording systems, as well as inconsistent quality:

> *…it's the same as you've got good plumbers and bad plumbers. Just because you're a plumber doesn't mean that everybody delivers plumbing services in the same way. So, the brilliant thing right now is that telehealth just shines a light on how poor clinical practice is in general, how it can slip below a pretty basic standard.* (Practitioner 2)

A psychologist delivering predominantly rural and remote services for over four years suggested a continuum of clinical skills enhancement helped her refine her practice and develop transferrable skills. This began by "mastering the art" of telephone coaching and counselling, so that when she moved to telehealth practice having a video link "was a walk in the park, comparatively":

> *….that song "New York, New York" came into my mind, "if I can make it there, I can make it anywhere". I'd developed the ability to search for as many nuances in phone sessions - what the client's saying, what the client's not saying, is there a significance to that silence, for example? So, I upskilled in that area and then I utilized that with the telehealth sessions.* (Practitioner 10)

For physiotherapists used to seeing patients in Hospital clinics, and dependent on physical touch, manipulation of bodies and demonstrating exercises, the sudden move to telehealth required some innovative adaptions to their practice. While setting up a video call, moving the camera and communication with clients was not particularly difficult, they found themselves doing “a lot more gestures and mirroring”, showing patients exercises on camera and then asking them to do it. While younger patients found this “pretty easy”, it can be “tricky” for older people, requiring a change to the approach:

> *…in the clinic, I just put my hand on them, turn this way turn that way, this is how I want you to do it, but for the older person, it can be a bit hard. So sometimes I’m finding certain exercises I might have given in a face-to- face situation, I have to revert to a simple one. I have to sort of think a bit more out of the box on how I want them to do something.* (Practitioner 4)

Ways to improve telehealth clinical practice was also reported by some practitioners. Recording and peer review of consultations was strongly advocated by one, arguing that the effective way to improve clinical practice was to “get people to audio record the consult and listen back to an audit on the processes and the skills that they use”. She noted that while the mechanisms for “personal skills reflection” have always been there, there is “very little desire on the health system front to use those mechanisms”, due to clinician reluctance:

> ***…** the resistance comes from clinicians that are not prepared to do it; they feel so threatened by the activity. That's the problem, it's clinician attitudes - they don't think they need to. They think they're going just fine, thank you very much. And most of us, quite understandably, find it would be really confronting.* (Practitioner 9)

From the perspective of a paramedic in a rural and remote area, the ability to access more specialised clinicians would be valuable:

> *…when I can't get an intensive care paramedic or an extended care paramedic out to the scene, if I can telelink to them even via a mobile phone via Skype, showing them what I’m seeing, and I can actually get that information from them, that can better my practice and my care to a patient community.* (Practitioner 1)

Embedding telehealth in practice further would assist paramedics in developing their skills, confidence, and knowledge retention*,* commenting that if they haven't done it for a while, it's certainly “a lot more daunting”. Doing “three or four in a row” is a lot easier “because it's sort of just flows”:

> *…if I or some of my colleagues haven’t done it for a while we have to go back and revisit a little bit as to how…“ what's that guideline that we need to go to, what was the protocol that we need to inform us?”* (Practitioner 1)

One psychologist suggested that if COVID- 19 had a “silver lining” it was to force their practice more into the telehealth space, noting that “psychologists are very wedded to the scientist practitioner model, the empirical evidence is a really important part of it”. The lack of widespread use of telehealth has not provided that empirical support in the past, but the pandemic has reversed the normal evidence-based approach:

> *….it's been one of those things where the experience has been the thing that sort of feeds back into the into the body of evidence. It's now been the experience rather than research that's feeding back through.* (Practitioner 7)

Telehealth saves time and allows more efficient use of resources included themes of costs and benefits, and from a positive perspective is expressed in terms of saving time, better use of resources and flexibility for practitioners. In supporting visually impaired clients, mobility and orientation instructors travel widely and are often “hands-on in the training sessions, with absolutely no availability for any other client”. Telehealth enables them to efficiently deliver services “to someone who's maybe just having a relatively simple aftercare concern”. For psychologists in private practice, the convenience of not having to drive to offices is “a really big positive factor” as is the “quicker turnaround time” of not having to escort clients out and bring the next one in.

For an ambulance service, telehealth frees up both personnel and vehicles, saving a great deal of time, delivering the service “quicker and more efficiently for both the patient and us.”

> *..so, you sort of get some of the jobs that we do rurally might take three or four hours to go and assess someone as opposed, if we can do it through telelink, you can do it over half an hour.* (Practitioner 1)

In public outpatient orthopaedic clinics, there are “a lot of patients” who don’t attend their appointments as it can be “too inconvenient for someone to bring them”. Using telehealth means not only a more efficient service with increased attendance, but one where *“*they're able to do it in the comfort of their own home and actually engage a bit better as well*”.*

Some negative impacts on efficiency where also noted, mainly due to issues with setting up sessions, connections dropping out, or sessions lasting longer than they otherwise would, due to communication issues:

> *…if you know the Internet connection’s bad, if it drops out in and out, that obviously delays the session. If they flip the camera and they don’t know how to get back, then that eats into the session a bit as well. I feel like sometimes we just got to let the patient talk a little bit more over telehealth - with face-to-face, there’s more of the non-verbal cues*. (Practitioner 4)

Funding arrangement and increased overheads were another cost for practitioners, with psychologists expected to reduce fees or “bulk bill” due to Medicare subsidies, while having to pay administration staff to schedule and send out links to online platforms:

> *So basically, effectively, we're working for, you know, half of what that “bulk billed” amount is. Plus, our overheads still remain the same.* (Practitioner 10)

The inclusion of home and family helps builds rapport and embed positive behavioural change includes themes of being able to see patients in the home environment and involve family and carers directly in consults. This is perceived as positive both through the lens of improving rapport, helping to design treatment, and embedding behaviours. For physiotherapists, being able to see how patients move around their own homes was a reported to be a significant benefit:

> *…they’d sometimes say things like “I have a lot of trouble when I'm climbing the staircase or getting out of this chair” and they can actually show me exactly where in the house, or they say – “I've got this exercise equipment. I'm not sure if it's something I can use” -*

> *they go and grab it , and then they can show me how they're using it exactly .We can involve all the family with them so they can also sit in the sessions.* (Practitioner 4)

Involving family in this way can be " a tremendous advantage", as "the client is not necessarily the only influencer" in the process of them adhering to treatment recommendations.

One psychologist commented that younger male clients are particularly benefiting from the use of telehealth in her practice, seeming to be "more verbose, more open, more willing to share" in their home environment. She attributes this to the more casual, familiar setting:

> *… for them, it seems to be maybe a little less intimidating, a little less uncomfortable than sitting in an office in a more kind of like formal setting. And yeah, I think I've been able to make more progress with those couple of young men than I would have without the telehealth.* (Practitioner 7)

Another psychologist noted that, to be able to treat patients with specific conditions such as obsessive-compulsive disorder in their own environment, "may be beneficial" for them to be able to demonstrate the level of the obsession and compulsiveness "in their own space"

Continuity of care and keeping patients in place provides improved outcomes for the community included themes of continuity of care, continuous improvement, feedback, and professional development. In remote areas of Australia where are large distances between major hospitals, health emergencies can lead to long and traumatic travel experiences, involving both road and air transport. Extending telehealth further into those communities can provide a continuity of care and potentially reduce the number of times people need to leave their areas for treatment:

> *..I think we would provide a much better service to people in the community if we could keep them in the loop by telehealth. I think a lot of mental health patients, they kind of get lost in the system, whereas if they knew that they had a regular appointment, someone going to, you know, check up on them, I actually think we would get better outcomes for the patients*. (Practitioner 1)

The ability to offer telehealth during COVID-19 has meant psychologists have kept their practices viable, while continuing to offer care to their clients:

> *…… essentially were it not for telehealth, my practice would have ground to a halt for a good six months and it would have been problematic for me in terms of delivering support to my clients, and to me personally in terms of finances. So, it's been an absolute blessing for me*. (Practitioner 7)

Understanding the client experience to inform continuous improvement is recognised as important by practitioners but has been occurring haphazardly. While acknowledging that "permanent feedback mechanisms" are needed to "build onto monitoring and evaluation", most did not collect client experience data at all. Some physiotherapists mentioned using patient reported outcome measures (PROMs) through an evaluation tool at the first and last session, but this data focuses "more on their function, not on their experience".

4.3.4 Justice

There was one category identified from the coding of practitioner data subcategories for *justice*, shown in Figure 4.8:

Figure 4.8 Categorisation of Practitioner Data for *Justice*

Telehealth alleviates isolation and the distance to care for remote communities included themes of *reducing isolation* and *equity of access*. For rural and remote communities, as already noted, not just access to health services but time spent travelling or away from home and family can be alleviated by the use of telehealth. This also alleviated the *sense of isolation* remote communities have:

> *…..with some we do regular telehealth, and they think it's wonderful because one, they've got someone sort of checking in on them and they're not so isolated, and two, there's someone that's genuinely interested in their health care. A lot of them for a lot of years felt that they were just really isolated. Whereas with telehealth, they can come down for their acute phase, and then are sent back to their home. And that follow up is done from home*. (Practitioner 1)

One psychologist noted that there are there are "very limited" mental health services in regional and remote areas and "none, basically none" in very remote areas. For clients driving "four and a half hours for a fifty-minute session, staying overnight and then driving back", telehealth "saved a whole day of their lives":

> *…it means if you have access to an Internet connection or mobile data, you could live in Timbuktu and still receive mental health services without it being a significant drain on your time and energy*. (Practitioner 8)

Isolation is not just about distance; it can also be about mobility or difficulty in using transport. Regardless, practitioners acknowledge that if they can access the technology and teach both themselves and clients how to use it, and become comfortable with it, "it just opens up a whole new world for access to services for clients that particularly in remote areas, they may not have".

4.3.5 Professional-patient Relationships

Professional-patient relationships requires the provision of accurate information about telehealth to patients, the promotion of mutual understanding and trust, and prioritising the patient's interests over others, including third parties. There were four categories identified from the coding of practitioner data subcategories for the professional-patient relationship, shown in Figure 4.9:

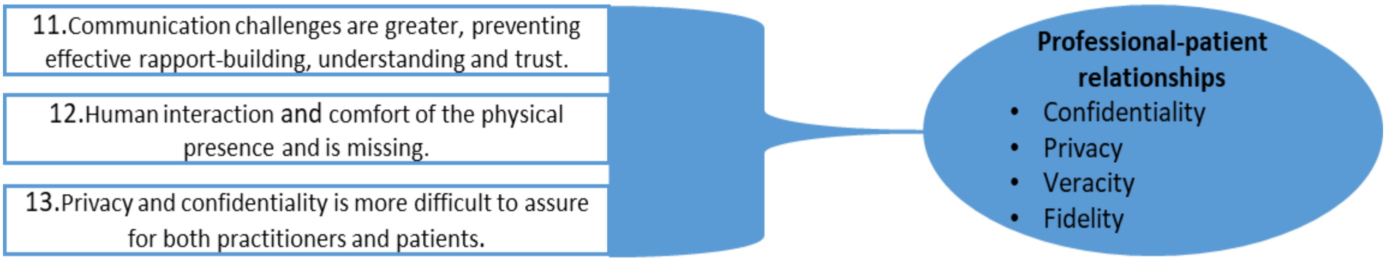


Figure 4.9 Categorisation of Practitioner Data for *Professional-patient Relationships*

Communication challenges are greater, preventing effective rapport-building, understanding and trust included themes of *communication barriers*, the use of *small talk,* and *video versus phone*. Practitioners experienced challenges communicating with clients over telehealth, particularly those who were older, or who spoke a different language. Elderly patients "may not accept telehealth", translators may be difficult to access, and then “you are fairly reliant on the person at the other end giving you the information that you require”:

> *..and if they are a little bit confused about that, that could be a bit of a barrier as well. Even though we try and keep it fairly simple, there's sometimes when we can't communicate exactly what it is. And then we then need to say to that person, well, we couldn't make a proper assessment over this telelink, you need to present at your local health centre or something like that, so that so that we can get someone to actually have a face-to-face meeting with them and just check their wounds isn’t infected.* (Practitioner 1)

The skill of the patient in navigating the technology can also have a significant impact, especially for those involved in physical therapy:

> *..let's say for the older patients, sometimes with the hard of hearing it can be tricky with video, then we'd probably need a family member to be there to adjust the camera for us, and especially the way we want to look at that - they're looking at this view, but we want to look at their feet. So, they've got to be able to change the camera a lot. That can be a task in itself for an older person.* (Practitioner 4)

Even being able to access an interpreter didn’t guarantee a good result, with interpreter’s offices sometimes being noisy. If a consultation needed to be done over the telephone in a three-way call, it brought other challenges:

> *…we can't see the patient; the interpreter can't see the patient. So, we've got to rely on what they're saying. If they're saying it's moving well, then we've got to take that when it might not be*. (Practitioner 3)

Physiotherapists found they had to be very careful about the words they used and how they gave instructions to clients, finding the “words that you use a very important in the way you communicate certain things”:

> *…. instead of saying “lift your arm” I now have to say, “I want you to lift your arm, have your thumb up and turn this way and be in a certain direction”. So, it takes a bit of getting used to... then you might say “imagine you're holding a cup and you want to pour it”, so they can relate it to an everyday task.* (Practitioner 4)

The connection dropping out, unstable platforms, the client's ability to switch off the camera or lags in timing also caused headaches, particularly for psychologists interacting with vulnerable clients:

> *…when you're working with kids or teens and they play around with the video, they switch it over or they pause it, particularly the ones that are into self-harming. And you can hear that they're doing something, and you say, "you need to put the camera back on and I need to see you". That's one of the biggest issues I find.* (Practitioner 10)

Some practitioners found using telehealth during COVID-19 easier, as they could work from home and didn't have to wear PPE, as "wearing our masks and glasses and things can limit communication as well". Some made the choice to use telehealth for that reason:

> *I would find it much more difficult, I think, to be able to interact with a client if their face were completely covered with a mask, as was mine, than if I were using telehealth and I had that visual. I've come back to telehealth because I think that's less intrusive than masks.* (Practitioner 7)

A number of practitioners discussed how their use of "small talk", or introductory communications, to put patients at their ease was impacted by the use of telehealth**.** With face-to-face sessions there is a "natural 30 seconds" when people are moving from waiting rooms into the clinical space where talk about "the weather, or the drive in" normally occurs. Some practitioners felt that, as sessions were taking longer over telehealth, they had less time for "chit-chat, while others spent more time than they would otherwise. Longer time spent was mainly due to orienting patients to the "why and how to use" the technology, or overcoming "the awkwardness of a telehealth appointment":

> *… you sort of spend a bit longer talking about COVID this or that. And I don't know if that's a way of making the patient feel a bit more comfortable via this platform or whatnot. That definitely stems from my own feelings, there's certainly been no recommendation around small talk.* (Practitioner 3)

Some found that the strangeness and potential intrusion of the technology actually enhanced communication, acknowledging that it's "usually a big moment for the client, if it's the first time they have access to this kind of service". Connecting by video for the first time is:

> *..a bit like you suddenly see someone on the street, - "oh, there you are!". And you can smile and joke about it.* (Practitioner 6)

One psychologist found telehealth communication involving children, was "actually far easier", as using technology is "their normal":

> ..*when you're working with those under 12, they're actually far more open straight up than what they are face to face. So, you actually tap into a child much quicker.* (Practitioner 10)

The difference between using *telephone* and *video* for telehealth was mentioned by some practitioners. For physiotherapists, using video was the "closest thing we can get to face-to-face", finding consults where patients are "just giving you feedback or information" over telephone, "presumably less accurate":

> *.. if you wanted to see a patient do a squat, it's a lot easier via a video. It's essentially them being there next to you So, they can watch you, you can demonstrate things for patients, which always helps. Plus, you can actually see them doing, whether it's a movement or an exercise, you can give them feedback straight away.* (Practitioner 3)

For a psychologist servicing rural and remote clients there is "an awful lot that has to happen through telephone that just can't, when you can't see someone".

> *…I had a woman on the phone the other day, and she was very distressed and crying. And I could not interpret how distressed she was on the phone. It was - she's crying, then a silent gap. She was quite not really forthcoming, and I could only guess.* (Practitioner 6)

In comparing a similar situation using video, this practitioner was better able to discern the reasons for the distress – it was about "a distressing situation" – and consequently "I didn't feel so sort of anxious myself about my ability to connect"

Another psychologist in a similar practice saw "no difference" between the two methods, insisting the "outcome measures and rapport building" is still the same. What was different and more challenging for her was “the great mental fatigue” that came from “switching your senses on in a different way”:

> *..when I'm doing video, I'm very switched-on reading their facial cues. When you're on the phone, you actually listen for different sounds within the voice and the intonation, you're then having to use all your senses and draw on the strengths of them to tap into them stronger. You never know what you can get, it keeps you more alert and on the ball. But then there is a great mental fatigue that comes with it.* (Practitioner 10)

Patient demographics, and patient choice can also determine what methods practitioners use. Younger people are “very comfortable to walk around with their phones even and be talking while walking”. Some clients choose telephone over video if they're “set up in bed in their pyjamas and they don’t want the bother of going to get their PC”. For older clients, unused to the technology, telephone is just as effective:

> *…some of them get so flustered that we then just end up doing a phone session. That older age group, they're more comfortable talking on the phone because that is what they are used to. So, the phone system actually works for them.* (Practitioner 10)

Human interaction and comfort of the physical presence is missing included themes of the comfort of a physical presence, human interaction, and the changed nature of the relationship. Most practitioners felt very strongly that face-to-face interactions with patients was superior to telehealth, but many struggled to express *why* that was. For paramedics, physiotherapists, and occupational therapists, being able to touch a patient was integral to the way they delivered care, and to their own identity as health professionals:

> *I feel myself; I can assist someone better if I can actually you know, feel a pulse or, look at their skin and things like that.* (Practitioner 1)

> *…for us as physios a lot of it is seeing one movement from different angles. You can't feel what's happening. They’re saying, “oh, it's sore” and I say, “where exactly?” And they can't quite describe it or tell me exactly where. Whereas if I were face-to-face I could put my hands on it and figure out what's going on with movement. But without us putting our hands on it, it can be a bit tricky.* (Practitioner 4)

> *… I think my biggest worry was the change in the relationships, aside from the physical signs and information that you can get from hands-on assessments and treatments that you can do with your hands, I think it's that rapport that just changes completely when you're not face-to-face. To be honest, that's how I've trained, that's how I've practiced.* (Practitioner 3)

Patient expectations of the service, and *trust* were also raised by one physiotherapist, feeling that using telehealth “takes away from the full treatment that you would normally be giving them”. She could also “build a stronger rapport” and “connect a bit deeper” with patients “through trust with you being able to touch them”.

For psychologists, face-to-face sessions better enabled them to deliver quality care, as there is “something about that that you can't replace with telecommunication”. Some spoke about the value of communication nuances such as facial and bodily cues, “the whole perception”, that is not possible through telehealth.

> *..you can see when one eye slightly raises, that they starting to get that sort of almost light bulb moment that you can keep probing and prodding. When you're in that face-to-face space, you've not only got the facial cues that you're picking up on, but then you've got those bodily cues. And I think that then changes the dynamic of that therapeutic relationship.* (Practitioner 6)

Another psychologist spoke of the” comfort of a physical presence “ in face-to-face sessions and the fact that patients are “with someone whose job is to care, to think about their psychological position”. One believed it is essential when delivering telehealth services that “we're not forgetting that sense of connectivity to each other and other people” because:

> *…it's hard to get warmth across to people and that “caring sort of space”, it's harder for us as clinicians to be able to let them see that you're authentic and real and you're compassionate over a video than what it is face-to-face.* (Practitioner 10)

Privacy and confidentiality are more difficult to assure for both practitioners and patients included themes of privacy, confidentiality, recording of video and audio, and the drivers of privacy concerns. Most practitioners acknowledged that ensuring complete privacy is not possible given “we are on the Internet and it’s only as secure as the server is”. One noted that “in telehealth you can’t always control the environment.” They take various measure to negate privacy concerns from both their and the client’s perspectives though “overt checking” of who is in the room, including “calling it out” if there are interruptions, and “holding people accountable” to preparing as if it were a face-to-face session. One commented that practitioners need to trust what clients are saying, but “you don't have that one hundred percent confirmation that they're alone and that it is private”. Others acknowledge that patients can’t always fully control their own home environment, and see the need for flexibility:

> *..if you know that there's other people around, asking them if they want to continue. “I can hear is there something else going on that's distracting you, do want to proceed today, or should we reschedule?” Just because they're doing it at home doesn't mean that they still don't get ready for it*. (Practitioner 10)

The security of particular platforms or devices was also raised, with a psychologist noting that “you need to be a little bit more careful with confidentiality than in a private clinic”, but practitioners are also reliant on platform providers to upgrade their settings:

> *…there'd be nothing funny about it if I were having a conversation with a client and there was an intrusion from someone. I did feel more comfortable once Zoom increased their security. That happened fairly quickly where they brought in private waiting rooms and passwords to get into sessions.* (Practitioner 7)

All the practitioners have a protocol or process – “a little bit of paperwork that I need to do with them and talk about confidentiality and privacy” – that they follow before commencing telehealth with a client. This includes confirming the client’s privacy arrangements and their own:

> *…I’ll say, “I'm not recording the session and I’d appreciate if you also don't recall the session”. I'm not sharing any personal information on my side, versus the patient is sharing their personal information with me. So, I'm not too concerned in that respect. I live by myself at home, so I'm not concerned that there's someone else in the house who's listening, or you've got a neighbour who's listening.* (Practitioner 4)

Using telehealth also enabled clients to make their own decision about a private space:

> *…one of my clients will quite happily have her session in the car. Because she wants complete privacy and that way, her husband isn't overhearing what's being said.* (Practitioner 8)

Using shared devices like “the family iPad” may also cause concern, but patients “will find a private space”, so it’s “presumed” the conversation remains confidential although “someone may know that they've been talking to their psychologist”.

The topic of what *drives* concerns over privacy in telehealth was raised by some practitioners, who are “not so sure that there are people out there who want to listen to other people's health conversations”. While acknowledging a “*Zoom* bomb” by a third party would be “entirely inappropriate”, some doubt that many patients are actually as concerned as “a lot of legislators are”:”

> *.. the resistance around privacy, and the concerns about privacy I don't think is really coming from patients themselves. I think it's coming from a whole lot of different areas. And I think it's much more coming from health professionals being concerned.* (Practitioner 2)

The emphasis should be on making sure “the platform we use is secure, and the data we hold is secure”, and “that’s about it.” One psychologist found that clients “don't seem to be particularly concerned” that the platform being used is not encrypted”:

> *…I've never had anyone that's sort of shown any issues with that. Most people laugh and say, “look if somebody wants to listen in, go for it. But why would I be interesting to anyone?”* (Practitioner 7)

The issue of recording consultations over telehealth is also somewhat controversial. Some practitioners have had no direction or “any instruction” regarding it and never explicitly state to clients, “I don't record this, this can't be recorded or it's OK to record things”. One physiotherapist commented that a few patients “here and there”, asked if she could record me doing an exercise or a demonstration” for them. A psychologist mentioned that it was more common for clients to ask to record in face-to-face sessions, rather than over telehealth.

A physiotherapist who has been delivering telehealth training for a number of years felt very strongly that one of the “biggest advantages” of telehealth is that it enables recording of consults to be “so much easier and commonplace”. This is “exactly what I would want from my feedback in a training point of view to train health professionals”. The resistance to record, comes not from patients, but from health professional themselves:

> *…. I have recorded numerous face-to face consults with clients over the years, and I've had maybe two clients ever refuse to do it. Most patients are absolutely happy to do it. It's health professional anxiety that's the issue*. (Practitioner 2)

4.4 Results – the Patient Experience

Ten telehealth patients were interviewed between August 2019 and December 2020. Table 4.4 summarises the participant characteristics. Results of the data analysis are presented by first tabling participant demographics, the length of time receiving telehealth services, and the type of services they have received. I will briefly discuss how patients became involved in telehealth, to provide context, followed by the presentation of the data categories, aligned to the ethical framework.

Table 4.4 Characteristics of Telehealth Patient Participants

ID #	**Patient characteristics**	**Time receiving telehealth services**	**Service type**
1	Female, 25-35 years	5 years	Medical (general practitioner), dietician
2	Male, 45-55 years	3 years	Medical (general practitioner and specialist)
3	Male, 55-65 years	12 months	Medical (general practitioner and specialist), psychology, psychiatry
4	Female, 25-35 years	6 months	Medical (general practitioner), paediatrics
5	Female, 55- 65 years	5 months	Medical (general practitioner and specialist)
6	Female, 35-45 years	6 months	Medical (general practitioner), psychology, psychiatry, dietician
7	Female, 55-65 years	5 months	Medical (general practitioner), physiotherapy, diabetes management
8	Female, 35-45 years	6 months	Medical (general practitioner), psychology, psychiatry
9	Female, 25-35 years	6 months	Medical (general practitioner), psychology, psychiatry
10	Male, 35- 45 years	8 months	Medical (general practitioner and specialist)

The participant sample was sourced from five regions of Australia, with experience receiving health services over telehealth ranging from 3 months to 5 years. Six of the ten had only commenced telehealth “out of necessity“ as a response to the COVID-19 pandemic, when public and private clinics closed or severely restricted face-to-face consultations:

> *If you wanted access to health care, that was the only way you're going to get it. You couldn't walk into a hospital if your arm got chopped off, you'd be turned away from the hospital, was my take on it, they were just not open.* (Patient 10)

A young mother with a small child who was unwell had “avoided the doctor” due to fears of exposure to the virus, organising a telehealth consultation instead (Patient 4). Another patient had to use telehealth to ensure continuity of care for chronic disease management:

> *…when we had the COVID I couldn't see my GP and usually I go to him to get the forms signed, to see a podiatrist or physio and the yearly plan that he does, the care plan. I couldn't go in because he wasn't doing any physical appointments.* (Patient 7)

A patient who has chosen to use telehealth for nearly five years faced significant challenges accessing health services due to disability, and decided she would “refer herself to telehealth services”:

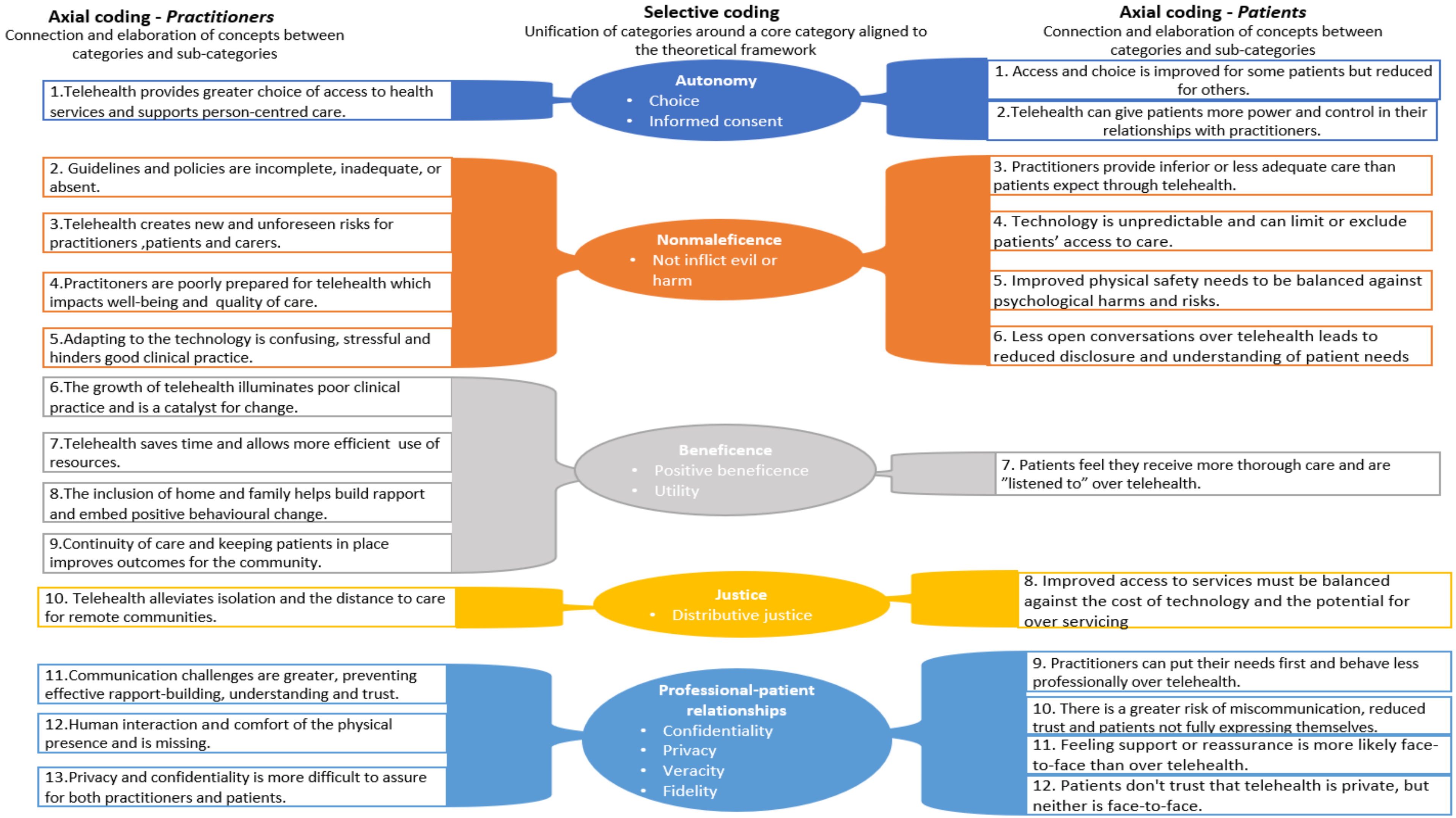
> *…because I am bedridden with my disability, it takes a stretcher ambulance to get me to a health place and even then, it’s a month or 6 weeks of recovery time so it’s not actually practical even though its technically possible to do. Also, I have a lifetime of built-up medical trauma in the way that lots of severely chronically ill people do from being treated badly and what have you, so telehealth is much nicer.* (Patient 1)

The same data analysis and coding process was followed as with the practitioner group.

Data analysis of the practitioner interviews followed the method described in 4.2.7 above. Step 1 of open coding resulted in 107 separate categories of data. Step 2 of axial coding produced twelve categories that are detailed in Figure 4.4.

Step 3 of selective coding aligned the categories with the ethical principles of the theoretical framework. The predominant principles, or core categories, that emerged from the patient data were *non-maleficence*, including not inflict evil or harm, and P*rofessional-patient relationships*, including *privacy*, *confidentiality*, *veracity* and *fidelity*. Both had four aligned

Phase 2 categories or 33% each of the data coded. *Autonomy,* including *choice* and *informed consent*, was the next highest with 16%. *Beneficence*, including positive beneficence and utility and *Justice*, including *distributive justice*, had only one aligned category each, or 8%. Figure 4.104 summarises the coding and categorisation of patient qualitative data, in addition to the practitioner data. I will now discuss each category of the patient data in turn.



Axial coding - *Practitioners*

Connection and elaboration of concepts between categories and sub-categories

1.Telehealth provides greater choice of access to health services and supports person-centred care.

2. Guidelines and policies are incomplete, inadequate, or absent.

3.Telehealth creates new and unforeseen risks for practitioners ,patients and carers.

4.Practitoners are poorly prepared for telehealth which impacts well-being and quality of care.

5.Adapting to the technology is confusing, stressful and hinders good clinical practice.

6.The growth of telehealth illuminates poor clinical practice and is a catalyst for change.

7.Telehealth saves time and allows more efficient use of resources.

8.The inclusion of home and family helps build rapport and embed positive behavioural change.

9.Continuity of care and keeping patients in place improves outcomes for the community.

10. Telehealth alleviates isolation and the distance to care for remote communities.

11.Communication challenges are greater, preventing effective rapport-building, understanding and trust.

12.Human interaction and comfort of the physical presence and is missing.

13.Privacy and confidentiality is more difficult to assure for both practitioners and patients.

Selective coding

Unification of categories around a core category aligned to the theoretical framework

Autonomy
- Choice
- Informed consent

Nonmaleficence
- Not inflict evil or harm

Beneficence
- Positive beneficence
- Utility

Justice
- Distributive justice

Professional-patient relationships
- Confidentiality
- Privacy
- Veracity
- Fidelity

Axial coding - *Patients*

Connection and elaboration of concepts between categories and sub-categories

1. Access and choice is improved for some patients but reduced for others.

2.Telehealth can give patients more power and control in their relationships with practitioners.

3. Practitioners provide inferior or less adequate care than patients expect through telehealth.

4. Technology is unpredictable and can limit or exclude patients’ access to care.

5. Improved physical safety needs to be balanced against psychological harms and risks.

6. Less open conversations over telehealth leads to reduced disclosure and understanding of patient needs

7. Patients feel they receive more thorough care and are ”listened to” over telehealth.

8. Improved access to services must be balanced against the cost of technology and the potential for over servicing

9. Practitioners can put their needs first and behave less professionally over telehealth.

10. There is a greater risk of miscommunication, reduced trust and patients not fully expressing themselves.

11. Feeling support or reassurance is more likely face-to-face than over telehealth.

12. Patients don't trust that telehealth is private, but neither is face-to-face.

Figure 4.10 **Coding and Categorisation of Patient and Practitioner Data**

4.4.1 Autonomy

There were two categories identified from the coding of patient data subcategories for the autonomy, shown in Figure 4.11:

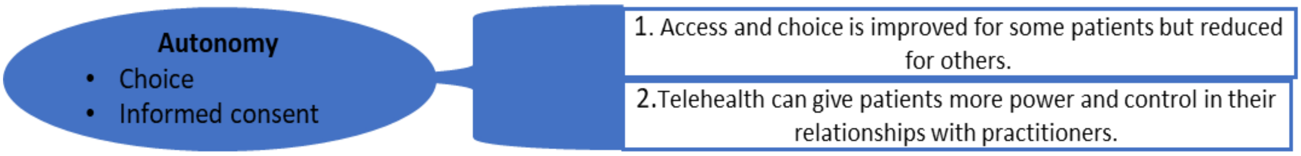


Figure 4.11 Categorisation of Patient Data for *Autonomy*.

Access and choice are improved for some patients but reduced for others included themes of *choice*, *access to services* and *lack of alternatives* to telehealth. *Choice* was linked to convenience for a number of patients, enabling better use of their time and easier coordination of appointments:

> *…I would get up in the morning and think, "oh, look, I don't have to travel today, I just have to wait for the phone call". The convenience of that is really great. You can have back-to-back appointments - last Thursday I had four telehealth appointments in one day.* (Patient 10)

For a mother, whose son is living with a disability, the option to use telehealth made caring choices easier:

> *….on the days when he's not well, it's very hard to get him out of the house. So, having telehealth means he gets the care and support that he needs rather than having to reschedule for a face to face.* (Patient 8)

If distance were a barrier to accessing services, patients valued having the choice:

> *…if I had to see someone in Sydney - that's two and a half hours drive - then telehealth would make sense. And I would probably choose that because otherwise I lose my whole day. I guess it would depend on how inconvenient a face-to-face appointment is compared to a telehealth.* (Patient 6)

The ability to access health services anywhere, even at work, improved a patient's ability to manage their conditions:

> *…..I would just book a meeting room in the office, dial in and do the consultation, walk back to my desk – all done. So, you get the care without having to take an enormous chunk out of your day and then when I got sicker it was just so much better because I just didn't have the energy to do the trip most of the time. So, I was getting the same care, but it was far more convenient, you didn't use up the time, you didn't use up the energy*. (Patient 2)

Another patient felt that the option to access face-to-face care should be "always be available", if patients felt that it was "warranted". Choice should not be at the discretion of health professionals. One patient accessing mental health services was concerned that Governments would perceive telehealth as "a cheaper option", and restrict access to other options such as face-to-face care:

> *…it's definitely good for people to have choices, but I would just hate it to be like, oh, suddenly this is the only the only choice you have. And just because you don't have enough money, you can't do it any other way*. (Patient 9)

For someone who is predominantly bed bound or otherwise severely disabled, the choice is not one between telehealth and face-to-face care, it's "whether or not to use the service at all". With home visits by GPs either "not an option" or "ridiculously expensive", it's "either telehealth or go without":

> *…people often talk about telehealth with the assumption that if telehealth isn't provided then you can access the service the normal way by going to an appointment. I think most people in telehealth, their mental picture of a person using telehealth is someone who lives in the middle of nowhere but could access the service given enough willingness to travel, whereas that's not my situation at all. The alternative for me is no care.* (Patient 1)

Telehealth can give patients more power and control in their relationships with practitioners included themes of patients having more control and power in using telehealth, both in relation to managing their interactions with health professionals, and by having to become more self-reliant. One patient felt less vulnerable when accessing psychological services, finding telehealth:

> *..gives more control over the process for me individually, and for my son. And you're not as vulnerable as in a room, that's their space, that's their domain, they have the power. I can't just leave. On a screen or on the telephone, I can literally just sit back and have a little break and ground myself with my things in my space much easier, much quicker. And if I want to, I can say "I'll be back in five minutes" and just go and get a drink of water, do a quick meditation, check on my son. You can't do that in a room. I could ask, but I'm unlikely to ask for a break midsession if it's face-to- face.* (Patient 8)

Another benefited from being able to engage with a health professional in an environment that suited her therapeutically:

> *… I really like the bush, for me, that's a really calming place, so I'll talk to my psychiatrist there and she's like, "oh, where have you taken me today?" It's sort of nice because I could just take her with me, where normally, I'd have to go to her*. (Patient 9)

Telehealth also permits vulnerable patients to have a support person attend a consultation much more easily. One patient reported wanting to "have the support and consideration of others to help me through, especially when you're having a poor mental health episode". Often friends or relatives are not able "to go with me to the surgery or the GP's office – they have other things happening in their life:"

> *...so, I miss that. Now, if I was at home, I could arrange for a neighbour or a relative to be with me, perhaps over coffee at 10 o'clock in the morning, and say, "would you please sit with me? I'm about to get some news. I don't know whether it's good news or bad news". So quite often I have reflected on the fact that I've come away from a meeting with a specialist at the hospital, or a surgeon, or even from my GP's, and I felt cold. I felt neglected. I felt "that was a bad interview. I've got a bad result. I don't know what to do next".* (Patient 3)

Using telehealth enabled some patients to feel more empowered to take control of their health conditions in new ways. One patient attending group physiotherapy sessions in a gym couldn't under CVOID restrictions, and was offered telehealth instead:

> *….I thought, how can we do this at home? But I was really surprised at how easy it was. He sent us one of those stretch things. I already had weights at home. I went and bought a plastic stepper, and it was exercises that anyone can do, and you don't really need a gym. And I'm getting good results, my sugars are dropping, I dropped a little bit of weight.* (Patient 7)

4.4.2 Nonmaleficence

There were four categories identified from the coding of patient data subcategories for *nonmaleficence,* shown in Figure 4.12:

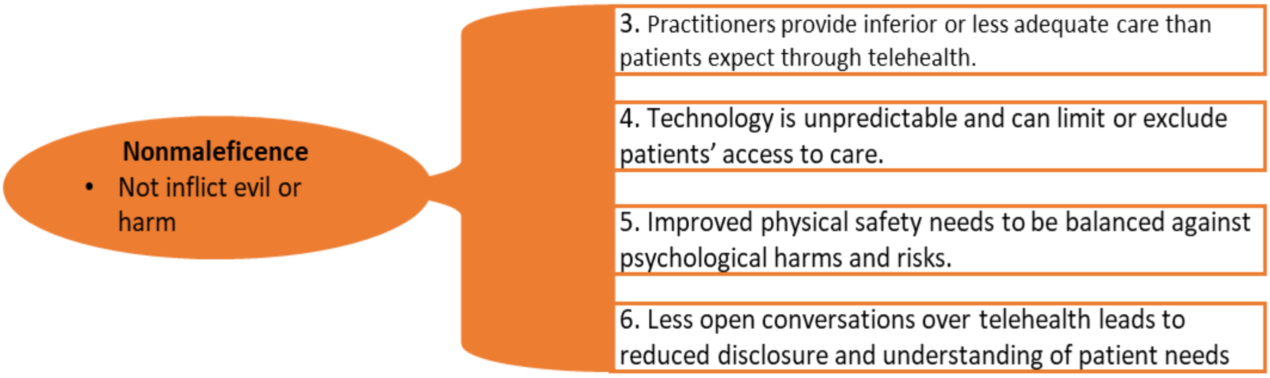


Figure 4.12 Categorisation of Patient Data for *Nonmaleficence*.

Practitioners provide inferior or less adequate care than patients expect through telehealth included patients reporting that “you're not actually getting the same level of care” through telehealth compared to face-to-face. One patient described the care she was receiving from her GP over telehealth as “*rubbish care*”, resulting in her avoiding treatment for her condition:

> *…. she's supposed to weigh me, and she's supposed to be monitoring my blood pressure and my heart rate and all of those other things that get monitored in an eating disorder. And you can't do that over telehealth. And I question how they can say they're providing care when a critical part of care in anorexia is weighing the person. In the early days of moving to telephone, it was a weekly call. But because it's so useless and I just get annoyed and frustrated by having to talk to her, it's been more like every three weeks.* (Patient 6)

Another patient described a telehealth consult with his GP as “just ticking the boxes”:

> *…if you have a telehealth appointment at 9:30 and you know that usual session is 15, 20 minutes or half an hour, with telehealth, they call you 5 to 10 minutes late. You seem to be on and off the telephone call in five minutes. It's very quick. And it seems to be just ticking the boxes, moving the paper and, if it's Medicare, they're billing very quickly and in quick rotation.* (Patient 10)

A patient accessing both allied health and medical care over telehealth reported that her psychologist has been "amazing, super organized, you get the link, you get the reminders, you get the troubleshooting guide, etc". She attributed an inferior experience with her GP to the way medical practices are structured:

> *..GPs have got 15 minutes per patient, whereas the psychologist can manage the flow during the day. They've got four, six clients throughout the day, for an hour. So, it would be good to have some kind of consistency and common procedure. For me, I would feel much more confident and comfortable*. (Patient 8)

Not being physically present with a patient meant that doctor's "miss a lot". The sign of a "good doctor" was to "see the whole person, not just treat symptoms". Important physical or emotional cues like "nervousness or demeanour", are not observed "when all you can see is a talking head". The lack of physical interaction could also lead to misdiagnosis:

> *…. somebody had a video call and then about a month later noticed a growing spot on the face and of course, it was melanoma. Now, if that person would have gone to their GP instead of having a phone consultation, that might have been spotted quicker.* (Patient 5)

One patient reported that telehealth had been "more or less forced upon me and I was pretty negative about it. He was "really very, very sceptical" that it would be "at all helpful, especially for people that had physical complaints". This could lead to people avoiding care altogether:

> *….people haven't gone to their GP or haven't had something checked. And, you know, six months later, they've ended up with, late-stage cancers and things like that. They know this is happening because the cancer rates are down and the rates for everything else is down. That's because people aren't presenting.* (Patient 10)

Patients reported that ***technology is unpredictable and can limit or even exclude their access to care.*** One who has physical disabilities and has relied on telehealth for many years has found it “very hard to predict if it’s a day when the technology is going to work or whether the technology isn’t going to work”. Although she was “used to it”, her concern was that health providers would stop telehealth services altogether:

> *.. other people aren’t used to it screwing up, they’re much more likely to be super frustrated and not know what to do or just want to give up straight away, and I end up having no service at all, which doesn’t help. Health providers are mostly not enormous tech nerds like I am, also, they have alternatives, if it’s too frustrating for someone to provide telehealth services because the technology is crap then the health provider can just get another client – they don’t need me.* (Patient 1)

Other patients reported the likelihood of the technology working was “dependent on the weather too”, as well as “issues with the network or computers being too slow”. The limitations of the platforms used by providers also impacted levels of care:

> *…my physiotherapist, this was the first time he's ever doing Zoom and we were dropping out; he couldn't hear us or he couldn't see us. And the Zoom connection that he had, he said - “it'll drop out after forty-five minutes”. He's getting a free service which shuts down. I thought, well they need to investigate that better because sadly they say, "you have to get off because it's going to close down".* (Patient 7)

When technology “collapses”, patients report not knowing what to do. As well as being disruptive, they feel “excluded” from meetings when audio or video doesn’t work properly (Patient 8). Those with reduced access to a network, or able to only use a mobile phone, found telehealth “limited”, and “becoming too dependent on it is a concern”. (Patient 9)

One patient reported that her son was “on standby” as he has been able to “help me through any glitches” that were relatively minor:

> *…and that's because of my age. This is very new. So, it's a bit intimidating. If I had to do anything additional, then that would concern me. I'd need some help with that. If the system breaks down, I don't know how to fix things. If it's basic and it works how*

> *it's supposed to work, glitch free, that's fine. It's just when problems occur, I don't know what to do*. (Patient 8)

Improved physical safety needs to be balanced against psychological harms and risks included both positive and negative themes. Not having to attend clinics during the COVID-19 pandemic was "a big weight off" for one patient:

> *…it was good because I didn't have to go and expose myself or expose my son to other people sitting in the waiting room. So, I think I felt assured and safe with that level of care and for my son as well.* (Patient 4)

Patients accessing mental health services reported mixed feelings about safety. One felt quite comfortable with her psychiatrist on telehealth but unsafe with her psychologist:

> *…my psychiatrist checks my medication, just asks how my week is. She keeps it quite surface, because if I bring up anything, she's like "talk to a counsellor about that", because she just sees her role as the medical side. And then the counsellor I talk to about deeper issues. So, I think one reason I really didn't feel good talking to her on Zoom is she wasn't there if things went bad and she couldn't help me. She couldn't help me because she wasn't with me, and so it didn't feel very safe.* (Patient 9)

Another patient who was at a "really bad time for me, I wasn't in a great headspace", questioned "how well they could assess my psychological safety over telehealth versus in person, and whether they would be able to pick up that risk". (Patient 6)

Patients reported telehealth being *harmful* in the context of ***less open conversations over telehealth leading to reduced disclosure and understanding of patient needs:***

> *…. I speak a little louder than I normally would. And I am also more aware of how I'm coming across, how I'm wording what I'm saying rather than just speaking off the top of my head or from an emotional place. Is it leading to less genuine conversations and less emotional connection? That's what I wonder. So, I'm very mindful of how I present what I say, perhaps a little bit more so than if I was in a room*. (Patient 8)

One patient reported being frustrated because "all the normal cues you use in conversation, like when to talk" are not as apparent, and "you start to talk, and they have already started to talk":

> *..and it's just awkward and especially if there's any kind of group thing, it's definitely so much harder . And you can't really have a natural conversation like that.* (Patient 9)

One patient has to act as **“**the conduit, the interpreter” while facilitating her son’s appointments with his psychiatrist and his psychologist over telehealth “because he finds very difficult to talk on the phone and especially Zoom”:

> *…and sometimes he'll express himself nonverbally. It will be a position that he takes, or he'll be scratching his head or whatever. And I have to say over the phone, “this is what's happening”. With Zoom, he finds it very, very stressful. So, what happens is, he'll sit to the side. It's his session, but he'll sit to the side and occasionally he'll flick a hand in or the side of his face. But the rest of the time, it's me in the screen for his session. I think it's much more confronting for him because in a room he's able to move around, swivel the chair this way, pull himself back a couple of meters, whereas this is very close and can be really intimidating.* (Patient 8)

Another patient reported feeling “extra pressure” over telehealth, finding pauses in conversation in a room **“**doesn't feel as weird as when someone is just sitting on the other end of a computer screen staring at you”:

> *…so, I feel like, “oh, my gosh, you’ve got to think of the answer quickly”. Especially on a phone. Well, it's just words, and I'm not very good with words a lot of the time, so that feels really stressful to me. You just find that way more exhausting being on this kind of thing, to just being with someone, it's really more draining.* (Patient 9)

Patients also reported the *sharing of home lives*, either their home lives being shared with others, or them seeing into provider’s home lives, as causing stress and concern.

> *….if I'm used to seeing someone in the office and it doesn't look like the office, then I'm sitting there wondering “why are they in a different office or are they at home? And if they're at home, then where are they?” So, yeah, I don't know, I'm sitting there with unanswered questions.* (Patient 6)

Some providers, such as psychologists, attempted to explain changes to their normal environment with anxious patients:

> *…she would always tell me at the beginning where she was. And if it was strange, then she would explain why. Like the time she was in her kitchen. She was having issues with the Internet at home, and it wasn't working in the little studio that she normally uses, so she was having to work in a communal area. Stuff like that is a bit weird, it's too much of an insight into people's lives*. (Patient 6)

One patient reported that her “anxiety increases” at the thought of people seeing into her home if she is unable to “get a background” for a video meeting, because that’s “a very private thing for me”

> *….I have no idea why ,they're just seeing a blank wall, but I feel more vulnerable, more exposed, less in control. Once I had a bookshelf behind me, you know, innocuous. It's just a bookshelf. No - people started commenting and somebody said, “oh, you really love languages”. What? And noting the language books that I had behind me, oh, wow, we're not here to talk about my languages. That's why I shut it down.* (Patient 8)

4.4.3 Beneficence

There was one category identified from the coding of patient data subcategories for beneficence, shown in Figure 4.13.

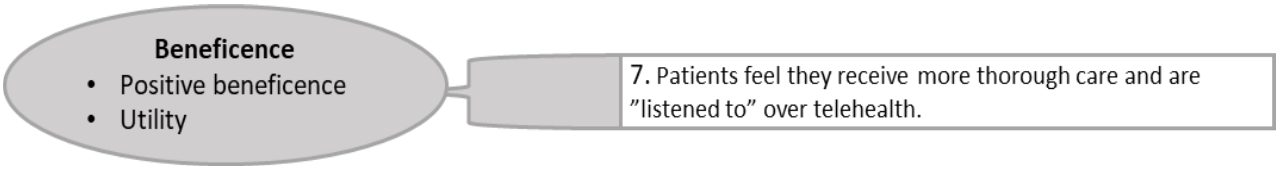


Figure 4.13 Categorisation of Patient Data for *Beneficence*.

Patients feel they receive more thorough care and are ”listened to” over telehealth included themes of *increased flexibility and effort of providers* using telehealth during the COVID-19 pandemic, and *greater thoroughness of clinical care.* Telehealth enabled continuity of care to occur where it otherwise may not have been able to, due to distance or restrictions. It also provided some peace of mind to fearful people in a pandemic:

> *..I found that I wasn't waiting in the waiting room getting restless with a lot of other people. That lack of exposure through using telephone was really reassuring for me. So, my mental well-being has been better for not having to go to the doctor. And my*

> *elderly parents- they're 70 -my dad is not great with the phone. So, having the doctor call at a certain time meant that he's not worrying about having to make the phone call. He knows they're going to call him.* (Patient 4)

A patient with a lung condition reported feeling “very honoured”:

> *…when the specialist rang me from Sydney because she was very busy and in an important role, that was the peak of the COVID in May. And I thought, well, she does care about her patients. She's a really caring doctor because she's got her hand’s full there and she's still caring about her private patients who are so remote.* (Patient 7)

Another patient felt “more listened to “and “really heard” over telehealth, compared to a face-to-face meeting with her GP:

> *They were still really thorough; in fact, I think I've been asked more questions over the phone than I would have been asked in person. With the respiratory tract infection and for my son's cough, there wasn't an opportunity to “place hands”. So those extra questions were covered. I felt I was listened to. I certainly heard the doctor being thoughtful. And I think the focus was on me. I know in the clinic consultation room, it's still focused on the patient, but I just felt like I was really heard.* (Patient 4)

Another patient reported Zoom group sessions with her physiotherapist as “more intimate” on telehealth, but with more opportunity to engage with other patients as well as other providers who were able to attend:

> *…..we've been meeting every week, twice a week for the last two months with a physiotherapist and a doctor. And they were asking me how was I during the week? And I said, “well, I've been having a lot of problems with my eye”. And so, the doctor says, “OK, you can put this on, and you clean that and do this”. And so, you know, I had a free medical consult.* (Patient 7)

4.4.4 Justice

There was one category identified from the coding of patient data subcategories for *justice*, shown in Figure 4.14:

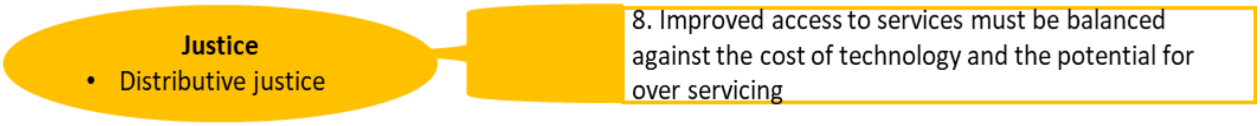


Figure 4.14 Categorisation of Patient Data for *Justice*.

Improved access to services needs to be balanced against the cost of technology and the potential for over servicing included the theme of telehealth providing equity of access to health services for people who may otherwise struggle to do so. Telehealth could be “lifesaving” for those with mental health issues who find it difficult to leave their homes – “they make an appointment and sometimes they just can't get outside the door*”.* (Patient 5)

Physical activity such as strength training sessions over video would also be beneficial for nursing home residents where “the people can’t go to the gym or they're in wheelchairs”. Barriers exist however, for the elderly who “can't use modern technology”, and those who are visually or hearing impaired. Patient 7 believed that people “speaking a different language, or refugees” would “probably be scared” to use telehealth, as it’s “just not culturally suited to them”.

The *cost to access* telehealth was also seen as a barrier to access as participating assumes

> *…that people have access to all the high tech that you need and to the Internet, which is quite costly. We've had to upgrade our Internet to cope with all of this. It's making an assumption that people can afford it and can manage it as well.* (Patient 8)

One patient reported that cost to access video telehealth services was the “biggest downside” for her:

> *….I only have prepaid data on my phone, and I have to hotspot to my computer for the Internet. So, it chews through stacks of data. A one-hour Zoom is nearly a gig of data, so when I was trying to do at least two appointments a week, that was heaps of data that I was chewing through. So, it just adds up in terms of using up the data, which then means I have to pay more for my phone.* (Patient 6)

The concept of *fairness* was reported by patients in relation to sharing of benefits and burdens. Being able to access a variety of technology rather than one preferred or mandated by a health provider was of value to one patient. Another found that telehealth forced doctors to be more strict or careful with their time as they have to initiate calls, rather than having patients waiting in clinics for them. Rural or remote doctors ability to access specialists in city areas for “backup” provided “enormous” benefits:

> *..because many of them feel very isolated and out of their depth. And patients can do their X-rays and their bloods and everything, and the GP can then run it past the specialists by telehealth. To me, that's wonderful.* (Patient 5)

One patient reported feeling concerned about the potential for telehealth to lead to over servicing, in the case of doctors who “had lost 90 percent of their face-to-face consultations” during the pandemic. They could use telehealth to “boost their revenue”, increasing the burden on taxpayers:

> *…. if it's Medicare based, where the taxpayers pay the bill -over servicing to boost your practice in bad times? - to me that's not ethical. People think Government’s money is nobody's money, but it's actually everybody's money. And there could be a very big problem if people can just ring their doctor whenever they want and pay nothing.* (Patient 5)

4.4.5 Professional-patient Relationships

There were four categories identified from the coding of patient data subcategories for *professional-patient relationships*, shown in Figure 4.15:

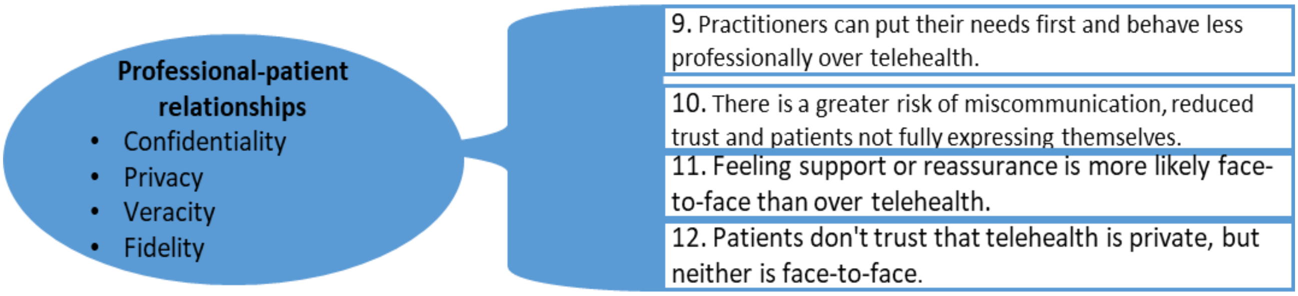


Figure 4.15 Categorisation of Patient Data for *Professional-patient Relationships*

Practitioners put their needs first and behave less professionally over telehealth included themes of *not knowing where providers are*, *wasting patient's time* and *not being adequately prepared* for a telehealth consultation*.*

Not knowing where a health professional *was* during telehealth consultations was reported by patients as being a concern. This was linked to expectations that they gave patients their full attention, as well as issues concerning safety and security. For telephone consultations:

> *… you have no idea where that person is. They can't see you. And even more importantly for me, I can't see them and know that they're speaking to me in a safe and secure environment where I'm actually the person that they're paying attention to*. (Patient 5)

Patients expected that providers would "explain where they are, whether they're at home or in their office, I think it's just good to have a sense of where they are" (Patient 6). One found telephone sessions particularly difficult for that reason, as she "didn't know if they're there or not, you don't know what they're doing" (Patient 9)

One patient stated that health professionals should disclose where they are from a privacy perspective, finding instead that "it's a conversation that just doesn't happen":

> *….I'm assuming that they are in a quiet room with the door closed. I'm hoping that that's always the case, that they're not on a park bench with people walking past or the study room at the library, but who knows where they might be? And there's no disclosure around that, and I think that should be, at least verbally, for them to say, "I am in this particular location, nobody will come in and nobody will overhear this", or if there is a risk of that, to be really upfront about it. I set the confidentiality from my end, so I will close the door, I will let my son know that I will be on a phone appointment for however long. And not to interrupt me, except if it's an emergency. Does that happen on their end? Who knows? That's a big concern*. (Patient 8)

Another patient wanted rules "around *where* a doctor could consult." While acknowledging that during a pandemic "doctors were not going into their clinics for safety reasons",

> *… when telehealth continues, you shouldn't be able to be stirring the pot in the kitchen or supervising your kids or in the car and doing something on your mobile phone with no video.* (Patient 5)

Patients also reported their time being wasted due to poor time keeping by doctors, exacerbated by a lack of technology infrastructure in clinics, and inadequate communication:

> *…look, during COVID things were difficult. But you make an appointment, you don't expect to be hanging around and waiting with the computer. The specialist also was very late and why? I have no idea. I have no idea where that person was*. (Patient 5)
>
> *…. apparently where this surgery is, they've only got two or three Teleconference lines, so the doctors have to use them when they're available and there's 15 doctors there. So, I was waiting for a call to come at 12:00 o'clock and instead he rang me at seven thirty in the morning. You know, the patient has to be warned too.* (Patient 7)

Patients reported health professionals not being prepared for telehealth consults, including being "hopeless" with the technology, allowing interruptions to sessions, or rushing conversations:

> *…just to get out of the way as quickly as possible. "I have your results here. They are..." He didn't check in to say, look, this is unusual for us, how do you feel about it? Are you comfortable with this now?" No – "Hello, how are you? OK, got your results". That's it.* (Patient 5)

One patient reported that lack of confidence by providers using telehealth caused her stress and anxiety, as her GP "still has not been able to get it to work with me" after several months. Other providers also struggled:

> *...the first psychologist was sort of emphasizing to me how little she knew about what she was doing, which I don't find helpful. If someone is helping me, I want them to be confident in what they're doing and not me having to reassure them that they're doing a good job. I think providers need to be comfortable with it, or at least appear to be comfortable with it, and confident.* (Patient 6)

Patients reported “annoying” behaviour by providers such as “leaving the room to go and let the dog out or close a window” (Patient 6). Interruptions with GP consultations also caused frustration:

> *…you'll get a knock on the door and it's a receptionist assuming you're on a phone call. That's cool. You can duck in, do what you need to do and get out. But it breaks the sequence. It breaks the flow. And I'm thinking, where was I and what did I say? Did he even hear anything?* (Patient 8)

There is a greater risk of miscommunication, reduced trust and patients not fully expressing themselves included themes of miscommunication, confusing gaps and silences in conversations, or patients not feeling they could adequately express themselves:

> *…I find it hard to get to the point very quickly. I know what I need to say, but I don't want to be seen by a health care professional as someone that uses Doctor Google, as someone thinks they know better than I do. So, I really want to present with symptoms or my experience and let them connect the dots. So that's difficult to get done because my doctors have become quite polished, you know, “ring the call, notates something in the file, ring off, charge Medicare”.* (Patient 10)

One patient reported that telehealth “didn't seem as though they were real consultations”, or that “the person at the other end was fully engaged” or “really knew what they were supposed to be talking about”. (Patient 5)

Others reported missing out on “a lot” with telehealth, including “the “with-it-ness” from emotional readings and facial expressions (Patient 4):

> *….. especially if it's a phone call, it’s very hard to gauge if they're still interested, if they want to know more, if they're being empathic, if they're confused. You miss out on all that body language and all the micro expressions are completely gone. That's a big worry. And on telehealth, it's hopeless, you're talking over each other and interrupting, it’s easy to lose focus.* (Patient 8)

Another patient reported finding communicating with mental health professionals over telehealth “in general”, very difficult. She is “very sensitive to like vibes or emotions” that she can “pick up more when I'm actually in the room with people”, and found telehealth was akin to a *physical* barrier:

> *..with the counsellor, I just felt like I couldn't communicate with her, the things I needed to. It was just like this big wall in between us that I couldn't climb over, and it just made me feel super awkward. I just find social things so awkward anyway, so anything that makes it more awkward just makes it so much harder for me. I just feel like I need all the cues I can get, and when you remove some of them, it just makes it much harder.* (Patient 9)

Patients also reported the nature of “chatting” or “small talk” with their health providers was altered when telehealth was used. One reported that there was generally small talk with a specialist he knew well, “an exchange before you settle into the consult”, however:

> *…there is none of that on telehealth. I don't feel that I can say anything that I would say in person. It's just a little bit stilted because you're not in the room and you're not used to talking to that person on the telephone.* (Patient 10)

Other patients reported that the lack of small talk made the exchange feel “more professional”, “more efficient and focused” and “more clinical”. This was partly attributed to the protocols around COVID-19:

> *…my GP went through all of the COVID information at the start and sent me for COVID tests twice based on my response. And then it was all very tailored to me, the questioning, but no small talk, even though she knows my mum, my dad and all of that. And it was very, very professional, more so I suppose than if I had been in there*. (Patient 4)

Another patient reported the opposite experience, finding the interaction between the doctor and themselves, “quite unsatisfactory and perfunctory, a bit dismissive, not thorough”. (Patient 5)

For some patients, seeing the provider’s face was important for communication, and they preferred video - “so that you can see where the person is and that they fully engaged with you”- to telephone telehealth:

> *I like the fact that I can see people, I can see their faces, because that's important to me. I've always had a bit of a phobia about talking on the telephone even from when I was young, I just don't like having conversations when I can't see people*. (Patient 6)

One patient found that communication was actually *better* for her over telehealth, and “physically a lot easier”, due to the nature of her condition:

> *…if I was transported by stretcher ambulance to a hospital, by the time you get to see your doctor, in huge amounts of pain and essentially so fatigued that it’s very hard to talk, whereas if I’m communicating to the doctor just like now then I’m in an environment that’s safe and supportive for me, and it doesn’t bother me to talk on the phone or video chat.* (Patient 1)

Feeling supported or reassured is more likely face-to-face than over telehealth was reported by a number of patients, although the reasons for stating this varied. One who is predominantly housebound due to disability preferred it “partly because you don’t have to worry about all the technical stuff”, but also to ease loneliness:

> *…. I think it’s more I don’t get a lot of social contact, I’m isolated, and I like seeing people. Even if they’re just people here for professional reasons. It’s still another human being that you get to see, which is nice, I miss seeing people.* (Patient 1)

Another patient reported that “if it's a case of somebody who has limited mobility or can't get to a doctor for geographic or other reasons” telehealth “is better than nothing”. However:

> *… you can't, in my opinion, replace face- to- face consultations, all the cues that you would get sitting with someone. And I have doctor friends who are the ones who kept going during the pandemic, who insisted on proper precautions, say that you can't beat having somebody sitting in front of you in a surgery. And I agree with that.* (Patient 5)

Providing support or reassurance to patients was more effective face-to-face than over telehealth:

> *….I think that would have been something that would have reassured me, again, that little bit of extra face- to- face, which is missing, because I'm a young mom, I've got a young child.* (Patient 4)

A patient receiving psychological services over telehealth reported “keeping myself in check more, there's more self-care, self-responsibility” when becoming emotional, due to the lack of a physical support presence:

> *…. it's very hard to pick up when somebody is really emotional I've found. And then what do you do with that? You can't give them a box of tissues, a glass of water, a hug. Where we're seen a one-on-one session, you're much more likely, I am, to cry and to express your feelings, and know that you've got emotional support just there, like a meter away.* (Patient 8)

Patients don't trust that telehealth is private, but neither is face-to-face included varying degrees of concern about privacy and confidentiality. For some the risk was either low, or equivalent to a face-to-face consultation. One patient felt there was an important difference between the expectation of “perfect” privacy and the likelihood that no-one would be interested enough to breach it:

> *…. you don’t ever know that there isn’t someone listening at the door when you’re talking to your doctor either. You just assume things are private because that’s usually your experience of it. If anyone ever released hacked Skype recordings, it would be like a million hours of hacked Skype recordings, nobody bothers to just hack XXXXX’s Skype recordings. People looking at the recording, they’d look for celebrities or rich people, no-one actually ever bothers to hack anyone like me.* (Patient 1)

Some providers made concerted effort to reassure patients, moving the computer “around the room, because they were working from home, to try and show me that it was private”:

> *…but I don't know if somebody's got nothing better to do than listening to my conversation. And I kind of feel sorry for them. So, I'm not someone who gets to that fussed about the privacy aspect.* (Patient 6)

Another patient expected that that his specialist would be in the same hospital environment to be able to access paper files, not “sitting in a call centre”. He “assumes and trusts that it is as confidential as it would be in person" (Patient 10). How confidential "in person care" actually is was challenged by one patient:

> *...you know – why do you trust your GP? You've got people who keep a complete record of everything that they've got, they're not IT security specialists. I know how terrible things are and how they put things in the wrong spot, and have no idea what's going on, stuff gets lost, so the security issues are no different*. (Patient 2)

Another patient, who reported once receiving someone else's test results, felt that "privacy and confidentiality has been a factor for a long time, and I don't think the new technology is any more susceptible or liable to breaches than the old method". (Patient 3)

Some patients *are* concerned about the privacy and confidentiality of telehealth, however. One patient stated that "those need to be raised up front and dealt with by the health professional":

> *…and then if the person's not that bothered, you can move on. But the person then at least they have an opportunity to express their concerns or raise more questions*. (Patient 6)

One patient reported being concerned about "the potential for hacking, for people to be listening and about what happens to recordings". She felt that because telehealth is "so new mistakes are going to happen, and we will get caught out at some stage", and that not enough information is provided about privacy:

> *… somebody the other day said, "we don't do Zoom because it's been proven that they are unsafe and insecure". So, I just flashed through the 100 Zooms I've been on and thought "oh, dear, should I be trusting this, where's the research, where's the black and white saying this is trustworthy?" And confidentiality from their end. How is that assured and how do you manage it if there is a breach of that? Do they have to disclose it? How will they disclose it? There're so many areas that have not been looked at thoroughly.* (Patient 8)

Another patient reported feeling "not hugely concerned" about privacy in telehealth, however, didn't completely trust it either:

> *…in the back of my mind, I feel like it's just some big corporation running this. I don't really know what they're doing with everything. I don't really understand how it works. I wouldn't be surprised if there wasn't something bad that would come out.* (Patient 9)

4.5 Discussion

The analysis of qualitative data from 1:1 interviews with twenty telehealth practitioners and patients generated 25 axial coded data categories, which were then unified and aligned through selective coding with the Beauchamp and Childress (2013) framework of biomedical ethics outlined in Figure 3.1 [1]. I will now discuss the comparative experiences of the two groups, and then outline a framework for developing theory of how ethical principles are experienced in telehealth practice.

4.5.1 Comparative summary of the experiences of telehealth practitioners and patients

Patients and practitioners all reported experiencing situations, instances or phenomenon associated with ethical principles while providing or receiving health services via telehealth. However, those reported experiences were slightly or significantly different.

In relation to *autonomy*, both groups reported that telehealth provided greater *choice* to access health services, but patients felt that choice could be limited by demographic factors such as age and ethnic background. Patients also reported an increased experience of *power* and *control* when using telehealth. This suggests that telehealth may be *more* ethical than traditional health service delivery in regard to the first principle.

The principle of *nonmaleficence* requires that health professionals not inflict harms on patients, impose risk of harms, and take “due care”[1]. The data from each group resulted in four categories of coding for non-maleficence. For practitioners, this was equivalent with beneficence; for patients, the reporting of experiences of the risk of harm from telehealth was much greater. Practitioners reported that they were poorly prepared for telehealth regarding a number of factors, including a lack of useful guidelines and training. This was more prevalent in those who had commenced telehealth practice solely as a response to the pandemic. Patients experienced this lack of skill and preparedness as providing of a lower standard of clinical care than they required, but it also resulted in increased levels of stress for practitioners. Telehealth created new risks in practice, particularly for mental health clinicians, who felt they could not always adequately control environmental hazards. Mental health patients also reported feeling less psychologically safe when using telehealth, compared to being physically in a room. Both groups reported that the use of the technology required to deliver telehealth could cause ethical harm through poor user experience, unfamiliarity with the functionality, adapting to different platforms and limited access to support when it failed. From the perspective of not inflicting harm then, the data suggests that telehealth *presents ethical issues,* particularly for patients.

In relation to *beneficence*, practitioners reported more phenomenon of *positive beneficence* than patients, resulting in four categories of coded data, compared to just one. Practitioners reported that telehealth could positively influence clinical practice overall, by highlighting the inadequacies of current systems, such as record keeping. Enabling continuity of care where patients wanted to live, and including family, carers and the home environment in treatment provided benefits to the broader community. Only a third of patients, however, were able to articulate how telehealth provided “good care” for them. This was predominantly reported in the context of the COVID-19 pandemic, where health professionals put additional protocols in place to ensure clinical standards were maintained. The groups reported similar instances of improved *utility* from telehealth; however, as both patients and practitioners were able to save time and resources through not having to travel or physically attend clinics. From the perspective of preventing or removing harm and promoting good, and the balancing of benefits, risks and costs, the patient data suggests that telehealth *presents ethical issues*.

Both practitioner and patient data resulted in one category for *justice,* but the perspectives were different. For practitioners, justice was reported as an increased ability for patients to equally access health services, regardless of distance or physical isolation from care. For patients *distributive justice* was more important. There was a strong concern that costs to access technology was unfair and burdensome for patients, and that GPs in particular, were using telehealth to supplement their income during the pandemic, when there was no clinical need. In regard to *justice* then, telehealth practice may present *ethical issues*.

Practitioners and patients were the most aligned when reporting experiences of *professional-patient relationships*. Categories relating to increased barriers to communication and, the importance and drivers of concerns around *privacy and confidentiality*, were comparable. Challenges to *veracity* in the context of building rapport, mutual understanding, and trust when the physical human presence was absent, were also similar. Patients reported experiences in one additional category, aligned with *fidelity,* or the duty of health professionals to act in the best interests of the patient, rather than putting their own needs first. From the perspective of *professional-patient relationships,* the data again suggests that telehealth *may present ethical issues*, particularly for patients.

The analysis of the qualitative data supports the following assumptions in developing theories of how ethical principles are experienced in telehealth practice:

1. Ethical principles are experienced differently by telehealth practitioners and patients, and these differences can impact the quality and safety of care.
2. Practitioners feel telehealth provides better care overall than patients do, however both reported similar levels of improved utility.
3. Access to telehealth services may not be fair and equitable; increased utilisation may force a greater share of costs and burdens onto patients.
4. From an ethical perspective, telehealth can be more harmful than face-to-face health service delivery as it creates new or increased risk of harms for both patients and practitioners.
5. Building sufficient trust and mutual understanding is equally or more important to patients as privacy and confidentiality.

In the next chapter, I will present a framework of theory development from the data analysis, articulate the theories that emerged from applying the framework, and address the final research question of how ethical issues in telehealth practice can be challenged or re-negotiated through this new knowledge.

CHAPTER 5 – Discussion, knowledge translation and recommendations.

5.1 Introduction

The first research question of this thesis has been addressed by the literature review and document analysis in Chapters 2 and 3, the second research question has been addressed by the document analysis in Chapter 3, and the third research question by a qualitative study presented in Chapter 4. This chapter presents a framework of theory development of ethical telehealth practice, then addresses the fourth research question regarding how ethical concerns in telehealth practice may be challenged or re-negotiated through new knowledge. This chapter concludes with discussion of the four research questions, research limitations, the future of ethical telehealth practice, and recommendations for future research.

5.2 Development of theory of ethical principles in telehealth practice

As outlined in Chapter 4, components of grounded theory methods were used in data collection and analysis of this qualitative study, and subsequently in theory development. Strauss and Corbin's (2008) define theory as:

> *a set of well-developed concepts related through statements of relationship, which together constitute an integrated framework that can be used to explain or predict phenomena*[37]*.*

Their view of theory, while acknowledging “interpretivist views”, is considered by Charmaz (2006) as “much more abstract and explanatory” than her constructionist viewpoint. Strauss and Corbin (2008) consider that a researchers’ interpretation of data is an “unavoidable limitation”. A constructionist approach on other hand, means “more than looking at how individuals view their situations”, aiming to show the complexities of “particular worlds, views, and actions”. The resulting theory is an interpretation, which depends on the researcher's view; “it does not and cannot stand outside of it”[38].

In developing theory of how ethical principles are experienced by telehealth practitioners and patients, I have constructed the theoretical framework presented in Table 5.1:

The structure of the framework puts the “sensitizing concepts and theoretical codes to work” to explain the “conceptual logic and directions” of the theory development[38]. The first two sections of the framework define the ethical principles and their related ethical concepts[1]. The third section orders the coded categories of data into summary theoretical concepts, while the fourth describes the theory that has emerged from the analysis, which is demonstrably “grounded” in data from participants who have experienced the process.

Table 5.1 Framework of Theory Development

Ethical principles and sub-themes[1]	Ethical concepts	Categories of data	Theory
Autonomy - **Choice** - **Informed consent**	Allowing patients to act with self-determination and providing them with meaningful choices in relation to telehealth services.	- Telehealth provides greater choice of access to health services and supports person-centred care. Access and choice are improved for some patients but reduced for others. Telehealth can give patients more power and control in their relationships with practitioners.	1. Telehealth enhances *autonomy* by giving patients greater choice, power, and control in how, when and where they access health professionals.
Nonmaleficence - **Not inflict evil or harm**	Telehealth practitioners must not *inflict harms* on patients but also must not impose *risk of harms* and take *due care*.	- Guidelines and policies are incomplete, inadequate, or absent. Practitioners are poorly prepared for telehealth which impacts welfare and quality of care. - Telehealth creates new and unforeseen risks for practitioners, patients, and carers. Improved physical safety needs to be balanced against psychological harms and risks. - Adapting to the technology is confusing and stressful and hinders good clinical practice. Technology is unpredictable and can limit or exclude patients' access to care. - Practitioners provide inferior or less adequate care than patients expect through telehealth. Less open conversations lead to reduced disclosure and understanding of patient needs.	2. Breaches of *nonmaleficence* can occur in telehealth contexts. Evil or harm may be inflicted on patients if: I. practitioners cannot access appropriate guidelines, training, or support II. risks or threats to safety are not identified and evaluated sufficiently when providing services III. protocols are absent regarding choice of technology, orientation to in its use, and mitigation strategies should it fail IV. clinical care, including an understanding of patient needs, is less comprehensive than that provided face-to-face.

Ethical principles and sub-themes[1]	**Ethical concepts**	**Categories of data**	**Theory**
Beneficence - **Positive beneficence** - **Utility**	The prevention or removal of harm and the promotion of good, and the balancing of benefits, risks, and costs to produce “the best overall results”.	- The growth of telehealth illuminates poor clinical practice and is a catalyst for change. Patients feel they receive more thorough care and are” listened to” over telehealth. - The inclusion of home and family helps build rapport and embed positive behavioural change. - Continuity of care and keeping patients in place improves outcomes for the community. - Telehealth saves time and allows more efficient use of resources.	**3.** Telehealth provides *positive beneficence* through acting as a catalyst for improvements in clinical practice. The inclusion of home and family enhances relationships between clinicians and patients and promotes compliance and behavioural change. Telehealth can improve health and well-being outcomes for the broader community by allowing patients to stay in place and receive continuity of care. **4.** More efficient use of patient and practitioner resources, such as time, money, labour, and infrastructure, promotes *utility*.
Justice - **Distributive justice**	Entitlement to access health care and health-related resources, and fair, equitable and appropriate distribution of benefits and burdens.	- Telehealth alleviates isolation and the distance to care for remote communities. - Improved access to services must be balanced against the cost of technology and the potential for over servicing.	5. Telehealth can improve *justice* for patients who are isolated, or experience a greater distance to care, by providing equitable access to health services. 6. A failure of *distributive justice* can occur if impediments to patient access are not addressed, or if some practitioners use telehealth to gain financial advantage.
Professional-patient relationships - **Confidentiality** - **Privacy** - **Veracity** - **Fidelity**	The provision of *accurate information* about telehealth to patients, promoting *mutual understanding and trust*, and giving the *patient’s interests priority.*	- Privacy and confidentiality are more difficult to assure for both practitioners and patients. Patients don't trust that telehealth is private, but neither is face-to-face. - Communication challenges are greater, preventing effective rapport-building, understanding and trust. There is a greater risk of miscommunication, reduced trust and patients not fully expressing themselves. - Human interaction and comfort of the physical presence and is missing. Feeling support or reassurance is less likely over telehealth.	7. *Professional-patient relationships* can be adversely impacted by using telehealth. The drivers and extent of concerns over *privacy and confidentiality* need to be examined, understood, and effectively addressed. *Veracity* and *fidelity* can be undermined when patients don’t know where clinicians are, feel they are not acting in their best interests, or the lack of a physical presence causes discomfort or insecurity.

The structure of the framework puts the “sensitizing concepts and theoretical codes to work” to explain the “conceptual logic and directions” of the theory development[38]. The first two sections of the framework define the ethical principles and their related ethical concepts[1]. The third section orders the coded categories of data into summary theoretical concepts, while the fourth describes the theory that has emerged from the analysis, which is demonstrably “grounded” in data from participants who have experienced the process.

In constructing the theoretical framework that follows, I also acknowledge the effect temporality may have on the experience of patients and practitioners. Managing the care of a person with chronic illness builds relationships and care continuity over time. Many of the participants in the qualitative research study had been introduced to telehealth very recently and under the stressful conditions of having to change behaviours and practices suddenly in the face of a pandemic. Their experience may change over time as they become more familiar with the technology, mode of care and communication nuances.

I will now address the final research question by discussing how ethical issues in telehealth practice can be challenged or re-negotiated through this new knowledge.

5.3 Defining new knowledge in ethical telehealth practice and comparing traditional and new models of telehealth practice

Figure 5.1 shows the logical structure of the research questions, and the question to be addressed in this Chapter.

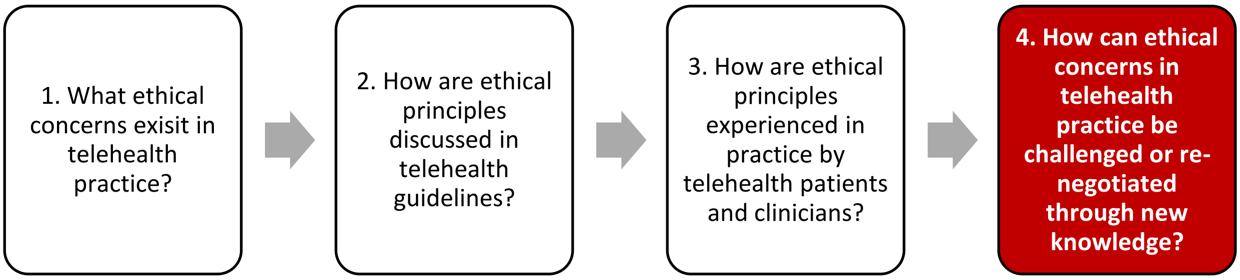


Figure 5.1 Structure of research questions

I will address this research question in three ways:

1. Define what is *new knowledge* in ethical telehealth practice. I will do this by comparing the results of my research with the existing evidence base.
2. Examine traditional models of knowledge transfer in health and compare them with emerging models in telehealth practice.
3. Propose knowledge translation strategies that will support access to new knowledge to improve ethical telehealth practice.

To define what *new knowledge* is in ethical telehealth practice I quantified the amount of data from the literature review, documents analysis and qualitative study and summarised it in Figure 5.2.

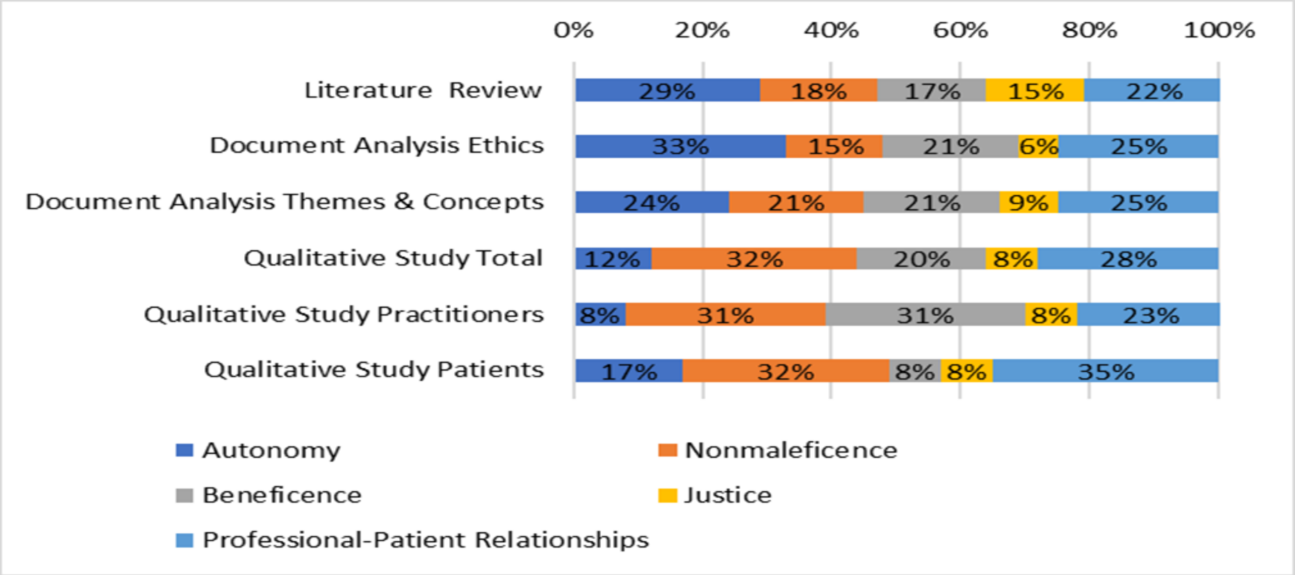


Figure 5.2 **Summary of the Results of Data Collection and Analysis**

The data in Figure 5.2 compares the emphasis and importance given to each ethical principle. It identifies areas of variance between the theory (literature review), the guidelines that are available for practitioners (document analysis), and the experience of clinicians and patients in telehealth service delivery (qualitative study). In regard to the literature review, not all ethical principles are discussed in all papers. For example, Barina (2015) focusses on the professional-patient relationship[41], Parks (2015) on beneficence and autotomy, while Roman et al (1997) discuss all 5 [33, 69]. In total, ethical principles are discussed 118 times across the 49 papers. Figure 5.2 shows the percentage of times each ethical principle is included for discussion, out of the total of 118.

I then summarised the theory, new knowledge, and implications for practice that has emerged from the data analysis comparison. This is shown in Table 5.2.

Table 5.2 Summary of Theory, New Knowledge, and Implications for Practice

Ethical Principle	Theory	Comparison of results	New knowledge	Implications for practice
Autonomy	Telehealth enhances autonomy by giving patients greater choice, power, and control in how, when and where they access health professionals.	1. Substantially less emphasis in the qualitative study than in both the literature review and the document analysis. 2. Patients place more emphasis on autonomy that practitioners do.	Patients experience more control and *power in their relationships* with practitioners, and over the *process of receiving health care*. They *expect to retain the same levels* of power as they had in a face-to-face service. This concept of a patient growth in power builds upon the positive obligation of respect for autonomy.	Practitioners should adapt their approach and practice with patients following COVID or in general to acknowledge and navigate these expectations around power and control. Health professionals have an obligation to assist patients in "achieving their ends, and foster their capacities as agents
Nonmaleficence	Breaches of nonmaleficence can occur in telehealth contexts. Evil or harm may be inflicted on patients if: •practitioners cannot access appropriate guidelines, training, or support •risks or threats to safety are not identified and evaluated sufficiently when providing services •protocols are absent regarding choice of technology, orientation to in its use, and mitigation strategies should it fail •clinical care, including an understanding of patient needs, is less comprehensive than that provided face-to-face.	1. Both practitioners and patients place more emphasis on the potential for harm. 2. The emphasis is also equal between the two groups, although the themes are different.	There are *inadequate guidelines, training or support* provided to practitioners to ensure patients are not exposed to risk of harms. Poor orientation to the technology and lack of skill of the practitioner can *impact good clinical care.* The absence of plans or strategies for handling emergencies or deterioration in a patient's condition can result in *harm for both clinicians and patients*. In a time of crisis however, the good effect of continuing to provide patients with access to care, may outweigh some of the bad effects that arose.	Practitioners should ensure they receive appropriate training in how to provide care over telehealth, including knowledge about the technology. Patients should be supported by orientation to the service, and a thorough and appropriate risk evaluation should take place prior to the first session. Emergency plans and mitigation strategies must be developed. In acknowledging that telehealth can produce benefits, practitioners must also ensure the proportionality between the good effects and the bad effect.
Beneficence	•Telehealth provides *positive beneficence* through acting as a catalyst for improvements in clinical	1. The emphasis on beneficence is	Telehealth can *influence continuous improvement* in other models of health care delivery through	Practitioners can evaluate gaps and opportunities to improve other models of care through telehealth

Ethical Principle	Theory	Comparison of results	New knowledge	Implications for practice
	practice. The inclusion of home and family enhances relationships between clinicians and patients and promotes compliance and behavioural change. Telehealth can improve health and well-being outcomes for the broader community by allowing patients to stay in place and receive continuity of care. •More efficient use of patient and practitioner resources, such as time, money, labour, and infrastructure, promotes utility.	comparatively even between the cohorts. 2. However, there is a significant gap between how practitioners see the potential for telehealth to provide benefits, compared to patients.	identifying poor practice. The inclusion of home and family enhances relationships between clinicians and patients and promotes compliance and behavioural change. This also allows clinicians to see "the whole person", and *tailor care and exercise plans* to the patient's everyday environment. In addition, telehealth provides *utility* for patients, but also for practitioners, who can save travel time, reduce costs and potential expand their practice.	learnings. Observing patients in a home environment can provide insight into the effectiveness of treatment and improve clinical outcomes. Telehealth can enable clinicians to more efficiently run their practices.
Justice	•Telehealth can improve justice for patients who are isolated, or experience a greater distance to care, by providing equitable access to health services. •A failure of distributive justice can occur if impediments to patient access are not addressed, or if some practitioners use telehealth to gain financial advantage.	1. Justice is given more emphasis at the theoretical level. 2. Within the document analysis and qualitative study however, emphasis on justice is equal between the three groups.	During the COVID-19 pandemic, conditions arose where patients could not access face-to-face care under most circumstances, due to concerns over infections. This meant that patients who were technology poor, had language barriers or other concerns around telehealth were not able to access services or had a disproportionate burden of the costs compared to others. This also had the effect of reducing clinician's incomes, with some over servicing to make up the shortfall.	Practitioners should explore factors that will enable them to offer telehealth services to all sections of society. Practitioners should only utilise telehealth when it is a clinical requirement, not to boost or recover revenue.
Professional-patient relationships	The professional-patient relationship can be adversely impacted by using telehealth. The drivers and extent of concerns over privacy and	1. Professional-patient relationships is given the same level of emphasis	Practitioners focus on privacy and consent can be overemphasized at the expense of other relationship issues that are more important to patients.	Practitioners should reassure patients that they have the same level of care for them as in face-to-face consults and endeavour to

Ethical Principle	Theory	Comparison of results	New knowledge	Implications for practice
	confidentiality need to be examined, understood, and effectively addressed. Veracity and fidelity can be undermined when patients don't know where clinicians are, feel they are not acting in their best interests, or the lack of a physical presence causes discomfort or insecurity.	across all results except for one. 2. Telehealth patients place a greater emphasis on this principle than practitioners do.	Professional standards of behavior can be undermined through telehealth, impacting communication, trust and the patient experience. The potential for a conflict of interest to arise in telehealth is greater than in traditional models of care. During COVID-19 this may materialise through the combination of increased availability of funding and a reduction in face-to-face consultations, leading to practitioner's financial self-interest unduly influencing their actions	demonstrate this. They should ensure mutual understanding and allow adequate time for concerns to be addressed. They should confirm their location and surroundings and ensure privacy throughout the consultation.

I will now discuss the data comparison, emerging theory, new knowledge, and implications for practice for each of the 5 ethical principles.

5.3.1 Autonomy

Autonomy was identified as the predominant ethical principle in the literature review in terms of the number of times it is included in papers, at 29% (34/118), compared to the other principles. Within this primary theme several subthemes emerged, including consent, individual choice, independence, empowerment, control, and self-determination. The analysis of telehealth guidelines in the document analysis found that 33% of documents contained references to autonomy[97, 98, 100, 101, 107, 111, 115, 116, 118, 121, 123]. Sub-themes of self-care, engagement, patient-driven choice, and partnership were identified. In the qualitative study, autonomy was raised 12% of the time. Comparing the results of the literature review and the document analysis with the qualitative study provide two phenomena of interest. Firstly, that there is *substantially less emphasis on autonomy in the results of the qualitative study (12%) compared to both the literature review (29%) and the document analysis (33%)*. However, *patients place more emphasis on autonomy (17%) than practitioners do (12%),* in their experience of telehealth practice. This suggest that telehealth practitioners are failing to recognise the value of autonomy to their patients, and the dimensions of that value.

New knowledge from my research suggests that not only can telehealth provide patients with more choice and control about how and where they access health services, it can also give patients more power and control in their *relationships with practitioners*. This is expressed by patients as giving them more control over the process, and more equality of power in their relationships with clinicians. They also expect the same level of control and power that they experience in a face-to-face environment. So not only do they appreciate greater power with telehealth, but they are also not willing to relinquish what they have face-to-face. Practitioners may have to acknowledge changes to the how and where power is held in these relationships between different platforms of communication and how they manage it, in a post-COVID world. From the perspective of Beauchamp and Childress' (2013) theory of biomedical ethics, this concept of a patient growth in power builds upon the *positive* obligation of respect for autonomy. Health professionals have an obligation to assist patients in "achieving *their ends*, and foster *their capacities* as agents"[1].

5.3.2 Nonmaleficence

Nonmaleficence, or preventing harm, in relation to telehealth practice, is included in papers 18% of the time (20/118) compared to the other principles. Examples of telehealth's ability to actively promote safety are identified, lowering the risk in patient care because of the lack of physical proximity of the healthcare worker. The potential for harm is more prevalent however, and includes telehealth equipment such as videophones situated in the home having the effect of stigmatising a person and causing shame or embarrassment; the possibility that professional carers may choose the remote communication rather than delivering care in person in difficult or high needs cases may put clients at risk; and an "undue burden" may be imposed on unwell or frail patients who find the technology intrusive or do not fully understand it's use[31, 33, 40, 45, 48, 50, 51, 54, 55, 59, 61, 62, 64, 66, 71, 73-75, 79, 82, 84, 87] . In telehealth guidelines, non-maleficence is discussed in relation to including adverse effect on care, client advocacy, harm to others, risk of distance, cultural safety, compliance, and clinical safety[2, 97, 98, 100, 103, 107, 110, 112, 113, 115-119, 121, 123]. Comparing the results of the literature review and the document analysis with the qualitative study provide two phenomena of interest. *Both practitioners and patients place more emphasis on the potential for harm* in telehealth practice (32%), compared with the literature review (18%), and the document analysis (15%). This emphasis is also *equal between the two groups,* with patients at 32% and practitioners at 31%, although the themes identified are different. New themes pertaining to nonmaleficence have been identified in my research. The first of these includes inadequate guidelines, training or support provided to practitioners to ensure patients are not exposed to *risk of harms*. Poor orientation to the technology and a lack of skill of the practitioner can adversely impact on good clinical care, and the lack of plans or strategies for managing emergencies or deterioration in a patient's condition can result in harm for both clinicians and patients. Principles of biomedical ethics however, distinguished between harmful effects that arise from an intention to do good. In acknowledging that telehealth can produce benefits, practitioners must also ensure the *proportionality between the good effect and the bad effect*[1]. In a time of crisis, such as a pandemic, the good effect of continuing to provide patients with access to care, may outweigh some of the bad effects that arise.

5.3.3 Beneficence

Beneficence is included in papers 17% of the time (20/118), compared to the other principles, and is usually discussed in conjunction with non-maleficence [31, 33, 45, 48, 53, 55, 61, 62, 66, 71, 73, 78, 79, 82, 84, 87]. These authors note that telehealth has the potential to benefit people by providing assurance, increasing an individual's confidence in managing their health and reducing the dependence on professional carers or family. Sub-themes included improving access, continuity of care, and the ability of patients to be treated in familiar surroundings. Consistency, rights and responsibilities, continuous improvement and supporting clients with disabilities were discussed in telehealth guidelines [97, 98, 100-102, 104, 105, 107, 108, 110, 112, 114, 116-118, 121, 123]. Comparing the results of the literature review (17%), the document analysis (21%) and the combined data from the qualitative study (21%), indicates that the emphasis on beneficence is comparatively even between the 3 studies. However, there is a *significant gap between how practitioners see the potential for telehealth to provide benefits (32%), compared to patients (8%)*. There is new data from my research relating to *positive beneficence* and *utility*. The potential for telehealth to underpin continuous improvement in other models of health care delivery through identifying poor practice, is one, through acting as a catalyst for improvements in clinical practice. While the benefits for patients in staying in their home environment has been noted in the literature [62, 84], the inclusion of home and family enhances relationships between clinicians and patients and promotes compliance and behavioural change. This also allows clinicians to see "the whole person", and tailor care and exercise plans to the patient's everyday environment. In addition, telehealth provides *utility* for patients, but also for practitioners, who can save travel time, reduce costs and potentially expand their practice to other patients. From the perspective of biomedical ethics, beneficence in telehealth practice is most aligned to the rule of obligation *to remove conditions that will cause harm to others*[1]. It does this by influencing improvement in overall clinical practice, improving access to care, and enabling the inclusion of family, carers, and the home environment in care.

5.3.4 Justice

In the existing literature, *justice* is most discussed in relation to fairness concerning equal access to telehealth technology, balancing the needs of the individual with those of the wider community, and ensuring not to disadvantage one group in favour of another[31, 42, 45, 46, 48, 50, 52-54, 59-62, 65, 68, 71, 79, 87]. Justice is most often discussed in telehealth guidelines in relation to access to care and the resource burden of travel and/or time, and also by equity of choice[97, 98, 100, 101, 104, 106, 115, 116, 121, 123]. Comparing the results of the literature review (15%), the document analysis (6%) and the combined data from the qualitative study (8%) indicates *that justice is given more emphasis at the theoretical level.* Within the document analysis and qualitative study however*, emphasis on justice is equal* between the three cohorts at 8%. The new knowledge from my research suggests that failures of distributive justice can occur in unanticipated ways. During the COVID-19 pandemic, conditions arose where patients could not access face-to-face care under most circumstances, due to concerns over infections. This also had the effect of reducing clinician's incomes, with some over servicing clients who could access telehealth to make up the shortfall. Patients who were technology poor, had language barriers or other concerns around telehealth were not able to access services and had a disproportionate burden of the costs compared to others. This is detrimental to one of the material principles of distributive justice: that each person should have the means necessary for the realisation of core dimensions of well-being. It also contravenes the "*fair-opportunity rule"* whereby persons not responsible for "disabilities" such as being technology poor, should receive help to reduce or overcome these barriers[1].

5.3.5 Professional-patient relationships

Just over half of the articles in the literature review identify or discuss the potential "disruption" of the relationship between health professionals and their patients. It is second to autonomy in terms of the terms of the number of times it is included in papers, at 22% (26/118), compared to the other principles. Sub-themes include confidentiality, privacy, and fidelity and the lack of the "human touch' in care[33, 40-42, 44-47, 50, 54, 55, 57-59, 65, 72, 75, 79, 82-84, 87, 89, 130]. In telehealth guidelines, the professional-patient relationship is discussed in relation to integrity, comfort and rapport building, and privacy and confidentiality[97, 98, 100, 101, 103, 105-108, 110, 113-119, 121, 123]. Comparing the results of the literature review (22%), the document analysis (25%), and the combined data from the qualitative study (28%) indicates *that professional-patient relationships is given a similar level of emphasis* across all results. The exception is the emphasis between patients and practitioners, with patients placing a greater emphasis on this principle (35%) than practitioners do (23%). New knowledge from my research is that a practitioner focus on privacy and consent can be overemphasised at the expense of other relationship issues that are more important to patients. Professional standards of behaviour can be undermined through telehealth, which can adversely impact on communication, trust, and the patient experience. From the perspective of biomedical ethics, the potential for a conflict of interest to arise in telehealth is greater than in traditional models of care. In the COVID-19 pandemic there has been combination of increased availability of funding for telehealth, and a reduction in face-to-face consultations, due to lockdowns and public concerns about infection. Patients in the qualitative study have commented that they are receiving (and being billed for) telehealth consultations from a doctor around test results; for example, where a simple call from a receptionist would have occurred in the past. The patient-professional relationship can be adversely impacted in this case where patients perceive a practitioner's financial self-interest as unduly influencing their actions[1].

In the next section I will examine theory of knowledge translation (KT) in health, compare existing KT methods in telehealth practice, and discuss how this new knowledge may be transferred to improve ethical telehealth practice.

5.4 Knowledge translation theory, knowledge translation in telehealth practice, and knowledge translation strategies for this research

Having defined the new knowledge from my research, I will now discuss which methods should be used to transfer this knowledge to practice. Baumbusch et al (2008) note that the gap between "the generation of evidence and its uptake in practice" highlights the need for "effective models" for the transfer of research findings into practice. They argue that crucial to this approach is the understanding that research findings must be translated into "information that is *meaningful* to practitioners". Knowledge translation (KT) should emphasize the critical elements of "reciprocity and exchange" between the "producers and users of knowledge". Focusing as much on the *process* as the *product,* effective translation is a "function of the relationships among the nature of the evidence, the context of the proposed change, and the mechanisms by which change will be facilitated" [131].

Rychetnik et al (2013) define knowledge translation in public health as:

> *Strategies and systems that actively promote and enhance the application of all research evidence in evidence-based policy and practice. Knowledge translation represents the active interface between evidence building and review, and evidence-based policy and practice[132].*

They also propose four questions related to the translation of evidence, that need to be considered in effective knowledge transfer strategies:

1. Are experimental research findings transferable to "real-life"?
2. Can findings from one context or setting be transferred to another?
3. Are findings transferable from one population to other populations?
4. Can small-scale findings be "scaled-up" to large population-wide policies and programmes?

Armstrong et al (2013) describe knowledge translation in clinical and health services contexts as building upon three key methods of *diffusion*, *dissemination*, and *implementation. Diffusion* is generally passive, while *dissemination* is a "more active strategy" to promote the dispersal of "particular ideas". *Implementation* is a more systemic approach to "encourage adoption of evidence and knowledge by overcoming barriers", such as absence of personal contact between researchers and policy makers and practitioners, lack of time and resources, organizational structures, and decision-making processes, timeliness of research, poor quality or limited availability of research, poor reporting of research, and political influence [133]. They identify three different types of KT strategies:

1. Researcher-focused interventions to disseminate research findings
2. Decision maker-focused interventions to change practices and behaviours
3. Interventions comprising partnership between researchers and decision makers to inform policy-level decisions

Rychetnik et al (2013) argue that knowledge translation strategies are underpinned by a 'knowledge-to-action framework', which "distinguishes between knowledge creation and the application of that knowledge in policy and practice settings". This relies on an active interface between research and policy or practice, which may be embodied in persons, such as knowledge mentors or knowledge brokers, or entire knowledge translation agencies with supporting systems, structures, and incentives. Importantly, there is emergent understanding of knowledge translation as a two-way process of exchange between the worlds of research and practice.[132]

Telehealth services, peak bodies and other interest groups who represent the health sector to the government, have developed methods of translating knowledge, and I will discuss several approaches here. At a National level, Scotland had two telehealth *knowledge exchange networks* which merged in 2011 to form the Scottish Centre for Telehealth and Telecare (SCTT). This was done to "engage with and learn from a significantly larger network of individuals, working across a wide range of service settings, and with distinctive professional experience". The SCTT Is an example of a *knowledge translation agency*[132], providing supportive structures "to facilitate the exchange of knowledge and raise awareness of how telehealth and telecare are used". Their purpose is to give staff working in health, housing, social and voluntary sectors "the knowledge base and capacity to develop robust and sustainable services".[134] Their challenge was how to support this Network with a range of activities which could be delivered efficiently "with content that would be relevant, informative and interesting". Some of their methods include the sharing of "updates, resources and news" with the Network members by email and via a community website, the hosting of a "Learning Network Day" and a SCTT conference. They supplemented these KT activities with a programme of webcasts, that were "multi-professional in nature and with an emphasis on exchanging lessons learned", to overcome barriers of distance and funding restrictions. Some of the challenges they noted with this format were the difficulty in accessing webcasts from work computers in the public sector; working with clinical schedules; raising awareness of the webcasts and defining the key information points in each webcast.[134].

In Australia, the *Centre for Telehealth Excellence (CTE)* has developed the *Innovation to Implementation for Telehealth: A Practical Guide to Knowledge Translation in Telehealth***.** This is an adaptation of the same publication developed by the Mental Health Commission of Canada. The CTE Guide focuses on KT activities required for effective telehealth implementation. They define KT as:

> *the process of changing what we **do** to match what we **know** – it is fact-based decision making, where the "facts" are best available evidence.*

On disseminating new knowledge, they advise that determining a method is not “an ‘either/or’ choice – to reach different audiences the take-home message from your KT project may need to use several methods”. They acknowledge that feedback to the stakeholders and participants in the research is “both vital and courteous” and advise an initial stakeholder or consumer forum to share results. They also recommend using White Papers which “can be shared online via a website or through social media”, and formal and informal presentations to key stakeholder groups. The use of peer-reviewed “outlets” such as journals and conferences that attract different audiences, such as “scientific symposia (attended by researchers) and professional meetings for continuing education (attended by clinicians)”, are also recommended.[135]

The Australasian Telehealth Society (ATHS) was established in 2008 to bring “researchers, telehealth practitioners, clinicians and industry partners” together, “providing a forum for sharing of issues” affecting telehealth. They see their role as one influencing both dissemination and implementation of KT. Dissemination, via regular online forums where researchers can present findings, and an annual “peer-reviewed national Success and Failures in Telehealth conference”. This conference is described as a place to “share experiences, interact with peers, share ideas and learn from presentations in the categories of formal research and clinical case reports”. They also seek to influence implementation of KT, through bringing issues to the attention of “decision makers”, recommending guidelines and standards of practice for telehealth services, “ensuring that quality /safety and optimal patient care are maintained, and investigating and influencing policy /legislative opportunities” to integrate telemedicine into mainstream healthcare[136].

The Telehealth Victoria Telehealth Community of Practice (TVCP)is an example of how KT occurs at grassroots, clinician-led, operational level. Initiated with support from Department of Health and Human Services (DHHS), the VTCP audience is “the Victorian health workforce who are involved in implementing, supporting, managing and evaluating telehealth access to their health services”. Like the ATHS they are involved in both *dissemination* and *implementation* activities. Dissemination is achieved through developing “a knowledge hub to support health services in developing consistent practice in the integration and delivery of telehealth”. The VTCP is also a forum for the “collation of ideas and input”, that can be shared with the DHHS to “help inform and support development of telehealth practice, policy and direction"[129]. They provide a discussion forum where members can create topics about telehealth-related issues, post questions and contribute answers and ideas, share resources and information, and search the member database and find contacts. The DHHS can also request feedback on a topic, document, or policy from members. From discussion topics such consultations, coordinating care, data collection and reporting, education and training, technology, and sustainability, working groups are formed to provide recommendations back to members and also the DHHS.

The telehealth practitioners who participated in the qualitative study provided a perspective on effective KT, particularly during the COVID-19 pandemic. Their preferences for dissemination of new knowledge on telehealth practice were communities of practice, their professional organisations, peer review and consultation, collaboration across services, and bespoke guidelines. *Combining communities of practice* across modalities and "tapping into" mainstreams services such as general practice can help learning be shared in a wider forum:

> *…the main thing for us would tapping into those mainstream services and finding out what we can learn from them and vice versa. I think there's a way that we could share resources, but at the moment we don't have those yet. Communities of practice is really, really good way to share, and potentially combining like for like professional services.* (Practitioner 5)

Psychologists felt that their professional bodies had disseminated "a lot of information about using telehealth "in response to COVID 19, including "webinars and podcasts". The peer consultation that is a requirement of their ongoing registration also provided *dissemination* of knowledge from one practitioner to another:

> *I've done quite a lot of my peer consultation via telehealth, and it's played quite a large role in conversations that I've had with colleagues through that period. So, talking to them about how they're using different aspects of telehealth and learning about some of the stuff that's available.* (Practitioner 7)

Collaboration between clinicians who share the same patients, and can act as "knowledge brokers[132]" between disciplines, also resulted in useful diffusion for practitioners in rural and remote areas:

> *…before psychology was approved there were paediatricians, psychiatrists and the other specialties that provide services into those rural areas. And you get to know them. And you build those relationships and then you would talk with them about what they use and do a few sessions with them – "can we just have a chat about this and test this out".* (Practitioner 8)

Successful knowledge translation of the new knowledge from my research requires strategies that encompass methods of diffusion, dissemination, and implementation, addressing the questions of successful translation, and the mechanisms to achieve this. While the generation and diffusion of research is fundamental to the translation of new knowledge, *dissemination* via multiple channels, groups and individuals involved in designing and delivering telehealth services, is crucial in improving ethical practice. These strategies of knowledge translation can support both the transferring of findings from one context or setting - allied health to general practice for example - as well as from one population to another - for example rural and remote to urban. Table 5.3 summarises the approach:

Table 5.3 Strategies for Knowledge Translation

	Methods of translation		
	1. Diffusion Strategy **Focus**: Researcher-focused interventions. **Purpose**: to support the dissemination of research findings.	**2. Dissemination Strategy** **Focus**: Decision maker-focused interventions. **Purpose**: to change practices and behaviors related to the integration of research evidence into decision-making processes.	**3. Implementation Strategy** **Focus**: To create partnerships between researchers and decision makers. **Purpose**: Research is used to inform policy-level decisions.
Mechanisms of translation	**Translation success criteria:** Are experimental research findings transferable to "real-life"?	**Translation success criteria:** Can findings from one context or setting be transferred to another? Are findings transferable from one population to other populations?	**Translation success criteria:** Can small-scale findings be "scaled-up" to large population-wide policies and programs?
How is knowledge delivered?	▪ Peer-reviewed journals ▪ Conference presentations ▪ Social media	▪ Training ▪ Working groups ▪ Forums ▪ Feedback and coaching ▪ Audit	▪ Consultation ▪ Co-design ▪ Standards of practice ▪ Inclusion in curricula
What activities are undertaken?	▪ Published research ▪ White papers	▪ Peer collaboration ▪ Evolution of guidelines, protocols & codes of conduct ▪ Design of bespoke models of care ▪ Intra and cross-community learnings	▪ Policy development ▪ Clinician accreditation ▪ Credentialling
Who is involved?	▪ Researchers ▪ Research participants ▪ Mentoring bodies ▪ Interest groups	▪ Professional bodies ▪ Communities of practice ▪ Individual clinicians acting as knowledge brokers ▪ Multidisciplinary settings	▪ Educators ▪ Policy makers ▪ Regulators

1. The *diffusion strategy* acknowledges that health decision-making is evidence-based and new knowledge must follow the established methods of peer review journals, conferences proceedings and so on. The research participants themselves can be utilised to diffuse the findings to practitioners and health consumer through their established platforms. Social media platforms such as LinkedIn, Twitter and Facebook can be used to bring new knowledge to targeted audiences in an expedited way.
2. The *dissemination* strategy is the crucial mechanism for changing practices and behaviours as well as testing the transfer of new knowledge between contexts and populations. It targets the decision makers at practice, service and also at professional association level, where guidelines and codes of conduct are developed and endorsed. It acknowledges the opportunity to improve practice through less formal translation environments, such as peer consultation, intra- and cross-community settings, and communities of practice.
3. The *implementation* strategy speaks to embedding ethical telehealth practice as part of the health system, involving standards and regulations, inclusion in curricula across a broad range of training and credentialing across nursing, medical and allied health. Co-designing ethical practice at both the strategic and operational level with patients' needs to occur. Knowledge mobilization can also be tailored by impacts like raising awareness, informing policy, and changing mindsets.

There are two additional points to raise here, in relation to *universality* and *best practice*. Firstly, Oborn et al (2013) suggest that the goal of "universality" as a success criterion in knowledge translation ignores "contradictions in histories, cultures and institutional forces". Healthcare policy, design and delivery is political, and often siloed. Knowledge, "unlike water, does not flow evenly but rather is influenced and often constituted by a number of boundaries", which may be "disciplinary or organisational in nature"[137]. The knowledge translations strategies I have proposed assume that practitioners want to improve practice from an ethical perspective, could collaborate and learn from each other, and are able to do so within the structures of their profession or service models. Understanding the nature of the knowledge boundaries in telehealth practice and their effect on the translation process and "the means by which the "gap" is sustained" is important for successful knowledge translation[137] .

The second point is the concept of “best practice”. While ethics has been included in practice guidelines produced by regional, national, or state authorities, and by professional organisations, often these guidelines are general in nature and do not provide sufficient contextual or practical advice. Bespoke guidelines are needed, particularly for models of care when telehealth is emerging. While the principles of ethical practice can be identified in general terms i.e., privacy and confidentiality, what may present a benefit or a “risk of harm” may vary in a psychology consult compared to a physiotherapy, medical or nursing consultation. This approach can be merged with person-centred care and incorporate a co-design process with patients. As one practitioner stated, communities of practice can be “really useful” in translating knowledge but:

> *…you've got to start with a clear articulation about what is an effective consult. And at the moment, the entire health system basically gauges an effective consult on what tests did I do and what did I tell the client that they should do? Well, that's not person-centred care*. (Practitioner 2)

Oborn et al. (2010) argue that future research in knowledge translation may have to deviate from the primary assumption that “there is a best practice out there” that can be defined by a process of biomedical research. Instead there should remain the “analytic possibilities that “best practice” may be socially constructed” and variable, rather than scientifically and empirically determined[137]. They also note that while “epistemic and disciplinary boundaries” exist for successful knowledge translation, so do organisational and jurisdiction ones. One practitioner summarised this challenge as follows. While there is “no gold standard out there” for telehealth practice, the gap for practice is not based in a lack of common understanding of the skill set, the processes, and the concepts; that has “been in the literature for years”. What is challenging for clinicians is “finding support to use that [insight] day-to-day in their practice and adapt it to the needs of the patient. (Practitioner 2)”

5.5 Discussion and recommendations

This final section is a summary discussion of the results of the research, and I begin by specifically answering the four research questions which form the core of the work.

I then return to the central research question, in a discussion which summarises the theory development and suggest possibilities for its extension:

> *How can applying ethical principles in telehealth practice improve service delivery for clinicians and patients?*

This will lead to describing the limitation of the research program, the future of ethical telehealth from a patient and practitioner perspective, and the implications of this research for further research and for telehealth practice.

5.6 Answering the Research Questions

5.6.1 What ethical concerns exist in telehealth practice?

This question was addressed by a systematic literature review which provided an overview of ethical considerations in the use of telehealth in the last forty years. The broad search strategy yielded many initial results but analysis of these resulted in very few articles that actually described how ethical considerations are or may be incorporated into telehealth practice, whether in the home, community, or medical environment. The literature searches returned a small number of studies when qualitative methods had been used to identify relevant ethical issues associated with telehealth practice, and subsequently discussed their potential impact on service quality and effectiveness from the perspective of patients, carers and health professionals. There was also limited evidence on how ethical principles are currently incorporated into telehealth practice[90].

A number of articles provided or suggested frameworks, codes of conduct, guidelines or ethical codes for telehealth practice that may be applied or followed by telehealth nurses, general practitioners, or specialist doctors, but provided little discussion, evidence, or evaluation of how these recommendations are being used to establish or improve ethical telehealth practice.

5.6.2 How are ethical principles discussed in telehealth guidelines?

The second research question is largely answered in Chapter 3 through the analysis of telehealth guidelines using Ritchie and Spencer's (2002) Framework methodology[34]. In identifying, discussing, and aligning the use of ethics, the context of ethical principles and emerging themes in the 25 documents, it was clear that the application of ethical principles is proposed, advised, or recommended in telehealth guidelines. Ethical principles can be identified in all the document groups to varying degrees, predominantly at the national, state, and local level, and at the professional body level. There is a broad acknowledgement, of the "special nature" of telehealth compared to face-to-face health service delivery. While *ethics* is relevant to telehealth practice, the specific meaning of what constitutes *ethical practice* is not clearly defined. Practitioners are often referred back to established professional standards or codes of conduct, developed for more traditional/ historic models of care delivery. There is less prominence of ethics closely related to practice. The distribution and prevalence across documents indicate that the more operationally focused guidelines become, the less discussion or information there is about ethical standards and frameworks. There is also an acknowledgment that specific ethical frameworks should be developed as part of operationalising a telehealth service.

5.6.3 How are ethical principles experienced by telehealth practitioners and patients?

The main intention of the qualitative study presented in Chapter 4 was to explore how ethical principles are experienced by telehealth practitioners and patients in Australia. Telehealth enhances *autonomy* by giving patients greater choice, power, and control in how, when and where they access health professionals. Telehealth provides *positive beneficence* through acting as a catalyst for improvements in clinical practice. The inclusion of home and family enhances relationships between clinicians and patients and promotes compliance and behavioural change. Telehealth can improve health and well-being outcomes for the broader community by allowing patients to stay in place and receive continuity of care. More efficient use of patient and practitioner resources, such as time, money, labour, and infrastructure, promotes *utility*.

Telehealth can improve *justice* for patients who are isolated, or experience a greater distance to care, by providing equitable access to health services. A failure of *distributive* *justice* can occur if impediments to patient access are not addressed, or if practitioners use telehealth to gain financial advantage.

Breaches of *nonmaleficence* can occur in telehealth contexts. Harm may be inflicted on patients if practitioners cannot access appropriate guidelines, training, or support. If risks or threats to safety are not identified and evaluated sufficiently when providing services or clinical care, harm may occur. If an understanding of patient needs, is less comprehensive than that provided face-to-face, patients may be put at risk of harms.

Professional-patient relationships can be adversely impacted by using telehealth. The drivers and extent of concerns over privacy and confidentiality need to be examined, understood, and effectively addressed. Veracity and fidelity can be undermined when patients do not know where clinicians are, feel they are not acting in their best interests, or the lack of a physical presence causes discomfort or insecurity.

5.6.4 How can ethical concerns in telehealth practice be challenged or re-negotiated through new knowledge?

In this final chapter I summarised the theory generated from my research for each of the 5 ethical principles defined in the ethical framework of Beauchamp and Childress (2013) [1]. I compared the results of the three research projects and identified “new knowledge” by comparing the results of my research with the existing evidence base. I then discussed the implications for practice. Theoretical models of knowledge translation in public health were examined and juxtaposed with emerging models in telehealth practice. I proposed knowledge translation strategies that will facilitate access to new knowledge to assist clinicians in delivery ethical services.

5.7 Limitations of the research program

The research program consisted of three distinct approaches:

1. A systematic review.
2. A document analysis.
3. A qualitative study of telehealth practitioners and patients.

Each project has its own limitations which are addressed in the respective individual chapters. This section comments on the limitations of the research program and the entire thesis. The main limitations are:

1. Scope of the Thesis

The intention of undertaking this research was originally to examine the ethical use of telehealth in a focused way. I hoped to compare a cohort of clinicians with a cohort of patients who were participating in delivering or receiving the same service. This approach would produce results that were empirically strong and applicable for that service and allow for a relatively easy and effective knowledge translation. The inability to find an organisation willing or able to partner in a reasonable timeframe led me to broaden the scope of the research by recruiting clinicians and patients from a range of services. However, it may also have diluted the ability to contextualise the findings for a specific organisation.

2. Timeliness of the Thesis

Over the six years of completing this thesis, the use of telehealth in Australia has changed dramatically, particularly over the last 18 months. When I commenced this research in 2016 Government funded access to telehealth was limited to rural and remote services or bespoke State-based services such as medication, or infectious disease management. Rural and remote practitioners had developed models of care and expertise over several years. With the COVID-19 pandemic occurrence, the majority of face-to-face health services were suspended and new cohorts of clinicians – GPs, Specialists, allied health professionals – were “thrown in” to using telehealth. While the rushed nature of pivoting to telehealth meant that services remained available, many clinicians were not well prepared, supported or even enthusiastic to use telehealth. As one physiotherapist said, “there wasn’t a part of starting telehealth that I wasn’t worried about” (Practitioner 3). In some cases, it was “the blind leading the blind” (Practitioner 4). This may have distorted the data to the extent of these practitioners appearing “less ethical” than those who had been practicing for longer, in a way that accentuated the negatives.

3. **Sample size/sample bias**

Limitations in scope, as mentioned above, coupled with the small number of participants who met the selection criteria for length of practice resulted in a somewhat narrow range of experiences since delivering telehealth services. Practitioners were either very new (6 months or less) to telehealth due to COVID 19 or had been practicing for a comparatively much longer time (greater than 2 years). While this disparity was useful in surfacing some of the systemic and longer-term issues for telehealth practice, it presented challenges in transferring the findings more generally to populations. The same applied, although to a lesser degree, with the patient cohort. In terms of the document analysis, timeframes and language were limited due to both scope and resources constraints. While available updates to documents were included at the time of writing, telehealth guidelines continue to evolve as attitude and practices continue to shift in response to the pandemic.

4. **Data collection**

Data collection was limited to qualitative methods. It would have been beneficial to include a quantitative study of a larger group of both patients and practitioners to add further depth to the analysis and potentially form the basis of a broader longitudinal study. Again, this approach was limited by time, resources, and access to research participants.

5.8 The future of ethical telehealth practice

So, what does the future hold for telehealth services? In Australia, at the time of writing, Medicare funding during the COVID-19 pandemic had been extended until the 30th of June 2021, presenting a continuing opportunity to embed telehealth as a truly integral and sustainable part of the health system. How can the “promise” be realised, while avoiding the “peril”[6]? Patients involved in the qualitative study view telehealth as a *choice* or an *alternative* to face-to-face care in the future, relevant in certain circumstances. They wanted telehealth services to be an option for them, more universally accessible, and designed in a patient-centric way:

> *…..definitely continue with the Medicare funding for this, but also you need to upgrade the technology, knowledge, and access to the resources, etc. for people who*

> *can't afford it but want to participate in telehealth, because they're the most vulnerable and can need telehealth the most. But you're not going to go off to McDonald's for the free Wi-Fi or book a computer at the library for an hour to get your telehealth session. So, access and equity and continuity and choice, but also, working on privacy and confidentiality and ensuring that can happen so that we feel more confident.* (Patient 8)

They also wanted greater consultation and control over *how* services are delivered:

> *..sometimes I'm just sent an SMS saying your next session will be via Zoom and I think," wait a minute, I didn't even get a say here?". How about "would you like A, B or C?" Because it's actually* ***my*** *session.* (Patient 6)

Some "minimum standards" and "more research about how safe this is" is also expected by patients. They don't want to "lessen that face-to-face contact" and "that connection you have" with health professionals (Patient 4), particularly for physical conditions that "require an examination, or you have a concern about" (Patient 10). Continuity of care is crucial. Telehealth can be "very, very useful" for "little things" such as ongoing routine consultations, requests for prescriptions, or blood test results, if you are an established patient of a practice:

> *…but not if you are at a medical centre where you see any doctor that's around. Or if you don't have an ongoing relationship, I'm concerned.* (Patient 5)

From a patient perspective, the future of ethical telehealth practice is a focus on autonomy, increasing the benefits, reducing potential harms, improving access, and maintaining quality relationships with care providers. From the practitioner perspective, research, and learnings from telehealth expansion during the pandemic, has produced more targeted recommendations on how to improve ethical practice in specific clinical areas. Baumes et al (2020) compared the ethical codes and guidelines of different, but related, fields of practice and potential implications for telepsychology. They recommend practitioners receive appropriate training on the technologies used in telehealth, as well as "clinical skills specific to telehealth-based therapy". Addressing the safety of a practitioner's and client's environment, having the required equipment, assessment of a client's suitability for telehealth as well, privacy and a "suitable space" are all advised [138] .

Fleming et al. argued in 2009 that “technology is neither inherently ethical nor unethical”:

> *Rather it is the means by which the technology is implemented that impacts the question of appropriate utilization. As healthcare technology permeates our daily practice of healthcare, we become more dependant and are at risk of becoming more technology centric than patient centric. For healthcare providers to remain focused on their primary goal, a studied and balanced approach must be taken that will allow the introduction of innovative interventions, without losing sight of the patient*[50].

This understanding and focus on the primary goal of the practitioner, coupled with an evidence base of what is important in ethical telehealth, is the key to improving practice. As one of the qualitative study practitioner participants argued, “telehealth is not unethical, clinicians are unethical”. Thus, the choices individual practitioners make, and their attitude and beliefs about the way they deliver care overall, is crucial:

> *… clinicians were unethical when they didn't use telehealth and they'll be unethical when they use telehealth, ethical clinicians will be ethical when they're using face to face, and they'll be ethical when they use telehealth. Ethics comes from the clinician and their perceived beliefs and expectations about what their role is in the patient's care. And unfortunately, in the health system, a lot of clinicians really see their role as, “well. I'm here to assist you and tell you what to do”. And that's woefully inadequate when you are the consumer of that service. It's got to do with ethical challenges when you run a huge health system, which is complex and difficult and not straightforward. And there's often no one prescribed way, which means that it’s about the way* ***you*** *choose to run a service or the decisions* ***you*** *make as a health professional.* (Practitioner 1).

This view that resistance or barriers to ethical telehealth practice come from clinicians, who feel “threatened” or “confronted” is not fully borne out by other practitioners. A number speak of the future of telehealth “being dictated by the patient” (Practitioner 3), and “tapping into the convenience factor for the client” (Practitioner 5). One psychologist felt that “for younger clinicians coming through, it’s going to be their new normal”. She still saw an area of caution similar to that expressed above by Fleming et al (2009) about not “losing sight of the patient” and staying focussed on that primary goal of care:

> *….it's ensuring that whilst we're delivering telehealth services, we're not forgetting that sense of connectivity to each other and other people, because it's hard to get warmth across to people and that caring sort of space, it's hard for us as clinicians to be able to let them see that you're authentic and real and you're compassionate over a video than what it is face- to- face as well. So that may be a future limitation?* (Practitioner 10).

5.9 Recommendations for future research

The COVID-19 pandemic has created a great opportunity for telehealth to expand and become more sustainable in Australia, as well as elsewhere in the world. Research continues to better understand learnings from the increased telehealth practice stimulated by the pandemic.. Professional bodies, particularly psychologists, have lobbied for Medicare funding to remain for telehealth services post-COVID. Patients have expressed a desire to continue to access telehealth services, in some circumstances. There are three areas where I would suggest future research into telehealth ethics would add value:

1. **Qualitative comparisons of the experience of patients and clinicians in like-for-like clinical settings.** For example, my research has included psychologists, physiotherapists, and occupational therapists as a general clinical group. Further research in specific clinical settings would enable the development of an evidence base that can be used to produce bespoke guidelines to clinical practice areas or models of care where telehealth has been an absent, underutilised, or restricted model of care.
2. **Further data on the experience of patients and the requirements of co-design processes for telehealth practice**. The themes of patient-centred care, patient choice and flexibility of access to care were prominent in the qualitative study across a number of ethical principles, particularly autonomy, beneficence, and non-maleficence. It would be valuable to research further how patient-centred care principles and ethical principles intersect in theory of service delivery, and what variables may apply specifically to telehealth practice.
3. **Further research on ethical health practice overall.** There are several learnings for telehealth research that can be utilised further and translated into broader health care settings, particularly in defining what “ethical practice” may be. For example,

both patients and practitioners expressed the view that privacy and confidentiality concerns are not always treated seriously in face-to-face health care delivery. From the perspective of justice, the burden of access to care in terms of distance, time, resources, and convenience has been acknowledged in Australia in relation to rural and remote communities. However, several patients have raised this as a concern in urban settings too, in relation to disability, access to transport, or work-life balance.

5.10 Conclusion

This research has added to the existing knowledge of ethical telehealth practice by developing new theory and providing a useful framework for policy and practice. The process I have followed is summarised in Figure 5.3:

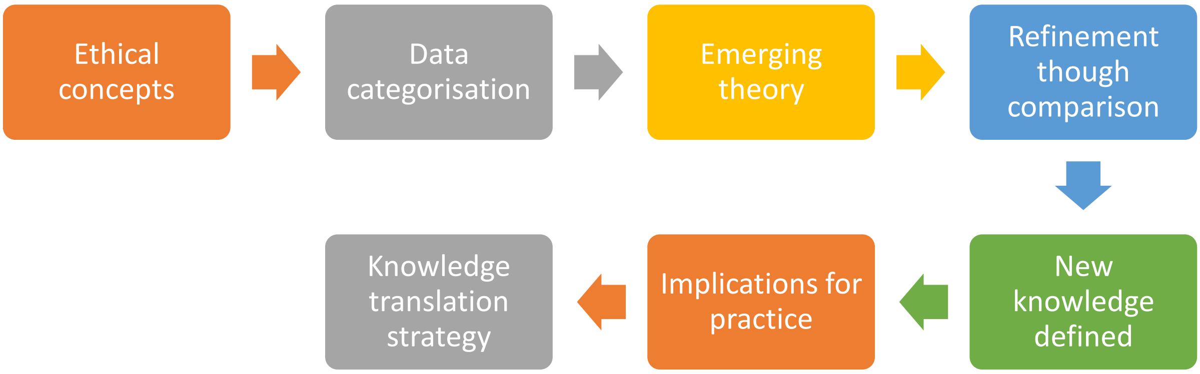


Figure 5.3 **Theory Building Process**

In conclusion, this thesis has demonstrated the following points:

1. Applying ethical principles in telehealth practice is *important to the expansion and sustainability of such services.* Ethical telehealth practice has been researched over the last thirty years however translation of research findings into practice has been challenging.
2. While telehealth practice guidelines acknowledge the need to incorporate ethical principles in designing and delivering telehealth services, *consistent and comprehensive definitions of ethical care or best practice are lacking*.

3. Some ethical challenges in telehealth are different to face-to-face practice. However, it is not simply the use of technology in care that defines this difference. The definition of ethical practice and ethical care is much broader and linked to philosophies and methods of patient-centred care which have been based on face-to-face service delivery.
4. I have developed theory which defines the key areas of telehealth practice where ethical issues may arise, and where they may be dissimilar for practitioners and patients. Utilising this theory can assist practitioners align their own view of what constitutes ethical practice, with that of their patients.
5. Knowledge translation in telehealth is crucial to improving practice. Having the right mechanisms in place at the regulatory, professional, multidisciplinary and grassroots level is critical. I have demonstrated that my findings are sufficiently defined to be useful in broad practice setting and context, and with diverse populations.
6. There needs to be a shift from the focus of applying ethical principles in telehealth practice that are based on medico-legal frameworks to a more patient-centred care approach. This is particularly relevant in the case of professional-patient relationships where privacy and confidently are given precedence over other factors that also pose a risk to both patients and clinicians.
7. Further qualitative research into specific service contexts that includes practitioners and patients is needed to add to the results of my research to contextualise findings for specific applications, which will be more valuable and impactful for those practices.

Applying the above theory and set of recommendations will form a foundation for ethical telehealth practice, which can be tested via quantitative research methods, evolved, extended to deliver innovation in health service delivery, and provide substantial benefits to patients and practitioners and the health system more broadly, while minimising harms. Whilst designed for implementation of telehealth services, this research is also likely to be relevant and applicable to the introduction of other technological innovations in health care. At the time of writing 12 million Australians were under strict lock down with all international and many state borders closed, due to the fear of spreading COVID-19. Australia's National Cabinet noted at the end of August 2021 that "the COVID-19 pandemic continues to surge in many countries around the world"[139]. Telehealth can be utilised to maintain access to health services in areas under lockdown, as well as serve as a crucial tool in the public health response against COVID. The Organisation for Economic Co-operation and Development has noted that telehealth has been used “to monitor the health and wellbeing of people who have been diagnosed with COVID-19, both less severe patients who are able to stay at home and more critical cases who need to be hospitalised”[140]. There remains a strong desire from both clinicians and patients to realise the “Promise” that telehealth represents, while minimising the “Peril”, and this thesis sets out a clear direction for potentially advancing this outcome.

APPENDIX A – Articles meeting the inclusion criteria for the literature review

APPENDIX A – Articles meeting the inclusion criteria for the literature review

Author/ Year	Location	Study Type	Title	Ethical Themes	Sub Themes	Publication Type
Barina 2015[41]	USA	Research paper	New Places and Ethical Spaces: Philosophical Considerations for Health Care Ethics Outside of the Hospital	Professional-patient relationships	Ethics of care; communication	Peer reviewed journal
Botrugno 2019[42]	USA	Research paper	Towards an Ethics for Telehealth	Autonomy; professional-patient relationships; justice	Confidentiality: privacy: need for new ethics, to address the operation of the remote services.	Peer reviewed journal
Clark et al. 2010[45]	USA	Research paper	Telemedicine: Medical, legal and ethical perspectives	Autonomy; professional-patient relationships; beneficence; nonmaleficence ; justice	Confidentiality; privacy; respect for persons	Peer reviewed journal
Chaet et al. 2017[87]	USA	Research paper	Ethical Practice in Telehealth and Telemedicine	Autonomy; professional-patient relationships; justice	Trust; fidelity; differentials in access	Peer reviewed journal
Cheshire 2017[44]	USA	Research paper	Telemedicine and the Ethics of Medical Care at a Distance	Professional-patient relationships	Limitations of perception; separation of action from effect; absence of personal presence	Peer reviewed journal
Cornford and Klecun-Dabrowska 2001[31]	UK	Research paper	Ethical Perspectives in Evaluation of Telehealth	Autonomy; beneficence; nonmaleficence ; justice	Ethical evaluation of telehealth services needs to be more extensive than face-to-face	Peer reviewed journal
Demiris et al. 2009[31]	USA	Methodological Review	Ethical Considerations Regarding the Use of Technology for Older Adults: The Case of Telehealth	Justice; professional-patient relationships	Confidentiality; privacy; informed consent; equal access; usability	Peer reviewed journal
Demiris et al. 2006[10]	USA	Research paper	Ethical Considerations for the Utilization of Telehealth Technologies in Home and Hospice Care by the Nursing Profession	Autonomy	Confidentiality; privacy; informed consent; equal access; usability; autonomy vs. dependence; medicalisation of the home environment; lack of human touch	Peer reviewed journal

Author/ Year	Location	Study Type	Title	Ethical Themes	Sub Themes	Publication Type
Draper and Sorell2013[47]	USA	Research paper	Telecare, remote monitoring and care	Professional-patient relationships; autonomy	Empowerment	Peer reviewed journal
Eccles 2010[48]	UK	Research paper	Ethical Considerations Around the Implementation of Telecare Technologies	Autonomy; beneficence; nonmaleficence; justice	Ethics of care	Peer reviewed journal
Fisk and Rudel. 2013[88]	UK	Research paper	Telehealth and Service Delivery in the Home: Care, Support and the Importance of User Autonomy	Autonomy	User Autonomy	Book chapter
Fleming et al, 2009[50]	USA	Research paper	Telehealth Ethics	Autonomy; professional-patient relationships; nonmaleficence; justice	Consent, privacy and confidentiality; justice, access and equity; burden and quality of life; exploitation	Peer reviewed journal
Glueckauf et al. 2018[51]	USA	Quantitative study	Survey of Psychologists' Telebehavioral Health Practices: Technology Use, Ethical Issues, and Training Needs	Autonomy: nonmaleficence	Consent: privacy: handling emergencies remotely	Peer reviewed journal
Gogia et al. 2016[40]	USA	Research paper	Unintended Consequences of Tele Health and their Possible Solutions	Nonmaleficence; professional-patient relationships	Miscommunication between providers as well as providers and patients	Peer reviewed Journal
Heintz et al. 2015[52]	Sweden	Framework	Framework for Systematic Identification of Ethical Aspects of Healthcare Technologies: The SBU Approach.	Justice; autonomy	Equality and justice; autonomy, privacy, cost-effectiveness	Peer reviewed journal
Holmstrom et al. 2007[53]	Sweden	Qualitative study	The faceless encounter: ethical dilemmas in telephone nursing	Autonomy; beneficence; justice	Talking through a third party; confidentiality; insufficient resources	Peer reviewed journal
Humbyrd 2019[54]	USA	Research paper	Virtue Ethics in a Value-driven World: Ethical Telemedicine	Nonmaleficence; justice; professional-patient relationships	Virtue ethics; moral character	Peer reviewed journal
Iserson 2000[55]	USA	Research paper	Telemedicine: A Proposal for an Ethical Code	Professional-patient relationships; beneficence; nonmaleficence	Privacy; confidentiality	Peer reviewed journal

Author/ Year	Location	Study Type	Title	Ethical Themes	Sub Themes	Publication Type
Kaplan and Litewka 2008[56]	USA	Research paper	Ethical Challenges of Telemedicine and Telehealth	Autonomy	Informed Consent; empowerment	Peer reviewed journal
Kluge 2011[57]	Canada	Research paper	Ethical and legal challenges for health telematics in a global world: Telehealth and the technological imperative	Professional-patient relationships	Privacy; consent; misunderstanding of information; dependence on technology	Peer reviewed journal
Korhonen et al, 2015[58]	Finland	Systemic Literature Review	Technology and its ethics in nursing and caring journals: An integrative literature review	Autonomy; professional-patient relationships	Misunderstanding of information; beneficence; autonomy; fidelity; justice	Peer reviewed journal
Layman 2003[60]	USA	Research paper	Health Informatics Ethical Issues	Autonomy; beneficence; justice	Beneficence	Peer reviewed journal
Langarizadeh et al. 2017[59]	Iran	Systemic Literature Review	Application of Ethics for Providing Telemedicine Services and Information Technology	Autonomy: justice; professional-patient relationships	Beneficence	Peer reviewed journal
Loute and Cobbaut 2017[61]	France	Research paper	What Ethics for Telemedicine?	Autonomy; professional-patient relationships; beneficence; nonmaleficence; justice	Dehumanization of medicine; power; common good	Book chapter
Magnusson and Hanson2003[62]	UK, Ireland, Sweden, Portugal	Qualitative study:	Ethical issues arising from a research, technology and development project to support frail older people and their family carers at home	Autonomy; beneficence; nonmaleficence; justice	Security; privacy; confidentiality	Peer reviewed journal
Mort et al. 2015[63]	UK, Spain, The Netherlands, Norway	Ethnographic study	Ethical implications of home telecare for older people: a framework derived from a multisited participative study	Autonomy	Privacy; intrusion	Peer reviewed journal
Nelson 2010[65]	USA	Research paper	The Ethics of Telemedicine: Unique nature of virtual encounters call for special sensitivities	Autonomy; professional-patient relationships, justice	Informed consent; privacy; confidentiality; equity	Peer reviewed journal
Nelson et al. 2013[64]	USA	Book Chapter	Ethical Considerations in Providing Mental Health Services Over Video teleconferencing	Beneficence; nonmaleficence; justice	Fidelity and responsibility; respect for rights and dignity, integrity	Book

Author/ Year	Location	Study Type	Title	Ethical Themes	Sub Themes	Publication Type
Nesher and Jotkowitz 2011[66]	Israel	Research paper	Ethical issues in the development of tele-ICUs	Autonomy; beneficence; nonmaleficence; justice	Autonomy	Peer reviewed journal
Newton 2014[67]	USA	Research paper	The promise of telemedicine	Autonomy	Informed consent; access	Peer reviewed journal
Palm et al. 2013[68]	Sweden	Research paper	Ethically sound technology?	Autonomy	Autonomy; privacy; freedom of choice; consent; human contact	Peer reviewed journal
Parks 201[69]	USA	Research paper	Home-Based Care, Technology, and the Maintenance of Selves	Beneficence; autonomy	Empowerment; identity; privacy; social isolation	Peer reviewed journal
Percival and Hanson 2006[70]	UK	Qualitative Study	Big brother or brave new world? Telecare and its implications for older people's independence and social inclusion	Autonomy	Choice and self-determination; empowerment; independence; privacy	Peer reviewed journal
Perry et al. 2010[71]	UK	Delphi study	Ethical issues in the use of telecare	Autonomy; beneficence; nonmaleficence; justice	Privacy; isolation and wellbeing; fairness in the allocation of resources	Grey Literature (report)
Pols[72] 2010	The Netherlands	Ethnographic study	The Heart of the Matter. About Good Nursing and Telecare	Professional-patient relationships	New types of communication and information from patients to nurses	Peer reviewed journal
Roman et al. 1997[33]	USA	Research paper	Creating an ethical foundation for home telemedicine	Autonomy; beneficence; nonmaleficence; justice; professional-patient relationships	Privacy; confidentiality	Peer reviewed journal
Rutenberg and Oberle 2008[73]	US	Research paper	Ethics in Telehealth Nursing Practice	Autonomy; beneficence; nonmaleficence	Autonomy	Peer reviewed journal
Sarhan 2009[74]	USA	Research paper	Telemedicine in healthcare 2: the legal and ethical aspects of using new technology	Nonmaleficence	Confidentiality; privacy	Peer reviewed journal
Sävenstedt et al. 2006[75]	Sweden	Qualitative study	The duality in using information and communication technology in elder care	Autonomy; nonmaleficence; professional-patient relationships	Superficiality and genuineness; capacity and freedom; intrusion and privacy	Peer reviewed journal

Author/ Year	Location	Study Type	Title	Ethical Themes	Sub Themes	Publication Type
Schermer 2009[76]	The Netherlands	Research paper	Telecare and self-management: opportunity to change the paradigm?	Autonomy	Consent; privacy; equal access; medicalisation of the home environment	Peer reviewed journal
Sethi et al. 2012[77]	UK	Research paper	Telecare: Legal, Ethical and Socioeconomic Factors	Autonomy	Consent	Peer reviewed journal
Shea 2008[78]	USA	Research paper	Trust in the Virtual Home Healthcare Nurse	Beneficence	Trust	Peer reviewed journal
Skar and Soderberg 2018[79]	Sweden	Systemic Literature Review	The importance of ethical aspects when implementing eHealth services in healthcare: A discussion paper	Autonomy; beneficence; nonmaleficence; justice; professional-patient relationships	Privacy; confidentiality; user-centred design	Peer reviewed journal
Sorell and Draper. 2012[80]	UK	Research paper	Telecare, Surveillance, and the Welfare State	Autonomy	Independence; privacy; isolation	Peer reviewed journal
Stanberry 2001[130]	UK	Research paper	Telemedicine: barriers and opportunities in the 21st century	Professional-patient relationships[89]	Privacy; confidentiality	Peer reviewed journal
Stowe et al. 2010[89]	UK	Research paper	Telecare, telehealth and telemedicine	Autonomy; professional-patient relationships;	Confidentiality; lack of face-to-face contact	Peer reviewed journal
Voerman et al. 2017[82]	USA	Research paper	Sound Trust and the Ethics of Telecare	Beneficence; nonmaleficence; professional-patient relationships	Trust; sound trust	Peer reviewed journal
Wade et al. 2012[83]	Australia	Qualitative study	A qualitative study of ethical, medico-legal and clinical governance matters in Australian telehealth services	Professional-patient relationships	Privacy and security; consent and choice; empowerment; access	Peer reviewed journal
Willems 2005[84]	The Netherlands	Research paper	Advanced home care technology: moral questions associated with an ethical ideal	Beneficence; nonmaleficence; professional-patient relationships	Quality of communication; lack of face-to-face contact	Grey Literature (report)

APPENDIX B – Documents included in the document analysis

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#	Author	Title	Year
1	European Telecommunications Standards Institute.[98]	ETSI Guide: Human Factors (HF);User experience guidelines; Telecare services (eHealth)	2008
2	TeleSCoPE Project[97]	European Code of Practice for Telehealth Services	2014
3	Agency for Clinical Innovation[101]	Guidelines for the use of Telehealth for Clinical and Non-Clinical Settings in NSW	2014
4	Agency for Clinical Innovation[122]	Telehealth in Practice Guide	2020
5	Government of Victoria, Department of Health and Human Services[106]	Critical success factors: how to establish a successful telehealth service	2015
6	NIFTE Canadian Society of Telehealth)[108]	National Initiative for Telehealth Framework of Guidelines	2003
7	Allied Health Aotearoa New Zealand[123]	Allied Health Best Practice Guide for Telehealth	2018
8	NZ Telehealth Forum and Resource Centre[141]	Guideline for Establishing and Maintaining Sustainable Telemedicine Services in New Zealand	2017
9	Western Australian Statewide Telehealth Service[105]	Statewide Telehealth Service Use Policy	2014
10	NCSL Partnership Project on Telehealth[109]	Telehealth Policy Trends and Considerations	2015
11	Medical Board of Australia[99]	Guidelines: Technology-based patient consultations	2012
12	Province of British Columbia Health Authorities[100]	Telehealth Clinical Guidelines	2015
13	The Royal Australian College of General Practitioners[115]	Standards for general practices offering video consultations	2012
14	ACRRM Telehealth Advisory Committee (Australian College of Rural and Remote Medicine)[111]	ACRRM Telehealth Advisory Committee Standards Framework	2016
15	Nursing and Midwifery Telehealth Consortia[112]	Guidelines for Telehealth On-Line Video Consultation Funded Through Medicare	2013
16	Nursing and Midwifery Telehealth Consortia[113]	Telehealth Standards Registered Nurses	2013
17	Allied Health Professions Australia[118]	Telehealth Guide for allied health professionals	2020
18	Dieticians Association of Australia[116]	APD Telehealth Guidelines	2020
19	The Royal Australian and New Zealand College of Psychiatrists[117]	Professional Practice Standards and Guides for Telepsychiatry	2013
20	The Royal Australian College of General Practitioners[120]	Telehealth video consultations guide	2019
21	Australian Health Practitioner Regulation Agency[110]	Telehealth guidance for practitioners	2020
22	Occupational Therapy Australia[119]	Telehealth Guidelines 2020	2020

#	Author	Title	Year
23	American Telemedicine Society[107]	Core Operational Guidelines for Telehealth Services Involving Provider--Patient Interactions	2014
24	Royal Australian College of Physicians[114]	Telehealth: Guidelines and Practical Tips	2016
25	East London NHS Foundation Trust[121]	Telehealth Policy	2015

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