NSW GOVERNMENT

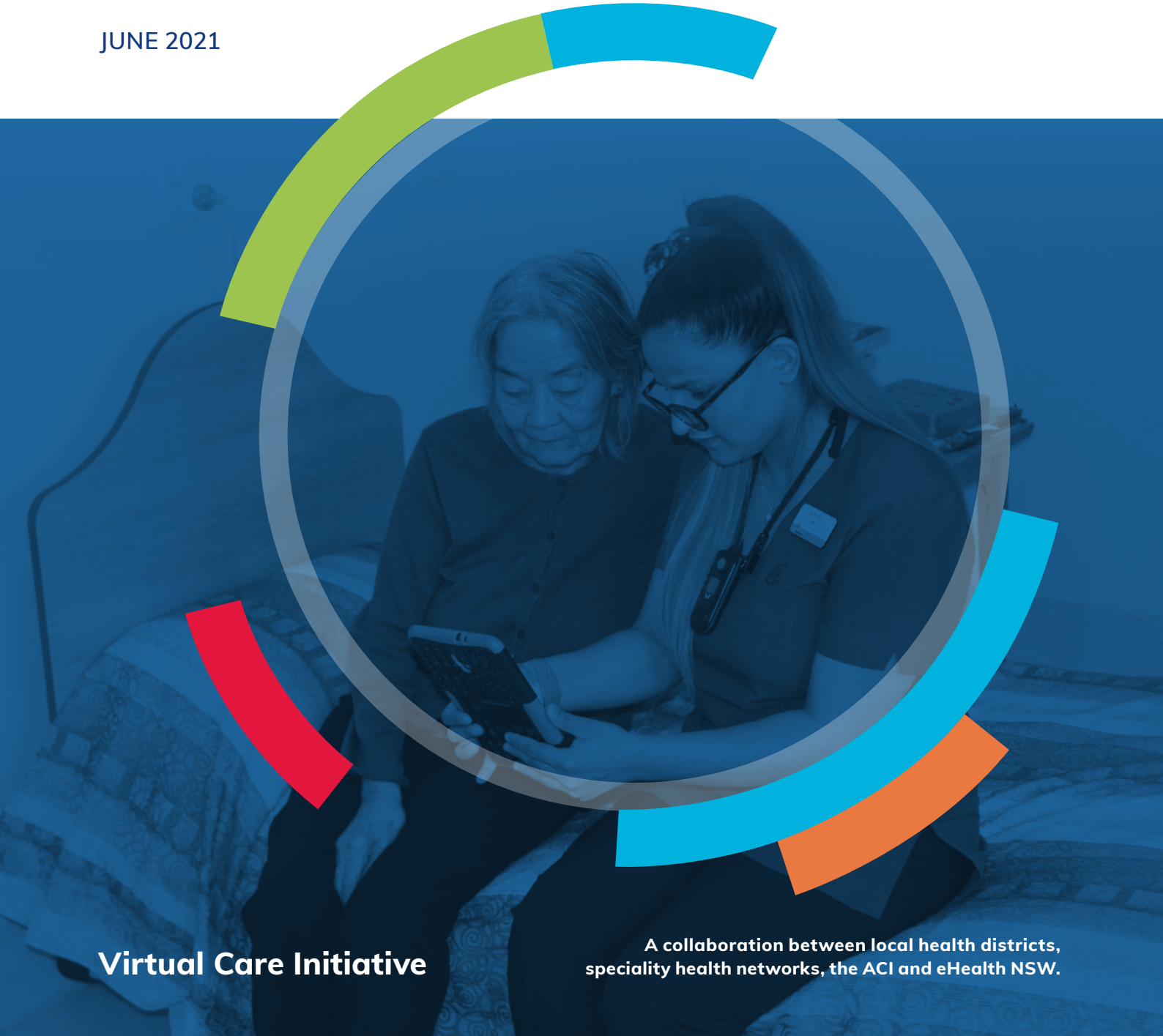
AGENCY FOR CLINICAL INNOVATION

Spotlight on virtual care: Aged Care Rapid Response Team (ARRT)

Aged Care Rapid Response Team

Royal North Shore and Ryde Hospitals, Northern Sydney Local Health District

JUNE 2021



Virtual Care Initiative

A collaboration between local health districts, speciality health networks, the 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

The Aged Care Rapid Response Team (ARRT) is a geriatric outreach service offering care to older people who live within the Lower North Shore and Ryde and Hunters Hill areas of the Northern Sydney Local Health District (NSLHD). Depending on the clinical need, ARRT offers virtual assessments and home visits to help people remain at home or in their Residential Aged Care Facility (RACF).

ARRT is one of three geriatric outreach services provided by NSLHD. The ARRT team was established in 2012 with a geriatrician, advanced trainee registrar in geriatrics and two clinical nurse consultants (CNCs).

ARRT provides rapid geriatric assessment and treatment to people in their own home, including people who live in the 40 RACFs within the catchment. This includes the review of older people who are deteriorating functionally or medically and are at risk of hospitalisation. ARRT aims to treat people safely in their residence, ensuring they receive the right care, in the right place, and at the right time. ARRT reduces the number of avoidable emergency department (ED) presentations for older people who are acutely unwell and may provide an alternative to hospitalisation. ARRT uses videoconferencing to enhance their existing services.

Initially, ARRT began using videocalls between the geriatrician and CNCs to enable the team to work more efficiently. Following the success of this approach, the team piloted the use of video calls between RACFs and ARRT to triage referrals and gain a clearer picture of a person's condition.

Figure 1: A map of NSLHD showing the Lower North Shore and Ryde - Hunters Hill Sectors (yellow and green areas are serviced by ARRT).

Reported benefits of the model

The below benefits are from both the virtual and in-person components of the ARRT service, as these are closely integrated together.

Patient benefits

- Care provided by a specialised hospital aged care multidisciplinary team
- Receiving care at home
- Family members and RACF clinical teams who know the patient well can be more involved in the care
- Proactive, safe and timely health care
- Rapid access - almost immediate consultation with ARRT can be arranged
- In many cases, going to hospital can be avoided or the length of stay can be reduced
- Reduced risk of hospital-acquired complications.

Clinician benefits

- Clinicians can accurately triage patients supported by videoconferencing in the assessment
- Reduced need for travel, as video assessments replace home visits (and the team can prioritise home visits when these are needed and appropriate)
- Clinicians in RACFs have access to specialised geriatric advice in a timely manner
- ARRT can support care coordination and access to hospital specialist services and expertise
- Provides specialist outreach to GPs who can call ARRT for advice rather than sending people to the ED.

Service benefits

- Timelier access to assessments
- Care is provided in the most appropriate setting to meet clinical need
- Reduction in preventable presentations to EDs
- Reduction in preventable admissions to hospital
- Reduction in duplicated tests and investigations
- Increased efficiency allowing more patients to be seen each day
- Use of existing technology infrastructure to improve processes
- Reduced need for transport to hospital by NSW Ambulance
- NSW Ambulance access to specialist clinical support.

'Videoconferencing has allowed ARRT to more quickly see how unwell a patient is and provide an instant response; it improves the efficiency of our service and allows us to rapidly treat people safely in their own homes.'

DR JAMES HARDY, SENIOR STAFF SPECIALIST, ARRT

Overview of the model

Key elements of the model

Element	Detail
Patient population/Service users	• People aged over 70 years who are acutely unwell in the Lower North Shore and Ryde and Hunters Hill areas • People aged under 70 years who have an age-related health condition • People in RACFs or living in their own home
Referral pathway	• Anyone can refer by a phone call direct to ARRT clinicians including: ○ RACF staff ○ families ○ community care providers ○ General Practitioners (GPs) ○ self-referrals ○ NSW Ambulance via direct referral or ARRT can identify a referral from the NSW Ambulance board
Healthcare team	Established staffing for ARRT: • Geriatrician • Advanced Trainee • Two CNCs ARRT received temporary funding for additional staffing during COVID-19 (see staffing section on page 12 for further detail) Other team members that participate in virtual consultations: • GPs • NSW Ambulance extended care paramedics • RACF clinical teams
Technology	ARRT: • Smartphones and laptops with 4G internet access and remote access • Pexip videoconferencing platform • Photography for wound reviews/skin conditions • Email for medication charts • Hospital eMR • My Health Record • NSW Ambulance Arrivals Board RACF: • Tablets and smartphones • Pexip videoconferencing platform • Electronic prescribing in some RACFs Other Providers: • Mobile X-ray • Mobile Ultrasound • Pathology service providers

Services

In addition to RACFs, video assessments can also be offered to someone in their home if they can use technology or have support from family or another health provider to access and participate in the videoconference (see patient story on page 9).

ARRT provides:

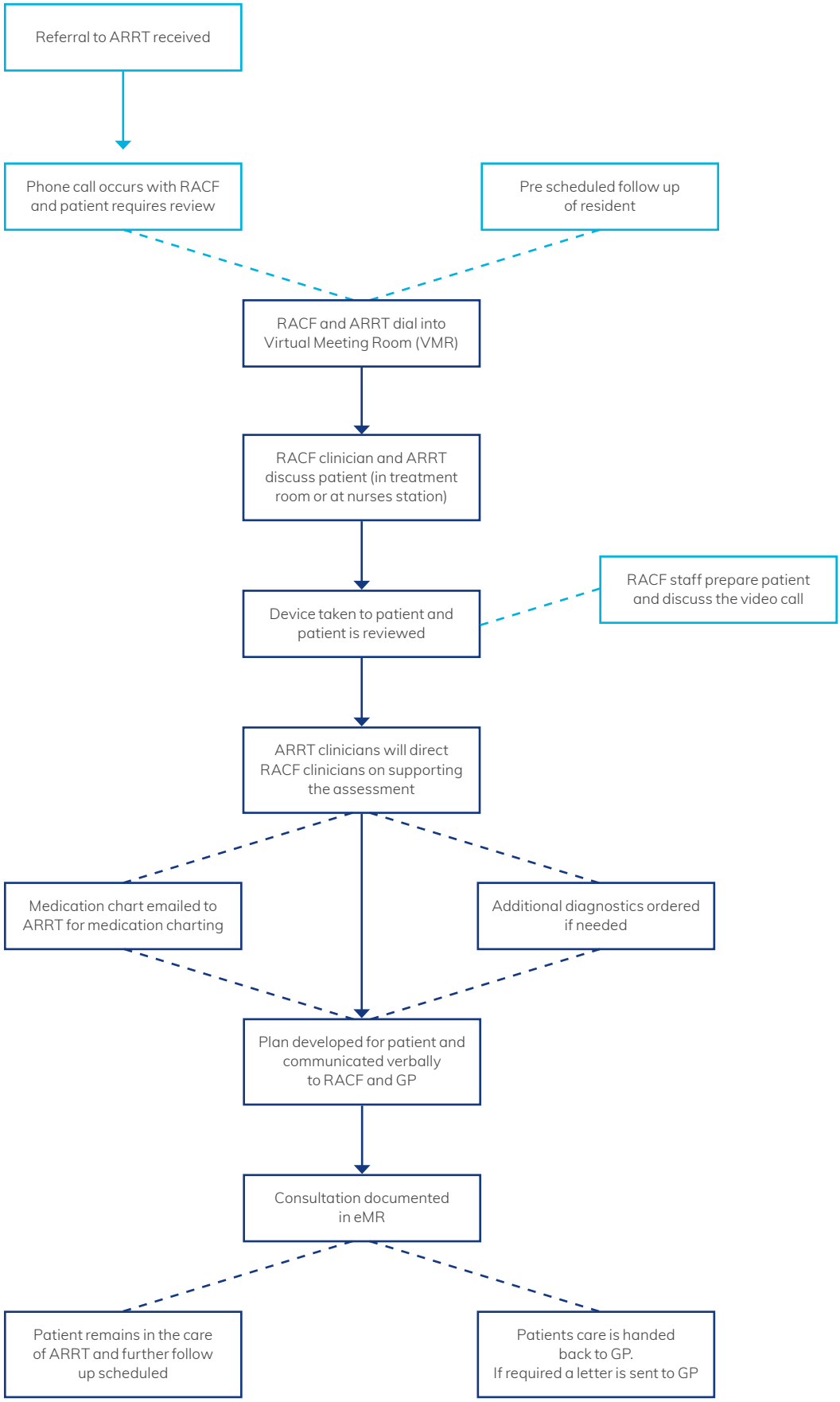
- comprehensive geriatric assessment for people living in the community who have become unwell
- treatment for acute infections including chest, wound, urinary tract and gastrointestinal infections
- management of recent confusion due to illness and/or dementia
- administration of intravenous antibiotics, diuretics and subcutaneous fluids
- falls assessment
- pain management
- medication review
- management of in-dwelling tubes
- heart failure management
- liaison with other services including home nursing, hospital in the home (Acute Post-Acute Care), NSW Ambulance, palliative care, mental health and other aged care community services.

The team determine the appropriate modality of care (videoconference or in-person) on a case-by-case basis. Virtual modalities are also used to follow up patients who may have been seen in person.

RACF clinicians use a tablet device to communicate with the ARRT team prior to reviewing a patient.

A RACF resident and registered nurse use a tablet for videoconferencing

Workflow for videoconferences between ARRT and RACFs



Patient Story

George* is an 81-year-old man who lives in an independent-living facility. George visited his GP on a Friday afternoon as he was experiencing severe pain (sciatica). The GP provided George with immediate pain management and phoned ARRT to make a referral. On Monday morning, ARRT contacted George and arranged a visit in his home for the following day. An ARRT clinical nurse specialist (CNS) and physiotherapist visited George and worked with him to develop a plan to help him better while staying at home.

George cares for his wife, so remaining at home and being independent is important to him. Any admission to hospital would affect his ability to care for his wife.

The following week, George experienced vertigo and was so unwell he was unable to get out of bed. Having had contact with them the week before, George's daughter phoned the ARRT team.

After an initial phone triage, the ARRT team arranged a videoconference with George and his daughter (who was able to assist in the home). As it was close to the weekend, it was important to establish a plan and understand whether it was still appropriate for George to stay at home. Following a videoconference, the ARRT team arranged a home visit with a CNC, physiotherapist and doctor.

George and his daughter said:

'If you can use video calls it gives the clinicians more information than a phone call. In dad's case he could only lie down. It was confronting physically, and it was helpful to show the team the condition dad was in. They were confident about their ability to help him. They gave clear instructions on what to monitor for, and saved dad an ambulance to hospital which was the next option.

I was instantly able to get on to people who had seen Dad. It was incredibly helpful and reassuring. I was confident in the advice I was getting. It was a saviour that night.'

** 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

Service model

- ARRT is a geriatric outreach service offering both virtual assessments and home visits to keep people at home or in their RACF.
- ARRT covers two geographical areas: The Lower North Shore and Ryde/Hunters Hill.

Processes and clinical protocols

- ARRT supports the care of acutely unwell older people in the community. Non-acute patients are referred to other services.
- Most referrals are received from RACFs and GPs. ARRT also monitors the NSW Ambulance arrivals board for bookings from RACFs which may be suitable to manage in the RACF.
- Protocols are in place for direct referrals to be made to ARRT from extended care paramedics and general paramedics.
- All referrals to ARRT are triaged by an aged care CNC or advanced trainee and a treatment plan established. Depending on clinical need, the appropriate care provider/s attend to patients in-person as necessary. ARRT clinicians send a copy of the video consultation notes directly to the RACF to include in the RACF clinical record.

Clinical governance

- Virtual care modalities are managed in line with existing clinical governance mechanisms.
- ARRT is managed by a senior staff specialist geriatrician and clinical supervision is provided by an advanced trainee or specialist geriatrician.
- ARRT reports to the Division of Medicine and Aged Care at RNSH and to the Director of Nursing at Ryde Hospital.
- ARRT follows up all patients who have been assessed by the service via a phone call, video call or a follow up home visit, depending on clinical need.
- Patients are discussed in a weekly clinical meeting and serious incidents can be escalated to the Aged Care Department Morbidity and Mortality Meeting.

Strong alignment with LHD priorities

- The ARRT model contributes to the priority of connected and patient centred care (NSLHD Strategic Plan 2017-2022), by using video assessments to allow people to access the best care possible.
- Hospital avoidance programs for older people are a priority for NSLHD in the district's Clinical Services Plan 2019-2022.
- Support for RACFs and providing care closer to home is also a priority for the LHD.
- ARRT aligns with the Aged Care Quality Standards, specifically standard 3f, which requires timely reviews of patients.

Building engagement

Key partners and stakeholders

This service is dependent on a number of partnerships with key stakeholders. These include:

- RACFs
  - Most referrals into ARRT are direct from registered nurses (RNs) within RACFs to ARRT CNCs.
  - ARRT has relationships with all RACFs to provide outreach care, education, and capacity building.
  - An expression of interest (EOI) to take part in videoconferencing was sent to all RACFs, and several facilities responded. In the initial stages of virtual care roll-out, selection was based on the EOI, existing relationships with ARRT and number of referrals.
- GPs
  - ARRT works closely with GPs in the community and RACFs to allow the best care to be delivered to residents in their catchment.
  - GPs can refer directly to ARRT and the service has been promoted to GPs.
- Patients and carers/families
  - Patients and/or their families/carers are kept informed of virtual care consultations with ARRT and can choose if they wish to participate.
  - Patients and families get direct and immediate assessment by hospital specialists without leaving their RACF/home. As a result, difficulties engaging are rare. If an in-person consultation is required, this is still provided in addition to the virtual assessment.
- EDs
  - ARRT retrospectively reviews all presentations of patients aged over 70 to NSLHD EDs using an automatically generated report to identify if admissions could have been prevented. The RACF or GP is then contacted to remind them of the ARRT service and to prompt referrals for next time.
- NSLHD Patient Access and Logistics Service (PALS)
  - ARRT clinicians and PALS clinicians monitor the NSW Ambulance Board and bookings to identify which patients may be more appropriate to access care from ARRT.
- Specialist teams at RNSH and Ryde
  - Where another specialist may be required, ARRT will work with teams at RNSH or Ryde to access this. This may be a clinician-to-clinician conversation and implementation of plan in the home, or ARRT may arrange for a patient to be followed up in an outpatient clinic if needed.
- Acute Assessment Unit (AAU) RNSH
  - Where required, ARRT can facilitate direct admissions into the AAU at RNSH.
  - For other direct admissions, ARRT will coordinate this with:
    - private hospitals
    - rehabilitation hospitals
    - nursing homes, where urgent respite is required.
- Other NSLHD services such as Acute Post Acute Care (APAC) and Northern Sydney Home Nursing Service (NSHNS), who provide care to NSLHD residents in the community.
- NSW Ambulance
  - ARRT and NSW Ambulance work closely together to ensure the most appropriate management of patients. This includes collaboratively agreeing on referral processes.
  - ARRT and NSW Ambulance piloted the use of Pexip for extended care paramedics based at the Artarmon Superstation. The next stage is a collaborative project to introduce Pexip to all generalist paramedics based at Artarmon Superstation.
- Sydney North Primary Health Network (SNPHN)
  - ARRT works closely with the SNPHN to support RACFs and GPs in their catchment (e.g. to deliver education).

Staff engagement and ownership

- ARRT actively promote the use of videoconferencing to review patients. All staff are confident in using Pexip and will often recommend a video call prior to a home visit.
- When ARRT implemented video calls into their service, referral processes remained the same, however triage was enhanced by utilising videoconferencing. This promoted the video call option with other staff and patients.

RACF engagement

- Virtual care was rolled out to RACFs in a phased approach. This commenced with working with facilities that had strong relationships with ARRT.
- Pilot RACFs were actively supported to begin using video calls by NSLHD.
- ARRT CNCs who have existing relationships with RACFs were involved in the engagement of RACFs.
- RACFs were initially offered loan devices. However, these devices were often locked in cupboards for security reasons and inaccessible when needed. ARRT found that when RACFs used their own devices for video calls, they were more readily available when required.

'Access to a program such as ARRT has kept our residents out of hospital 99.9% of the time.'

RACF CARE MANAGER

Dr Alicia Anthony and CNC Therese Jepson speak with a local RACF.

Workforce and resourcing

Technology

- The service operates using Pexip with a virtual meeting room (VMR) assigned to each geographical area (Lower North Shore and Ryde and Hunters Hill). To ensure security during consultations, the VMRs are set up as clinical locked VMRs. Only ARRT clinicians have access to the access code, allowing them to begin a conference. Facilities dial in to the platform and are admitted to the conference room by ARRT.
- ARRT clinicians use smartphones or their laptops with USB speakerphones. Notes are recorded in the eMR at the time of the consultation. No further financial investment was required, as existing technology was used.
- RACFs use their own devices (either smartphones or tablets), and their existing WiFi or SIM cards to connect to the internet.
  - RACF devices have the Pexip app installed and ARRT clinicians saved as a favourite for ease of connection.
  - QR codes to scan for Pexip were developed to assist staff to quickly connect.
  - Staff in RACFs are discouraged from using personal phones.
  - Some RACFs trialled the use of laptops, however in order to manage people who are acutely unwell it was found that portable devices (e.g. smartphones and tablets) were most effective.
- There have been instances where RACFs have experienced challenges accessing videoconferencing platforms. This is generally related to downloading apps onto the RACF devices or issues with firewalls blocking video calls. It is important to test a video call on their network, and work with the RACF and LHD telehealth/virtual care manager or lead to support this process.
- A strong and stable internet connection is required to enable RACFs to participate in video conferencing. A concern during implementation was the availability of an internet connection in some RACFs to facilitate a virtual consultation. Where issues with the connection were identified, they were raised with the RACF.

Staffing model

- ARRT operates as a Monday to Friday service from 8am to 4.30pm.
- ARRT is staffed with established funding for:
  - one geriatrician (0.4 FTE)
  - one advanced trainee (1.0 FTE)
  - two CNCs (2.0 FTE).
- ARRT received temporary COVID-19 funding from October 2020 to June 2021, this enabled the initiative to be expanded with additional staffing:
  - two geriatricians (1.0 FTE)
  - two CNSs (2.0 FTE)
  - one physiotherapist (1.0 FTE)
  - one administration officer (0.6 FTE).
- Medical staff support the entire ARRT catchment area.
- CNCs are allocated to cover either the Lower North Shore or Ryde and Hunters Hill Area. These CNCs have existing relationships with all RACFs.

'ARRT is an essential service which supports our acute services, the video calls help enhance this service.'

DREW HILDITCH-ROBERTS, DIRECTOR OF NURSING, RYDE HOSPITAL

Training and development

- All ARRT clinicians were trained in the use of Pexip by the LHD's telehealth project officer.
- RACFs received individual on-site training, which included support to set up devices and an overview of how to use Pexip. This training was provided as a collaboration between the LHD and SNPHN.
- During site visits, staff were encouraged to undertake a practice video call to ensure they were confident using the technology prior to needing to use it for an acutely unwell resident.
- During COVID-19, several RACFs received virtual training, however on-site training proved to be most effective in engaging facilities.
- All RACFs were given a double-sided document outlining how to make a call and key troubleshooting tips*. The guide also covered how to set up the Pexip application on devices and make the ARRT team a favourite if required.
- Ongoing training of all RACF staff is required to ensure staff are confident initiating a videoconference. ARRT staff facilitate this training.

Capturing activity

- ARRT is a non-admitted service. All occasions of service (OOS) are recorded in the eMR with the service delivery mode selected.
- When an ARRT clinician is present with the patient and conducts a video call back to the office for input from another clinician, the consultation is captured in eMR at both ends.

Funding

- The service operates under Activity Based Funding. Additional temporary funding was provided for additional staffing during the COVID-19 pandemic.
- Videocall are now one of the core modalities of clinical service delivery for ARRT. Service events provided by videoconference receive a national weighted activity unit (NWAU) adjustor in line with Ministry of Health funding.

'I'm delighted and coming from a background of doing homecare, I couldn't see a better service than this for keeping people at home.'

ARRT PATIENT

Onboarding of RACFs during pilot

1. **RACF identified:** The ARRT team identify RACFs who would benefit from access to video calls (e.g. based on number of referrals, engagement).
2. **RACF contacted:** The RACF is contacted by the LHD's telehealth project officer or a Primary Health Network (PHN) project officer; to discuss the opportunity to use video calls.
3. **RACF technology identified:** A discussion with the RACF occurs to identify the technology available in the RACF and any potential issues (e.g. connectivity).
4. **RACF staff identified for training:** Staff who make referrals to ARRT clinicians are identified to receive training on how to use Pexip.
5. **RACF staff trained:** onsite training of staff occurs and staff are provided with resources on how to contact ARRT. Training includes a practice call using Pexip. Staff are also provided with one-page guides on how to use Pexip.

*See How to call ARRT document in Supporting documents section.

Benefits of the model

Results

There have been 2,686 video calls since July 2019. Consult numbers continue to increase month on month (see graph below).

84% of video calls had an RACF staff member on the patient end of the call.

In 79% of cases, the ARRT clinicians felt that the use of video conference improved their triage.

In 98% of cases, ARRT clinicians felt that the use of video calls improved their clinical decision making, compared to the previous practice of a phone triage and a home visit.

From July 2019 to February 2021 the use of video calls meant that in 74% of cases, ARRT were able to provide care without a home visit. Of the remaining cases, 19% required a home visit and 7% of home visits were not appropriate.

In June 2021, ARRT reviewed 392 patients by video call. This was the highest number of videoconferences in a month.

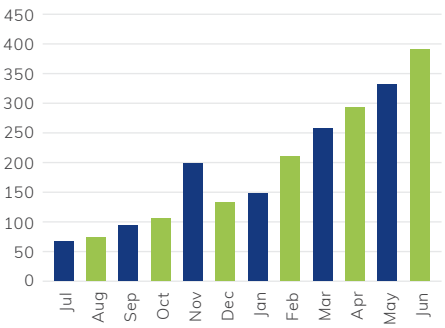
ARRT CNC, Therese Jepson, was named the RNSH Nurse of the year in 2020.

ARRT was awarded a 2021 NSLHD Quality and Improvement Award for their use of virtual care.

Benefits

1. Specialist geriatric care in the right place at the right time.
2. Care coordination for a vulnerable population.
3. People receive rapid access to care in their home where clinically appropriate.
4. Reduced ED presentations and admissions.
5. Improved service efficiency with saved time for clinicians.

ARRT Video Calls 2020-21 FY



'There is always positive feedback from staff, this gives quick access to specialised advice for our residents.'

FACILITY MANAGER RACF

Monitoring and evaluation

Monitoring

- ARRT quantify the effectiveness of virtual care by recording outcomes of all service events involving video calls in the comments section of a predesigned template on eMR.
- This template records patient demographics, diagnosis, management provided and outcomes of each OOS. ARRT created specific acronyms for OOS, which can then be extracted from eMR. Outcome measures include:
  - impacted triage
  - improved clinical decision making
  - prevented the need for a home visit
  - prevented hospitalisation.
- ARRT reports their monthly activity, including service events and outcomes, to the Division of Medicine and Aged Care at RNSH and Director of Nursing at Ryde Hospital.
- This data also informs education for RACFs. For example, identifying common conditions that referrals are received for (such as heart failure) and targeting education to RACFs.

Evaluation

- It is challenging to survey people who are seen by ARRT, as they often access the service in a time critical setting and may be suffering from dementia, delirium or sensory impairments.
- RACF staff, NSW Ambulance paramedics and families/carers report high satisfaction with use of video conferencing
- Anecdotal feedback from RACFs has shown that many patients and facilities are highly satisfied with accessing care this way.

Opportunities

Implementing video calls into ARRT required staff to adapt to minor changes in workflows, but these led to significantly improved outcomes for patients. Patients now have faster access to the most appropriate care.

Aged care outreach services in other LHDs could benefit from this approach. There is also an opportunity for aged care outreach services in other LHDs to partner with NSW Ambulance, where collaboration via virtual care allows access to the right care, at the right time.

There may be opportunities to incorporate Medicare billing where patients are seen by a staff specialist and a GP referral into the service exists. This opportunity will exist beyond COVID-19 due to funding arrangements for the delivery of virtual care into RACFs.

ARRT undertakes a multidisciplinary review of a patient following a fall in their RACF.

References and links

NSW Ambulance Extended Care Paramedics

NSLHD Strategic Plan

NSLHD Clinical Services Plan

Supporting documents

How to call ARRT document

ARRT team video

ARRT TCIG presentation

ARRT brochure

Acknowledgements

We would like to acknowledge the current NSLHD ARRT for their involvement in documenting this virtual care initiative, along with all past and present staff who have been involved in its development and ongoing delivery.

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The Agency for Clinical Innovation (ACI) is the lead agency for innovation in clinical care.

We bring consumers, clinicians and healthcare managers together to support the design, assessment and implementation of clinical innovations across the NSW public health system to change the way that care is delivered.

The ACI's clinical networks, institutes and taskforces are chaired by senior clinicians and consumers who have a keen interest and track record in innovative clinical care.

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