

Virtual care in NSW

Use and patients' experiences



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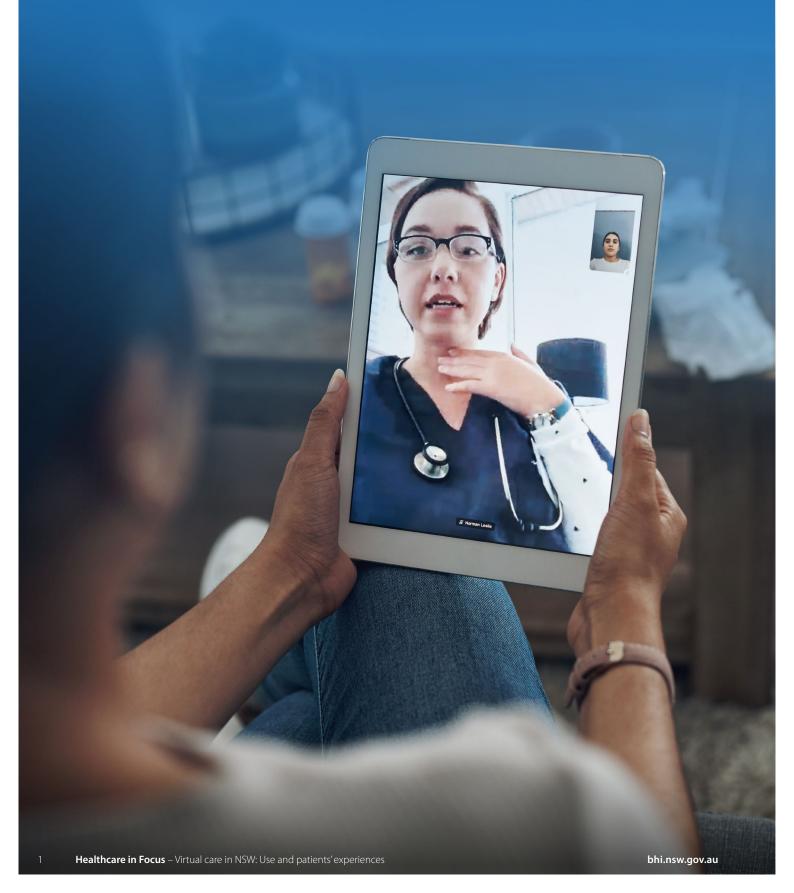
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The conclusions in this report are those of BHI and no official endorsement by the NSW Minister for Health, the NSW Ministry of Health or any other NSW public health organisation is intended or should be inferred.

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Foreword



Virtual care is now embedded as a core component of healthcare delivery in NSW having expanded rapidly through necessity during the COVID-19 pandemic.

This issue of the Bureau of Health Information (BHI) annual *Healthcare in Focus* report draws on multiple sources and employs advanced analytics to illustrate evolving patterns in the use of virtual care, which can involve any interaction between patients and clinicians with the use of information technologies.

The report reveals a gradual decrease in use of virtual care in NSW during 2023 – having settled below the pandemic peaks.

It shows, however, that most NSW patients who have used virtual care had positive experiences, and it's helping in key areas such as the coordination of their care.

BHI is giving voice to these patients through extensive work that began early in the pandemic.

In line with our commitment to be responsive in providing high value information that can be used to improve care for patients, after the start of the COVID-19 pandemic we worked quickly to introduce the statewide Virtual Care Survey to understand how patients were experiencing this model of care.

The survey has now been running for four years and continues to inform the monitoring and evaluation of NSW Health's Virtual Care Strategy.

In addition, special virtual care questionnaire modules in our core surveys have allowed us to better understand experiences of virtual care across the healthcare journey, expanding the information we make available in this critical area. This data underpins many of the insights in this and other BHI reports.

I would like to thank the thousands of people who took the time to tell us about their experiences. Without your contributions we would not be able to deliver this valuable information to help improve healthcare experiences and outcomes for patients across NSW.

Dr Diane Watson

Chief Executive

Summary

This Healthcare in Focus report provides insights into patients' use and experiences of virtual care in NSW. It illustrates patterns of virtual care use in recent years and shows how, with what services and in what contexts patients used this model of care between 2020 and 2023.

Using results from the NSW Patient Survey Program, the report also explores around 20,000 patients' experiences of virtual care services with NSW public hospital outpatient clinics and general practitioners (GPs), including after discharge from hospital, and factors that influenced positive experiences. This feedback provides important information on the performance of the NSW health system and enables us to identify where the system is performing well and where virtual care services could be improved to better meet patients' needs.

One of BHI's functions is to provide an annual report to the NSW Minister for Health and the NSW Parliament about the performance of the NSW public health system. This report fulfils that responsibility and provides transparency

for the community as well as insights to support system management and improvement.

Analyses in this report include:

- Medicare-subsidised GP and specialist virtual care attendances in NSW from 2019 to 2023
- self-reported use and experiences of patients admitted to NSW public hospitals in 2022 who received virtual care from hospital outpatient clinics and GPs after discharge
- patients' use of virtual care in conjunction with in-person care after discharge from hospital
- insights into the role and impact of virtual care with regard to care coordination between hospitals and GPs
- insights into patients' experiences of virtual care from 2020 to 2023, including predictors of positive experiences of virtual care with NSW public hospital outpatient clinics.

The Appendix to this report contains detailed information about the analyses.



Key findings

Virtual care continues to be well-utilised in NSW, although uptake has gradually decreased since the height of the pandemic.

In 2023, 18% of Medicare-subsidised GP attendances were virtual – among the highest of any Australian state or territory. However, 9% of Medicare-subsidised specialist attendances were virtual – among the lowest of all Australian jurisdictions.

Virtual care is a common part of care following discharge from hospital, mainly as a complement to in-person care. In 2022, 16% of adult admitted patients said they had at least one virtual care appointment with a hospital outpatient clinic in the three months after discharge, and 32% at least one virtual care appointment with a GP.

The more virtual care appointments patients had after discharge, the more likely they were to say their care was well coordinated between the hospital and the GP.

From 2020 to 2023, most patients provided positive overall ratings of their experiences of virtual care with NSW public hospital outpatient clinics.

Those who had more virtual care appointments and those who had seen the health professional(s) before were the most positive about their virtual care experiences.

Setting the scene

Improving access to digitally-enabled healthcare and improving patients' experiences and outcomes are system-wide priorities for NSW Health.

Virtual care is any interaction between a patient and clinician, or between clinicians, occurring remotely with the use of information technologies. As technology has evolved so too has the terminology, and 'telehealth' services are increasingly being referred to as 'virtual care' to better reflect the broader range of technologies used*.

The use of virtual care has expanded in recent years, with this growth accelerating during the COVID-19 pandemic. In a survey by the Australian Bureau of Statistics conducted in 2022–23, more than one-quarter of people in Australia aged 15+ years (28%) reported having had at least one virtual care consultation for their own health in the last 12 months.

Virtual care is designed to complement in-person care as a safe, effective and accessible option for healthcare delivery in NSW*. It has many potential benefits including supporting access to care across the healthcare journey and providing patients with more choice about how and when they receive care.

Virtual care it is not without its challenges. Difficulties with technology may prevent some patients from accessing and/or fully benefiting from virtual care and some patients require extra support to ensure equitable access to virtual care.

The analyses in this report provide insights into the use of virtual care in NSW as well as the experiences of patients who use virtual care with hospital outpatient clinics and GPs, including after discharge from NSW public hospitals.

In 2022-23,

28%

of people in Australia said they had a virtual care consultation for their own health in the last 12 months Of these...



85%

had a virtual care appointment with a GP



21%

had a virtual care appointment with a medical specialist

Source: Australian Bureau of Statistics (ABS) Patient Experiences Survey 2022–23

^{*}NSW Virtual Care Strategy 2021-2026.

Key NSW Health policy and context documents

The NSW Virtual Care Strategy 2021–2026 outlines a pathway for a coordinated and consistent approach to increasing use of virtual care as part of a suite of healthcare delivery options across NSW. It aims to achieve a number of key outcomes which focus on patient centredness, equity of access to care and building consumer confidence in virtual care and care providers. The Strategy also makes reference to myVirtualCare, a web-based videoconferencing platform that includes a point of care patient survey.

Virtual care is a key component of **Future Health: Guiding the next decade of health care in NSW 2022–2032**, a roadmap which aims to deliver on NSW Health's vision of a 'sustainable health system that delivers outcomes that matter most to patients and the community, is personalised, invests in wellness and is digitally enabled'.

Elevating the Human Experience: Our guide to action for patient, family, carer and caregiver experiences identifies innovation and technology, including virtual care, as key enablers of enhancing patient experience, including through facilitating the delivery of healthcare in alternative care settings.

The NSW Patient Survey Program

Each month BHI asks thousands of people to tell us about their recent experience with the NSW public healthcare system as part of the NSW Patient Survey Program. This program of surveys ask patients questions about different aspects of their care such as communication and information, accessibility and timeliness, whether they were treated with respect and dignity and the physical environment of the hospital. Patients are also asked about their subsequent healthcare outcomes and any follow-up care, including virtual care appointments.

This report draws on findings from two ongoing BHI surveys: the Adult Admitted Patient Survey, which asks for feedback from people who have recently been admitted to a NSW public hospital; and the Virtual Care Survey, which asks for feedback from people who have had a virtual care outpatient appointment with a public hospital outpatient clinic.

To see more patient survey results relating to virtual care experiences visit the BHI website at **bhi.nsw.gov.au**



Virtual care with GPs and specialists in NSW

Virtual care is a staple model of healthcare service delivery for many NSW patients

General practitioner (GP) and specialist virtual care attendances in NSW rose sharply from early 2020 at the onset of the COVID-19 pandemic. After peaking in mid-2021 during the COVID-19 Delta wave, they decreased to an average of 18% of GP attendances (Figure 1) and 9% of specialist attendances (Figure 2) throughout 2023.

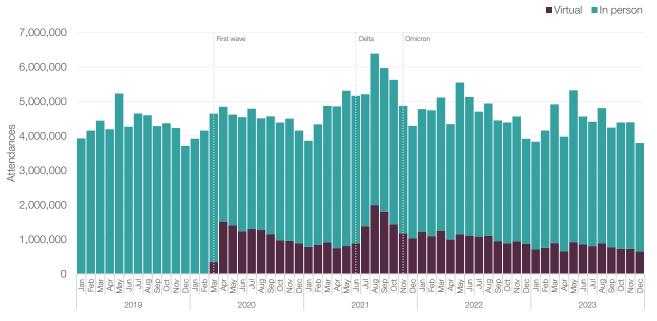
While the use of virtual care has declined from its peak during the pandemic, it has not receded to prepandemic levels, reflecting the sustained adoption of hybrid models of in-person and virtual care.

In 2023, virtual care attendances were higher than in 2019, however the total volume of attendances (inperson and virtual) only saw a modest increase (see Table 1 in the Appendix to this report). This indicates that virtual care was largely an alternative to inperson care, rather than an addition to it.

GP attendances in NSW

Percentage of GP attendances that were virtual, 2019 to 2023

Figure 1 Medicare-subsidised GP attendances, by type of appointment, NSW, January 2019 to December 2023



Source: Australian Government Services Australia. Retrieved from: **medicarestatistics.humanservices.gov.au/statistics/mbs_item.jsp** (online resource). Data downloaded 11 March 2024.

Note: From March 2020, temporary Medicare Benefits Schedule (MBS) telehealth items were introduced to help reduce COVID-19 transmission and protect patients and healthcare providers. From January 2022, many of these items were made permanent.

Specialist attendances outlined in Chapter 1 refer to those subsidised by the Commonwealth government under the Medicare Benefits Schedule.

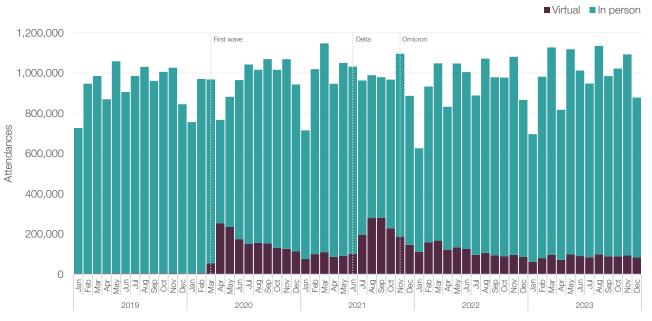
Information on use and patients' experiences of virtual care provided by NSW Health-funded hospital outpatient clinics is available in Chapters 2 and 3.

Specialist attendances in NSW

Percentage of specialist attendances that were virtual, 2019 to 2023

2019 2021 2023

Medicare-subsidised specialist attendances, by type of appointment, NSW, January 2019 to Figure 2 December 2023



Source: Australian Government Services Australia. Retrieved from: medicarestatistics.humanservices.gov.au/statistics/mbs_item.jsp (online resource). Data downloaded 11 March 2024.

Note: From March 2020, temporary Medicare Benefits Schedule (MBS) telehealth items were introduced to help reduce COVID-19 transmission and protect patients and healthcare providers. From January 2022, many of these items were made permanent.

Virtual care with GPs and specialists across Australian states and territories

NSW patients are higher users of virtual GP care and lower users of virtual specialist care

Of the 28.3 million Medicare-subsidised virtual GP attendances in Australia during 2023, 9.3 million (33%) were in NSW and of the 3.5 million virtual specialist attendances in Australia during 2023, 1 million (29%) were in NSW.

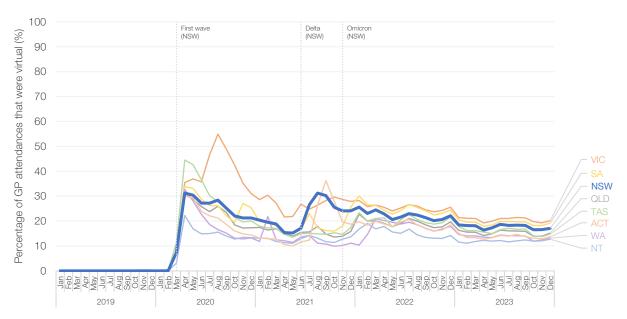
As a percentage of all GP attendances, virtual GP attendances in NSW rose sharply with the first COVID-19 and Delta waves before declining to the end of 2023 (Figure 3). As a percentage of all specialist attendances, virtual specialist attendances in NSW followed a similar pattern, but with a sharper decline in late 2021 (Figure 4).

Other Australian states and territories also experienced surges in the take-up of virtual GP and specialist care that coincided with COVID-19 waves, although both the timing of waves and lockdowns, and the extent of their impact, varied across the country (Figures 3 and 4).

By December 2023, the percentage of all GP attendances that were virtual was higher in NSW compared with most other states, with the exception of Victoria and South Australia (Figure 3). In contrast, the percentage of all specialist attendances in NSW that were virtual was among the lowest of all the states and territories (Figures 3 and 4).

GP attendances across Australian states and territories





Source: Australian Government Services Australia. Retrieved from: medicarestatistics.humanservices.gov.au/statistics/mbs_item.jsp (online resource). Data downloaded 11 March 2024.

Note: From March 2020, temporary Medicare Benefits Schedule (MBS) telehealth items were introduced to help reduce COVID-19 transmission and protect patients and healthcare providers. From January 2022, many of these items were made permanent.



I struggle to leave my house due to my anxiety so being able to have appointments virtually helps me a lot.

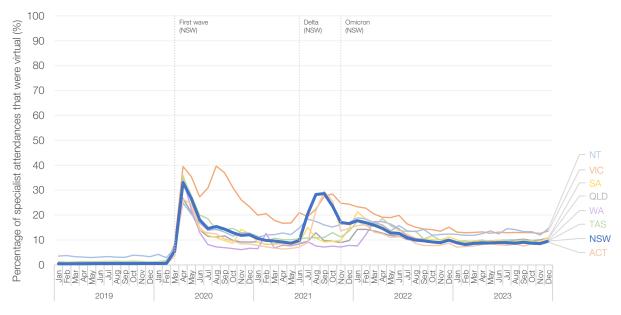
patient

I have used virtual care to talk to my spinal team, my GP, pathology, for at home appointments and chemists. This service is extremely valuable for me. - patient



Specialist attendances across Australian states and territories

Percentage of Medicare-subsidised specialist attendances that were virtual, NSW and other Figure 4 states and territories, January 2019 to December 2023



Source: Australian Government Services Australia. Retrieved from: medicarestatistics.humanservices.gov.au/statistics/mbs_item.jsp (online resource). Data downloaded 11 March 2024.

Note: From March 2020, temporary Medicare Benefits Schedule (MBS) telehealth items were introduced to help reduce COVID-19 transmission and protect patients and healthcare providers. From January 2022, many of these items were made permanent.

Patients' experiences with outpatient clinics and GPs

Most patients who used virtual care after discharge had positive experiences

Many patients who access virtual care do so as part of their follow-up care after discharge from hospital. These patients may require follow-up care either with a hospital outpatient clinic, with a general practitioner (GP) or both.

As part of the 2022 Adult Admitted Patient Survey, 9,931 patients admitted to hospital from January to June 2022 provided information about their use of virtual outpatient and GP care within three months of their discharge. Virtual care appointments were a common feature of many patients' post-discharge care (see infographic below).

Overall, hospital outpatients were very positive about their post-discharge virtual care experiences in the first half of 2022.

More than eight in 10 patients (86%) said that overall, the virtual care they received from hospital outpatient clinics was either 'very good' (52%) or 'good' (34%), and around nine in 10 (92%) said it helped them 'definitely' (58%) or 'to some extent' (34%) (Figure 5).

Similar ratings were provided by patients who had virtual care appointments with GPs after discharge from hospital (Figure 6).

Use of virtual care within three months of discharge from a NSW public hospital, January to June 2022

16%

of patients had a virtual care appointment with a hospital outpatient clinic



32%

of patients had a virtual care appointment with a GP

9%

subset of patients had a virtual care appointment with both

Chapter 2 **Virtual care after discharge**

Figure 5 Percentage of admitted patients in NSW who also had a virtual care appointment with a hospital outpatient clinic within three months of discharge, all response options, January to June 2022

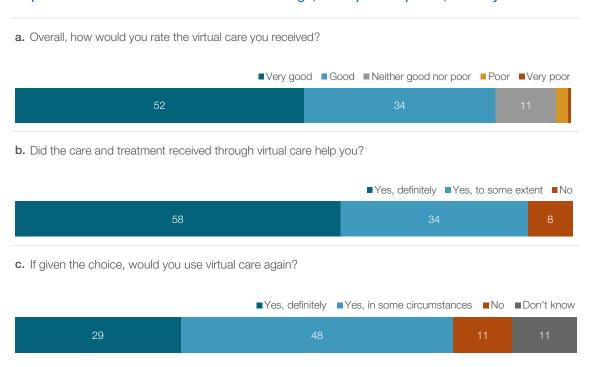


Figure 6 Percentage of admitted patients in NSW who also had a virtual care appointment with a GP within three months of discharge, all response options, January to June 2022



Virtual and in-person care

In the post-discharge period, virtual care is mostly used as a complement to in-person care

Patient-centred, clinician-led virtual care may be an efficient and effective model of care alongside inperson appointments.

The results of the Adult Admitted Patient Survey 2022 were analysed to understand how 9,931 patients admitted to hospital between January and June that year used virtual care in conjunction with in-person appointments in the three months following their discharge from hospital.

The analysis found that the bulk of post-discharge care was delivered in person, and that when virtual care was used, it was most frequently used in combination with in-person care (see infographic below).

These findings highlight the role of virtual care as an essential component of healthcare delivery in the post-discharge period.

Some of the more prevalent users of post-discharge virtual care were older patients (with GPs), patients living in urban areas and patients who mainly speak a language other than English at home. Notably, patients in urban areas showed a higher use of virtual GP care within three months of discharge than those in rural areas. Although 81% of patients in both settings reported an in-person appointment, 35% of patients in urban areas reported a virtual appointment compared with 25% of patients in rural areas (see Table 2 in the Appendix to this report).

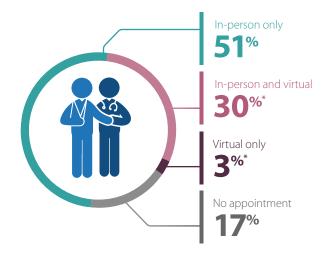
Post-discharge care for patients admitted to hospital from January to June 2022

Appointments with hospital outpatient clinics

In-person only 27% In-person and virtual 12% Virtual only 4% No appointment 57%

Note: Results may not add up to 100% due to rounding. *Sum of in-person and virtual (30%) does not equal the 32% quoted on page 11 due to rounding.

Appointments with GPs



Patient comments



My virtual care was part of my rehabilitation after being treated for a heart attack. The virtual care backed up and complemented the in-person care I received.

> I have hearing aids that don't always work very well with the phone so I prefer to see faces. It's very hard to explain complicated symptoms over the phone.

The best part of my virtual care experiences is that it's so much easier for me. Because I can't walk and drive due to my illness, having virtual appointments at home makes my life so much easier.

> Specialists in particular have been rushed in explaining complex information, and don't give enough time for questions. The cut-off is very abrupt with virtual care, there's no time to realise you've forgotten to ask something.

I had a fantastic experience with the virtual online doctor! The platform was userfriendly, and the doctor provided thorough and helpful insights.

> I was not satisfied with my virtual care experiences. I felt the process impersonal and less than adequate for my healthcare needs

Virtual care and care coordination

Virtual care helps to ensure care is well coordinated between the hospital and the GP

Virtual care can play an important role in the postdischarge period, including by helping to ensure that healthcare is coordinated, from acute through to primary care settings.

The Adult Admitted Patient Survey 2022 asked patients admitted to hospital between January and June 2022 about the extent to which the use of virtual care helped with care coordination. Almost nine in 10 (88%) respondents who had a virtual care appointment with a GP in the three months following their discharge said the opportunity to use virtual care either 'definitely' (51%) or 'to some extent' (37%) helped to ensure that their care was well coordinated between the hospital and their GP (Figure 7).

BHI conducted further analyses of the results to understand the role of virtual care in care coordination in the post-discharge period.

The analysis found that the more virtual care appointments a patient had within three months of discharge, the more likely they were to report that the use of virtual care helped ensure their care was well coordinated between the hospital and the GP (see page 16).

These findings highlight the role and potential of virtual care to enhance the coordination of care for patients after they leave hospital.

Figure 7 Percentage of admitted patients in NSW who also had a virtual care appointment with a GP within three months of discharge, all response options, January to June 2022*

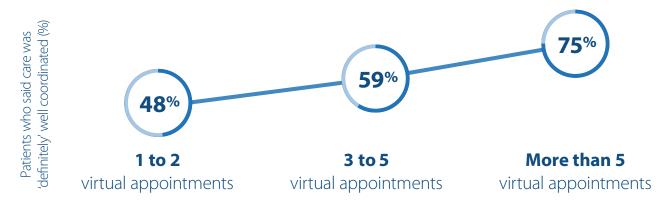
Did the opportunity to use virtual care help ensure that your care was well coordinated between the hospital and the GP?



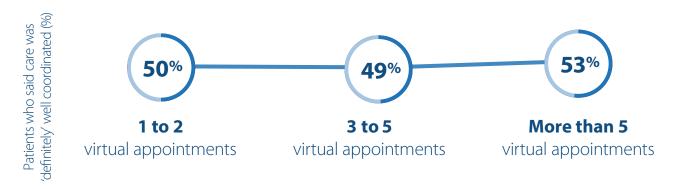
^{*} Based on the responses of 2,785 patients who said they had at least one virtual care appointment with a GP within three months of discharge

Patients who used virtual care more often were more likely to say it 'definitely' ensured their care was well coordinated between the hospital and the GP⁺

Patients who had virtual appointments with hospital outpatient clinics (and at least one appointment with a GP)



Patients who had virtual appointments with a GP



^{*}Based on the responses of 2,785 patients who said they had a virtual care appointment with a GP within three months of discharge and 686 patients who said they had a virtual care appointment with both a hospital outpatient clinic and a GP.

Hospital outpatients' experiences over time

Patients remain positive about virtual outpatient care

In 2023, almost two in 10 (17%) of the 14.8 million outpatient services provided by NSW Health were through virtual care, down from 21% in 2022 (see Table 3 in the Appendix to this report).*

Between 2020 and 2023, BHI collected information about adult patients' experiences of virtual outpatient care provided by NSW public hospitals via the Virtual Care Survey.

Over this period, patients offered relatively high ratings of their virtual outpatient care. Around two-thirds rated the virtual care they received from hospital outpatient clinics in the 12 months prior to completing the survey as 'very good,' with around a quarter rating it as 'good' (Figure 8).

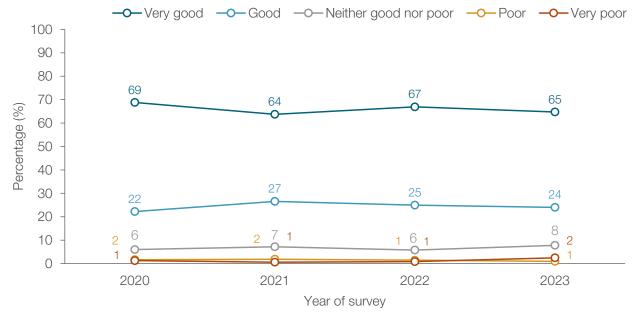
From 2020 to 2023, patients were increasingly likely to say that the virtual care and treatment they received from hospital outpatient clinics in the 12 months prior to completing the survey 'definitely' helped them. In 2020, 67% of patients said virtual outpatient care 'definitely' helped them, before

jumping sharply from 66% in 2021 to 71% in 2022. Fewer than one in 10 patients (7%) said that the virtual care they received did not help them (Figure 9).

As virtual care has become more widely accepted as a staple model of healthcare delivery, patients appear to have become more discerning of the circumstances in which they want to use it. At the height of the COVID-19 pandemic, half of respondents (49% in 2020 and 50% in 2021) said they would 'definitely' use virtual care again if given the choice. Between 2021 and 2023, the percentage of patients providing this response declined, with a corresponding increase in those indicating they would use it 'in some circumstances'. In 2023, fewer than one in 10 patients (8%) said they would not use virtual care again (Figure 10).

Visit the **BHI website** to see more patient survey results relating to virtual care experiences with NSW public hospitals and general practitioners (GPs).

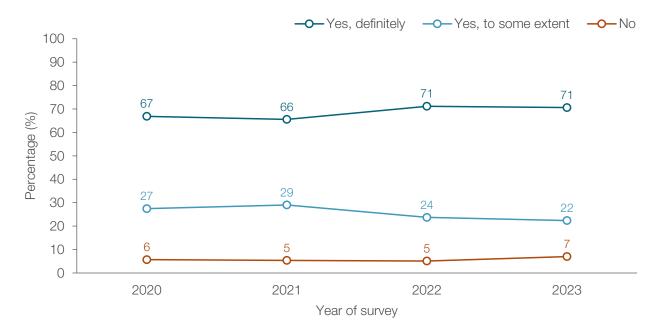
Figure 8 Overall, how would you rate the virtual care you received?†, all response options, NSW, Virtual Care Survey, 2020 to 2023



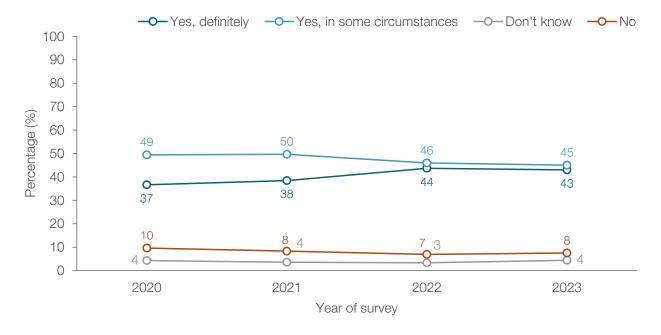
^{*} NSW Ministry of Health, System Information and Analytics Branch. Non-admitted patient data collection. Data extracted 20 February 2024.

 $[\]dagger$ Appointments with hospital outpatient clinics in the past 12 months.

Did the care and treatment received through virtual care help you?†, all response options, NSW, Virtual Care Survey, 2020 to 2023



If given the choice, would you use virtual care again?†, all response options, NSW, Virtual Care Survey, 2020 to 2023



Predictors of positive experiences and outcomes

Patients who had used virtual care before and had seen the healthcare professional(s) before were more likely to have positive virtual care experiences

BHI undertook additional analyses of survey responses from more than 10,000 adult patients about their experiences of virtual care with hospital outpatient clinics between 2020 and 2023. The analyses estimated how much more or less likely it was that different patient groups responded positively to questions about their virtual care experiences (the adjusted odds ratio).

The analyses showed that patient familiarity with virtual care, and with the healthcare professional(s) providing the care, were significantly associated with the most positive ratings of virtual care experiences.

For example, patients who had more than five virtual outpatient appointments in the past 12 months were almost twice as likely to rate their overall virtual care as 'very good' and to say they would 'definitely' use virtual care again if given the choice; and 1.6 times more likely to say the care and treatment received through virtual care 'definitely' helped them (Figures 11, 12 and 13).

Patients who had seen the health professional(s) before were 1.5 times more likely to rate their overall virtual care as 'very good'; 1.3 times more likely to say they would 'definitely' use virtual care again if given the choice; and 1.6 times more likely to say the care and treatment received through virtual care 'definitely' helped them (Figures 11, 12 and 13).

Other factors predictive of virtual care experiences with hospital outpatient clinics included language mainly spoken at home, living in a rural area and accessing virtual care with video. Patients who mainly speak a language other than English at home were less positive about their virtual care experiences overall, patients living in rural areas were more likely to say they would 'definitely' use virtual care again if given the choice and patients who accessed their virtual care appointments with video were more likely to say the care and treatment received through virtual care 'definitely' helped them (Figures 11, 12 and 13).

For more information about the statistical model and results, see the Appendix to this report.

Figure 11 Overall, virtual care with hospital outpatient clinics in the past 12 months was 'very good', NSW, Virtual Care Survey, 2020 to 2023

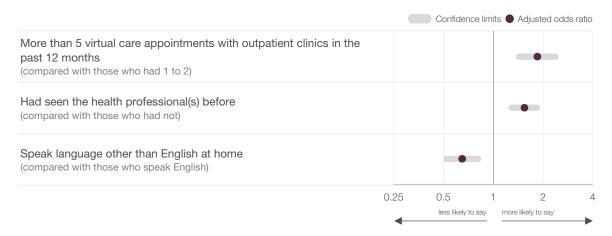


Figure 12 Care and treatment received through virtual care with hospital outpatient clinics in the past 12 months 'definitely' helped, NSW, Virtual Care Survey, 2020 to 2023

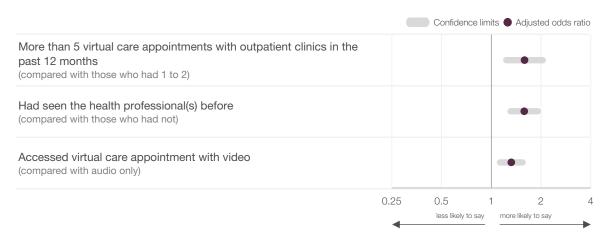
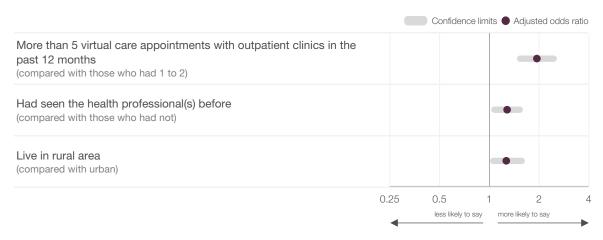


Figure 13 'Definitely' would use virtual care again if given the choice (appointments with hospital outpatient clinics in past 12 months), NSW, Virtual Care Survey, 2020 to 2023



Appendix

Use of virtual care in NSW and Australia: Virtual care with GPs and specialists in NSW

The number of Medicare-subsidised general practitioner (GP) and specialist attendances by type of appointment (in-person or virtual) was extracted from Medicare Benefits Schedule (MBS) data made available from Services Australia. Table 1 shows the number of Medicare-subsidised in-person and virtual attendances for GPs and specialists in NSW from 2019 to 2023.

Table 1 Medicare-subsidised GP and specialist attendances, by type of appointment (in-person or virtual), NSW, 2019 to 2023

| | Year | in-person | virtual | total | % virtual |
|-----------------------|------|------------|------------|------------|-----------|
| General practitioners | 2019 | 52,029,578 | 16,949 | 52,046,527 | 0 |
| | 2020 | 42,580,485 | 11,047,819 | 53,628,304 | 21 |
| | 2021 | 46,918,135 | 13,818,397 | 60,736,532 | 23 |
| | 2022 | 43,953,960 | 12,653,584 | 56,607,544 | 22 |
| | 2023 | 43,448,103 | 9,343,577 | 52,791,680 | 18 |
| Specialists | 2019 | 11,287,219 | 58,884 | 11,346,103 | 1 |
| | 2020 | 9,901,864 | 1,562,649 | 11,464,513 | 14 |
| | 2021 | 9,907,149 | 1,884,318 | 11,791,467 | 16 |
| | 2022 | 9,963,950 | 1,391,000 | 11,354,950 | 12 |
| | 2023 | 10,772,702 | 1,040,794 | 11,813,496 | 9 |

Source: Australian Government Services Australia. Retrieved from: **medicarestatistics.humanservices.gov.au/statistics/mbs_item.jsp** (online resource). Data downloaded 11 March 2024.

Virtual care after discharge: Virtual and in-person care

BHI analysed responses from 9,931 respondents to the Adult Admitted Patient Survey 2022 from January to June 2022. Table 2 shows the percentages of patients who had in-person or virtual appointments with hospital outpatient clinics and general practitioners (GPs) within three months of discharge, grouped by patient characteristics.

Table 2 Percentage of patients who had an in-person and/or virtual appointment within three months of discharge from a NSW public hospital, NSW, January to June 2022, by patient characteristics

| Characteristic | | % in-person with a hospital outpatient clinic | % virtual with a hospital outpatient clinic | % in-person with a GP | % virtual with a GP |
|--------------------------------|-------------------|---|---|-----------------------|---------------------|
| Age | 18-34 years | 45 | 17 | 74 | 27 |
| | 35-54 years | 45 | 16 | 77 | 34 |
| | 55-74 years | 37 | 15 | 83 | 31 |
| | 75+ years | 34 | 15 | 86 | 34 |
| Rurality of patient residence* | Urban | 43 | 17 | 81 | 35 |
| | Rural | 30 | 12 | 81 | 25 |
| Language mainly spoken at home | English | 38 | 14 | 81 | 31 |
| | Other language | 45 | 22 | 82 | 37 |

^{*}Patient residence is classified as 'urban' and 'rural' using the Accessibility and Remoteness Index of Australia (ARIA+), the Australian Bureau of Statistics measure of remoteness and patent postcode.

Patients' experiences of virtual care: Hospital outpatients experiences over time

Total outpatient service events were extracted from the centralised data warehouse, Enterprise Data Warehouse for Analysis Reporting and Decision Support (EDWARD), administered by the NSW Ministry of Health. The number of service events were then split by the contact modes 'in-person', 'telephone', 'video call' and 'other', where 'other' included services delivered by electronic messaging, email or other technology. Table 3 shows the number of outpatient service events in NSW, by contact mode, from 2019 to 2023.

Table 3 Number of outpatient service events, by contact mode (in-person, virtual or other), NSW, 2019 to 2023

| Year | in-person | virtual | other | total | % virtual |
|------|------------|-----------|---------|------------|-----------|
| 2019 | 12,570,060 | 1,683,579 | 282,227 | 14,535,866 | 12 |
| 2020 | 12,436,978 | 3,169,456 | 364,512 | 15,970,946 | 20 |
| 2021 | 16,642,442 | 3,684,211 | 479,549 | 20,806,202 | 18 |
| 2022 | 11,484,194 | 3,199,766 | 514,055 | 15,198,015 | 21 |
| 2023 | 11,683,266 | 2,580,411 | 510,306 | 14,773,983 | 17 |

Source: NSW Ministry of Health, System Information and Analytics Branch. Non-admitted patient data collection. Data extracted 20 February 2024.

Patients' experiences of virtual care: Predictors of positive experiences and outcomes

BHI analysed the combined responses of 10,036 NSW public hospital outpatients who responded to the Virtual Care Survey between 2020 and 2023. A multivariable logistic regression model was used to explore patient factors predictive of positive virtual care experiences during this period.

For each of the three measures analysed the most positive response option was used to create a dichotomised variable such that the most positive response was coded as 1, and all other responses were coded as 0.

For each measure, a multivariable model was created to identify patient characteristics associated with the likelihood of respondents reporting the most positive response while controlling for other patient-related characteristics.

The following patient characteristics were considered as independent variables or covariates for each question: number of virtual care appointments in the past 12 months (1 to 2, 3 to 5, more than 5), age group (18–34 years, 35–54 years, 55–74 years, 75+ years), sex (female, male), language mainly spoken at home (English, other language), rurality of patient residence (urban, rural), having a longstanding health condition (yes, no), having seen the health professional before (yes, no) and mode of virtual care delivery (audio only via telephone or online, video, other methods).

SURVEYLOGISTIC procedure with a backward elimination approach was used to build the multivariable models for each question.

More information about the multivariable models and results are available from BHI on request.

Acknowledgments

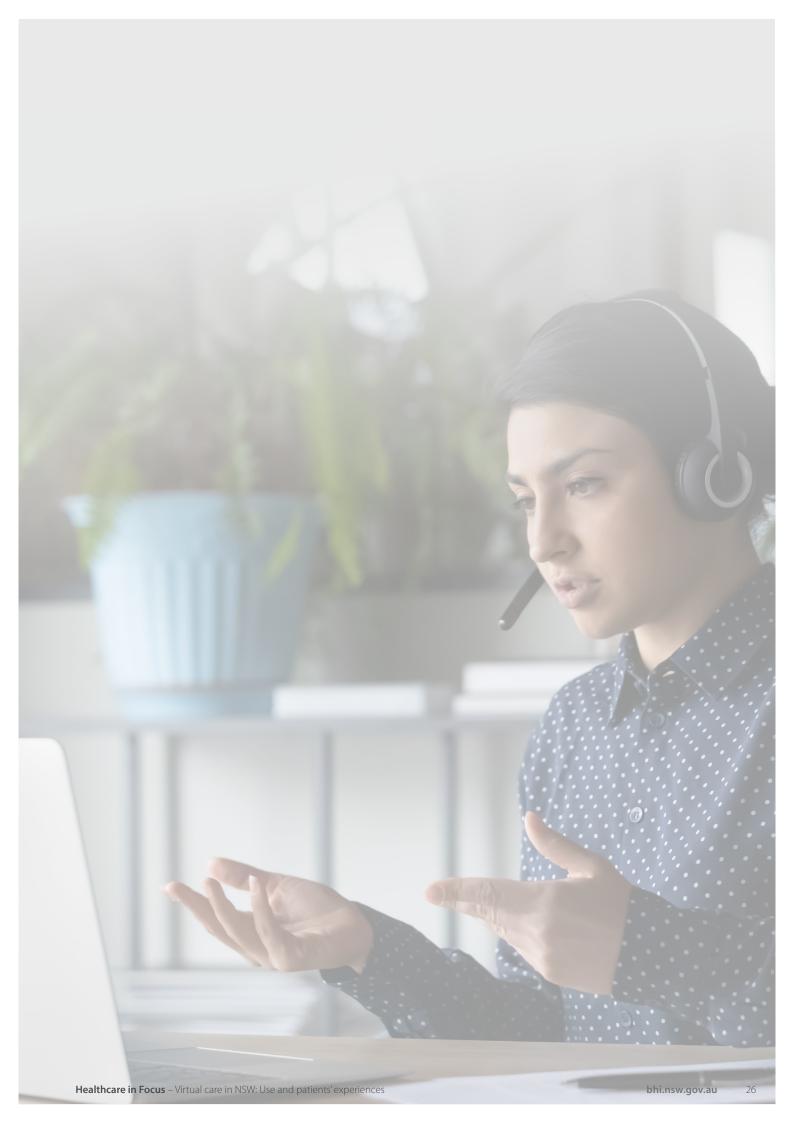
The Bureau of Health Information (BHI) is the main source of information for the people of NSW about the performance of their public healthcare system.

BHI is led by Chief Executive Dr Diane Watson and overseen by an independent board chaired by Professor Carol Pollock.

We thank the NSW Ministry of Health's Health System Strategy and Patient Experience branch for their invaluable guidance and advice on the content of this report.

We acknowledge BHI's dedicated teams of analytics, research, corporate, design and communications professionals whose expertise made this report possible.

BHI acknowledges and respects the Aboriginal people as the traditional custodians of the lands and waters of NSW and pays respect to Elders past, present and emerging.



About the Bureau of Health Information

The Bureau of Health Information (BHI) is a board-governed organisation that provides independent information about the performance of the NSW healthcare system.

BHI was established in 2009 and supports the accountability of the healthcare system by providing regular and detailed information to the community, government and healthcare professionals. This in turn supports quality improvement by highlighting how well the healthcare system is functioning and where there are opportunities to improve.

BHI manages the NSW Patient Survey Program, gathering information from patients about their experiences and outcomes of care in public hospitals and other healthcare facilities.

BHI publishes a range of reports and information products, including interactive tools, that provide objective, accurate and meaningful information about how the health system is performing.

BHI's work relies on the efforts of a wide range of healthcare, data and policy experts. All of our assessment efforts leverage the work of hospital coders, analysts, technicians and healthcare providers who gather, codify and supply data. Our public reporting of performance information is enabled and enhanced by the infrastructure, expertise and stewardship provided by colleagues from NSW Health and its pillar organisations.

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