# Clinician perspectives on rapid transition to telehealth during COVID-19 in Australia – a qualitative study

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## ABSTRACT

**Objective.** The coronavirus disease 2019 (COVID-19) pandemic precipitated a major shift in the use of telehealth in Australia. The changes highlighted gaps in our knowledge regarding the efficacy of, and clinician attitudes to, the use of telehealth. The current study expands and deepens the available evidence as a result of being collected in unique circumstances that removed one of the major barriers (lack of Medicare rebates) and also one major enablers (willingness) of telehealth uptake. **Methods.** Using a semi-structured interview, we invited clinicians (N = 39) to share their perspectives, attitudes and experiences of using telehealth. Topics covered included perceptions of the strengths and challenges of telehealth, and how experience of using telehealth during the COVID-19 pandemic had influenced clinicians' views and intentions regarding their future practice. Participants included clinicians from five disciplines across public and private practice: paediatrics, neurology, immunology, rural general practice, and orthopaedics. **Results.** We found three key dimensions for consideration when assessing the suitability of telehealth for ongoing practice: the attributes of the patient population, the attributes of the clinical context and environment, and the risks and benefits of a telehealth approach. These findings map to the existing literature and allow us to infer that the experiences of clinicians who previously would have *chosen* telehealth did not differ significantly from those of our 'pandemic-conscripted' clinicians. **Conclusions.** Our findings map clearly to the existing literature and allow us to infer that the experiences of the clinicians who have *chosen* telehealth (and are already represented in the literature) did not differ significantly from those trying out telehealth under the unique circumstances of the removal of the Medicare Benefits Scheme barrier and external pressure that over-rides the 'willingness' enabling factor in uptake decisions.

**Keywords:** clinical care, COVID-19, immunology, neurology, orthopaedics, paediatrics, rural and remote, telehealth.

## Introduction

The coronavirus disease 2019 (COVID-19) pandemic precipitated a seismic shift in the use of telehealth in Australia. Where almost all consultations were previously held in person,[1] public health measures to control the transmission of COVID-19 compelled both a clinical and governmental pivot. These changes highlighted a gap in our knowledge about both the efficacy of, and clinician attitudes to, the use of telehealth in an outpatient setting. Prior literature has largely been limited to contexts in which the use of telehealth was down to a *choice* by the clinician[2] and the patient.[3] In the Australian context, use has also been heavily influenced by the absence of telehealth reimbursements from the

Medicare Benefits Scheme (MBS).[4] The present study seized the opportunity to expand the available evidence, by collecting clinicians' experiences of telehealth use during a period where the choice element was removed and temporary MBS rebatable claims were available for all patients during the early stages of the COVID-19 pandemic.

Telehealth approaches improve accessibility to healthcare, particularly in rural and remote areas.[5] Other benefits for clinicians can include reduced consumable and infrastructure expenses and enhanced efficiency of clinical resource allocation in the long term.[6,7] Reported enabling factors for telehealth use include clinician willingness[8,9] and clinician perception of advantage.[8,10,11] However, the uptake of telehealth in Australia prior to COVID-19 was low[12] with considerable pushback from Australian clinicians generated by resistance to new technology, a perceived lack of telehealth infrastructure and lack of adequate funding by the MBS.[4]

Previous research has indicated a range of barriers to clinician and patient engagement with telehealth. The most common barrier reported by clinicians is the potential for telehealth to add to their already overburdened workloads.[5,8–10,13,14] A second barrier is the perceived requirement for additional resources, funding and training.[15] Prior to the COVID-19 pandemic, telehealth in Australia was primarily used to service rural areas.[16] However, it was often discontinued due to incomplete reimbursement strategies.[15] In March 2020 'whole of population' telehealth was implemented with temporary MBS rebateable claims made available to all patients.[17] Following the inclusion of telehealth into the MBS, telephone consultations in general practice settings rose from 0 to 34% of all consultations,[1] and specialist consultations rose from 0.7 to 36%.[18] In the subsequent period to February 2021, the proportion of specialist consultations decreased with telehealth now making up an average of 19% of monthly consultations.[18] Although telehealth remains an option for clinicians, most consultations have reverted to being held face-to-face.

The inclusion of telehealth consultations in the MBS and the concurrent introduction of public health control measures created an opportunity to examine the experiences of a range of clinicians under unique conditions. First, one of the major barriers (lack of MBS reimbursement) was removed, and second, one of the major enablers (clinician willingness) was made irrelevant. This meant, we could collect clinician experience data among clinicians who had *not* previously self-selected to use telehealth on the basis of willingness or perceived advantages, and were also not impeded by the structural barrier of restricted reimbursement. We already know from the uptake data above that the majority of clinicians reverted to face-to-face consultations, and the data presented here offers us a window into why.

The current study included both consultant clinicians and general practitioner (GPs) who were interviewed after a period of being 'pandemic-conscripted', i.e. compelled to use telehealth in their everyday practice. We collected data across a range of specialties, as we anticipated that there may be discipline-specific barriers and enablers to telehealth use that are tied to the need for physical examinations (e.g. orthopaedics vs neurology), the unique needs of patient populations (e.g. immunology and paediatrics) or the specific logistical constraints (e.g. rural general practice). In the case of our data 'telehealth' included both videoconferencing and telephone-based consultation, but predominantly telephone. The use of these did not vary in any systematic way, with the exception of the rural GP sample, who were almost exclusively using telephone-based consulting.

The specific aims of this study were exploratory and structured around four key questions. First, how is telehealth being used and what are the clinician perceptions of the strengths and challenges of this approach? Second, have clinicians who have been using telehealth during the COVID-19 pandemic changed their views on the use and value of telehealth as part of their practice? Third, what examples do clinicians have of patient-clinician interactions where their previous perceptions have been challenged? And, finally, have clinician experiences of telehealth during COVID-19 influenced their intentions for future practice?

## Methods

### Ethics

The ethical components of this study were approved by the ACT Health Human Research Ethics Committee (2020.LRE.00199) and the Australian National University Human Research Ethics Committee (2020/667).

### Study design and setting

The study was conducted in Australia in 2020 and 2021. Interviews were conducted with clinicians working in the Australian Capital Territory (ACT) and surrounding regional New South Wales (NSW) after the first wave of COVID-19 infections in Australia (from January 2021). Due to mandates implemented by the ACT government, clinicians were required to use telehealth wherever possible during this time. This setting limits the study, as it lacks the experiences of clinicians in other states, particularly those that are geographically larger and in which a greater proportion of the population live outside of major cities.

A semi-structured interview was developed and refined through a review of the literature and discussions among the research team and their clinical contacts. Interview questions were designed to prompt clinicians to share their perspectives, attitudes and experiences of using telehealth. Topics included perceptions of the strengths and challenges of telehealth, how experiences of using telehealth during the COVID-19 pandemic had influenced their views on the use and value of telehealth, examples clinicians had of patient-clinician

interactions, and clinicians' intentions regarding continuing to incorporate telehealth into their future practice.

## Participants and recruitment

Participants ($N = 39$) included clinicians across five disciplines from public and private practices who were based in Canberra and regional NSW. The disciplines sampled were: paediatrics ($n = 8$), neurology ($n = 5$), immunology ($n = 5$), rural general practice ($n = 11$) and orthopaedics ($n = 10$). Participants were eligible if they had previous or current experience with using telehealth. With the exception of the rural GP subsample (in which 9 of 11 had prior telehealth experience), the majority of this experience (in 25 of 28 non-rural respondents) was new during the pandemic. A snowball sampling approach was used to recruit participants via email and professional networks, with additional facilitation by collaborating senior clinicians. All eligible participants were invited to participate and given a briefing regarding the research questions and likely duration of the interview. Participants self-selected into the project and represented about 50% of the sample to whom the opportunity was advertised. Participants were not compensated for their participation.

## Data collection

Interviews were conducted face-to-face, online via zoom (Zoom Video Communications Inc., San Jose, California, USA), or via telephone between January and May 2021. On average, interviews lasted 30 min (range: 19–42 min). All meetings were audio-recorded. All interviews were completed and no participant asked to withdraw their data. A semi-structured format was followed to guide interviews (see Supplementary Appendix S1). Probe questions were used to facilitate discussion where necessary.

## Transcription

All interviews were transcribed verbatim by the authors who conducted the interviews including timing and pauses in speech. Each transcript was de-identified prior to analysis.

## Analysis

Data were analysed using a thematic analysis approach.[19] All de-identified interview transcripts were analysed and coded into their discipline groups by one author per discipline. As the project was exploratory and generative, coders took an inductive, constant-comparison approach. Transcripts were read completely by the assigned author and preliminary codes were developed and defined. Some preliminary codes were also taken from key factors identified from the literature. Each code was given a label based on the concept it described. Some codes were also developed through discussion with members of the research team. Through this approach, a preliminary coding framework was developed, against which the remaining interview data were coded. The data were coded three times and throughout this process, the codes were redefined and readjusted iteratively. All interview transcripts were then read a final time and coding was considered complete once there were no new codes or themes emerging from the data. To generate a pragmatic, thematic analysis of the data, codes were then grouped into higher-order themes. Following this discipline-anchored analysis, the first author re-analysed all transcripts, using the codebooks and negotiated theme frameworks identified by the discipline-lead authors, resulting in an integrated analysis across disciplines.

## Results

Following initial coding and interpretations of the large corpus of transcripts, three core themes in the data were identified. These themes were organised around intentions latent in our interview protocol design. These were: to describe the clinicians' experiences, to understand clinician attitudes and perceptions about telehealth, including the value, strengths and challenges of the modality, and to get a sense of clinicians' intentions for future practice. These three superordinate themes were used as an organising framework in summarising our analysis below.

## Superordinate theme 1: clinician experiences

Two sub-themes within the descriptions of clinician experiences were identified from clinicians' responses across all disciplines: (1) the attributes of the patient population and (2) the attributes of the clinical context/environment. A selection of illustrative quotes from clinicians are in Table 1. Their comments cover the full range of each theme, as well as highlighting discipline-specific priorities.

### Subtheme 1: the attributes of the patient population (the patients)

A theme that was identified across all disciplines was the importance of selecting appropriate patients for telehealth. Important attributes to consider included: technological literacy, phone and internet access, age, communication challenges (including language preferences and conditions that impact speech, hearing or cognition) and safety (frailty, immunocompromise). Attitudinal attributes included: patient engagement with the process, comfort with telephone- or video-based communication, patient willingness, and the existence of an established rapport with a clinician. Clinicians also identified a range of limits and opportunities related to the particular health profile and complaint of a potentially telehealth-appropriate patient. In paediatrics, for example, children with neurodevelopmental disorders were identified as a subgroup in which patients being in their own familiar

**Table 1.** Representative quotes from clinician interviews addressing patient and environmental factors.

| | Paediatrics | Neurology | Immunology | Rural GP | Orthopaedics |
|---|---|---|---|---|---|
| Patient | 'The key, I suppose, is being able to pick out symptomatology and clinical problems that do need a face-to-face consultation.' | '[The patient] didn't necessarily need an examination, although you would have liked to, but that helped and it saved the patient traveling 2 1/2 hours to Canberra to have a face-to-face consult and the patient was not in a position to travel because she was quite frail.' | 'If you knew them already there was no trouble, but if you didn't know them, [it was] much more difficult and much more difficult via phone than telehealth (video).' | '…as time went on, I thought it was quite useful, particularly people that lived quite rurally and it would take them a long time to come in and I saw it as a big advantage that people didn't have to sit waiting in the waiting room.' | 'A lot of work with private patients depends on building a rapport with patients…I find that people respond better to you when they see you in person…. people often doctor-shop looking for a particular connection and it's hard to get one over the phone.' |
| Environment | 'Realistically, both patient and provider have to have access to a good, secure and stable internet connection and they need to have the equipment that will support telehealth.' | 'The problem is, I think, the technology doesn't allow us to do every consult via telehealth. Maybe a proportion of patients, currently maybe a proportion of 10% of patients.' | 'As long as the technology worked, it didn't really affect my workflow.' | 'When we do zoom sessions in rural, we often have to turn the picture off because the bandwidth isn't great enough and people just drop out altogether. So you're not going to get anything more than just a voiceover usually.' | 'You need a good platform, in terms of a program that enables you to do telehealth. You need good administrative support because if you're running a clinic, you need to have, like, a virtual waiting room where you have, like, a front office person who welcomes the patient, puts them in the waiting room, all that kind of stuff.' |

environment and able to withdraw themselves from the interaction represented large benefits. However, other clinicians noted the challenges that might arise from relying on the patient's ability to identify and communicate relevant clinical information, for example in conditions impacting on the ability to communicate or instances of low health-literacy.

### Subtheme 2: the attributes of the clinical context/environment (the clinical context)

The second strong theme was a need to identify and ensure the correct clinical context, both in terms of the resources and workflow of the practice itself, but also in terms of each consultation. Practices that dealt with patients from a broad geographical area or a rural population were identified as appropriate for telehealth, with the critical caveat that adequate internet and mobile coverage for both patients and clinicians was essential. Similarly, practices that dealt largely with elderly, frail or immunocompromised patients would benefit from telehealth. One key factor that was identified across a number of disciplines was that telehealth was generally more appropriate for follow-up than for initial consultation, and was particularly for consultations that did not require physical examination. The difficulties in building rapport and relationships via phone or video were highlighted, as well as the clear impossibility of physical examination.

## Superordinate theme 2: clinicians' perceptions and experiences of telehealth as a modality

Two sub-themes were identified in clinician attitudes and perceptions: (1) risks and (2) benefits. These subthemes map to the ideas of strengths and challenges in our aims, but are not exactly the same thing. A strength would refer to something that the modality does well, whereas a benefit implies than the modality is comparatively better at something than an alternative. A challenge would refer to a difficulty that may be addressable, where a risk is more likely to be inherent and need to be *managed* rather than resolved. Clinicians were directly asked about their views on a range of potential risks and benefits at one point during the interview, but introduced others at other points during the course of the interview. A selection of illustrative quotes from clinicians are in Table 2.

### Subtheme 1: risks

The primary risk, identified across all disciplines, was the risk of 'missing something', whether through lack of physical examination, poor patient rapport, limited patient disclosure, inability to use or interpret non-verbal cues during the interaction, inability to identify other comorbidities in the context of a targeted examination, or patients not taking the consultation seriously (e.g. 'attending' the consult while in the supermarket). Both phone and video-conferencing

**Table 2.** Representative quotes from clinician interviews addressing risks and benefits.

| | Paediatrics | Neurology | Immunology | Rural GP | Orthopaedics |
|---|---|---|---|---|---|
| Risks | 'Medically, there's a risk of missing something obviously on physical examination, which is always in the back of our minds and that's why I don't do multiple video teleconferences without the odd face-to-face from time to time.' | 'I think the overall trend is… people tend to say less [on telehealth, as compared to in-person consultations]. Whether it's becoming more succinct or whether they are less spontaneous… [it's] probably more than one factor.' | 'The other problem we've had, is often we'd call, and people didn't seem to take it so seriously that they were in a consultation [as compared to] if they physically came to see us. So, they'd be out shopping, or they'd be at the gym and then they'd ask us to call back and, of course, we couldn't call back.' | 'I felt it would probably be more difficult to be honest…with a video you can see each other's face a little bit, you can read each other's expression, but with a phone consult, which we did the majority of the time, you don't get those nuances, and can't often pick up those nonverbal cues, so that makes it more difficult.' | 'A lot of [older patients] did find it difficult. Most of them would recruit like a grandchild or someone to kind of help them, to run the IT, or to use someone else's laptop. It created massive inefficiencies.' |
| Benefits | 'I have some patients who can be very difficult to manage in the clinic environment, and it's really much easier for their parents to keep them at home. They're in their own environment. They're well-distracted, and… their routine isn't disturbed.' | 'A clinic of nine telehealth consultations is sort of followed by a spring in my step as I walk out the room… which is not usually the case after nine face-to-face consultations.' | 'I think if I've seen the person the first time or the first few appointments and once it's comfortable, telehealth seems to be working well after.' | 'And I know that there are patients actually who prefer video telehealth when it comes to mental health consultation. They like having that little bit of separation. They feel less vulnerable…I guess everybody is different' | '…minor clinical check-ups are much better if we actually utilise telehealth because it saves the patient coming in from far away and also waiting in the clinical waiting room for hours on end' |

consultations presented all of these risks, albeit slightly differently. The use of phone-based telehealth magnified the perception of risk of 'missing something', through the loss of all visual cues and challenges communicating with those who might be hearing impaired or speak English as an additional language.

### Subtheme 2: benefits

A number of potential benefits were identified, including patient convenience - particularly in the context of patients who would otherwise have had to travel, patient safety, consult efficiency, the ability to consult with patients in their own comfortable environment, and the logistical convenience that facilitated multi-disciplinary consultations, as well as recording of consultation for ease of record-keeping.

## Superordinate theme 3: intentions for future practice

Across the board, clinicians recognised a future role for telehealth in their practice. The way in which they were going to integrate telehealth into their practices varied. A selection of illustrative quotes from clinicians are in Table 3. Some were enthusiastic about the opportunity to continue include telehealth in their practice. Others reflected on the need to use a balance of telehealth and face-to-face consultations, or on the need to use it selectively. For others, it was easily integrated into their existing practice, provided the logistics were addressed.

## Discussion

From our analysis, we draw three key dimensions for consideration by clinicians and policymakers who are assessing the suitability of telehealth for ongoing practice:

(1) The attributes of the patient population
(2) The attributes of the clinical context and environment
(3) The overall risks and benefits of a telehealth approach

Australian 'pandemic-conscripted' clinicians were positive about the use of telehealth provided (1) the technology is available and efficient, (2) the patient does not require either a physical examination or interpretation of nonverbal cues that cannot be assessed by video, and (3) the patient respects the consultation in the same way that they would a face-to-face interaction. These findings map clearly to the existing literature and allow us to infer that the experiences of the selection of clinicians who have *chosen* telehealth (and are already represented in the literature) did not differ significantly from those trying out telehealth under the unique circumstances of the removal of the MBS barrier and external (pandemic) pressure that over-rides the 'willingness' factor in uptake decisions.

**Table 3.** Representative quotes from clinician interviews addressing attitudes to future use of telehealth.

| | Enthusiasm | Finding a balance | Selective use | Focus on logistics |
|---|---|---|---|---|
| Clinician view | '...it seems very safe if used correctly and used carefully and.... it takes away one of the barriers to accessing health care for my patients, which is good' | 'I would like to have it combined into my normal work. It might help us run on time too. So, if you intermingled standard consultations with some telehealth...we might find the right balance to keep us running on time.' | 'I found it quite a useful tool.... whereas in the past I probably would have been more resistant to it. Now, if somebody wanted a follow-up appointment through telehealth, I'd be more inclined to use it.' | 'As long as the technology worked, it didn't really affect my workflow' |

Participants in this study recognised that appropriate use of telehealth depends on patients' symptoms, the clinical context, and the requirement for physical examination. This is in line with the existing literature, which indicates that telehealth use can be difficult for complex patients[20] and for patients requiring physical examination.[21] Clinicians need to be able to triage patients[22] and use their intuition[23] when determining which patients' circumstances and symptoms warrant face-to-face consultations. Clinician responses in our data reflected a preference for using telehealth for follow-up, rather than for initial consultations, which is consistent with findings reported in the literature.[24] The potential to 'miss something' as a result of reduced ability to perform a physical examination, possible impairment of emotional transmission, lack of patient disclosure, and/or difficulty in detecting non-verbal cues identified by the participants in this study is also consistent with findings in the literature.[25] It is of note, however, that many of our participants were unable to access video connection and had to rely on telephone consultation alone. Improvement in access to technology may mitigate some of the concerns raised about missing non-verbal cues.[26] The generally-positive perspectives and reported willingness to continue to use telehealth post-COVID by participants in this study is also consistent with that of other studies examining telehealth use.[21]

## Limitations and future directions

The findings of this study, while they represent some of the first data to survey such a broad range of medical specialties and disciplines, are limited in scope and this must be borne in mind when applying the lessons learned. First, these findings are limited to the Australian context. The Australian Medicare scheme provides universal health insurance and ensures access and service at low, or no, cost to individual Australians. This system governs healthcare delivery and the vast majority of respondents raised the introduction of the telehealth rebate option as a driving factor in the uptake of telehealth by clinicians and patients. Introducing telehealth as a lower-cost alternative to face-to-face consults has been suggested elsewhere,[27] but this would not apply to Australian patients. Second, while we had an excellent opportunity to sample clinicians who might never have *chosen* telehealth outside of the pressure of the COVID-19 pandemic, we were still limited to those clinicians who *chose* to participate in an interview about their experiences. It is possible that those clinicians who found telehealth truly impossible to integrate into their system of care would also decline to discuss it in a research context. Third, this study was carried out during public health measures that required people to remain in their homes, except for essential business ('lockdown'). It is important for future researchers to consider telehealth use in a non-lockdown context when patients and their families may not always be at home, and therefore

the apparent convenience of telehealth may become more complicated. Fourth, the population of both clinicians and patients whose experiences comprised the stimulus for our clinician reflections were all located in the ACT and surrounding NSW regions. This area is one of relative privilege, both economically and educationally[28] and the level of technological access and literacy is likely higher than that of a representative sample of Australians.

## Conclusion

Taken together, our data indicate some key lessons for healthcare delivery. First, clinicians who might not ordinarily have chosen to use telehealth in their practice but have experience of it nonetheless identified a range of practical benefits, particularly from the perspective of meeting the needs of patients who may struggle to access face-to-face healthcare (such as those in rural or remote areas, children, the elderly and the immunocompromised). Second, that there are risks inherent in the telehealth format, including lack of physical examination, weaker patient rapport, limited patient disclosure and the inability to interpret nonverbal cues. Finally, the removal of practical barriers, such as restricted reimbursement strategies under the MBS, can allow clinicians the opportunity to add a valuable strategy to their clinical practice that they might otherwise never have tested. The insights provided by this study can be used to inform future healthcare reform in primary and tertiary environments.

## Supplementary material

Supplementary material is available online.

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