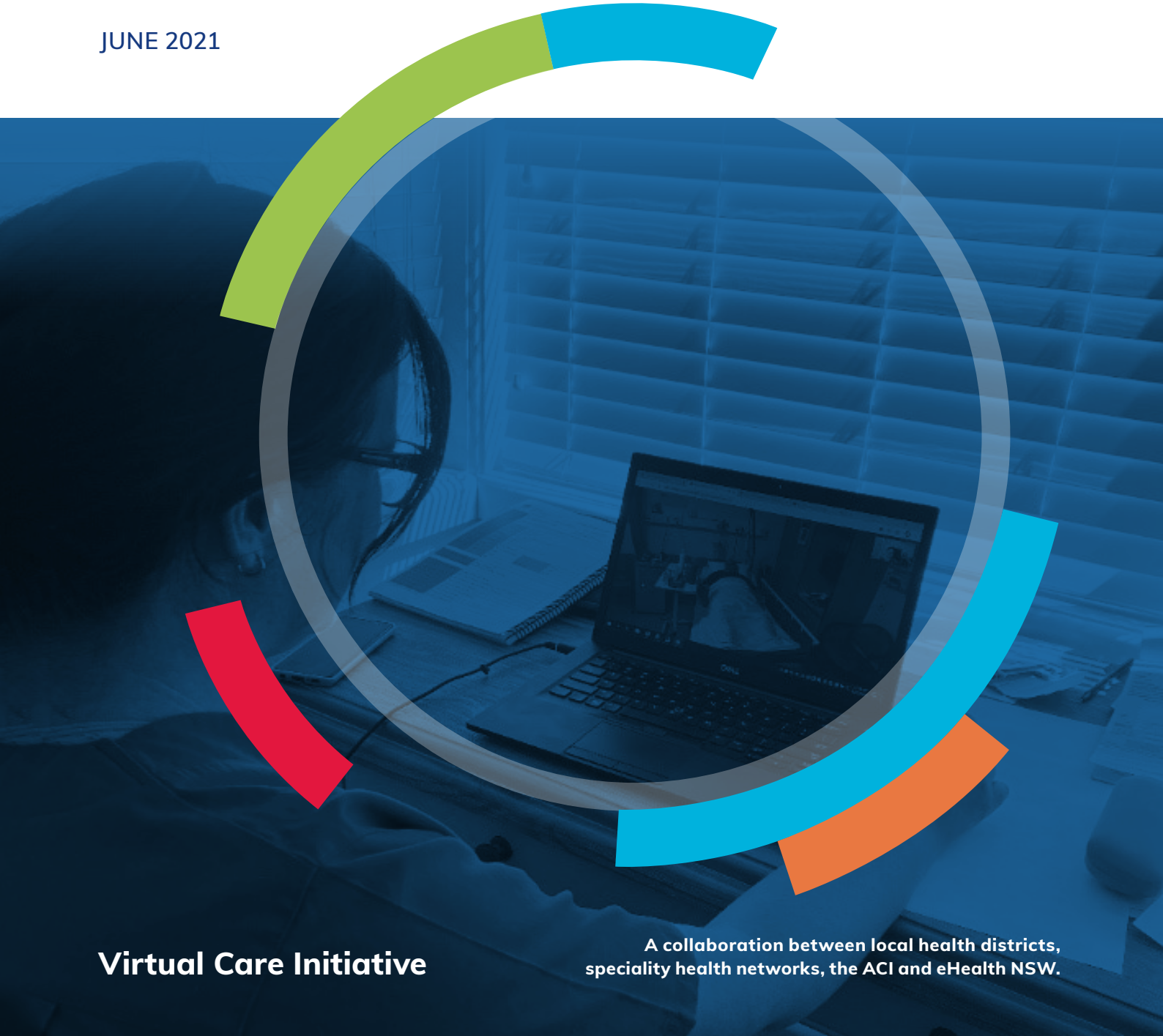
NSW GOVERNMENT

AGENCY FOR CLINICAL INNOVATION

Spotlight on virtual care: Virtual Rural Generalist Service (VRGS)

Western NSW 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 Virtual Rural Generalist Service (VRGS) was developed by Western New South Wales Local Health District (WNSWLHD) to support local medical and nursing staff to deliver safe and high-quality care to rural and remote communities. VRGS delivers a comprehensive virtual service and is the first of its kind in Australia. VRGS doctors work both virtually and in person to provide rural generalist medical coverage for hospitals and multipurpose services (MPS) and fatigue management when a local visiting medical officer (VMO) is not available or needs a break (including overnight and on weekends).

WNSWLHD is geographically the largest local health district (LHD) in NSW. At 246,676 square kilometres, it covers 31% of NSW and provides healthcare to a population of over 278,759. WNSWLHD has 38 inpatient facilities including:

- three major rural referral hospitals
- four procedural hospitals
- six community hospitals
- 25 Multipurpose Services (MPSs).

VRGS evolved from a telephone-based advice service that existed in the district for almost 15 years. It launched in February 2020 with 18 rural generalist doctors in the service covering three shifts per day. As of March 2021, the service has 26 rural generalist doctors who cover a minimum of six virtual shifts per day aligned to meet projected demand in emergency departments and wards, as well as additional in-person placements. When required, VRGS provides the following to all rural facilities in WNSWLHD alongside on-site clinicians:

- Video consultations to emergency department (ED) patients
- Medical management of acute inpatients
- Virtual ward rounds for inpatients
- Clinical support for residential aged care (RAC) residents in rural MPSs where the local general practitioner (GP) is not available.

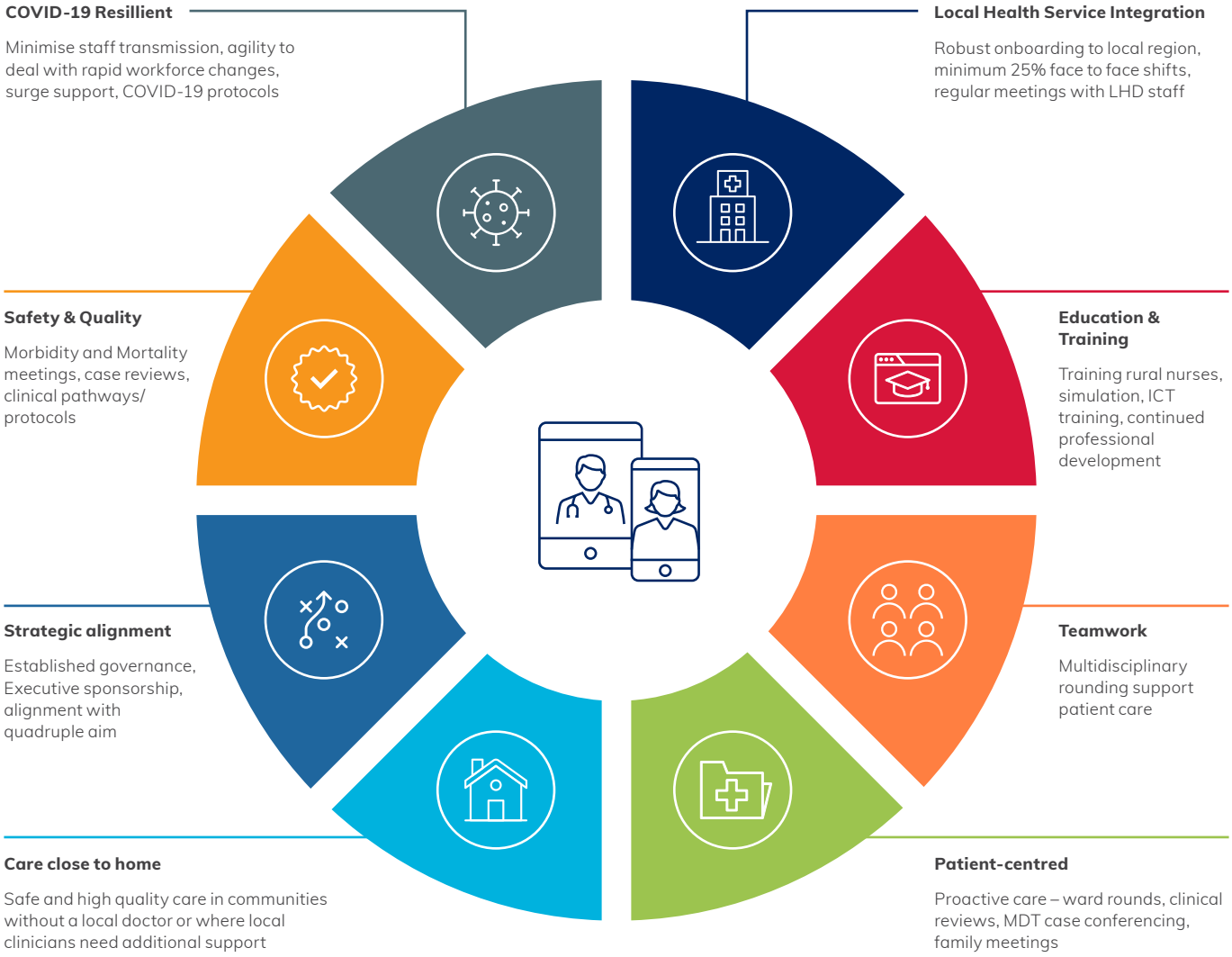
Like many rural regions, WNSWLHD experiences significant challenges in recruiting a specialist rural workforce to support the needs of its communities. This challenge is compounded by a decreasing number of GP trainees Australia-wide and an ageing medical workforce. As a result, there are difficulties in ensuring consistent medical coverage to provide care for people in rural and remote areas.

VRGS helps to address these challenges by:

- supporting hospital staff in communities where permanent GP VMOs have retired or relocated (including while recruitment efforts take place)
- supporting fatigue management of GP VMOs in towns with only one or two VMOs locally
- supporting gaps in rosters in towns where hospitals would otherwise be without medical coverage.

The VRGS model has been designed to provide solutions to challenges associated with short term locum placements. For example, VRGS doctors build relationships with local communities, local staff and have a thorough understanding of WNSWLHD systems and processes.

Figure 1: VRGS infographic



VRGS doctors provided more than 290 days of onsite medical coverage in WNSWLHD rural sites between January 2020 and May 2021. VRGS evolved from the Remote Medical Consultation Service (RMCS), which ran across the district for almost 15 years. The RMCS service was a telephone only service which lacked integration with eMR, eMeds and other clinical systems.

VRGS works closely with vCare to support staff in rural facilities in WNSWLHD to provide the most appropriate care to people close to home.

Partnership between VRGS and vCare services

vCare is a designated virtual unit that provides specialty-level advice, critical care expertise, transport, logistics, and coordination support across WNSWLHD.

VRGS provide virtual care to non-critical ED patients, medical management of acute inpatients, virtual ward rounds for inpatients, and clinical support for RAC residents in MPS in partnership with local staff when the local GP is not available.

VRGS and vCare work closely together with clear role delineations.

Reported benefits of the model

Patient benefits:

- Proactive care close to home and on country
- Improved access to patient-centred care, including multidisciplinary team meetings, family meetings and connecting with loved ones
- Access to a highly skilled rural doctor with knowledge of the local community and region
- Timely access to expert rural generalist doctors 24/7 to provide high-quality and safe care in rural and remote areas
- All acute inpatients admitted under a VRGS doctor are seen daily by VRGS on virtual ward rounds with local teams (proactive care)
- Positive patient reported experience measures (PREMs) in facilities regularly using VRGS throughout 2020.

Clinician benefits:

- Supports doctor wellbeing, including work-life balance, workload and fatigue management
- Improved attraction and retention in the rural medical workforce. High attraction and retention rates of VRGS clinicians
- Onsite in-person placements conducted by VRGS doctors (25%) support relationship building between virtual support teams and local clinicians
- Rural nurses are enabled to work to full scope of practice through an enhanced education program targeted at rural generalist nursing assessment skills
- Rural nurses are supported to manage the challenges of working without a doctor physically present
- VRGS doctors document directly into the electronic medical record (eMR) and can utilise real-time electronic medication prescribing (eMeds)
- VRGS doctors are rostered and available based on the projected needs and demands of local sites requesting support
- Clear delineation of clinical conditions which can be managed by VRGS, vCare and other virtual services such as Mental Health Emergency Care (MHEC).

Service benefits:

- Access to doctors when needed if a local doctor is unavailable
- Sustainable care delivery which supports rural communities and responds to local needs
- VRGS doctors are employees (not agency/locum staff) helping to improve continuity of care and ensuring knowledge of local systems, policies and processes
- VRGS doctors are involved in safety and quality improvement activities, e.g. coordinating rural monthly morbidity and mortality meetings for the LHD
- VRGS doctors complete 25% of shifts onsite in communities with specific medical workforce challenges. This helps the district to provide a high-quality medical workforce with greater continuity of care than locum services
- A COVID-19 resilient model that has supported facilities experiencing challenges getting doctors onsite or leaving at short notice due to border restrictions.

Overview of the model

Key elements of the model

Element	Detail
Patient cohort	• ED patients at rural sites • Inpatients at rural sites • Residential aged care patients when their local GP is not available.
Referral pathway	• All consult requests are ordered via eMR • A central 1800 number is used to escalate urgent or overnight referrals.
Healthcare team	Healthcare delivery team: • Designated rural generalist doctors • Nursing staff at sites receiving the service. Support team: • VRGS Administration Officer • Rural Health Innovation Lead • Rural Director of Medical Services.
Technology	• Teleconferencing (Cisco Self Care Portal phone diversions) • Videoconferencing (Pexip) • Fixed ceiling cameras with pan, tilt and zoom • Mobile videoconferencing units (Wallies) with two-way audio and video and pan, tilt and zoom • Lifepak electrocardiograms (ECG) to electronically send ECGs to the doctor • Visionflex Pro-Ex including otoscopes, dermscan and other peripherals • Clinical applications such as eMR and eMeds • Remote access using a virtual private network (VPN) • SharePoint and NSW Health emails for collaboration.

Services

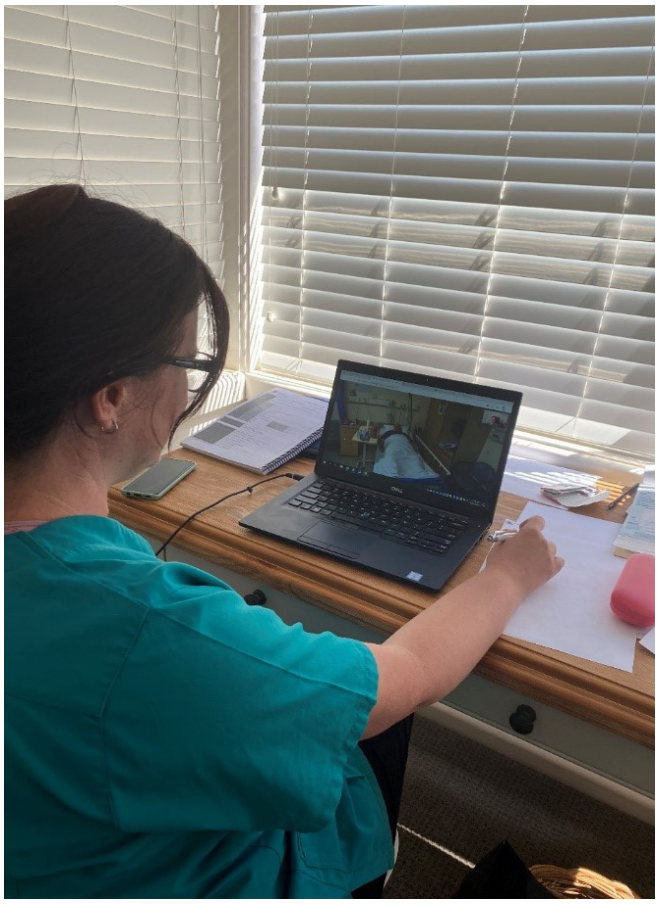
GP VMOs provide care to patients admitted to hospital in many rural communities. VRGS has been designed to support the hospital staff virtually when a doctor is unable to be there in person or needs a break.

VRGS supports acute care in hospitals; it is not designed to provide primary care services in the community.

If critical care is required, this would be referred to vCare in line with WNSWLHD policies and processes. While this can be supported by the VRGS, it is predominantly handed over to and managed by vCare.

Some clinical situations require a person to be transferred, or to travel, to a hospital with a higher level of care. The decision to transfer is made by the VRGS doctor and vCare in consultation with nursing staff and the patient and family. They may include:

- presentations by patients requiring certain hands-on medical or nurse practitioner expertise that cannot be performed by staff locally or virtually (e.g. foreign bodies in the eye, suturing, specialised medical examination)
- critically unwell patients who cannot be managed in the local facility and require a higher level of care
- patients requiring specialist-level care
- patients who require investigations that cannot be undertaken at the local community
- where there is significant patient or family concern requiring escalation.



VRGS VMO Dr Kellie Mathieson reviews a patient during a VRGS ward round.

GP VMOs

GP VMOs are local doctors in communities who have admitting rights at the local hospital or MPS and who also work out of a private GP clinic in town.

Workflow diagrams

Figure 1: VRGS review of an ED patient

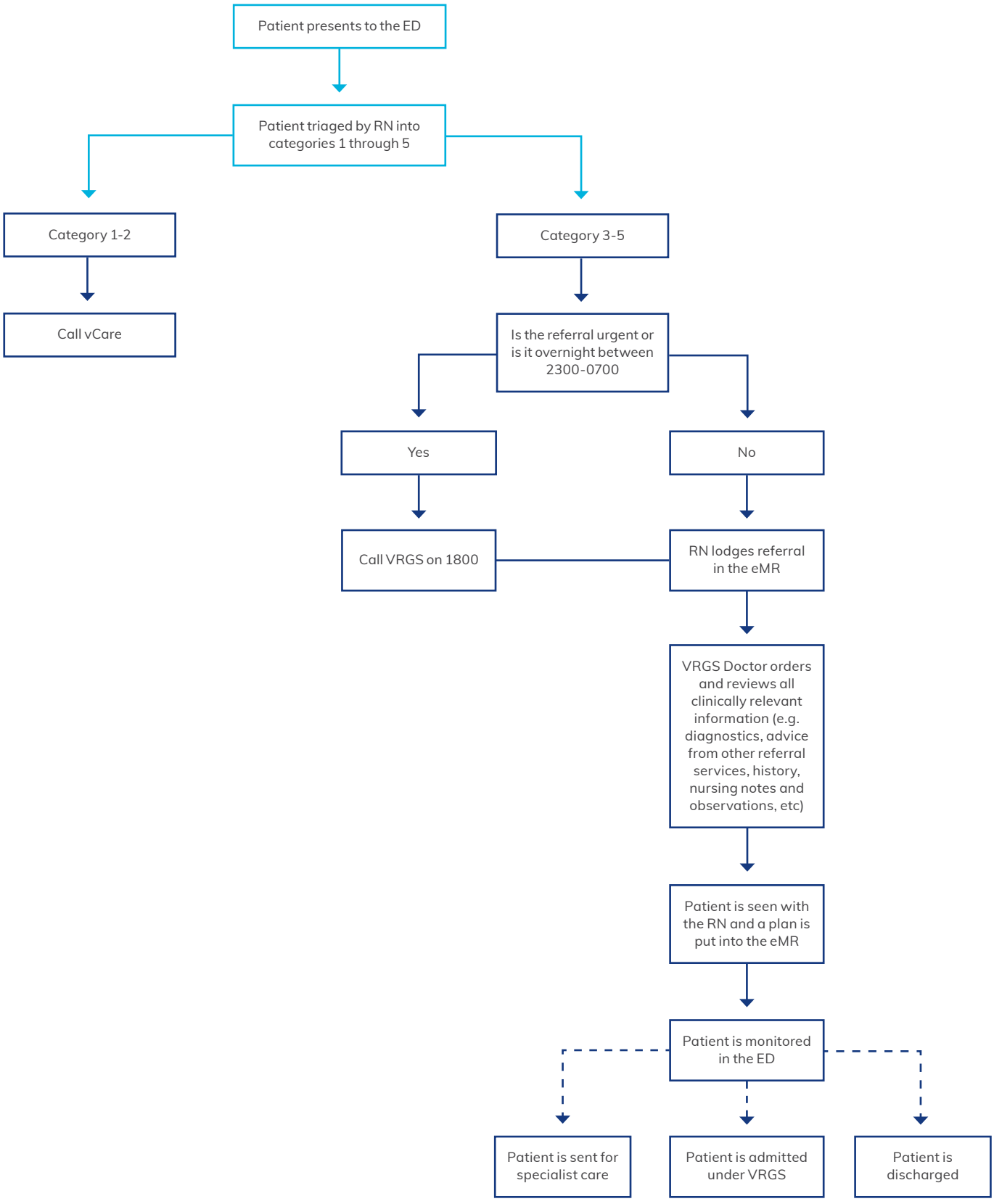
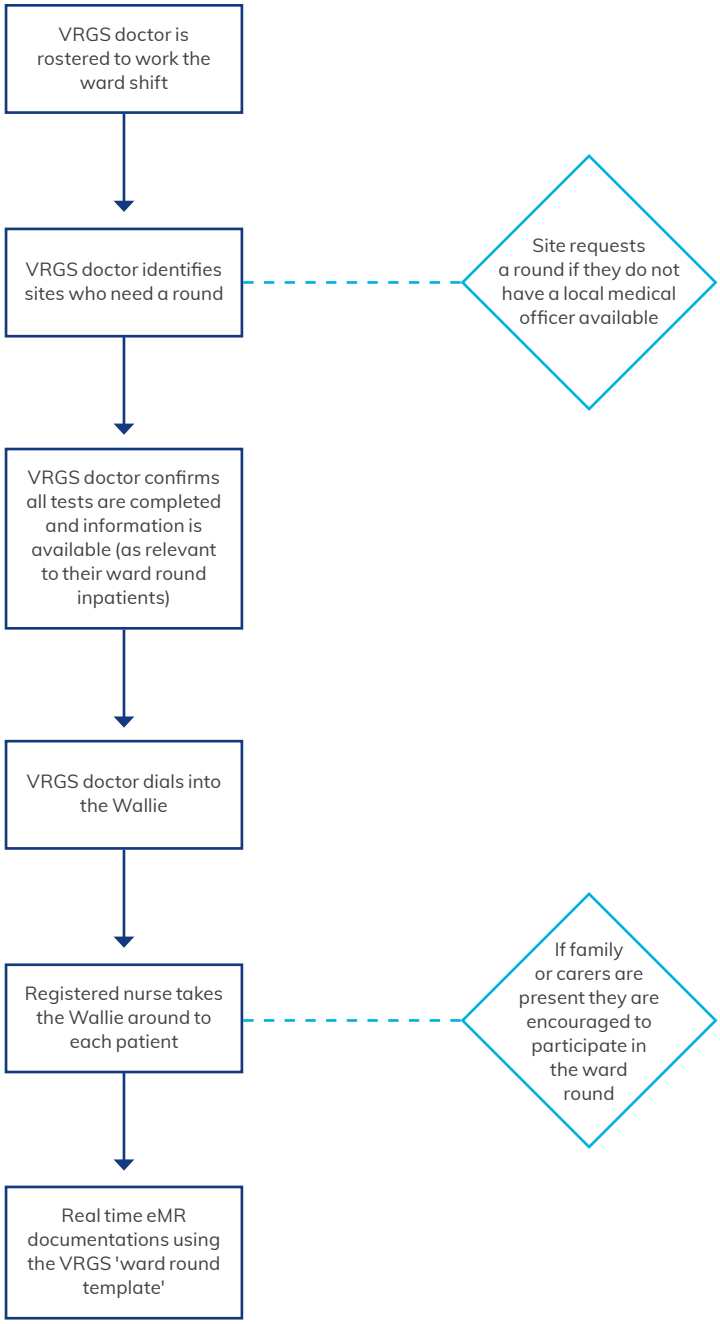
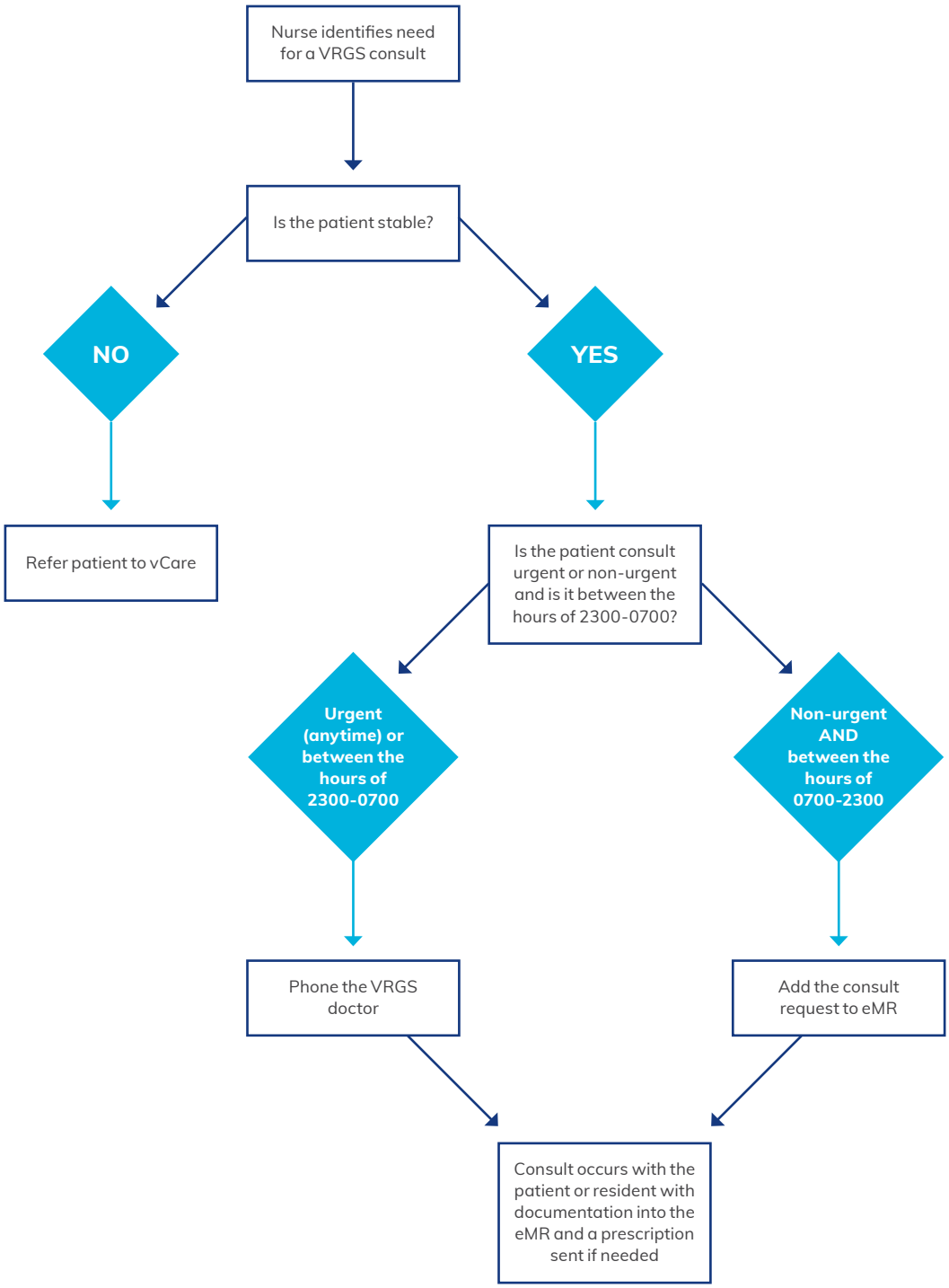


Figure 2: VRGS ward round**



**See VRGS ward round template in Supporting documents list

Figure 3: VRGS ad-hoc and Residential Aged Care patient review



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 design

- VRGS is a support service for rural facilities who do not have a doctor available due to leave, training or recruitment challenges. VRGS also supports fatigue management and roster gaps.
- A significant amount of process mapping and understanding of service need was undertaken prior to the launch of VRGS in 2020. This planning was fundamental to the service's success.
- The service has been designed with robust processes and clinical governance to ensure high quality and clinically appropriate care is provided to patients.
- VRGS is as an enhancement to the previous telephone advice service. Conducting video reviews of patients whilst utilising eMR for documentation and eMeds for electronic prescription of medication enhances the safety and quality of services delivered.
- To ensure VRGS doctors understand the communities they are servicing, 25% of all shifts are completed in person within rural sites in WNSWLHD.

Processes

- All VRGS clinical processes are designed to replicate best-practice in-person care.
- Clinical documentation into eMR is mandatory. VRGS doctors document in eMR using either the VRGS consult or VRGS ward round eMR template.
- For admitted patients all medications should be ordered in eMeds. ED patients and patients requiring prescriptions for discharge, are sent via email or fax to pharmacies with paper copies posted to pharmacists.
- At the start of their shift, VRGS doctors read the previous shift's handover document. Each doctor must document a handover at the end of their shift to support the oncoming team.
- When patients are admitted under VRGS they are added to the VRGS admitted patient list.
- For ED patients in sites without a medical officer present:
  - triage categories one and two are to be seen by vCare. vCare can re-refer these patients to VRGS if ongoing review is required
  - triage categories three, four and five are seen by VRGS.
- All local hospitals and MPSs have Clinical Emergency Reponse Systems (CERS) in place. The CERS processes are locally driven, unique to each facility and involve escalation to vCare for critical care. Escalation occurs whether an onsite doctor is available or not. This occurs in line with the NSW Health policy Recognition and management of patients who are deteriorating.

- VRGS clinical pathways align to all relevant WNSWLHD and NSW Health guidelines including:
  - mental health emergency care (MHEC)
  - trauma
  - sepsis
  - pathway for acute coronary syndrome assessment (PACSA)
  - between the flags
  - CERS
  - stroke
- Where VRGS doctors are requested to conduct a clinical review of a patient, it must be conducted by videoconference and documented in eMR.
- If a patient requires transfer to another facility for higher level care or a specialist consultation, VRGS work with vCare to coordinate this.
- The VRGS team hold monthly team meetings attended by all doctors to discuss operational matters.

Clinical governance

- VRGS has developed a robust clinical governance structure, with safety and quality integral to the model.
- All VRGS doctors must complete safety and quality improvement activities as part of their portfolio. This is typically two projects per year and may include:
  - clinical audits
  - development of VRGS specific policies
  - coordination/involvement in the VRGS monthly morbidity and mortality meetings
  - participation in root cause analysis or serious incident investigations
  - participation in quality and safety reviews
  - involvement in research.
- Where an incident or near miss occurs, VRGS doctors are expected to document this in the incident management system (ims+). VRGS is linked to ims+, meaning when an incident occurs at a site, VRGS management are also notified.
- Morbidity and mortality meetings (M&M) occur monthly in line with Clinical Excellence Commission (CEC) guidelines.*
- An issues log is maintained to ensure feedback from local clinicians is captured and actioned.
- VRGS doctors are subject to same performance requirements as a doctor on the ground in a WNSWLHD hospital.
- All doctors working for VRGS are credentialled to work for WNSWLHD through the Medical and Dental Appointment and Advisory Committee (MADAAC).

Executive support

- Executive sponsorship for VRGS sits with the WNSWLHD Medical Services directorate and is managed by the WNSWLHD Operations Directorate
- The executive were key to supporting the establishment of the service in order to address known workforce challenges. As VRGS transitioned to an enhanced model (that did not exist anywhere else in Australia), executive buy in was essential.
- VRGS is supported by the WNSWLHD executive as the program has demonstrated sustainable benefits for doctor wellbeing, patient care, and patient safety.

Aboriginal health

- Whilst VRGS does not offer a specialised service for Aboriginal people, their needs were specifically considered in service planning. Cultural sensitivity and safety are embedded within the VRGS program. Doctors are aware of patients' needs, including preference to receive health care on country.
- 13% of the WNSWLHD population identify as Aboriginal or Torres Strait Islander.**
- Between February and August 2020, 25% of ED patients and 16% of admitted patients seen by VRGS clinicians identified as being Aboriginal or Torres Strait Islander when providing patient demographic information.
- VRGS doctors recognise the importance of self determination and incorporate shared decision making into their practice. They discuss treatment options with patients as part of routine practice including what treatment can be provided locally and when travel to another facility may be required.

*See CEC Guidelines for Conducting and Reporting Morbidity and Mortality/Clinical Review Meetings in references **See WNSWLHD Strategic Plan in references

Building engagement

Key LHD stakeholders

- Nursing staff present at the remote site with the patient are key to supporting the success of the VRGS model. In addition to providing high quality care, nurses also:
  - conduct patient assessments within their scope of practice
  - support VRGS doctors with patient assessment
  - assist with communication, use of technology (including videoconference units, hand-held otoscopes and cameras) and streamlining access to care teams.
- GP VMO's in local communities are supported by VRGS and the two teams work alongside each other to provide care to patients. There are handover arrangements in place between VRGS and GP VMO's to support patient care.
- vCare works with VRGS to support critically unwell patients, coordinate transport, and organise specialist consultations. vCare and VRGS have pathways in place to refer between services when a patient's clinical needs change to ensure the most appropriate care is provided.
- MHEC will provide mental health advice to facilities without mental health services available on site. Once a patient has been medically reviewed by either VRGS or vCare (dependent on triage category) MHEC will assess a patient.

'We would not be able to function without VRGS.'

MARK SPITTAL, EXECUTIVE DIRECTOR OPERATIONS WNSWLHD

Nursing staff engagement

- The introduction of VRGS was an enhancement to the existing RMCS model with a focus on supporting local medical and nursing staff. Prior to the commencement of VRGS, nursing staff were familiarised with VRGS through information sessions and flyers.
- Nursing staff support normalising the delivery of care virtually and work closely with VRGS doctors to do this.
- To build the generalist skills of nursing staff, WNSWLHD have developed nine modules delivered by the Rural Generalist Nurse Education Team (RG NET) to enhance the skills essential for rural nurses. These modules also support nurses when the GP VMO is not available, recognising that in many communities the VMO is not permanently based in the hospital.
- RG NET works with nurses to develop their patient assessment skills in nine key areas. Nurses are assessed and deemed competent by a nurse educator.
- The Rural Director of Medical Services for WNSWLHD hosted discussions with staff in rural health services to identify a process for staff to flag issues as they arise. This ensures they are appropriately managed. An issues log is retained and managed to allow continual quality improvement of the service.
- A key enabler for building relationships and engagement with nursing teams and the wider community is on site work that complements virtual activity. All VRGS doctors are required to work on-site for 25% of their shifts with WNSWLHD.

Community and patient engagement

- Several communities which VRGS supports do not have a permanent GP. Without VRGS providing coverage to hospitals, patients would need to travel significant distances to access ED and inpatient care.
- A key lesson learned is the need to involve the community and patients in service design from the start.
- Community members recognise virtual care as an important service when it is used appropriately. The district has identified that more consultation and education will help build understanding of virtual care as a mode of service delivery. This is an area of focus in 2021.
- VRGS executives work with communities to promote the role of virtual care, provide transparency about the quality of care being delivered and ensure there is trust in the service.

'This is the next best thing to seeing a doctor face to face'

CARER OF PATIENT, RURAL MPS

- VRGS clinicians are encouraged to engage with the communities they provide care for and be present in these communities when working their shifts on the ground. This aims to help build relationships and connections with communities.

Nyngan Hospital is 166 kilometres by road from Dubbo Hospital (WNSWLHDs nearest major hospital) and relies on VRGS doctors for in-person and virtual care

Patient Story

Jeremy is a 65-year-old Aboriginal man who was admitted to the local MPS during cancer treatment for management of lethargy and loss of appetite.

At the time of Jeremy's admission, VRGS were providing medical coverage for the hospital. The VRGS team supported his care along with the local nursing team at the facility. He spent one week receiving medical care through virtual ward rounds and nursing care onsite.

When speaking to Jeremy about his experience of care, he commented on how important it was to have access to the healthcare he needed so close to home. Without this service, he would have to travel two hours to receive healthcare at his nearest base hospital. This would mean being away from his family and following a long journey.

Jeremy remarked how good the doctors were at communicating over the video, and how well they worked with the nurses on site. His experience of the service was positive. He said the doctors 'never rushed me and had time to answer questions' he had asked. Overall, Jeremy was very happy with the service and would recommend it to his family and friends.

** Name changed to protect patient privacy and confidentiality*

Clinician to clinician engagement

- VRGS doctors communicate with each other using several modalities, including:
  - phone calls
  - email
  - group messages
  - SharePoint
  - formal handover documents.
- Prior to a video consultation, VRGS doctors often speak with nursing staff on the phone to better understand the patient's needs and circumstances.
- For sites where VRGS doctors and GP VMO's are working together, the doctors will leave comprehensive documentation in the patient's medical record and conduct verbal handover.
- In-depth interviews conducted with VRGS and local site staff after the first 6 months of operations identified the following critical success factors:
  - comprehensive onboarding training and support for VRGS doctors
  - trusting working relationships built between VRGS Doctors and nursing staff supported by onsite placements
  - Engagement with local GP VMOs, who spoke highly of the support the model provides them.

'Before VRGS we used the RMCS service. There was no eMR, no eMeds. Doctors could only talk to the nurses, not the patients. Doctors were not solely doing RMCS and would be distracted. Now doctors are JUST doing VRGS'.

HEALTH SERVICE MANAGER, RURAL MPS, WNSWLHD

VRGS doctor tips for engaging virtually:

- Always introduce yourself to everyone present on the consultation
- Where possible and practical, use video calls to review patients rather than phone calls
- If there are carers, family, or friends in the room include them in the consultation
- Talk to patients about the local area so patients feel connected and a rapport is built. Try to ask some non-clinical questions, for example where to get a good coffee or talk about pets
- If looking at results or eMR, let patients know you are looking away for a minute to refer to their results
- Be aware of your body language and eye contact over the camera.

A Nurse Manager and Dr Kellie Mathieson speak between patients during a VRGS ward round

Workforce and resourcing

Appropriate technology

- The service uses a range of technology to review patients following referral. These include:
  - eMR referrals (including census task list)
  - phone calls
  - videoconferencing/fixed ceiling cameras
  - Lifepak machines for ECG transmission
  - peripherals on videoconferencing machines which include wound cameras and otoscopes.
- VRGS doctors working remotely typically have the following set up:
  - dual monitors with access to eMR, eMeds, pathology results, medical imaging
  - a high-definition webcam, speaker and microphone
  - a mobile phone and telephone diversion platform
  - access to a shared mailbox
  - communication and collaboration platforms for doctors working on shift
  - remote access via VPN
  - a stable internet connection – internet connectivity is tested prior to onboarding with the service.
- As the VRGS workforce work remotely, the team have a central SharePoint platform with key documents used by the service including:
  - rosters (also published on the staff intranet)
  - availability
  - policies and procedures
  - facility information
  - contact details for rural sites and videoconferencing machines
  - how to guides.
- Due to the reliance on virtual care, VRGS has business continuity plans (BCP) in place should there be a technology failure.

Planning for implementation

- When VRGS was rolled out it was made available to all rural hospitals on the same day, in a transition from the previous RMCS service.
- Implementation of the model required significant upfront investment in information and communications technology (ICT) infrastructure (for example laptops for doctors) and in-person training.
- Doctors who joined the service prior to COVID-19 participated in a two-day in-person induction in WNSWLHD. This has since been facilitated virtually due to COVID-19, with future onboarding planned as face-to-face, as this is best practice.

Staff training and development

- Doctors are onboarded into VRGS through a comprehensive two-day orientation process, this requires doctors to become familiar with:
  - WNSWLHDs geography, patient cohorts and local complexities
  - WNSWLHD policies and procedures
  - WNSWLHD technology including eMR, eMeds, Pexip and service-related workflows
  - other virtual services available across the region (e.g. vCare, MHEC, virtual pharmacy)
  - training in virtual care communication and presentation skills
  - expectation of doctors in the service.
- All doctors undertake shifts in a buddy arrangement prior to starting with the service.
- Annual professional development programs are organised for the team in WNSWLHD.
- Nursing staff are supported to further develop their skills through the RG NET training program (see page 11). VRGS doctors also provide local education and training when doing their in-person shifts.
- VRGS also supports teaching medical students.

'From the perspective of servicing Baradine, I would not be able to do this on my own without the help of VRGS. It would be very difficult to recruit someone else to the town.'

DR MARTIN HUA, GP VMO BARADINE MPS AND VMO VRGS

Medical staff

- The recruitment process for medical staff is critical to the model.
  - All VRGS doctors are selected based on their experience in rural and remote medicine as Rural Generalists, mostly with fellowship of either the Australian College of Rural and Remote Medicine (ACRRM) or the Royal Australian College of General Practitioners (RACGP).
  - Strong interpersonal skills are also crucial to support the delivery of virtual care.
- 25% of all shifts done must be in person within the district and in the hospitals which VRGS provides support to.
- VRGS doctors who have the required critical care experience also support the coverage of the vCare roster overnight.
- Several VRGS doctors have experience as international retrieval doctors or working for organisations such as Royal Flying Doctors Service, World Health Organisation, United Nations, Médecins Sans Frontières/Doctors Without Borders.
- All VRGS doctors are employed by WNSWLHD as VMOs and have admitting rights at all VRGS supported hospitals/MPSs.
- VRGS doctors:
  - report to the Rural Director of Medical Services for WNSWLHD
  - are supported by the Rural Health Innovation Lead and VRGS Administration Officer, who provide logistics and administration support
  - come from a variety of rural and remote backgrounds and some VRGS doctors work as GP VMOs in WNSWLHD.

Staffing model

- Six doctors are rostered per 24-hour period, with shift times aligned and scaled to meet projected demand in emergency departments and wards.
- Shifts for VRGS are typically:

Shift	Hours
Day	8am -6pm (on-call until 8pm)
Ward	8am -6pm (on-call until 8pm)
Bridge	Noon -10pm (on-call to midnight)
Evening	2pm - midnight (on-call to 2am)
Night	8pm - 8am

- When VRGS doctors are working on site, they do not provide virtual consults.
- Doctors working for VRGS are in dedicated roles supporting VRGS hospitals/MPS and are not completing other duties at the same time.
- VRGS doctors are employed with the service as VMOs and remunerated accordingly.
- VRGS has recently expanded the workforce to support additional demand.
- VRGS shifts are increased to support projected demand on days where it can be predicted that there will be additional pressures on the service (for example public holidays and weekends).

Funding model and sustainability

- VRGS is funded entirely within the LHD budget.
- VRGS is funded in a sustainable manner that allows investment to be made locally when an in-person doctor is available and investment in VRGS when there is need across the LHD. The district preferences the recruitment of local doctors in communities and can scale back VRGS shifts as more doctors are recruited across rural communities.
- When considering funding for this initiative it is important to note that VRGS provides a stable workforce of doctors familiar with WNSWLHD communities, geography and systems. This enhances the safety and quality of care.

Benefits of the model

Results

In the first six months VRGS doctors made over 12,000 patient notes in eMR (an average of over 70 patient interactions per day).

VRGS regularly receive up to 100 consultation requests per day. This includes ED reviews and ward reviews.

In an average month:
– VRGS receive 1,157 requests on eMR for an ad hoc review
– VRGS doctors will answer 900 phone calls to the central 1800 number.

Average length of stay data for GP VMOs, VRGS and locums is comparable.

From April to June 2020, 97% of patients at four rural facilities regularly supported by VRGS (Narromine, Nyngan, Dunedoo and Gulgong) rated their care as Excellent or Good. This was an increase on the same period the year prior.

VRGS has high satisfaction rates and positive experience feedback among nursing and medical staff (VRGS and VMO's). Local GP VMOs spoke highly of the support the model provides them.

VRGS doctors provided 290 days of in-person medical coverage in rural hospitals and MPSs between January 2020 and May 2021 (despite travel difficulties due to COVID-19).

The WNSWLHD Clinical governance unit found a reduction in serious incidents across rural sites following the introduction of VRGS.

Benefits

1. **Improved access to ED medical support for remote and rural communities** with little or no local GP or VMO support
2. **Positive patient experience** reported by facilities regularly using VRGS.
3. **People can access care close to home and on country.**
4. **Assists recruitment and retention of GP VMOs to rural communities** as they have fatigue support and won't be solely on call 24/7.
5. **Increased support and workforce capacity** face-to-face and virtually for doctors and nursing staff at rural and remote communities.

'Personally, a service like VRGS balances a GPs life and it's a great arrangement in terms of preventing burnout and allowing longevity for career.'

DR SALLY PLUNKETT, GP VMO, DUNEDOO MEDICAL CENTRE AND DUNEDOO MPS

Monitoring and evaluation

- VRGS is monitored and evaluated against six domains. The service has received funding to undergo a complete evaluation in the 2020/21 financial year. Domains include:
- Appropriateness: Ensuring the service is appropriate for rural health service contexts
  - Patients seen by VRGS are monitored to ensure they are appropriate for the service.
  - Ensuring services are culturally appropriate.
- Utilisation: Monitoring demand utilisation to support planning and sustainability.
  - Monitoring and managing demand for the service across WNSWLHD rural sites to retain safe rostering practices.
  - Understanding the factors influencing demand e.g. the impact of border closures during COVID-19 and ongoing recruitment and retention challenges in rural and remote areas.
- Safety and quality: Striving to provide a safe, high quality and patient-centred service. This includes measuring and understanding:
  - health-related key performance indicators such as unplanned hospital readmissions, potentially preventable hospitalisations and hospital acquired complications
  - high quality clinical care including clinical variation
  - health outcomes for patients
  - patient reported experience measures.
- Organisational context: Considering medical workforce recruitment and retention issues and how VRGS helps to address this.
  - VRGS is designed to respond to and meet local health service needs for medical cover.
- Technology performance: Ensuring the technology solutions are meeting clinician and patient needs.
- Cost effectiveness: Ensuring sustainability.
  - Cost effectiveness is evaluated alongside other domains with a key focus on safety and quality in the service.
  - VRGS is evaluated by comparing the cost of short term locums and historical virtual support services with the cost of running the service (virtually and face-to-face).

Opportunities

Opportunities for the VRGS model in WNSWLHD include:

- partnering with integrated care teams in the LHD to further expand the service.
- expansion to provide ambulatory care services in settings where this is currently unavailable.
- inclusion of an internal medicine specialist and geriatrician to conduct multidisciplinary ward rounds.

The VRGS model is currently being considered by other local health districts in NSW. Other opportunities for the VRGS model include:

- Transfer to other rural and remote regions in both NSW and across Australia. Models like VRGS can enable working in a small rural community sustainable for GPs and rural generalists, preventing them from being required to be on call 24/7, 365 days per year. This will assist recruitment and retention, ultimately improving access to care for communities.
- If the MBS item numbers for virtual care are continued, there may be an opportunity to utilise these for hospitals which have a 19.2 exemption under the Medicare Benefits Schedule. This allows billing in rural communities and re-investment in local health services.
- VRGS supports the NSW State Health Plan – Towards 2021 and the NSW Rural Health Plan – Towards 2021 by investing in information and communications technology (ICT) infrastructure and changing work practices to improve access to and equity of health services for people in rural and remote areas.
- VRGS also goes some way to alleviating the maldistribution of the medical workforce in small hospitals and MPS facilities in rural and remote communities.

'This is a tool to bring doctors back to the bush. Doctors can come to the town, and not be expected to work 24/7.'

DR CLAYTON SPENCER, EXECUTIVE DIRECTOR MEDICAL SERVICES, WNSWLHD

References and links

vCare virtual care initiative report

WNSWLHD Strategic Plan

CEC Guidelines for Conducting and Reporting Morbidity and Mortality/Clinical Review Meetings

Supporting documents

VRGS Ward Round Template

Glossary

MPS	Multipurpose Service
RAC	Residential Aged Care
Wallie	portable videoconferencing machine
Cisco DX80	desktop videoconferencing machine
Rural Health Facility	smaller rural and remote sites at the receiving end of the virtual services
MDT	Multidisciplinary team
VMO	Visiting Medical Officer
PREMS	Patient reported experience measures
M&M	Morbidity and mortality
ACRRM	Australian College of Rural and Remote Medicine
RACGP	Royal Australian College of General Practitioners
RMCS	Remote Medical Consultation Service
Rural generalist	general practitioners who provide primary care services, emergency medicine and have training in additional skills like obstetrics, anaesthetics or mental health services

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