NSW GOVERNMENT

AGENCY FOR CLINICAL INNOVATION

Spotlight on virtual care: Delivering antenatal booking appointments virtually

The Royal Hospital for Women
South Eastern Sydney Local Health District

MARCH 2022

A collaboration between local health districts, speciality health networks, ACI and eHealth NSW.

The 'Spotlight on Virtual Care' reports showcase innovation and leadership in virtual health care delivery across NSW. The series aims to support sharing of learnings across the health system and outlines the key considerations for implementation as identified by local teams.

Each initiative within the series was selected and reviewed through a peer-based process. While many of the initiatives have not undergone a full health and economic evaluation process, they provide models that others may wish to consider and learn from.

These reports have been documented by the Virtual Care Accelerator (VCA). The VCA is a multi-agency, clinically focused unit established as a key partnership between eHealth NSW and the ACI to accelerate and optimise the use of virtual care across NSW Health as a result of COVID-19. The Virtual Care Accelerator works closely with Local Health Districts (LHDs) and Specialty Health Networks (SHNs), other Pillars and the Ministry of Health.

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Further copies of this publication can be obtained from the Agency for Clinical Innovation website at **www.aci.health.nsw.gov.au**

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Introduction

In 2020 during the COVID-19 pandemic, the Royal Hospital for Women began offering pregnant women a virtual appointment for their first antenatal visit (known as the booking visit). The antenatal outpatients clinic uses the myVirtualCare platform to link midwives with women and their partners (or another support person) during this virtual booking appointment.

The Royal Hospital for Women (RHW) is part of South Eastern Sydney Local Health District (SESLHD). Since its beginnings in 1820, it has become one of Australia's well known specialist hospitals for women and babies. Around 4,000 babies are born at the RHW annually, with the majority of the women attending the hospital accessing their pregnancy care through the antenatal outpatients clinic.

Women planning to give birth at the RHW as a public patient will attend a first hospital booking visit with a midwife. At this appointment, which ideally takes place at 14–16 weeks gestation, a comprehensive history is taken. This includes in-depth discussions about the women's general health, medical and obstetric history and psychosocial wellbeing. Traditionally, this first antenatal appointment takes place in person in the antenatal outpatients clinic and typically lasts an hour and a half to two hours.

Given the hospital visitor restrictions initiated during the COVID-19 pandemic, partners were no longer able to attend the antenatal appointment. To overcome this, the antenatal team at the RHW agreed that the first appointment could be completed virtually. The myVirtualCare platform was used to support the booking visit. This also aligned to statewide recommendations at the time.

Even prior to COVID-19, the length of the first antenatal appointment meant it could be challenging for women to attend in person. Attendance often involved the pregnant woman taking a whole day off work or needing additional childcare support to attend the appointment. Appointments after the initial appointment are conducted in person as physical examinations such as blood pressure, checking the size of the baby and listening to the fetal heart rate are necessary.

When COVID-19 visitor restrictions have eased, initial antenatal appointments will still be offered via myVirtualCare as a routine choice for women. This is because there has been such a positive client and clinician response to virtual appointments.

This report focuses on how the RHW implemented virtual care for initial antenatal appointments. Virtual modalities have also been used for other the RHW special services including gestational diabetes education sessions; next birth after caesarean group discussions; and information sessions for women from culturally and linguistically diverse backgrounds where a midwife, cross-cultural worker and interpreter are involved.

myVirtualCare is a NSW video conferencing platform endorsed by NSW Health. It has been custom-built to mimic the physical workflow of a clinical consultation. It provides a secure, convenient and high-quality virtual experience for employees, patients, families and carers.

Reported benefits of the model

Patient benefits

- Improved access to antenatal services
- Ability for partners and support people to attend appointments
- Reduced time away from commitments such as work, parenting and caring

Clinician benefits

- Easy-to-use platform, designed to be secure, simple and mimic normal clinical workflows for clinicians
- Establishing a videoconference has minimal impact on workload of clinical staff
- An opportunity for consulting midwives to provide care virtually
- Enables bookings to commence on time without external delays, such as delays due to traffic, parking etc

Service benefits

- The antenatal outpatient clinic provides greater choice and options for pregnant women during COVID-19 restrictions and beyond
- Facilitates patient-centred interactions between midwives, pregnant women and their partners or support person, where these might not otherwise be possible
- The ability to better implement social distancing protocols in the antenatal outpatient waiting room during times of visitor restrictions, as number of in-person appointments for pregnant women are reduced

Overview of the model

Key elements of the model

Element	Detail
Patient population/ service users	• Pregnant women booked in to have their baby at the RHW • RHW accepts women from across NSW
Referral pathway	Women or their GP can make direct referrals through: • the RHW online bookings form (completed when women are six weeks pregnant) • direct phone call to the RHW.
Healthcare team (LHD and others e.g. NGOs, GPs)	• Midwifery Unit Manager • Midwives • Antenatal outpatients administration officers • SESLHD Telehealth Team • Obstetric medical staff • Diabetes team
Technology	• myVirtualCare • A single monitor is needed as a minimum, two monitors is preferable to allow for viewing documents and electronic medical record • Webcam • Headset • eMaternity linked to electronic medical record

Services

Due to the escalating COVID-19 pandemic, in April 2020 the RHW antenatal outpatient service, in collaboration with the RHW executive, decided to offer all initial antenatal appointments virtually. The appointment is conducted by a midwife at the RHW antenatal outpatients clinic, using myVirtualCare, a NSW Health supported and endorsed videoconferencing platform.

Initially, appointments were completed over the phone, whilst a process for videoconferencing was established. The next phase included a combination of telephone consults and videoconferencing via Pexip. Pexip usage increased as midwives became confident in using the platform; however, this was a resource intensive process where the Midwifery Unit Manager allocated virtual meeting room numbers to each appointment.

With the support of the SESLHD Telehealth Team, the final phase saw the implementation of the myVirtualCare platform for initial antenatal appointments. In September 2020 the service was the first in SESLHD to 'go live' using myVirtualCare, providing better functionality for outpatient clinics due to its waiting room function.

Providing choice for women continues to be central to this model. Women can choose whether their first antenatal appointment is virtual or in person. Virtual care continues to be a suitable and worthwhile preference for many pregnant women, and the option to attend in person can still be accommodated. Appointments are conducted in person if complex medical and/or psychosocial issues are identified.

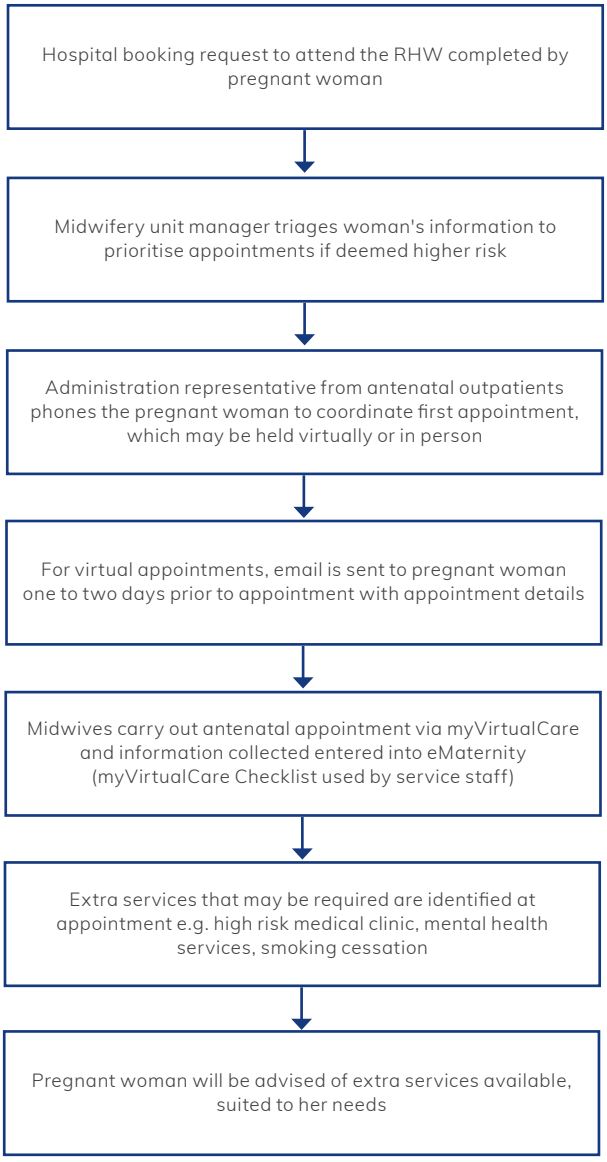
Likewise, arrangements are made for in-person attendance if a woman requires an interpreter. Language barriers, affecting communication were identified as a potential risk. Interpreters may be either present in the clinic or connected via telephone, although virtual care could potentially be utilised for this aspect of the service in the future.

The service found that care is better for this cohort when the woman is physically present. It also helps to provide written language-specific and culturally-sensitive information, as well as request forms for pathology and ultrasounds, directly to the woman. This creates an environment that aids understanding.

Tracey Menzel, Clinical Midwifery Educator and Fiona Donovan, Midwifery Unit Manager.

Workflow diagram

Figure 1: The virtual appointment workflow diagram



Patient Story

Amelia is a first-time expectant mother. In 2020, when Amelia found out she was pregnant, she self-referred to the RHW as she intended to have her baby there.

After making an online booking, Amelia received a phone call from the RHW antenatal outpatients clinic to coordinate her first appointment. As her pregnancy was during the COVID-19 pandemic, she was unable to bring a support person with her to her appointments because of visitor restrictions. When she was offered the opportunity to attend her first appointment virtually, she was happy and relieved as it meant her husband could attend the appointment with her at home.

On the day of her appointment, Amelia found it easy to connect into myVirtualCare and talk to the midwife at the RHW. She found the appointment was not much different than an in-person meeting. The midwife was very friendly and asked her questions in a sensitive and non-threatening way. Overall, Amelia had a good experience with her first antenatal appointment and would highly recommend virtual care to other first-time mothers.

** Name changed to protect patient privacy and confidentiality*

Making it happen

This section outlines the key enablers and challenges identified by those involved in implementing this model. Addressing these factors effectively has been critical to successful implementation and these learnings can be used by other health services in the development of local models. The resources listed in the supporting documents section at the end of this report also supplement these learnings and have been identified throughout the following sections.

Local planning, service design and governance

Processes

Before the appointment

- Initial bookings are made either by the woman or her GP via the online bookings form or by direct phone call to the clinic.
- Midwifery Unit Manager or Clinical Co-ordinator (Senior Midwife) will then triage the priority and timing of the woman's booking if necessary. This may include a need to see doctors early in the pregnancy due to medical risk factors.
- Administration staff phone the pregnant woman to coordinate her first appointment. The appointment is scheduled using eMR and midwives rostered accordingly.
- The *myVirtualCare: Checklist for service staff*[*] is closely followed prior and during each antenatal appointment. The checklist was developed by the SESLHD Telehealth Team, who were closely engaged with the Midwifery Unit Manager.
- The pregnant woman receives an email (see Appendix 1) from the antenatal outpatients clinic one to two days prior to her appointment. The email includes advice on virtual appointments, such as finding a quiet and private place, and having a good internet connection. Attachments to the email include:
  - further information on virtual care and how to join the appointment[†]
  - the Edinburgh Depression Scale (antenatal), which is used for both in-person and virtual appointments
  - information resources for pregnancy.

During the appointment

- During the appointment, the midwife asks the woman a series of questions about her own medical and obstetric history, relevant family history, emotional health, relationships, current stressors and explores any other issues that may be a challenge for her.
- Midwives emphasise emotional health during the first antenatal appointment as the staff at the RHW believe it is an important part of holistic pregnancy care. Based on the responses to specific questions, the midwife offers support and refers to other virtual and in-person services as needed.
- The midwife reviews the woman's responses to the Edinburgh Depression Scale (antenatal), which asks a series of questions about her current mental health. If mental health and wellbeing risk factors are identified, appropriate referrals are made and contact details for the 24-hour Mental Health Line are provided.
- If a pregnant woman is very distressed and her mental wellbeing is compromised, she is encouraged to attend an urgent in-person appointment or phone 000.
- Questions specifically relating to domestic violence are asked at the second appointment which is completed in person, without the partner (or other support person) in the room.
- If issues arise with internet and cannot be resolved, a telephone is used, or an in-person appointment is scheduled instead.

[*] See *myVirtualCare: Checklist for service staff-Go Live (SESLHD)* in Supporting documents list.

[†] See *Attending an appointment using telehealth (patients)* and *Information handouts for women at their booking visit 2020 (SESLHD)* in Supporting documents list.

Service model

- Existing private consultation rooms used for in-person antenatal appointments were identified as appropriate workspaces for virtual appointments. This allowed the virtual service to go live quickly.
- The only additions to the rooms was the installation of a webcam on top of the current monitor and provision of a headset to use during the virtual appointment.
- Guidance from the SESLHD Telehealth Team was a significant enabler. They had regular meetings with the Midwifery Unit Manager to plan the setup of the virtual clinic, including orientating staff to use myVirtualCare and integrating virtual appointments into existing workflows.

Clinical governance

- The development and operation of the antenatal outpatients clinic is overseen by a committee that includes:
  - A/General Manager RHW
  - A/Director of Nursing and Midwifery
  - SESLHD Telehealth Team
  - Midwifery Unit Manager
  - Obstetric Medical Physician.
- When the inclusion of virtual care was agreed upon, the governance structure was expanded to include:
  - Psychologist
  - Clinical Midwifery Educator
  - Administration staff
  - Maternity Data Manager.

Clinical protocols

- Most pregnant women are considered appropriate for virtual appointments.
- Women with known highly-complex psychosocial needs are invited to meet in person.
- An existing escalation pathway for mental health is followed, with appropriate referral for support based on responses to the Edinburgh Depression Scale (antenatal) and the interview questions.

'Midwives were already good communicators when talking with women on the phone. The staff were already comfortable in being able to talk with women virtually.'

HELEN MCCARTHY, A/GENERAL MANAGER RHW DURING IMPLEMENTATION

A traditional antenatal room set up converted for virtual appointments

Building engagement

Key partners and stakeholders

- Antenatal outpatient staff
  - Using videoconferencing supports midwives to build rapport with pregnant women during their first appointment (as occurs during in-person appointments).
  - The antenatal outpatients team are active advocates for pregnant women and saw this as an innovative opportunity for mothers to attend their first appointment and still build rapport at a potentially vulnerable time.
  - Strong clinical leadership from the Midwifery Unit Manager and the antenatal outpatients team was a key enabler during implementation.
  - Clinical leaders and champions from the antenatal team include the Midwifery Unit Manager, Clinical Midwifery Educator, midwives and administration staff.
- SESLHD Telehealth Team
  - Antenatal outpatients engaged with the SESLHD Telehealth Team prior to implementing virtual care. This engagement included identifying opportunities where virtual modalities were appropriate and supporting the change processes.
  - The local telehealth team also:
    - supported the service to understand videoconferencing platforms and to identify a platform that met the needs of staff and pregnant women
    - used redesign methodology with the Midwifery Unit Manager and clinic team to help ensure that virtual care was offered at a point in the woman's journey that was considered appropriate and sustainable
    - interfaced with local information and communication technology teams to support the access to myVirtualCare on each computer
    - assisted with the procurement of webcams and headsets
    - developed local myVirtualCare resources for staff and pregnant women.[‡]
- Pregnant women
  - The introduction of virtual care during COVID-19 allowed a pregnant woman to have a support person present during the appointment if that was her preference. When visitor restrictions are eased, virtual care will continue to provide a convenient and simple option for partners to connect via videoconference rather than attend the consult in person.
  - Women reported other benefits, including reduced time needed to attend the appointment and less time off work, as well as increased flexibility for mothers of young children who may have needed to arrange extra childcare. These benefits have helped to create buy-in for those choosing virtual care.
  - Consumer myVirtualCare resources, such as those for logging on or troubleshooting, are provided to support women to use the platform. This creates confidence when inviting them to engage virtually.

'They (midwives) are trying to build up that rapport. That's why the videoconference is so good compared to the telephone.'

FIONA DONOVAN, MIDWIFERY UNIT MANAGER, ANTENATAL OUTPATIENTS CLINIC

[‡] See *Attending an appointment using telehealth (patients)* in Supporting documents.

Workforce and resourcing

Appropriate technology

- The myVirtualCare videoconferencing platform was selected due to its suitability in the outpatient clinic setting.
- The technology required for the implementation of virtual initial antenatal appointments included a:
  - monitor
  - headset
  - webcam.
- Implementation support from the SESLHD Telehealth Team included:
  - implementation resources provided to the Midwifery Unit Manager
  - working with staff to identify and resolve issues to assist with adoption of the model.
- The SESLHD Telehealth Team received funding for a 0.1FTE Telehealth Manager to assist with project management and implementation.

Staff training

- Statewide training for myVirtualCare has been developed and is available on My Health Learning. This includes specific modules for people in different roles, including clinicians, administrative staff and interpreters. The antenatal team used these to upskill staff in the use of the platform.
- There are a range of statewide myVirtualCare resources to support staff to build confidence in using the platform.
- Orientation for new staff is provided by midwives, including use of myVirtualCare, observing the initial appointment and developing virtual rapport-building skills.

Using myVirtualCare

- The midwife allocated to the appointment monitors the virtual waiting room.
- If the midwife is late to the appointment, there are instructions for the woman to follow in the initial email with appointment details.
- During the 'go live' period midwives were coached by representatives from the SESLHD Telehealth Team who helped to troubleshoot any technical issues for both midwives and pregnant women.
- There is variation in the level of technical skill and confidence of midwives using myVirtualCare. Use of the different functionality in the platform, for example using screen sharing and linking with other services, has been flexible to accommodate their individual skills and confidence.
- Midwives use virtual appointments to build rapport and trust with the pregnant woman, just as they would at an in-person appointment.
- A checklist was developed for staff to use on the day of virtual appointments (see Appendix 2).

'I knew that if I was going to the hospital (for appointment), it would only be me and my partner wouldn't be able to come. The fact that it was telehealth meant that we could both be there, because it's our first baby.'

PREGNANT WOMAN

Staffing model

- The current staffing model for the service includes:
  - twenty-nine midwives (providing a combination of virtual and face-to-face care)
  - eight administration officers.

Data capture

- All occasions of service are recorded in eMR.
- The antenatal outpatients clinic Midwifery Unit Manager has commenced local audits of the notes entered into eMaternity.
- There are plans to implement the patient experience survey in myVirtualCare, which asks about the experience of care including the use of technology.

Considerations for funding and sustainability

- The service is funded via activity-based funding. This includes virtual booking clinic appointments.
- In order to implement the virtual appointments, 24 webcams and headsets were deployed to the service at a total cost of $2,868 to SESLHD.

'We had to make sure we had the IT in place to do this... the consumables, any equipment to run your virtual care is really key.'

HELEN MCCARTHY, A/GENERAL MANAGER RHW

Benefits of the model

Benefits

Partners can attend the first appointment virtually. No visitors were able to attend during the height of COVID-19 in 2020 and 2021. This will also be the case in 2022 and for the foreseeable future.

Women have less time away from work and other activities because virtual appointments can be done from home or work.

Women have less travel time and can coordinate the appointment time for when it best suits them.

Midwives can still develop strong rapport by using videoconferencing.

Midwives can manage their workflows more effectively when navigating unexpected delays.

The hospital creates a safe environment during COVID-19 for pregnant women by offering them a choice to attend in person or virtually.

Monitoring and evaluation

Clinical outcomes continue to be monitored in the same way as in-person appointments. myVirtualCare data is available to monitor the utilisation at the RHW antenatal outpatients clinic.

There has not yet been an evaluation of the virtual booking clinic; however, there are many positive anecdotal patient stories associated with the use of the virtual antenatal appointment.

The antenatal outpatients clinic team have also reflected that virtual appointments essentially run the same as in-person appointments and have not created significant administration or clinical burdens. In some instances, virtual appointments have increased productivity as midwives can manage their workflows with more flexibility.

The antenatal outpatient service has identified that there is an opportunity for future monitoring and evaluation including:

- staff experience
- women's experience
- evaluation of the implementation of myVirtualCare for use of virtual antenatal appointments.

Opportunities

There are opportunities for antenatal outpatient clinics around NSW to implement this approach of using videoconferencing for initial appointments.

'The telehealth team were available for support during go live appointments.'

BRUNO VILLAMEA SANTOS, TELEHEALTH PROJECT OFFICER, SESLHD

References and links

MyVirtualCare resources (ACI)

Supporting documents

Attending your appointment using telehealth (patient information)

Preparing for a virtual appointment (patient information)

Information handouts for women at their booking visit

myVirtualCare: Checklist for service staff - Go Live (SESLHD)

myVirtualCare: Checklist - Steps to Go Live for Telehealth team and Service staff (SESLHD)

myVirtualCare: Checklist for Telehealth Team - Handover (SESLHD)

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Fiona Donovan	Midwifery Unit Manager, Antenatal Outpatients Clinic
Tracey Menzel	Clinical Midwifery Educator, Antenatal Outpatients Clinic
Antenatal outpatients midwives and administration staff	
Helen McCarthy	A/General Manager, Royal Hospital for Women
Bruno Villamea Santos	Telehealth Project Officer, SESLHD
Julia Martinovich	Telehealth Manager, SESLHD
Virginia Spear	Maternity Data Manager, Royal Hospital for Women

We would also like to thank the clinicians, consumers and virtual care experts involved in reviewing this report.

Appendix 1: Confirmation email for virtual appointment

Good Afternoon,

Thank you for contacting Maternity Outpatients at The Royal Hospital for Women.

This is your telehealth booking appointment confirmation email on:

Insert date and time

We recommend you find a quiet, private place where you feel comfortable discussing your obstetric/ medical and family history. Your booking also covers emotional health, relationships, current stressors and other issues that may be a challenge for you during your pregnancy and journey into motherhood.

It would be good to have the attached Edinburgh Depression Scale with you for your appointment, to help us go through the questions together. **Emotional health is an important part of holistic pregnancy care**, and based on these questions, we can offer additional supports as needed.

To attend your online appointment, please read all attachments*. You will find a detailed instruction on how to use telehealth.

You can open your appointment from a computer, smartphone or tablet. Using **Google Chrome**, please enter the link below:

(Website) https://myvirtualcare.health.nsw.gov.au/public/#/sesrhwmatopd

We try to attend to all appointments on time. However, there may be short delays, since your midwife needs 15 minutes to enter your pathology and ultrasound results into your hospital electronic records prior to the consult.

If you have not already done so, please ask your GP to fax all results to 93826118 (Maternity Outpatients).

Otherwise, you can send them as a PDF file to SESLHD-RHWOPDRESULTS@health.nsw.gov.au

If you have not been attended to within 30 minutes of your appointment time, please call the clinic on 93826044.

We look forward to meeting you,

The Royal Hospital for Women Maternity Outpatient Department

Appendix 2: Checklist used by the Royal Hospital for Women team on the day of the appointment

Appointment Day		
	Task	**Who**
	Daily list of patients with telehealth sessions clearly marked and provided to clinicians.	**Admin**
	Admin to separate patients' facility medical records and results prior to appointments.	**Admin**
	Admin to 'check in' telehealth patients. • Ensure appropriate Modality of Care and Medicare Benefit Schedule (MBS) item numbers – metro patients / rural patients.	**Admin**
	Clinician access myVirtualCare home page and: • check log in profile (refer to guide) • test audio and video settings • click my waiting queue.	**Clinician**
	Conduct patient identification check (confirm name and date of birth) and proceed with consult.	**Clinician**
	On the conclusion of the appointment, check name off the patient list as attended. Note any follow up appointment requirement that can be done by telehealth: • Refer patient to admin team, if necessary, to book follow up appointment.	**Clinician**
	Document the appointment in eMR or patient's medical record, and note the consult occurred via videoconference.	**Clinician**
	Hand patient list to admin at conclusion of clinic to complete/fix up check in/ check outs.	**Clinician**
	Note any issues of difficulties with telehealth team.	**Clinician**
	Admin to 'check out' patients that attended the telehealth clinic. Ensure modality of care 'audio visual clinician end'.	**Admin**

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