



The impact of telehealth policy changes on general practitioner consultation activity in Australia: a time-series analysis

Keshia R. De Guzman^{A,B,*}  (MEpi, BPharm, PhD Candidate), Centaine L. Snoswell^{A,B}  (PhD, MPH, BPharm, Health Economics Research Fellow) and Anthony C. Smith^{A,B,C} (PhD, MEd, BN, RN, Professor and Director)

For full list of author affiliations and declarations see end of paper

*Correspondence to:

Keshia R. De Guzman
Centre for Online Health, The University
of Queensland, Qld, Australia
Email: uqkdeguz@uq.edu.au

ABSTRACT

Objective. To examine the impact of telehealth policy changes on general practitioner (GP) consultation activity in Australia, during the coronavirus disease 2019 (COVID-19) pandemic, from January 2019 to December 2021. **Methods.** An interrupted time-series analysis was conducted to analyse the impact of two major policy changes, introduced through the Medicare Benefits Schedule (MBS), on GP consultation (in-person, videoconference, telephone) activity. The first policy change was the introduction of additional COVID-19 telehealth funding through the MBS on 30 March 2020. The second policy change was the limitation on telephone consultation length to under 20 min on 1 July 2021. The rate of GP telehealth provision and activity was compared between pre-and post-intervention periods, separated by these MBS policy changes. **Results.** After the first policy change, there was a significant increase in telehealth provision, with a simultaneous decrease in in-person consultations ($P < 0.0001$). However, telehealth provision decreased in the months following this first policy change ($P < 0.0001$), while in-person activity increased. After the second policy change, the initial videoconference provision increased ($P < 0.0001$). However, all telehealth activity decreased afterwards. In the months following the second policy change, the decrease in monthly activity for in-person ($P = 0.700$), telephone ($P = 0.199$) and videoconference ($P = 0.178$) consultations was not significant. **Conclusions.** The introduction of additional telehealth funding and limitations on telephone consultation length encouraged the initial provision and growth of telehealth services. However, these policy changes did not sustain the long-term upward trajectory of telehealth activity. Telehealth policies should increase opportunities for appropriate and sustainable GP telehealth services.

Keywords: COVID-19, general practice, general practitioner, pandemic, policy, primary care, telehealth, telemedicine.

Introduction

Telehealth was a key strategy in reducing widespread disease transmission during the coronavirus disease 2019 (COVID-19) pandemic.^{1,2} This is because telehealth enables the delivery of a healthcare service from a distance, which reduces in-person contact.^{1,3} As a result, general practitioners (GPs) had to adapt quickly during the pandemic by engaging with patients through telehealth. Prior to COVID-19, telehealth provision by GPs in primary care settings in Australia was slow and sporadic.^{3–5} However, since COVID-19 emerged, there has been an exponential increase in GP telehealth services.^{3,6} This increase in GP telehealth services was supported by COVID-19 telehealth funding, which was introduced through the Australian national health fund, the Medicare Benefits Schedule (MBS).^{5,7,8}

Before the COVID-19 pandemic, telehealth consultations subsidised through the MBS were limited to specialist consultations for rural or remote patients, provided they were done by videoconference.⁹ However, in March 2020, COVID-19 MBS reimbursements

Received: 14 March 2022

Accepted: 21 July 2022

Published: 11 August 2022

Cite this:

De Guzman KR et al. (2022)
Australian Health Review
46(5), 605–612. doi:10.1071/AH22058

© 2022 The Author(s) (or their employer(s)). Published by CSIRO Publishing on behalf of AHHA. This is an open access article distributed under the Creative Commons Attribution 4.0 International License (CC BY).

OPEN ACCESS

were introduced for telephone and videoconference consultations provided by GPs and other clinicians.^{3,9} Since expanding telehealth coverage and reimbursement, the Australian Government has enacted multiple MBS policy changes.^{6,8} Some MBS policy changes that have affected GP services include changes to telehealth patient eligibility criteria, requirements for existing patient-GP relationships, and limitations on telephone consultation length.^{6,10} Therefore, it is timely to investigate the influence of funding reform and policy changes on GP services and the extent to which they impact GP consultation activity.

In Australia, GPs have provided more services by telephone than videoconference.^{3,6} As a result, some MBS policy changes, such as the limitation on telephone consultation length, were implemented to increase GP videoconference consultations. The high use of telephone over videoconference by GPs has been influenced by many factors such as the perception that sufficient quality care can be provided by telephone, consumer demand, and financial considerations in general practice settings.^{11,12} However, GP services are also impacted by the complex interdependencies of local practice needs, organisational levels, and government policies.^{11,13} This means that GP services are heavily affected by policy changes implemented at a federal level. Given the continually evolving situation of COVID-19, and the need to ensure telehealth sustainability post-pandemic, learning from and building on past telehealth experiences are important.^{2,5} This study examined the impact of MBS telehealth policy changes on GP consultation activity in Australia. These findings may be useful for policymakers responsible for process and reform which impacts telehealth delivery.

Method

Study design

This study used an interrupted time-series (ITS) to analyse MBS data for GP consultation activity (GP activity) delivered in Australia from January 2019 to December 2021. The ITS analysis was conducted using segmented regression to examine the impact of MBS telehealth policy changes on GP consultation activity. This study received ethics exemption from The University of Queensland Human Research Ethics Review (2021/HE001217).

ITS analysis description

ITS analysis can be used to assess the impact of an intervention (e.g. telehealth policy change) on a relevant outcome (e.g., GP activity). An underlying trend in time-series data is 'interrupted' by an intervention. The impact of this intervention is estimated by comparing the trend (growth rate and provision – positive or negative) in the outcome before and after the intervention. Segmented regression divides the data into pre- and post-intervention segments, which are dictated

by the interventions that occurred. Therefore, ITS analysis can provide valuable insights into the impact of policy changes on GP activity in Australia.

Interventions and outcomes

The primary interventions examined in this study were two major MBS telehealth policy changes in Australia during the time period analysed. The first policy change occurred at the onset of COVID-19, on the 30 March 2020,^{3,6} when telehealth reimbursement became available for the majority of patients. This reimbursement included additional MBS funding options for both telephone and videoconference consultations, which were reimbursed at parity to in-person consultations. The second policy change occurred on the 1 July 2021, when GP telephone consultations were limited to level A or B type consultations.^{6,10} This second policy change meant that GPs could only claim the MBS rebate for telephone consultations under 20 min. There were no changes to videoconference consultations, which could still be claimed for longer GP attendances. The primary outcome examined was GP activity in Australia, encompassing in-person, telephone, and videoconference consultations.

Data collection

Aggregate MBS activity data is publicly available.¹⁴ GP activity data for MBS item codes (Supplementary Table S1) for in-person, telephone, and videoconference consultations were collected and collated monthly for the 36-month study time period. Other primary care consultations, such as those delivered by nurses or allied health practitioners, were not included as the focus of this study was on GP activity.

Statistical analysis

A descriptive analysis was completed using line graphs to identify underlying trends and summary statistics for overall GP activity. A level and slope change a priori was proposed as the impact model. This is because telehealth provision increased significantly after COVID-19 and the rate of telehealth activity was expected to change based on the ongoing need for telehealth. ITS analysis using segmented regression was then conducted to assess the impact of the two MBS policy changes on GP activity. This was examined by comparing the changes in trends for telehealth provision and activity between the pre-and post-intervention periods. The intervention periods were dictated by the two policy changes that occurred. This was achieved through resultant coefficients and graphical representation of the ITS analysis. The Cumby–Huizinga general test was used to assess autocorrelation, while *P*-values of <0.05 and 95% confidence intervals determined statistical significance. A line graph of total monthly GP consultations and monthly incidence of reported COVID-19 cases was also created to visualise the trend for overall GP activity in the context of the pandemic.

All analyses were completed using Microsoft Excel and Stata 16[®] statistical software.

Results

Overall GP consultation activity in Australia

Overall MBS activity for GP consultations conducted in Australia from January 2019 to December 2021 is shown (Fig. 1). Over 3 years, on average, there was a total of 11.7 million GP consultations (in-person and telehealth) delivered monthly. In April 2020, telehealth consultations increased dramatically with a simultaneous decrease in in-person consultations coinciding with the onset of COVID-19. On average, telephone represented 97% of all monthly GP telehealth consultations while videoconference consultations comprised only 3% (Fig. 1). The total monthly GP consultations with the monthly incidence of reported COVID-19 cases can also be observed (Supplementary Fig. S2).

Policy change 1: introduction of additional funding for telehealth services, 30 March 2020

There was a significant increase in telephone consultations offered by GPs, of approximately 4 million consults ($P < 0.0001$), in the first month after the introduction of additional MBS funding for telehealth services (first policy change) (Table 1, Fig. 2). Similarly, videoconference

provision also increased in the first month after additional telehealth funding was introduced, although less than the telephone, by 109 000 consults ($P < 0.0001$) (Fig. 3). This was expected after the introduction of additional telehealth funding which made telehealth more accessible for GPs and their patients. Along with this increase in telehealth provision, there was a simultaneous decrease in in-person activity by 2.9 million consultations in the first month after the first policy change ($P < 0.0001$) (Fig. 4). After the initial increase in telehealth provision, a significant decrease in telephone and videoconference activity occurred over the 14 months following this first policy change. Telephone activity decreased by 174 000 consultations per month ($P < 0.0001$), while videoconference activity decreased by 9000 consultations per month ($P < 0.0001$), observable as slopes with negative gradients (Figs 2, 3). However, in-person activity increased by 179 000 consultations each month ($P = 0.012$) at the same time, observed as a slope with a positive gradient (Fig. 4). The difference in the slopes for GP telehealth activity between the pre- and post-policy periods were significant ($P < 0.0001$).

Policy change 2: limitation on telephone consultation length to under 20 min, 1 July 2021

After the second policy change, where limitations on telephone consultation length to under 20 min were enacted, there was a significant increase in both telephone and videoconference provision compared to the end of the previous

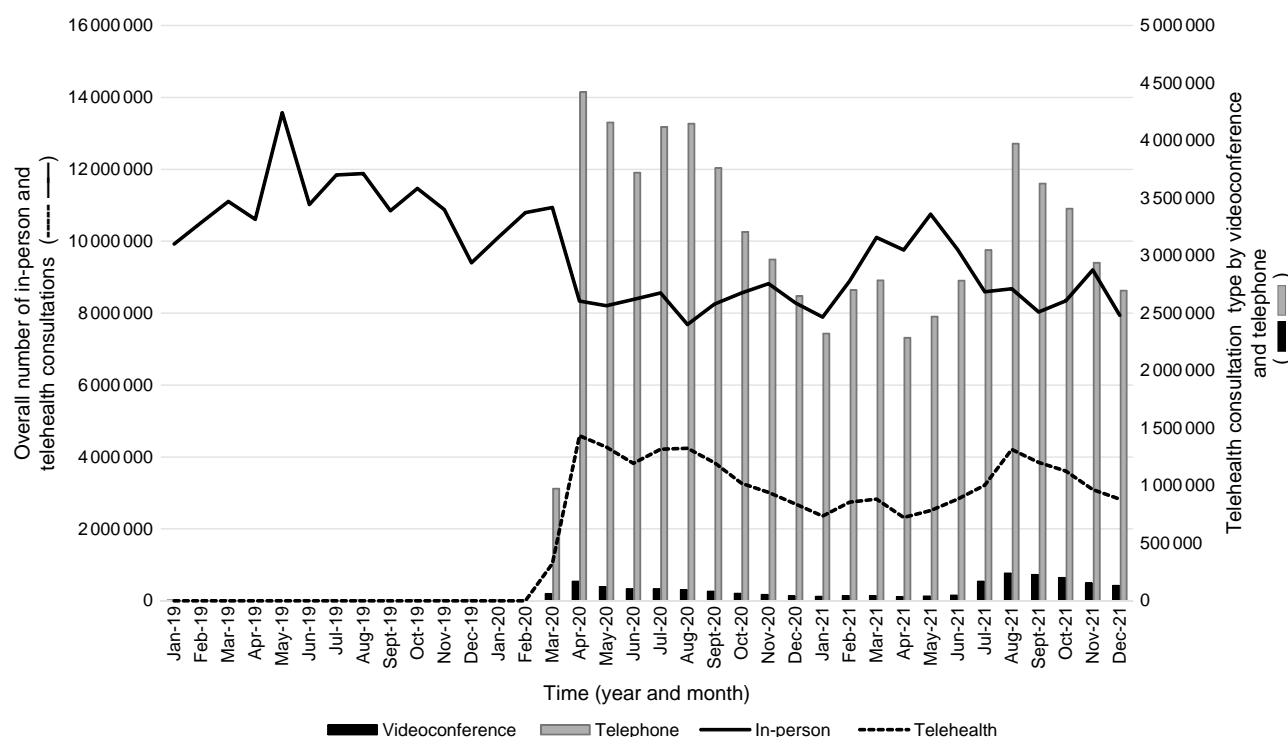


Fig. 1. General practitioner consultation activity in Australia from January 2019 to December 2021.

Table 1. Changes in telehealth provision and activity after implementation of telehealth policy changes using interrupted time-series analysis.

		Coefficient (95% CI)	P-value	Coefficient (95% CI)	P-value	Coefficient (95% CI)	P-value
		Telephone consultations		Videoconference consultations		In-person consultations	
First policy change on 30 March 2020: introduction of additional telehealth funding							
Initial activity	Initial slope	24 (–20 to 69)	0.271	2 (–1 to 4)	0.269	–33 (–149 to 83)	0.568
Change in provision	Level change (Immediate effect)	4020 (3466 to 4574)	<0.0001	109 (70 to 148)	<0.0001	–2939 (–3918 to –1965)	<0.0001
Change in monthly activity	Slope (Sustained effect)	–174 (–235 to –113)	<0.0001	–9 (–13 to –5)	<0.0001	179 (42 to 316)	0.012
Difference in monthly activity trend between pre- and post-policy period ^A		–150 (–191 to –108)	<0.0001	–8 (–11 to –5)	<0.0001	146 (73 to 219)	<0.0001
Second policy change on 1 July 2021: limitations on telephone consultation to under 20 min							
Change in provision	Level change (Immediate effect)	1608 (672 to 2543)	0.001	210 (137 to 283)	<0.0001	–1422 (–2267 to –577)	0.002
Change in monthly activity	Slope (Sustained effect)	–145 (–371 to 80)	0.199	–12 (–32 to 6)	0.178	–40 (–249 to 170)	0.700
Difference in monthly activity trend between pre- and post-policy periods ^B (Total Slope Change)		4 (–225 to 234)	0.969	–5 (–24 to 14)	0.593	–186 (–408 to 36)	0.097

All numbers are reported in thousands (e.g. 4020 is 4 020 000 consultations).

^AThe 'Difference in monthly activity trend between pre- and post-policy period' for the first policy change is calculated as $-174 + 24$.

^BThe 'Difference in monthly activity trend between pre- and post-policy periods' for the second policy change is calculated as $-145 + 174 - 24$.

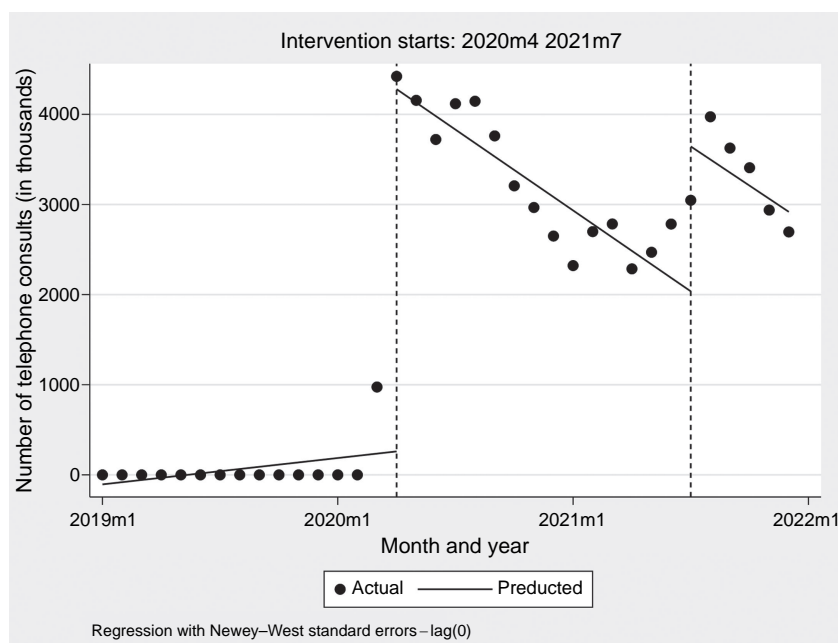


Fig. 2. Interrupted time-series analysis for telehealth policy changes on general practitioner telephone consultation activity.

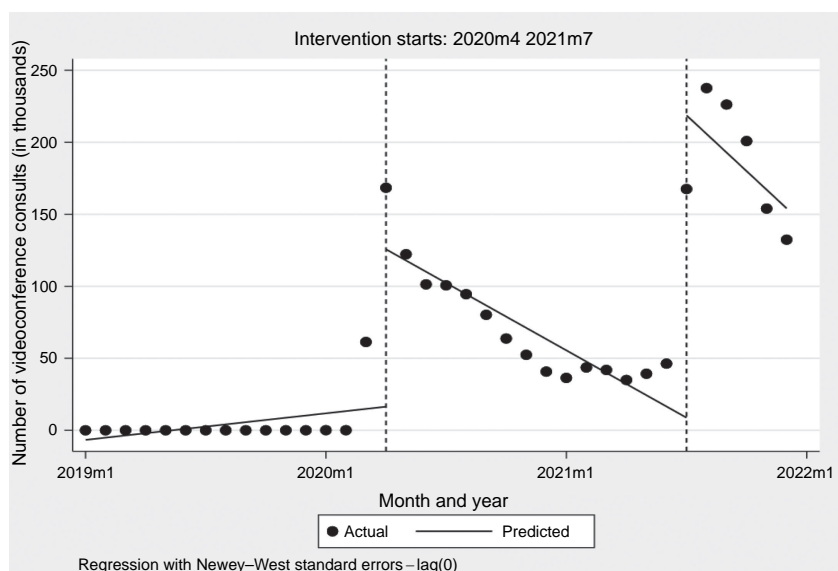


Fig. 3. Interrupted time-series analysis for telehealth policy changes on general practitioner videoconsultation activity.

policy period (Figs 2, 3). Telephone provision increased by 1.6 million consultations ($P < 0.0001$) and videoconference provision increased by 201 000 consultations ($P < 0.0001$). In the first month of the second policy change, the number of videoconference consultations was more than in the first month of the first policy change (when additional MBS telehealth funding was introduced in March 2020). This second policy change may have encouraged increased videoconference provision. Conversely, the number of telephone consultations in the month after the first policy change was less than the first month after the second policy change. The level change for in-person consultation provision after this second policy change was a much smaller decrease than the

level change after the first policy change (Fig. 4). This shows that the limitation on telephone consultation length had less impact on in-person activity than the introduction of additional telehealth funding 15 months prior. In the 5 months following the second policy change, telehealth (telephone and videoconference consultations) activity reduced, although this reduction was not significant. Telephone activity decreased by 145 000 consultations per month ($P = 0.199$) and videoconference activity decreased by 12 000 consultations per month ($P = 0.178$) (Figs 2, 3). However, the difference in the growth rate of monthly activity for telephone, videoconference, and in-person consultations across the policy periods (total slope change) was

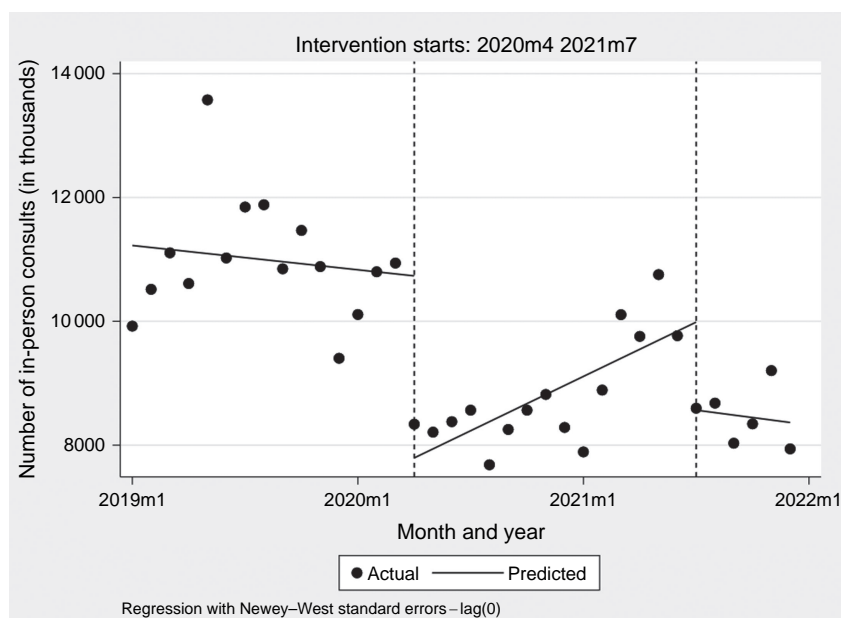


Fig. 4. Interrupted time-series analysis for telehealth policy changes on general practitioner in-person consultation activity.

not statistically significant. This demonstrates little difference in monthly GP activity rates between the policy changes.

Discussion

Main findings

This study examined the impact of two major MBS policy changes on GP consultation activity in Australia during COVID-19. The introduction of additional funding for telehealth services (first policy change) resulted in a significant increase in the provision of telephone and videoconference consultations and a significant decrease in in-person consultations. This demonstrated a shift from in-person to telehealth care during the pandemic. However, this first policy change did not necessarily sustain telehealth provision and growth in an upward trajectory as monthly telehealth activity significantly decreased following the introduction of additional telehealth funding. After the limitation on telephone consultation length (second policy change), the rate of videoconference provision increased compared to the previous policy period. This was demonstrated by the larger increase in the level change for videoconference consultations compared to the increase after the first policy change. This suggested that this second policy change may have encouraged videoconference use. However, the rate of all telehealth activity still decreased in the months following this second policy change. This shows that continued telehealth provision was not maintained, although these results were not significant. The insignificant total slope change shows that monthly activity did not change across the policy periods. However, significant changes in telehealth uptake and monthly telehealth activity were observed in both policy periods.

Importance of funding for telehealth uptake and provision

Investment into telehealth services during COVID-19 has been reported in Canada, the United States, and the United Kingdom.^{15–17} The introduction of increased telehealth funding globally has positively affected telehealth provision. Many clinicians and health services have continuously expressed the need for funding to provide telehealth services, particularly within the primary care sector.^{11,12,18} These study findings further support that additional telehealth funding was important from a GP perspective. This was demonstrated through the significant provision of GP telehealth consultations after the first policy change. In Australia, one of the main barriers to delivering GP telehealth services prior to COVID-19 has been the absence of appropriate reimbursement. Therefore, the government's decision to support ongoing MBS arrangements for GP telehealth consultations⁸ is one step in achieving telehealth sustainability post-pandemic.

Incentivising increased videoconference use

Telehealth funding alone is not the only requirement for sustained telehealth provision or increased videoconference use. The trend for increased telephone over videoconference use by Australian GPs in this study is consistent with other research.^{18–20} In Quebec, primary care providers mainly used the telephone during COVID-19. Videoconferencing represented 2–16% of all telehealth services.¹⁹ A study in the United States found that telephone consultations were the most common in primary care settings.²⁰ Since COVID-19, the Australian Government has led funding reform to encourage increased GP videoconference use. One strategy was implementing the second policy change, where GP telephone consultation length was limited to

20 min. This study showed an increase in the rate of video-conference provision after this second policy change. However, overall changes in telehealth activity in the months following were not significant. While the limitation on telephone consultations may initially encourage videoconference use, it is unlikely to independently influence telehealth provision long-term. An alternative suggestion for incentivising videoconference use is offering higher reimbursement amounts than those available for telephone consultations.¹⁵ However, other research has found that financial incentives alone do not inspire GPs to deliver more videoconference services. Currently, the Australian Government has committed to funding MBS telehealth services with some modifications to the remuneration regulations. From 1 July 2022, GPs who claim up to 30 telephone attendances on 20 or more days in a 12-month period will be subject to a professional services review, while videoconference attendances will remain the same.⁸ We expect this to lead to further changes in GP telehealth provision in Australia.

Complexity of factors influencing GP telehealth delivery

Many other factors influence GP telehealth delivery and choice of consultation mode.¹¹ Some of these factors include the type of clinical presentation, the ability to build rapport, the presence of time pressures, the impact of consumer preferences, and the perceived capacity to provide high-quality patient care.^{11,21–23} Videoconferencing has the potential to improve quality of care compared to the telephone because it enables visual assessment.¹¹ However, the time required to set up, manage, and deliver a videoconference consultation is often more difficult than a telephone consultation.^{11,24} Therefore, strategies to make videoconferencing interactions more ubiquitous are needed. Some potential strategies include establishing appropriate infrastructure, refining logistical processes (scheduling, billing), and better integration with existing clinical workflows.^{2,11,25}

Paving the way forward for GP telehealth services

Irrespective of how consultations are delivered, telehealth offers many other benefits within the primary care sector. These include improved access to care, decreased patient travel, and greater communication between care providers.^{7,26,27} Given these benefits and the evidence for the overall safety and effectiveness of telehealth,^{28–30} encouraging telehealth use in primary care is very important. Opportunities for telehealth delivery should enable GPs to offer flexible communication options that address patient needs and encourage collaborative care. GPs and professional organisations also have an important role in advocacy for appropriate videoconference use.^{25,26} Ongoing research is now needed to build on the evidence-base for effective

telehealth care in general practice, which will help inform new service models that are cost-effective and patient-centric.

Limitations

Until the impacts of COVID-19 fully unfold, the long-term impact on telehealth provision is yet to be observed, and the value of telehealth is yet to be assessed. Besides from policy changes, GP services may have been impacted by other factors, such as COVID-19 lockdowns mandated by the Australian Government. This study examined GP activity on a national level, and lockdowns differed across Australian states and territories. Still, investigation into GP activity across different states and territories, with consideration to COVID-19 lockdowns, could be an avenue for future research. Some changes in overall GP activity may have been due to seasonal variations or surges in COVID-19 cases. While this is difficult to quantify, GP activity did not appear to increase as a result of COVID-19 cases or seasonality. Examining GP consultations according to presenting complaint or consultation type may be of interest if this can be explored. This data set had limited granularity, with monthly time points only; therefore, additional policy changes were not examined. This study examined MBS claimed consultations, so private GP services were not represented.

Conclusion

This study examined the impact of MBS telehealth policy changes on GP services in Australia. The introduction of additional telehealth funding had a very positive effect on GP telehealth provision. While funding is necessary for telehealth sustainability, this study has demonstrated that funding alone is unlikely to result in long-term telehealth provision. Limitations on telephone consultation length may have initially encouraged videoconference use. However, it did not impact ongoing monthly GP activity and did not appear to increase GP preference for videoconference consultations. Funding is important for service viability, but other factors must be considered to encourage long-term telehealth adoption and sustainable change in primary care in Australia.

Supplementary material

Supplementary material is available [online](#).

References

- 1 Smith AC, Thomas E, Snoswell CL, *et al.* Telehealth for global emergencies: Implications for coronavirus disease 2019 (COVID-19). *J Telemed Telecare* 2020; 26: 309–313. doi:[10.1177/1357633X20916567](#)
- 2 Thomas EE, Haydon HM, Mehrotra A, *et al.* Building on the momentum: Sustaining telehealth beyond COVID-19. *J Telemed Telecare* 2020; 28: 301–308. doi:[10.1177/1357633X20960638](#)

- 3 Snoswell CL, Caffery LJ, Haydon HM, et al. Telehealth uptake in general practice as a result of the coronavirus (COVID-19) pandemic. *Aust Health Rev* 2020; 44: 737–740. doi:10.1071/AH20183
- 4 Wright M, Versteeg R, Hall J. General practice's early response to the COVID-19 pandemic. *Aust Health Rev* 2020; 44: 733–736. doi:10.1071/ah20157
- 5 Jonnagaddala J, Godinho MA, Liaw S-T. From telehealth to virtual primary care in Australia? A Rapid scoping review. *Int J Med Inform* 2021; 151: 104470. doi:10.1016/j.ijmedinf.2021.104470
- 6 Snoswell CL, Caffery LJ, Taylor ML, et al. Telehealth and coronavirus: Medicare Benefits Schedule (MBS) activity in Australia. Centre for Online Health, The University of Queensland; 2021. Available at <https://coh.centre.uq.edu.au/telehealth-and-coronavirus-medicare-benefits-schedule-mbs-activity-australia> [accessed 4 February 2022]
- 7 De Guzman KR, Snoswell CL, Caffery LJ, et al. Economic evaluations of videoconference and telephone consultations in primary care: A systematic review. *J Telemed Telecare* 2021; 1357633X211043380. doi:10.1177/1357633X211043380
- 8 Australian Government Department of Health. MBS Telehealth Services from January 2022. 2022. Available at <http://www.mbsonline.gov.au/internet/mbsonline/publishing.nsf/Content/Factsheet-Telehealth-Arrangements-Jan22> [accessed 4 February 2022]
- 9 De Guzman KR, Caffery LJ, Smith AC, et al. Specialist consultation activity and costs in Australia: Before and after the introduction of COVID-19 telehealth funding. *J Telemed Telecare* 2021; 27: 609–614. doi:10.1177/1357633X211042433
- 10 The Royal Australian College of General Practitioners (RACGP). Changes to MBS telehealth items from 1 July 2021. 2021. Available at <https://www.racgp.org.au/running-a-practice/practice-resources/medicare/medicare-benefits-schedule/changes-to-mbs-telehealth-items> [accessed 4 February 2022]
- 11 De Guzman KR, Snoswell CL, Giles CM, et al. GP perceptions of telehealth services in Australia: a qualitative study. *BJGP Open* 2022; 6: BJGP.2021.0182. doi:10.3399/bjgp.2021.0182
- 12 Willcock SM, Cartmill JA, Tse T, et al. How will telehealth change primary care in Australia? *BJGP Open* 2022; 6: BJGP.2021.0186. doi:10.3399/BJGP.2021.0186
- 13 Sturmberg JP, O'Halloran DM, McDonnell G, et al. General practice work and workforce: Interdependencies between demand, supply and quality. *Aust J Gen Pract* 2018; 47: 507–513. doi:10.31128/ajgp-03-18-4515
- 14 Australian Government. Medicare Item Reports. 2021. Available at http://medicarestatistics.humanservices.gov.au/statistics/mbs_item.jsp [accessed 4 February 2022]
- 15 Mehrotra A, Bhatia RS, Snoswell CL. Paying for Telemedicine After the Pandemic. *JAMA* 2021; 325: 431–432. doi:10.1001/jama.2020.25706
- 16 Joshi AU, Lewiss RE. Telehealth in the time of COVID-19. *Emerg Med J* 2020; 37: 637–638. doi:10.1136/emmermed-2020-209846
- 17 Fisk M, Livingstone A, Pit SW. Telehealth in the Context of COVID-19: Changing Perspectives in Australia, the United Kingdom, and the United States. *J Med Internet Res* 2020; 22: e19264. doi:10.2196/19264
- 18 Johnson C, Dupuis JB, Goguen P, et al. Changes to telehealth practices in primary care in New Brunswick (Canada): A comparative study pre and during the COVID-19 pandemic. *PLoS One* 2021; 16: e0258839. doi:10.1371/journal.pone.0258839
- 19 Breton M, Deville-Stoetzel N, Gaboury I, et al. Telehealth in Primary Healthcare: A Portrait of its Rapid Implementation during the COVID-19 Pandemic. *Healthc Policy* 2021; 17: 73–90. doi:10.12927/hcpol.2021.26576
- 20 Jetty A, Jabbarpour Y, Westfall M, et al. Capacity of Primary Care to Deliver Telehealth in the United States. *J Am Board Fam Med* 2021; 34: S48–S54. doi:10.3122/jabfm.2021.S1.200202
- 21 Chudner I, Drach-Zahavy A, Karkabi K. Choosing Video Instead of In-Clinic Consultations in Primary Care in Israel: Discrete Choice Experiment Among Key Stakeholders-Patients, Primary Care Physicians, and Policy Makers. *Value Health* 2019; 22: 1187–1196. doi:10.1016/j.jval.2019.05.001
- 22 Hammersley V, Donaghy E, Parker R, et al. Comparing the content and quality of video, telephone, and face-to-face consultations: a non-randomised, quasi-experimental, exploratory study in UK primary care. *Br J Gen Pract* 2019; 69: e595–e604. doi:10.3399/bjgp19X704573
- 23 Downes MJ, Mervin MC, Byrnes JM, et al. Telephone consultations for general practice: a systematic review. *Syst Rev* 2017; 6: 128. doi:10.1186/s13643-017-0529-0
- 24 Seuren LM, Wherton J, Greenhalgh T, Cameron D, A'Court C, Shaw SE. Physical examinations via video for patients with heart failure: Qualitative Study Using Conversation Analysis. *J Med Internet Res* 2020; 22: e16694. doi:10.2196/16694
- 25 Wherton J, Shaw S, Papoutsis C, Seuren L, Greenhalgh T. Guidance on the introduction and use of video consultations during COVID-19: important lessons from qualitative research. *Transl Res Evid* 2020; 4: 120–123. doi:10.1136/leader-20200000262
- 26 Bradford NK, Caffery LJ, Smith AC. Telehealth services in rural and remote Australia: a systematic review of models of care and factors influencing success and sustainability. *Rural Remote Health* 2016; 16: 3808. doi:10.22605/RRH4268
- 27 Moffatt JJ, Eley DS. The reported benefits of telehealth for rural Australians. *Aust Health Rev* 2010; 34: 276–281. doi:10.1071/ah09794
- 28 Snoswell CL, Stringer H, Taylor ML, et al. An overview of the effect of telehealth on mortality: A systematic review of meta-analyses. *J Telemed Telecare* 2021; doi:10.1177/1357633X211023700
- 29 Snoswell CL, Chelberg G, De Guzman KR, et al. The clinical effectiveness of telehealth: A systematic review of meta-analyses from 2010 to 2019. *J Telemed Telecare* 2021; doi:10.1177/1357633X211022907
- 30 Graetz I, Huang J, Muelly E, et al. Primary Care Visits Are Timelier When Patients Choose Telemedicine: A Cross-Sectional Observational Study. *Telemed e-Health* 2022; doi:10.1089/tmj.2021.0528

Data availability. The Medicare Benefits Schedule (MBS) data that supports this study is publicly available.

Conflicts of interest. The authors declare no conflicts of interests.

Declaration of funding. This research was supported by an Australian Government Research Training (RTP) Scholarship.

Acknowledgements. We acknowledge Dr Aaron Snoswell for his assistance with data collection for this study.

Author affiliations

^ACentre for Online Health, The University of Queensland, Qld, Australia.

^BCentre for Health Services Research, The University of Queensland, Brisbane, Qld, Australia.

^CCentre for Innovative Medical Technology, University of Southern Denmark, Odense, Denmark.