The doctor will ring you now

A look into telehealth’s ascent during COVID-19

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Introduction

Face-to-face consultations between patient and doctor, once the mainstay of healthcare delivery, suddenly presented a potential transmission risk due to the COVID-19 pandemic. One of the Australian healthcare system’s adaptations to the pandemic was an increase in the remote delivery of healthcare services, commonly known as telehealth. While telehealth has been a part of healthcare for decades, its use was limited prior to the pandemic, with utilisation restricted to rural and remote patients. Numerical barriers prevented its widespread adoption across medical services.

However, the pandemic accelerated telehealth’s implementation, with a sharp increase in usage since March 2020. While this was driven by the necessity of preventing transmission, it was also partly facilitated by policy decisions such as introducing Medicare subsidies for telehealth services. It is possible that as telehealth’s benefits become apparent and systemic barriers are overcome, telehealth’s increased uptake will remain post-pandemic, allowing it to become a central component of standard healthcare delivery in the future.

To comprehend these benefits and to appreciate the systemic barriers previously preventing telehealth utilisation, this article aims to provide a broad overview of telehealth usage prior to COVID-19. Furthermore, publicly available data about telehealth usage during COVID-19 will be examined to understand how usage evolved in 2020 and the factors driving this evolution.

What is telehealth?

The concept of remote healthcare delivery dates back to the telegraph and telephone, through which doctors have held remote consultations since the 19th century. Remote healthcare delivery evolved with technology throughout the decades since; today, telehealth may take the form of telephone or video consultations across a wide array of medical and clinical disciplines.

Specifically, the Australian Department of Health defines telehealth services as using “information and communications technologies (ICTs) to deliver health services and transmit health information over both long and short distances. It is about transmitting voice, data, images and information rather than moving care recipients, health professionals or educators.” The Royal Australian College of General Physicians (RACGP) further describes two models of telehealth services in operation within Australia:

i. Collaborative third-party services, further divided into specialist-end services (video conferencing between patient and specialist) and patient-end services (where a GP or nurse is present physically with a patient during a remote consultation with a specialist).

ii. On-demand telehealth services between patient and providers such as GPs.

It is important to note that prior to the COVID-19 pandemic, the Medicare Benefits Schedule (MBS), a list of services for which the Government offers rebates, had limited coverage for telehealth services. Specifically, only some third-party services (the former of the two above models) were listed under the MBS since July 2011. This meant that only telehealth eligible (ie. rural and remote) areas of Australia had access to specialist video consultations under Medicare prior to 2020.

Within the narrow range of telehealth services available under the MBS, previous years had nonetheless witnessed an increase in telehealth usage. For example, in the 2016-17 financial year, 115,000 Medicare-subsidised video conferences with specialists were claimed by 65,000 patients, along with 55,000 items of patient-end services. This represented an approximately seven-fold increase in telehealth use compared to 2011-12, when 16,000 specialist video consultations and 10,000 patient-end services were claimed.

Factors supporting telehealth uptake

In the pre-COVID-19 context, proponents of telehealth framed its benefits in terms of cost, care, choice and convenience. Significant stakeholders were remote and rural patients, including those experiencing relative isolation such as prisoners, workers at sea and those in war zones.

Studies reported that telehealth increased standards of care for rural patients through in-prisoner transfers in emergency care, access to familiar community and support at home, and information dissemination. Another study found that significantly fewer rural Queensland patients incurred costs when attending consultations via video than in-person as much of those costs were travel-related.

From the providers’ perspective, telehealth “promoted” enhanced local service provision, more rapid specialist clinical assessment, reinforcement of local health professionals’ clinical assess-
ments and increased access to specialists and their resources.[8] Access to specialist support was particularly relevant in disciplines such as dermatology, psychiatry, cardiology and non-critical chronic disease, with several studies concluding that greater telehealth coverage was needed to harness specialist support.[8, 9, 14-19] Furthermore, practitioners who were able to work from the comfort of their own homes found telehealth to be convenient.[1] Additionally, the installation of video infrastructure had the side-effect of enabling medical professionals to network and access professional development such as web-based education and courses through video-conferencing. [8] While this was not a direct patient-related benefit, there nonetheless existed an indirect benefit if providers successfully upskilled through electronic means.

**BARRIERS PREVENTING TELEHEALTH UPTAKE**

While telehealth appeared to offer a simple solution to the question of remote health access, a survey of patients and providers published in 2007 found telehealth remained “underused and poorly integrated into their practice”.[20] This sentiment is echoed today, with experts such as Prof. Anna Peeters of Deakin University expressing that telehealth had been extremely underutilised in Australia prior to COVID-19. [21] The late RACGP President Dr. Harry Nespolon similarly remarked, in reference to telehealth’s slow adoption, that the medical system was “languishing back in the 1970s” until the pandemic’s onset.[21]

Clearly, there existed barriers preventing a wider uptake of telehealth. A 2011 study identified a number of these barriers from the providers’ perspective: lack of funding for consultations (disincentivising providers from offering telehealth), increased teleconsultation time compared to traditional consultations, technological expertise, available infrastructure like internet access, and an innate preference for the traditional approach.[22] These concerns were echoed by the respondents to the aforementioned 2007 survey, who pointed to technological literacy and access, confusing funding arrangements, timetabling issues between urban specialists and rural practitioners as well as disruption to practices as reasons for their hesitancy to embrace telehealth.[20]

These barriers paralleled those seen from the patients’ perspective.[23] Inability to pay medical bills due to the lack of subsidy for teleconsultations posed a significant financial barrier.[24] Furthermore, remote patients often lacked funding to buy expensive video-conferencing equipment such as computers and cameras.[22, 25] Technological issues were exacerbated by unreliable internet availability and speed. [22, 25, 26] Similarly to in-person consultations, cultural barriers such as medical literacy and willingness to seek help further prevented engagement with telehealth.[23, 24]

On a systemic level, the government was also disincentivised from facilitating telehealth adoption. [23] Financially, there existed a significant capital cost associated with establishing infrastructure necessary for telehealth, expended mostly through funding for public hospitals and subsidies. In return, the government stood to raise no revenue; thus, there existed little incentive to bear this financial cost.[25, 26] Policy-wise, Australia’s state-level regulation of medical practices created difficulties for implementing binding nation-wide policies such as Medicare schemes for telehealth. Appropriate federal-level regulation and licensing was thus also challenging to implement, which posed a problem as telehealth often involved consultations that crossed state lines. [22, 25, 26]

**HOW COVID-19 CHANGED THE CALCULUS**

The cost-benefit analysis outlined above was in practice for years until the COVID-19 pandemic altered the calculus. Suddenly, the salient benefits of choice and convenience dwarfed in comparison to telehealth’s potential to save lives by avoiding the risk of contact transmission.[1] A strong incentive now existed to overcome the barriers preventing telehealth’s use.

**TELEHEALTH IN PREVIOUS PANDEMICS**

Increased use of telehealth during a pandemic was not novel to 2020. During the 2002-04 SARS outbreak, one study explored teleconferencing between doctors and an isolated SARS patient, which resulted in lower infection risk and lower cost while maintaining adequate delivery of care. [27] During the Ebola outbreak of 2014-16, a study investigated contact tracing performed digitally and remotely as opposed to paper-based forms, ultimately concluding that their data was more accurate and complete while minimising the risk from transmission.[28, 29]

**AUSTRALIA’S TELEHEALTH RESPONSE TO COVID-19**

Before COVID-19, telehealth’s value lay in its ability to provide service to rural and remote communities; in fact, one needed to satisfy criteria of remoteness in order to receive MBS subsidies for telehealth. The restrictions enacted to control COVID-19 spread, however, created an artificial remoteness between patients and providers; telehealth has been increasingly used to bridge the divide.
In recognition of the demand and necessity for telehealth, the Australian Government added a number of temporary items to the MBS on 13th March 2020, widening the scope of reimbursable and bulk-billed telehealth services beyond the services provided for rural and remote patients. This was part of a $2.4 billion COVID-19 health package announced by the Government on 11th March, of which $100 million was dedicated to “a new Medicare service for people in home isolation or quarantine... to receive health consultations via the phone or video such as FaceTime or Skype”. [30] Three weeks later, on 29th March, the Government unveiled a further $669 million to “expand Medicare-subsidised telehealth services for all Australians”, materialised in the form of more temporary telehealth items added to the MBS.[31] In that same package, bulk-billing incentives for GPs were doubled.[32] These temporary arrangements are due to be reviewed on 30th September 2020.

Here, it is important to recall that prior to COVID-19, a principal barrier cited by patients and providers alike was the lack of funding for consultations. The Government’s COVID-19 response directly worked to counter this barrier by covering services such as primary care that were previously unsubsidised. Furthermore, the very existence of government-funded telehealth packages implied that the urgency had now outweighed the systemic disincentives preventing the government from fully embracing telehealth. The breakdown of these barriers resulted in increased exposure of telehealth to patients and practitioners, possibly overcoming hesitancy while allowing the community to experience telehealth’s benefits for the first time.

SURVEY OF MEDICAL PRACTITIONERS

The immediate impact of the MBS changes was a sharp increase in the number of doctors offering consultations by telehealth. A report compiled from an online survey of medical practitioners conducted in May 2020 found that 36% of all consultation items were provided by telehealth, compared to just 1.3% pre-pandemic.[33] Telehealth was used by “almost all GPs” and 76% of non-GP specialists, with GPs and specialists bulk-billing 96% and 76% of their consultations respectively.[33] As a further indication of telehealth’s growing popularity among medical practitioners, 84% of the respondents supported telehealth’s permanent funding by Medicare.[33]

Interestingly, the vast majority of telehealth appointments were conducted over phone as opposed to video: 96% of GP and 81% of non-GP consultations in April 2020.[33] This possibly reflects the aforementioned technological barrier where video use requires higher technological literacy, as well as both patients and providers being more familiar with telephone infrastructure as opposed to video infrastructure.[33]

TELEHEALTH USAGE DATA FROM THE MBS

At the time of writing, no comprehensive nation-wide report about pandemic-related telehealth usage had been made available by the Government. However, monthly data about MBS item usage up to June 2020 is publicly available on the Services Australia website via a search tool.[7] It is also possible to access a comprehensive list of telehealth item numbers currently in operation.[34, 35] Querying these item numbers in the search tool returns the monthly claim numbers for those items.

EXISTING TELEHEALTH SERVICES

A search of item numbers corresponding to telehealth services that existed prior to COVID-19 revealed that those items were claimed significantly more after March 2020. At the peak in April 2020, the total claims for these item numbers approximately doubled the figures recorded for the months immediately prior to the pandemic. The majority of the rise in these claims was accounted for by specialist video consultations (see figure 1).
TEMPORARY TELEHEALTH SERVICES

As aforementioned, one of COVID-19’s greatest impacts on telehealth in Australia was the raft of temporary telehealth items added to the MBS in March 2020. Specifically, many existing item numbers for face-to-face consultations received temporary telehealth counterparts; these telehealth item numbers were further divided into telephone and video items. In total, almost 17.5 million temporary telehealth items were claimed between their introduction in March and 30th June. Of these, 16 million (92%) were by telephone while the remaining 1.5 million were video conferences. The peak monthly telehealth use occurred in April, when approximately 5.4 million telephone and 490,000 video conferences were held (see Figure 2i).

In contrast, face-to-face consultations experienced a significant decrease after the introduction of temporary telehealth items, sinking to a nadir of 11 million consults in April from a high of 15 million just two months earlier in February. However, this trend reversed slightly as telehealth use decreased over May and June while face-to-face consults increased (see Figure 2i). This was possibly due to a relative abatement in COVID-19 concern after the “first wave” passed by late April. [36]

Dissecting the aggregate values, there were various out-of-hospital services that received temporary telehealth item numbers which can be grouped as follows: [35]

- 28 GP services
- 31 other medical practitioner (OMP, eg. dermatologists, emergency medicine specialists, obstetricians and gynaecologists, ophthalmologists, pathologists, diagnostic and interventional radiologists, and radiation oncologists) services [37]
- 40 specialist services
- 20 allied health services
- 8 mental health services excluding GP/OMP services
- 8 obstetrician and midwifery services
- 4 nurse practitioner services
- 2 dental services, specifically for oral and maxillofacial surgery

Out of these services, the general trend observed above was reflected within GP, OMP, specialist, nurse practitioner and obstetrician/midwifery services; this trend featured a significant increase in telehealth use by April with a corresponding decrease in face-to-face consultations. GP services constituted the majority of all temporary telehealth item claims, accounting for 14 million (80%) of the 17.5 million total claims from March to June, while specialist claims came a distant second at 2 million (11%). This marked a shift away from the pre-pandemic paradigm, where the only telehealth items claimable were specialist appointments.

Mental health services deserve a special note here, as it was the one group where telehealth claims far outstripped face-to-face consultations, and also where video conferencing predominated over telephone (see Fig. 2c). A simple explanation could be that physical clinical examinations might not be as important in mental health services, leading naturally to the adoption of telehealth. Patients and practitioners alike might also prefer video over telephone due to the additional intimacy provided by visual contact.

CONCLUSION

Telehealth has been hailed as a revolutionary step in medical care, yet its adoption has been slow. This could be attributed to several identifiable barriers despite telehealth’s recognised benefits. In the COVID-19 pandemic of 2020, however, telehealth’s ability to provide care without an increased transmission risk became incredibly valuable. To promote increased telehealth use, the Australian Government and healthcare sector implemented measures to overcome these barriers. Specifically, newly introduced temporary telehealth MBS items and GP bulk-billing incentives contributed to a significant reduction in financial barriers. This led to a sharp increase in telehealth use, with monthly items claimed peaking at 5.9 million (of which 4.5 million were GP services) in April 2020, compared to fewer than 25,000 in the pre-pandemic months (see Figures 1,2).[7] The extraordinary current circumstance is further illustrated by noting that the vast majority of all MBS telehealth items claimed since April were non-specialist services unsubsidised prior to COVID-19.[7]

While it is too early to know whether the Government’s support for telehealth will persist beyond the 30th September review date, it is nonetheless true that many systemic barriers preventing telehealth’s adoption have already been overcome. This allowed telehealth’s benefits of safety, convenience, and care to accrue and gain recognition. Thus, it is entirely possible that if there is sufficient demand for telehealth, its utilisation will persist even after transmission risk ceases to be a pressing concern post-pandemic. This will ensure telehealth’s ascension to a mainstream role.
in healthcare, allowing the community wider access to its benefits.

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Nil

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