Evaluation of the Nepean Blue Mountains

After Hours Telehealth Service in Residential Aged Care Facilities (RACFs)

Final Report

WESTERN SYDNEY UNIVERSITY

phn NEPEAN BLUE MOUNTAINS

An Australian Government Initiative

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Acronyms

ACRONYM	DESCRIPTION
AMA	Australian Medical Association
ED	Emergency Department
EN	Enrolled Nurse
FACEM	Fellow Australian College Emergency Medicine
GP	General Practitioner
LGA	Local Government Area
MED	My Emergency Doctor
Medline	Academic literature data base
MBS	Medicare Benefits Schedule
NBM	Nepean Blue Mountains
NBMPHN	Nepean Blue Mountains Primary Health Network
N-Vivo 11 [TM]	Software to assist qualitative data analysis
NEPT	Non-Emergency Patient Transport
PubMed	Academic literature data base
RACF	Residential Aged Care Facility
RN	Registered Nurse
SNOMED	Systematized Nomenclature of Medicine - Clinical Terms (symptom and diagnostic coding)
VACS	Virtual Aged Care Service (hospital outreach)
WSU	Western Sydney University

Executive Summary

Introduction

The Nepean Blue Mountains (NBM) region covers over 9000 square kilometres to the west of Sydney and includes four local government areas (LGAs) of Blue Mountains, Hawkesbury, Lithgow, and Penrith. This region has a higher rate of ageing than the rest of NSW and chronic illness is common. It is often difficult for residents to access general practices due to a shortage of general practitioners (GPs) and access to after hours primary care is especially problematic in residential aged care facilities (RACFs), where patients are often transferred to hospital emergency departments (ED) for afterhours medical assessment.

In 2020-2021 Wentworth Healthcare, provider of the Nepean Blue Mountains Primary Health Network (NBMPHN) piloted a 12-month telehealth initiative with six RACFs aimed at addressing the need for greater access to timely afterhours medical care in RACFs. My Emergency Doctor (MED) was commissioned to deliver afterhours medical assessment and treatment using telehealth technology. The service was promoted to healthcare providers, the RACFs, residents and their families. The initiative was designed to reduce the inappropriate use of ambulance services and need for ED presentations and hospital admissions, as well as the afterhours workload on GPs.

Commissioned and funded by Wentworth Healthcare, a research team from the Department of General Practice at Western Sydney University conducted a mixed methods approach to evaluate the Nepean Blue Mountains After Hours Telehealth Service in Residential Aged Care Facilities. The Western Sydney University (WSU) Human Research Ethics Committee provided approval for the evaluation (H 13792).

Methods

A brief literature review of academic data bases and grey literature, focused on the use of telehealth and its related outcomes, informed the evaluation.

Quantitative data was provided by NBMPHN including service data from MED and the RACFs from 14 February 2020 to 14 February 2021 and data from NSW Ambulance related to calls into their service and subsequent ED transfers for all RACFs in NBM and separately for the six RACFs in the pilot.

Qualitative data was gathered by the research team via in-depth semi-structured interviews of key stakeholder groups. Eighteen participants comprised RACF management and staff, family members of RACF residents, GPs who used the MED service and those who declined, and management and clinicians from MED. Interviews were conducted by telephone, recorded and transcribed verbatim. The interview data were analysed thematically using an iterative approach to identify and describe meanings or themes in the data.

Results

Quantitative data revealed that most general practitioners providing patient care in the six RACFs (59/71) provided referrals for their patients (n=522) to receive after hours care from the MED Telehealth service. The RACFs commenced their engagement with the service between February and May 2020. There were 209 calls made by RACFs to MED during the pilot period. Of these calls, 179 resulted in a recommendation by MED for treatment within the RACF. Hospital transfer was recommended in relation to the remaining 30 calls. The RACF staff reported that prior to MED they would have contacted the ambulance service in 87 of those 209 calls. The NSW Ambulance Service data revealed that they received an increase in afterhours calls from RACFs in 2020 across the region and in the pilot sites in comparison to previous years. However, in pilot sites afterhours ED transfers decreased in comparison to an increase across the region.

Four overarching themes were identified in analysis of the interview data: Systems issues related to care in RACFs; Issues related to the MED Model of Care; Implementing the MED Program; and Experience of the MED program.

Interviewees highlighted a range of **systemic issues around providing care in RACFs**. Funding for RACFs was considered poor and staffing inadequate. Nurses reported receiving conflicting advice from GPs, ambulance and hospital staff, while GPs reported often being called afterhours for minor issues. A number of interviewees described a lack of access to medications in RACFs and delays in administering them, especially for palliative care residents. Many GPs commented that poor remuneration discouraged them from providing afterhours RACF care. Some expressed frustration about the funding for this pilot being directed to an external provider rather than to enhanced GP services.

Issues related specifically to the MED Model of Care were raised by interviewees. Principles of management in RACFs were frequently discussed. These included the challenge of deciding on the best location for care and judging when hospitalisation was more appropriate than managing care in the RACF. Interviewees emphasized team based care that included residents and families and the importance of working together. Trust was described as underpinning team-based decision making. It was generally agreed that MED was most appropriate for acute afterhours care rather than chronic conditions or when a procedural intervention was required. The video capability of MED was recognised as being better than other forms of telehealth, however concerns were expressed that patient records may not always be accessible and that even video based telehealth may not always enable an accurate assessment of the patient's condition. The MED service was considered complementary to usual care but the GPs described their local knowledge and knowledge of their patients as important in working effectively in RACFs.

I**mplementation of the MED program** was described in some detail. There were high expectations of the program with GPs anticipating their workload would be reduced and also pointing to the need for fewer patient transfers to emergency departments. Promotion of MED did not appear to have reached all stakeholders. Some GPs had little knowledge about MED and this made them reluctant to participate. The GPs relied on RACF staff to promote MED to their patients. With high staff turnover in RACFs, the MED service provided repeat training sessions for new staff. The support from the PHN was considered very helpful with the MED program regarded by many in RACFs as easy to set up and use. Processes were established early on in RACFs that considered consent and privacy. Communication was a high priority for MED, and they ensured the RACFs and GPs received detailed information about consultations.

The final key theme described the **experiences of participants with the MED program.** Although some GPs either declined or set conditions on their engagement in the MED service, most interviewees described the care provided by MED as beneficial. Coverage and ability to provide care "in the home" were highly valued. However, interviewees also noted that MED was sometimes used inappropriately for repeat prescriptions of medications and that sometimes GPs needed to recheck prescriptions for medication provided by MED. Care was readily accessible with MED providing rapid support and follow up which reassured nurses and families appreciated. The MED service was seen as reducing the burden for GPs and the stress for residents and their families. Interviewees often spoke about MED reducing ambulance transfers to ED and afterhours hospitalisation, and they felt that in this respect the service was likely to be cost effective. Many interviewees offered suggestions for improving both the MED service and afterhours care in RACFs more generally. These included recommendations for increased funding to improve RACF staffing and afterhours access to GPs; increased use of the Electronic Health Records and advance care plans; ensuring MED clinicians had local knowledge; and extending the MED service to palliative care.

Discussion

This evaluation provides evidence that the MED afterhours telehealth service enabled RACF residents to receive timely and appropriate afterhours care, decreased unnecessary use of ambulance services and need for ED presentations, and reduced GP workload.

Access to afterhours care improved, whilst preserving continuity of care and flexibility to enable residents and families to be engaged in decision making. Changes in clinical management could be implemented rapidly as

RACF residents received timely and appropriate afterhours care when their GP could not attend or be contacted. Interviewees also described how such immediate, homebased care reduced the distress that residents and their families often experience with ambulance attendance and in-hospital care.

With greater provision of in-situ care by MED, RACF staff reported a reduction in afterhours ambulance calls from RACFs and subsequent transfers of residents to the ED. Data from the NSW Ambulance Service also showed a slight reduction amongst the six participating RACFs, in afterhours ambulance transfers in the pilot period compared with trends from 2017 – 2019. In spite of these findings, ambulance data showed the number of afterhours calls from RACFs increased substantially during the trial period in both participating and all RACF groups. This may have been due to the COVID-19 pandemic, with RACF staff unsure how to manage patients in this new and challenging context.

Telehealth approaches were also considered effective in reducing medical practitioner workload and burden especially afterhours. General practitioners spoke about having more personal time since the implementation of MED.

This evaluation identified facilitators and barriers experienced with the afterhours MED service which largely align with those identified in the literature. Strong leadership and support from the NBMPHN **facilitated** RACF participation in the MED service. The MED app was considered simple to use and RACF staff were quickly oriented to the service with the "video" aspect considered especially useful. Setting up effective data collection and reporting processes in the RACFs and MED made implementation easier.

Interviewees also reported particular **barriers** they encountered. The issue of funding for telehealth services was contentious among GPs interviewed with some stating that this funding should have been provided to GPs to adequately reimburse them for such afterhours care. Promotion of the service was a challenge with some stakeholders not adequately engaged. Concerns were raised that MED clinicians were not familiar with local services and that GPs often needed to double check medications they prescribed.

Recommendations

A range of recommendations to improve care in RACFs, identified in the literature and proposed by our interviewees are relevant to the future of the MED program in the NBM region. These include:

- Increase funding to enhance community based nurse practitioner models of care and afterhours care provided by GPs. This will support face to face care and continuity of the care provided by a personal GP;
- Increase funding to RACFs to enhance resident/nurse ratios, particularly afterhours;
- Promote MED as a complementary service and opportunity to work together, and also continue promoting MED in RACFs - especially those with high staff turnover;
- Consider extending the MED service to other populations including elderly people living in their homes and people with disabilities or requiring palliative care;
- Encourage greater use of the Electronic Health Record including advance care plans. This will allow other clinicians ready access to patient information, including medications; and
- Support RACFs to stock an adequate supply of medications. Medication was a major reason for calls to MED and prescriptions sometimes took days to supply. Consider stocking medications suited to palliative care.

Introduction

The need for Telehealth in the Nepean Blue Mountains

The Nepean Blue Mountains (NBM) region, comprising four local government areas including Blue Mountains, Hawkesbury, Lithgow and Penrith, is home to a diverse population with unique characteristics and health needs. The NBM region consists of both urban and semi-rural areas, covering almost 9,179 square kilometres (1). Transport, including availability, long distances (especially for outlying areas), and costs are dominant issues for the region (2). The NBM region is ageing at a faster rate compared to the rest of NSW. This region will experience an overall growth rate in older persons as a proportion of the population of 5.13% between 2011 and 2026, compared to the New South Wales growth of 3.30% (2). The average cost of health treatment in the region for people aged 75 years and over is 2.4% higher than the NSW average. Most patients[1] in NBM aged 65 years and over attending a general practitioner (GP) consultation have one or more diagnosed chronic conditions (2). Health workforce shortages affect access to specialist care particularly for the Blue Mountains and Lithgow Local Government Areas (LGAs) and there are also difficulties accessing a general practitioner due to limited supply, with long waiting times experienced by residents from all LGAs. Afterhours primary care is especially problematic (3).

The Nepean Blue Mountains Primary Health Network (NBMPHN) has documented the need for afterhours medical care in Residential Aged Care Facilities (RACFs) with patients often transferred to hospital emergency departments (ED) afterhours (4). Although there are some other services available such as the Virtual Aged Care Service (VACS) from the Local Health District utilising nurse practitioners[2] and some general practitioner deputising services, these are very limited in their capacity to attend RACFs, particularly afterhours. This places additional pressure on the general practitioners providing care to residents in RACFs.

In 2020-2021 the NBMPHN piloted a 12-month telehealth initiative with six RACFs in three of its four LGAs aimed at addressing the need for greater access to timely afterhours medical care in RACFs. This involved commissioning a suitable service provider to deliver medical assessment and treatment using telehealth technology. The service was promoted to healthcare providers, the RACFs, residents and their families. This initiative aimed to reduce inappropriate use of ambulance services and need for transfer to ED, and hospital admissions, while reducing the afterhours workload on general practitioners.

The My Emergency Doctor Telehealth Service

Following a competitive tender process, NBMPHN engaged the My Emergency Doctor (MED) telehealth service to provide afterhours consultations when required in six RACFs for 12 months from 14 February 2020 (5). Afterhours were defined as after 6.00pm and before 8.00am weekdays, before 8.00am and after 12.00 noon Saturdays, and all day/night Sunday and public holidays. The RACFs were engaged through an expressions of interest process. General Practitioners providing care in these RACFs were invited, via letter from NBMPHN, to refer each of their residents to the pilot telehealth

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[1] The terms patient and resident are used interchangeably in this report. We refer to "resident" in the context of Aged Care Facilities and the Primary Health Network, and as "patient" in the clinical context of GP and the telehealth provider service (MED). Quotes are provided verbatim.

[2] https://www.nbmlhd.health.nsw.gov.au/nbmlhd-outpatient-clinic-service-directory/nepean-hospital-outpatient-clinics/geriatric-outpatient-clinics/virtual-aged-care-service-vacs

service. GPs could elect to opt in or opt out as follows: not use the service; use the service when required and if they were not available themselves to provide care; or use the service when required at any time during the afterhours period. For the opt in options, GPs completed a referral for each resident. Information about the telehealth service including a consent form was distributed to residents and their families by the RACFs.

The MED clinicians are accredited Emergency Medicine Specialists with fellowship of the Australasian College of Emergency Medicine (FACEM). Staff at the RACF contacted MED on behalf of a resident needing acute care and liaised with the MED clinician. Consultations were conducted via a video app on an iPad. The funding arrangement allowed for MED to bill Medicare for the first 20 calls from each RACF with the NBMPHN paying a higher rate to MED for each subsequent call.

The on-boarding[3] process developed to engage RACFs as part of the contract with MED ensured the facility could access the service and included technical training on the use of the MED app. Onboarding also included the engagement of the GPs providing care to residents within each facility and completion of the referral documentation as part of the opt in process.

The impact of COVID-19

With the rise in COVID-19 infections in Australia in March 2020, the Australian and NSW governments introduced measures to reduce physical contact for medical consultations. The Australian government introduced new item numbers to the Medicare Benefits Schedule (MBS) for GPs using telehealth including for aged care.[4] At the same time, the NSW government introduced a secondary triage service within NSW Ambulance, where RACF staff across NSW calling triple zero would have the priority of the call assessed and directed to an immediate ambulance response or to a telephone consultation to either manage at the RACF or if required, to escalate for ambulance transport.[5] The service provider engaged to deliver the secondary triage telephone consultation was MED. Both of these initiatives aimed to provide appropriate aged care while avoiding unnecessary ambulance calls and hospital presentations. These initiatives ran in parallel with the MED telehealth pilot implemented by the NBMPHN in participating RACFs.

Research aims and objectives

The NBMPHN commissioned the Western Sydney University (WSU) to evaluate their RACF afterhours telehealth program. This research was contextualised and informed by a brief literature review. The research aims were to utilise a range of data sources to understand how the program was functioning, its acceptability to key stakeholders, identify facilitators and barriers experienced during its implementation, and provide recommendations for sustainability and expansion.

The research team

The research was undertaken by researchers from the Department of General Practice in the School of Medicine at WSU. Dr Steven Trankle led the project, working closely with Professor Jennifer Reath who provided advice as a consultant. The WSU researchers consulted regularly with the telehealth

[3] On-boarding referred to engaging GPs and RACFs in the MED pilot and familiarizing them with the service and its processes.

[4] http://www.mbsonline.gov.au/internet/mbsonline/publishing.nsf/Content/Factsheet-TempBB

[5] https://www.health.nsw.gov.au/Infectious/covid-19/communities-of-practice/Pages/guide-safe-admissions-racf.aspx#secondary

program team from NBMPHN, who assisted with recruitment of participants, collection of quantitative data and provided guidance on the interpretation of the findings.

Reading this report

This document reports the evaluation of the afterhours telehealth pilot in NBM. The methods section provides a detailed description of the research design and the mixed methods approach to evaluation, ethics approval, data collection sources and participant recruitment.

The findings section reports the results of the data analyses including the literature review, quantitative analysis and thematic analysis of the qualitative data.

The discussion draws together findings of the research by reflecting on areas of achievement and difficulty in light of the literature, and concludes by describing facilitators and barriers to the NBMPHN afterhours telehealth program and making recommendations for the future.

Methods

Overview

This mixed methods study design included an analysis of quantitative data related to the use of the afterhours telehealth service and its outcomes, and also qualitative data collected through in-depth semi-structured interviews focused on participant experiences with the afterhours telehealth services.

Ethics approval

Ethics approval for the evaluation was received from the WSU Human Research and Ethics Committee on 4 May 2020 (H13792).

Meetings

The WSU researchers and the NBMPHN telehealth program leads conducted five meetings over the course of the evaluation to discuss program implementation and progress on the evaluation. These were between January 2020 and March 2021.

Data collection and analysis

A brief review of the literature was conducted to contextualise the evaluation. The NBMPHN collected quantitative data from the MED service provider and the RACFs on consultation numbers and outcomes, as well as data from the NSW ambulance service on calls from RACFs[6] and ED presentations. This data was provided to the WSU for analysis along with a process diary which NBMPHN maintained throughout the program's implementation. The evaluation also included qualitative interviews conducted by the WSU with different stakeholders engaged in the program.

Review of the literature

A review of academic and grey literature was conducted between 6 January 2020 and 27 February 2020 to inform the evaluation process.

Search strategy

The key objective of this literature search was to identify and describe literature concerning use of telehealth, particularly in primary healthcare and in aged care facilities. This included identifying risks

[6] Calls from RACFs to NSW Ambulance may result in ambulance attendance

and the facilitators and barriers to telehealth. To gain a broader understanding, we reviewed literature in both international and Australian contexts and in a range of different settings such as nursing homes, supported and assisted living and for a range of illnesses and health needs. A brief search of academic literature was conducted in PubMed - a large medical data base that also cross references articles in Medline. We used the search parameters: Telehealth OR telemedicine OR video conferencing AND aged care (5014 items) with a filter of 01/01/2000- 31/01/2020 (4880 items). After screening, the search was then narrowed by adding AND primary care to reduce capture of non-GP specialist research (leaving 1745 items). The "best match" function was used in PubMed searches. Identification of relevant grey literature was achieved through a google search of "aged care telehealth Australia".

Quantitative data

The NBMPHN collected data for the afterhours periods between 14 February 2020 and 14 February 2021. The MED service and the RACFs provided information on dates and numbers of calls, reasons for presentation, diagnoses, management, and recommended and actual usage of ambulance services for transport to an Emergency Department (ED). The NBMPHN also provided data concerning individual RACF and GP engagement with the telehealth pilot with numbers of patients and GPs.

The NSW Ambulance Service provided data to NBMPHN describing the total number of ambulance calls and ED transfers from the region's RACFs per year from 2017 and separately for afterhours calls and ED transfers. This data was also collected separately for the six RACFs engaged in MED telehealth service.

Analysis

The NBMPHN provided the quantitative data to the WSU researchers in a de-identified form for analysis. We conducted a descriptive and comparative analysis of the data.

Process Diary

The program staff at NBMPHN maintained a process diary from November 2019 to record their experiences implementing the pilot program. The diary recorded processes and correspondence around commissioning of services with the MED telehealth provider, and engagement with RACFs and general practices. The diary also included information about promotion of the pilot, discussions with GPs, training, and clarification of the purpose of secondary triage and its relationship to MED.

Analysis

No separate formal analysis was conducted on the process diary. However, the diary was used to complement the qualitative and quantitative analysis in the discussion section of this report.

Qualitative data

Research participants

A range of interview participants were planned to be recruited for the study. These included 8-10 staff from the six participating RACFs (nurses and managers), 8-10 general practitioners including both those who opted into the program and those who opted out, 5-6 MED staff (managers and clinicians), and 8-10 participating and non-participating RACF residents and their guardians. The NBMPHN identified and recruited a purposive sample of RACF managers and general practitioners using an ethics approved letter of invitation and information/consent form. Those agreeing to participate contacted the lead researcher to schedule an interview. The NBMPHN passed the invitation, and

information/consent forms to the MED manager to recruit clinicians, and to RACF managers to recruit their staff, residents and guardians. Those willing to participate then contacted the WSU lead researcher.

Interviews

A semi-structured interview schedule was designed to collect in-depth information from a broad range of participants (appendix A. The interview schedule was informed by the literature review as well as the program documents provided by NBMPHN, and reviewed and revised in consultation with key NBMPHN program staff. Interview questions explored participant experiences with the afterhours telehealth program including the facilitators and barriers they encountered. Interviews were audio-recorded and transcribed, and offered either face to face or by telephone as preferred by participants. Transcripts were integrity checked against the recordings and de-identified. All participants were given the opportunity to review their transcripts. After piloting the schedule with each participant group, some further minor revisions were made to the schedule to ensure it accurately collected the required data and to explore new emerging areas of interest.

Analysis

An inductive thematic analysis was conducted to interpret the experiences and perspectives of participants with the afterhours telehealth pilot. This approach allows patterns and meanings to be captured from qualitative datasets (6). A reflexive and collaborative approach to coding developed a richer more nuanced reading of the data (7). Research team members (ST, JR) each coded four of the first six interviews to identify patterns in the transcripts. An initial coding frame was then agreed before coding the remaining interviews and consulting together to check and refine the emerging analysis and consider any differences in interpretation. At a final workshop, the researchers (ST, JR) reviewed all interviews and agreed that saturation of codes had been achieved. The final thematic structure was also agreed to clearly and comprehensively describe our analysis (appendix B). The thematic analysis was then provided to NBMPHN program team for consideration before finalising. We used N-Vivo 11 ® software to help organise the interview data.

Findings

Brief literature review

Introduction

The International Organisation for Standardisation defines Telehealth as the "use of telecommunication techniques for the purpose of providing telemedicine, medical education, and health education over a distance" (8). Telemedicine, is defined as the "use of advanced telecommunication technologies to exchange health information and provide healthcare services across geographic, time, social and cultural barriers". Video-conferencing is one of the main ways in which telehealth is improving access to healthcare services for patients who live in regional, rural and remote areas (8).

With an increasing demand for healthcare in many countries, especially due to population growth and ageing, health services are under pressure to provide access to care that is timely, cost effective and appropriate to individual needs (9). Use of electronic health records and communication technologies provide a means of caring for patients in remote locations (10-13) and are proving more viable as their speed and sophistication improve (14, 15). Telehealth, telemedicine, and video conferencing enable medical practitioners to diagnose and provide guidance for patient self-care and also for nursing staff

who provide face to face patient care (16), triage of patients for escalation of care (12, 17), and real-time electronic monitoring of patient symptoms (18, 19). These approaches have an important role in reducing medical practitioner workload especially afterhours, and reducing the need for ambulance use, emergency department presentation and hospital admission (20-22). Telehealth can also complement conventional face to face management (23).

Uses

Telehealth technologies have been applied to many different health conditions and contexts. For example, studies have been conducted on telehealth services for stroke rehabilitation (14, 24) and chronic heart failure (25), rheumatoid arthritis (13), dermatology (26), a speech pathology telehealth service for head and neck cancer patients (27), oncology (28, 29) and telehealth services have provided carer education and support, particularly psychosocial support, in rural locations (30).

In rural and remote settings there is an obvious need for telehealth technologies. The Queensland Royal Flying Doctor Service conducts approximately 20,000 telehealth consultations each year (10). Telehealth use will increase in rural/remote Australia and is suggested as likely to supersede face-to-face consultations by 2025 (31). Recognising this need, the Australian government has established a National Strategic Framework for Rural and Remote Health that is a coordinated approach to care provision and has flexibility to adapt to local circumstances (32). This framework does not however address health service requirements in the urban context. Many professional societies and colleges including the Australian College of Rural and Remote Medicine, the Royal Australasian College of Physicians, the Royal Australian College of General Practitioners and the Royal College of Nursing Australia have developed specific guidelines and standards to support the use of telehealth (33-36).

Telehealth in Primary Healthcare

Telehealth is providing new opportunities in primary healthcare. In the US, 25% of *all* patients do not have a primary care provider or regular access to one (37). MinuteClinic is the largest pharmacy owned provider of primary healthcare services in the US (CVS Health) with over 1100 locations and was considered an effective telehealth platform for scaling primary care access across the population. Telehealth was the preferred option for many attending a MinuteClinic due to convenience and improved accessibility and most expressed satisfaction with the on-site nurse's capability, diagnostic imaging, quality of care, and overall understanding.

Results of a Danish study indicated GP telephone triage seems to be an efficient way of managing patient out of hours primary care, as 59% of contacts ended successfully by telephone (17). In similar initiatives, nurse led approaches resolved 26% of calls (38) and 52% of calls when managed by doctors (39). Another study showed most patients (72%) could be managed by telephone advice alone (40). However detailed cost analyses have not been performed in these studies.

Though many studies report patient and health provider satisfaction, some telehealth applications for chronic illness have not demonstrated positive outcomes. A study of patients in the Netherlands with COPD using a telemedicine model of health provider initiated phone calls reported a negative effect on their health status and resource use in primary and secondary care, in comparison with usual care (41). Another study reported that telehealth for COPD resulted in increased ordering of tests and antibiotic prescribing compared with face-to-face services (42).

In Australia there has been a rapid uptake of telehealth services by general practitioners due to the COVID-19 pandemic (43, 44). Establishment of new telehealth MBS item numbers enabled general

practitioners and other primary healthcare providers to bill for these services, however, most general practices have experienced increased workload and reduced income (45). Although telehealth enabled patients to access care, it did not perform as well to support complex clinical assessment and preventive health services have been reported to have been impacted by the shift to predominantly telehealth general practice approaches (46, 47). There is a strong view that once the pandemic is over, telehealth should be continued but as a complement to face-to-face consultations (47).

Telehealth in the aged care sector

Telehealth has been helpful in improving quality of life for the elderly (48). Tele-counselling can improve emotional status, resulting in a decrease in depressive symptoms and an increase in autonomy and improvements in perceived quality of life for residents of nursing homes (49, 50). Improved global cognitive functioning, physical activity, and eating habits through tele-counselling have also resulted in physiological benefits of weight loss and reduced cholesterol (48).

Whilst some studies report that telehealth is especially useful in geriatric care, research in this sector to ascertain the feasibility of telehealth has been limited (51). Telehealth in geriatrics is used to measure cognitive changes in patients with Alzheimer's Disease and other dementias (16, 52), as well as psychological symptoms for their caregivers, and has provided more timely diagnosis and care in the home (16, 48). A telegeriatric service provided in regional and remote areas of western Australia was more effective at reducing avoidable hospitalisations and subsequent health deterioration compared to a visiting geriatric service (53). The visiting geriatric service reported higher patient urgency and increased hospital visits and had longer wait times by comparison. However, age-related issues in cognition, perception, and behaviour of geriatric patients need to be considered when designing telemedicine applications (51). Some older people may have less technological familiarity and interest, although not all are averse to telehealth technologies and some competently use them when needed (54).

Palliative care in the community has improved through use of telehealth monitoring in patients' homes (15, 19). Evaluation has included patient symptom burden, hospice transitions, and advanced care directive use. Benefits for patients included improved efficiency of medication repeats, easier symptom checks, and increased comfort and peace of mind, resulting in more efficient and effective care (15). Carer burden was also reduced. Patients reported confidence in their carer's ability to use these technologies and, compared to face-to-face consultations, had no greater concerns around privacy or their relationship with their doctor (55). Clinicians reported that they were able to considerably increase their case load through their efficient telehealth contact with patients (15).

Research into use of telehealth in nursing homes is relatively recent with few studies published before 2016 (56). Some studies have reported nursing home physicians' confidence in telehealth as a means of improving timeliness of care and filling existing service gaps, whilst not reducing care effectiveness or jeopardising resident privacy (57, 58). Nursing home healthcare providers also have supported telemedicine as a modality of care that could provide specialty consults to nursing home residents (59). Providers showed the highest level of interest in telemedicine for dermatology, geriatric psychiatry, and infectious diseases.

In the US, a high-intensity telemedicine program for senior assisted-living community patients significantly decreased the rate of ED use for ambulatory care sensitive conditions over one year, compared with no change in ED use among a control group (60). Services included video and audio

communication, use of images (e.g. skin), video clips (e.g. movement), sound (e.g. lung sounds), and electrocardiograms. These services were provided through a telemedicine assistant with health training (60). The same program provided to those living with dementia and acute illnesses achieved a similar reduction in ED use (61). The researchers commented that similar studies need to be undertaken with other cohorts to understand how to optimise telemedicine.

Telehealth in Australian residential aged care facilities

Telehealth services for afterhours care are receiving greater attention in Australia with various Primary Health Networks implementing aged care programs to address local needs (20, 21). Between 2013 and 2017 eight primary healthcare organisations and one aged care provider, implemented the "The Better Health Care Connections: Aged Care Multidisciplinary Care Coordination and Advisory Service Program" funded by the Australian Government, Department of Health and Ageing (62). The program had two elements:

1. Trial an Aged Care Multidisciplinary Care Coordination and Advisory Service with the support of dedicated Aged Care Coordinator who acted as service navigators to improve health outcomes for aged care recipients in both residential and community settings.
2. Pilot General Practitioner (GP) video consultations for residents in RACFs.

The program aimed to promote expansion of in-reach health services to RACFs, develop locally based visiting multidisciplinary teams and incentivise and create stronger linkages across health sectors and specialities. Over the four years, there were 5,029 GP video consultations conducted across all of the sites (62). These were considered by GPs and RACF staff to be appropriate for a wide range of health conditions, although there was variation between individual GPs in terms of which patients they deemed to be suitable. Timeliness and continuity of care and flexibility to engage families in decision making improved, as did the ability of RACFs to implement clinical management changes rapidly. Access to clinical information improved for GPs and their travel time reduced. The sites where uptake was higher tended to be locations where GPs who opted in to use the MED service had a concentration of patients residing in the participating RACFs and hence video consultation became more embedded in the model of care at the facility. The pilot demonstrated that GP video consultations have the potential to work as a *component* of primary healthcare for people living in RACFs.

The evaluation noted that multidisciplinary care was enhanced in RACFs to a limited extent including improved linkages between Local Health Districts, GPs and allied health practitioners. The Aged Care Coordinators helped address some service gaps not addressed by GP video consultations. However, the RACFs did not perceive a significant role for Aged Care Coordinators within their current structure of service provision and funding.

A separate evaluation of the GP video component of the program in the South Eastern Melbourne Primary Health Network demonstrated that video consultations, when supported, were a cost-effective, timely and clinically useful tool for consulting with patients living in an RACF and provided access to multidisciplinary care. As a component of primary care in RACFs, the video consultations supplemented regular visits by providing unscheduled medical support that completely met the needs of 83% of patients (63).

The individual pilot programs implemented under this advisory service program improved access to healthcare and prevented inappropriate hospitalisations for older Australians (62). These programs

began to address the need for afterhours care in aged facilities. Evaluations identified that most RACFs operate on low registered nurse: client ratios on weekends and afterhours, and that the GP video consultation model would not be appropriate under these conditions as nurses had less time to instigate changes in management and relied on the ambulance service instead (62) p.77.

The use of telehealth technologies to provide healthcare services to older people may be more readily normalized in areas where existing services are limited (64). In Australia, implementation of telehealth services in the home is at a relatively early stage. To assist health leaders to expand pilot services, recommendations include demonstration of policy alignment, provision of solutions for difficult health services problems such coordinating hospital and primary care, and achieving clinician acceptance through providing evidence of benefit (65). Two key enablers of telehealth were reported to be marketing of telehealth to patients, clinicians and policy-makers, and building a community of practice by working collaboratively to an aligned vision and common goals (65).

Benefits and Risks

Many studies showed use of telehealth technologies can be as effective as face to face service provision, achieve similar outcomes and is particularly helpful when complementing existing services (23, 51). Telehealth services have been evidenced to promote quicker access to primary care thereby avoiding patient deterioration and the necessity for hospitalisation (37, 53) and can improve self-management (25).

Telehealth is less expensive to provide at scale than face to face service delivery (66-68) yet very few studies included detailed long term costs analyses or impact on co-morbidities. More recent research described the potential of telemedicine for care of the elderly, including in nursing homes, and for improving mortality, morbidity, providing social benefits and reducing hospitalizations (66). Nurse led telehealth models implemented internationally have been found effective in management of elderly patients including those with dementia and may be cost effective in Australia with GP oversight (61). Nurses have similarly led change in stroke management via telehealth in rural contexts (24). Carers have benefited from education and psychosocial support which has also resulted in cost savings in the rural community. Local services were augmented through the use of an on-line facilitator who brought skills not available locally (30).

Although telemedicine may offer benefits in terms of costs and increased access to care (68), it has risks. Some important aspects of the doctor-patient relationship can be affected, such as privacy (69), maintenance of the patient-provider relationship can be a challenge without face to face contact, and important non-verbal cues may be missed (70). Patients and carers who are less familiar with technology may not communicate information accurately. Some health providers and elderly patients hold negative attitudes toward telehealth, doubting its feasibility (14-16, 25, 64), and addressing this will require education about the benefits and ongoing support to encourage widespread use (65).

Facilitators and barriers

The success of telehealth has been defined as “its sustainable integration into routine clinical care” (71) p.532. Successful development and integration of telehealth can be achieved through champions who drive the vision and inspire providers and encourage service users (12, 62, 63, 72). Facilitators for sustaining telehealth services in Australia and internationally are quite similar (11, 73, 74) and include setting clear and realistic goals for the service, commitment of clinicians and management, demonstrated benefits including offering cost and time savings, and affordable equipment with

processes to manage technical issues (12). Other key factors characterising successful services were flexibility to adapt the service according to population needs, and streamlining processes involving coordinating clinician time, sharing test results and other information, and rectifying technical issues (12).

Despites its reported benefits, telehealth has not yet been widely embraced or well integrated into mainstream practice in Australia (75-77). Many pilot programs have not translated into sustained services (72). Some barriers noted in implementing telehealth include clinicians preferring to consult in person, legal and ethical concerns, changing management practices, service coordination difficulties, resources (including time and staffing) and incompatible funding models (71, 72, 78, 79). Other studies have noted clinicians concerns about lack of information and training about telehealth consulting (64). Similar challenges have been experienced internationally, where the uptake of telehealth has been slow and fragmented, despite the rapid advances in health and communication technologies and the potential benefits of remote service delivery (80-82).

Key learnings and recommendations from the literature

There is a lack of research into the potential for widespread use of telehealth within Australian healthcare, particularly in the provision of services relevant to older people, including palliative care, rehabilitation and chronic illness management (23). There are few studies in the academic literature reporting use of telehealth technologies in aged care facilities, and none focussed on afterhours care in these contexts. The following recommendations noted from the literature are of relevance to the Nepean Blue Mountains afterhours RACF telehealth initiative and its evaluation:

- Build a community of practice with common vision and aligned goals between policy makers, telehealth service providers and RACFs;
- Implement telehealth as a component of routine clinical care;
- Appropriate funding of telehealth;
- Adapt programs to the specific needs and capacities of targeted patients;
- Identify and encourage local champions to promote the benefits of telehealth and maintain motivation and commitment that sustains the service;
- Ensure adequate afterhours staffing at RACFs for the telehealth service;
- Support nursing skill development and GP oversight;
- Share information efficiently, including test results;
- Resolve technical issues promptly;
- Consider including cost benefit evaluation approaches; and
- Ensure evaluation identifies program use and outcomes including escalation of care but also seeks the views of health providers, patients and their carers.

Quantitative data analysis

The NBMPHN collected data from MED and the RACFs on dates and numbers of calls, the reasons for the call (presentation) and their diagnoses, the treatment outcomes and usage of ambulance services and Emergency Department (ED) presentations. This data was also aligned to the RACFs and the GPs engaged in the telehealth pilot and de-identified.

The NBMPHN also collected data from the NSW Ambulance Service for the total number of calls and ED transfers from the region's RACFs per annum from 2017, including for the pilot period, and separately for *afterhours* calls and ED transfers. Total ambulance calls and ED transfer data for all

RACFs in the region were also collected separately to the total data for the six RACFs engaged in MED telehealth service.

MED telehealth service engagement

The six RACFs joined the telehealth service pilot between February 2020 and May 2020. The first call to the MED telehealth service was on 14 February 2020 at 9.30 pm, four days after the RACF had completed its on-boarding process. The time from on-boarding to first MED call by RACFs varied from four to 133 days.

Most general practitioners providing patient care in the six RACFs (59/71) provided referrals for their patients to participate in the MED Telehealth service if a service was needed in the afterhours period. Over the 12 months of the MED Telehealth service, 522 residents had referrals from their GP to access MED if required.

A total of 209 calls were placed by RACFs to MED in the 12-month period. There were almost an equal number of female/male patients (106 female) accessing MED services. The average age of the patients requiring MED was 83.6 years and the age range was 62-101 years. Eighteen GPs referred 204 of the 209 MED consultations. Five MED consultations did not have a GP recorded. Most of the 204 MED calls (n=175) were provided to the patients of three of the 18 GPs. Table 1 provides engagement data[7].

Table 1. MED telehealth service engagement

RACF	Total residents in RACF (n)*	Total GPs in RACF (n)*	Referred residents (n)*	Referring GPs (n)*	RACF on boarding	Time to first MED call (days)	Total calls
1	58	11	48	9	April 2020	61	2
2	144	21	131	18	April 2020	7	7
3	125	4	125	4	February 2020	4	169
4	68	6	47	3	February 2020	6	22
5	135	22	109	18	May 2020	133	7
6	68	7	62	7	March 2020	39	2
Totals	**598**	**71**	**522**	**59**		**$\bar{x}$ = 41.7**	**209**

Figure 1 provides the accumulated monthly calls to MED over the 12 months. The timeline includes the commencement of MBS item numbers for GP telehealth and secondary triage during COVID-19. Both of these programs are likely to have impacted on the data.

[7] * denotes maximums for GPs and residents as these numbers varied over time (for most RACFs up to 10%). For example, some GPs joined the telehealth program later than others.

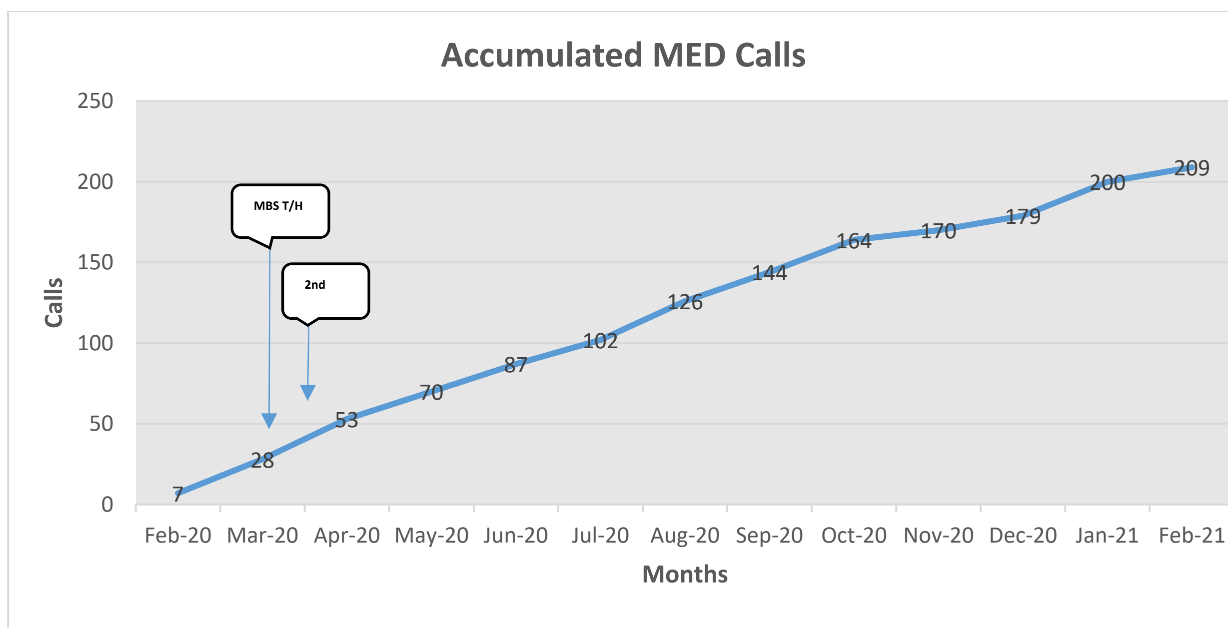

Figure 1. Accumulated monthly MED calls

Reasons for presentation to MED

In the 209 calls to MED over the 12 months, the reasons for presentation (calls by RACFs) for each patient were recorded by MED according to SNOMED categories. Table 2 provides the 10 most common reasons (162/209) for presentation according to higher order SNOMED categories (83).

Table 2. Reasons for presentation

Higher order SNOMED category	Subcategory according to SNOMED
Falls (95/209)	Elderly (85); mechanical fall (4); unwitnessed fall (2); minor fall (1); recurrent fall (1); falling injury (1); pushed over (1)
Pain (15/209)	Chest (5); abdominal (5); shoulder, neck, hip, headache, lower back (5)
Pharmacological assessment (11/209)	Medication review (10) and scripts (1) requested
Bleeding (8/209)	Haemoptysis (2); haematuria (4) blood in stool (1); rectal bleed (1)
Vomiting (8/209)	Vomiting (7); nausea (1)
Urinary (7/209)	Complication of catheter, blocked catheter, urethral discharge, urinary retention, reduced urine volume, dysuria, UTI,
Endocrine (6/209)	Hypoglycaemia (3); hyperglycaemia (1); diabetes mellitus (2)
Cardiovascular (5/209)	hypertension (3); hypotension (2)
Swelling (5/209)	Leg (2), toe, facial, neck
Fever (4/209)	(nonspecific)
Other (45/209)	

Diagnoses by MED

The 10 most common diagnoses provided by MED are provided in Table 3. These generally aligned with the reason for presentation, however, many diagnoses were more specific than the presenting reason noted. For example, a presentation for feeling agitated was diagnosed as schizophrenia, and some fevers were diagnosed as urinary tract infections or sepsis.

Table 3. MED diagnoses

Higher order SNOMED category	Subcategory according to SNOMED
Falls (61/209)	Elderly (38); fall (14); mechanical fall (5); recurrent fall (4)
Injury (33/209)	Head (6); head minor (10); shoulder (1); soft tissue (2); contusion (2); tear skin (1); no apparent injury (11)
Pharmacological assessment (33/209)	Chart meds (28); script (3); chart and script (2)
Pain (14/209)	Chest (4); abdominal (1); shoulder (2) hip (2), migraine (1), lower back (1) post fall (1); knee (1); neck (1)
Urinary (9/209)	Complication of catheter (1); blocked catheter (2); injury urethra (1); UTI (5)
Vomiting (6/209)	Vomiting (3); nausea (1); coffee ground vomit (2)
Infectious disease (5/209)	Sepsis (4); clinical sepsis (1)
Endocrine (4/209)	Hyperglycaemia (1); diabetes mellitus (2); poor glycaemic control (1)
Disorder respiratory System (4/209)	Hypoxia (1); cough (1); lower respiratory tract infection (1); COVID risk assessment /flu (1)
Inflammatory Disorder (4/209)	Cellulitis (3); periapical abscess (1)
Other (36/209)	

Outcomes of MED Calls

Hospital transfers

The majority of the 209 calls to MED resulted in a recommendation for management within the RACF (n=179). Thirty (30) patient transfers to ED were recommended. Nine of the 30 ED transfers were recommended for Non-Emergency Patient Transport (NEPT). According to RACF data, over the same time period there were 35 actual transfers to ED with no explanation provided for this discrepancy. Further analysis identified that 10 of the 179 patients recommended for in-situ management were actually transferred to the ED. This may have been due to GP or family request or the resident deteriorating and staff then called an ambulance. Of the 30 calls where MED recommended transfer to ED, 5 of these were managed in-situ, possibly because of family request or GP intervention.

When asked whether without MED they would have called an ambulance, RACF staff reported that in 87 of the 209 calls to MED, they would have normally called the ambulance service directly (Table 4).

Treatment provided

For 144/179 patients being managed in the RACF, no specific treatment was required. A medication chart review or script was required for 33/179 of these patients and 2 requests were made for imaging. The MED service also recommended planning a GP visit for 17 out of the 179 patients being managed within the RACF (in situ), however, there was no information as to the urgency of GP review (Table 4).

The MED service provided a consultation summary to the RACFs for all patient consultations. Table 4 provides the MED management plans in each of the RACFs.

Table 4. MED Management Plans*

RACF	In-situ	Medication	Imaging	Pathology	GP Review	Recommended ED Transfers Emergency/NEPT	Actual ED Transfers	Cases where RACF would have normally called ambulance
1	2	0	0	0	0	0/0	0	1
2	5	3	0	0	1	1/1	2	4
3	147	23	2	0	12	15/7	26	58
4	17	7	0	0	4	2/3	6	18
5	6	0	0	0	0	1/0	1	6
6	2	0	0	0	0	0/0	0	0
Totals	**179**	**33**	**2**	**0**	**17**	**19/11**	**35**	**87**

** This table represents MED provided data except for the last two columns where the data was collected from the RACFs.*

Use of ambulance service

The NSW Ambulance data was provided to NBMPHN, filtered according to the "afterhours" definition used for the pilot. The ambulance data covered the pilot period 14 February 2020 to 14 February 2021, including total numbers of calls into NSW Ambulance and ED transfers for all 28 RACFs in the Nepean Blue Mountains region and separately for the six RACFs participating in the telehealth pilot. Historical ambulance data for the full calendar years of 2017 to 2020 was also provided but not for a timeframe similar to the pilot period. Data collected during the pilot period did not differentiate the calls into NSW Ambulance and ED transfers where the call was transferred for secondary triage (a service implemented during COVID-19). We were provided with anecdotal information that only a very small number of calls to NSW Ambulance were actually referred to secondary triage, due to limitations of rostering ambulance staff with adequate expertise to identify which calls would be suitable for secondary triage. Therefore, when a triple zero call was made from an RACF, an ambulance may have been automatically despatched.

The number of afterhours calls into NSW Ambulance and ED transfers increased every year from 2017 to 2020 for the 28 Nepean Blue Mountains RACFs overall. Separate data for the six RACFs participating in the afterhours telehealth pilot showed similar increases over these years but a reduction in afterhours ED transfers in 2020. (Figure 2).

There is a large discrepancy between the ED transfers reported by the RACFs in relation to patients referred to MED (Table 4), and the numbers of transfers for the six RACFs recorded by the NSW Ambulance (Figure 2), specifically 35 vs 236. This suggests that staff in the six RACFs frequently called triple zero instead of MED and a large number of patients were transferred to ED as a result. As noted in Table 1, some RACFs commenced the pilot program later than others and so prior to this (but within the trial period) would have called an ambulance as their usual practice rather than MED.

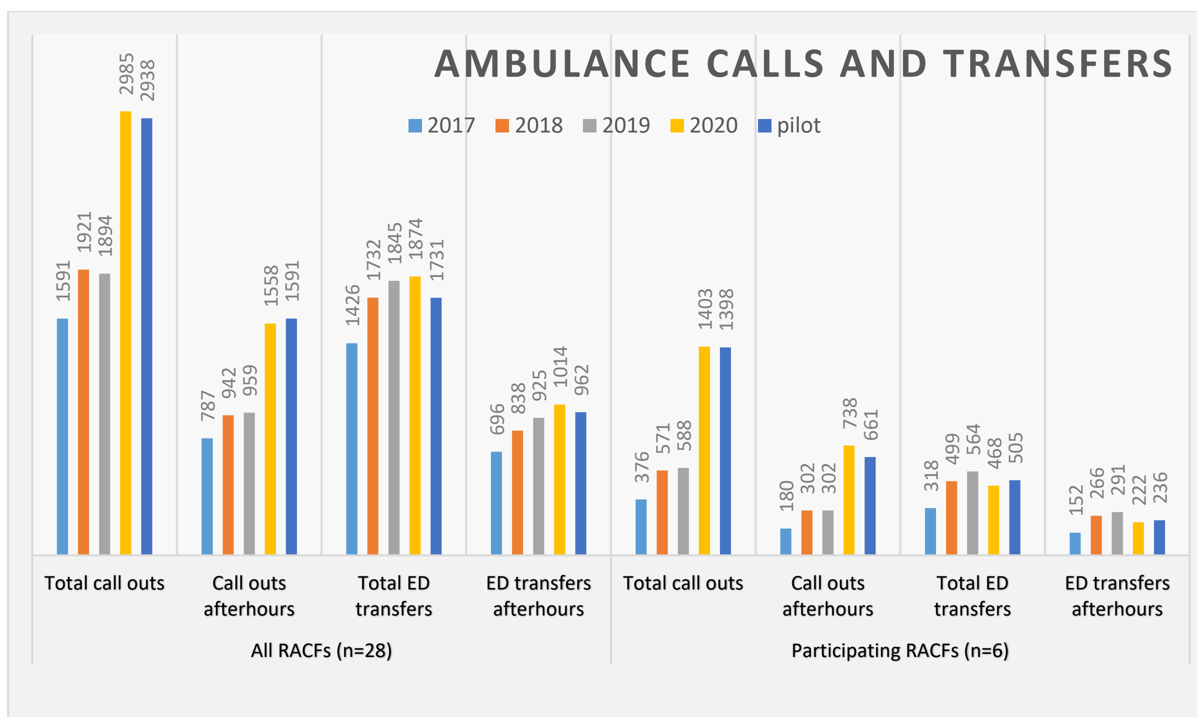

Figure 2. NSW Ambulance data 2017-2020 and during pilot period

Qualitative interviews

Eighteen one-on-one telephone interviews of 30-40 minutes each were conducted between October and December 2020. The interviews included 7 RACF staff, 7 GPs, 3 MED staff and one guardian of an RACF resident (Table 6). We did not reach the target numbers for all participant groups despite recruiting for an additional month to 15 January 2021.

Table 6. Total interviews conducted

Participant Group	"N"	Target
RACF- Manager (RACF MG)	4	8-10
RACF Manager/Registered Nurse (RACF MG-RN)	2	
RACF- Registered Nurse (RACF RN)	1	
MED manager (1) or FACEM (2) (MED)	3	5-6
Participating GP (GP-P) = those opting in to MED	5	5-7
Non- Participating GP (GP-NP) = those not opting in to MED	2	3
Resident/guardian (RG)	1	8-10
Total	**18**	

Thematic analysis of qualitative data

On thematic analysis of the interview data, four overarching themes emerged. These were: Systems issues related to care in RACFs; Issues related to the MED Model of Care; Implementing the MED Program; and Experience of the MED program. Each of these key themes encompassed a range of subthemes commonly identified in our analysis of the interview transcripts. Findings in relation to these themes and subthemes are described below with illustrative quotes. The full analysis table provided at appendix B.

Systems issues related to care in RACFs

Interviewees highlighted a range of systemic issues around providing care in RACFs. These included the challenges associated with providing care, availability of medication, difficulties of afterhours care in RACFs, and poor remuneration for GPs.

Challenges of delivering care in the RACF

Funding for RACFs was considered poor which placed pressure on staff numbers and time.

the big challenge is there is not enough money in residential aged care, nurse to patient ratio is very low …the nursing homes are 10 to one or 20 to one. Maybe two RNs on for 80 patients and the others are ENs, maybe seven or eight ENs. So 10 to one patient to nurse ratio as opposed to three to one in the public hospitals. (GP-P3)

Nurses were reported as struggling with conflicting advice from GPs, ambulance and hospital staff.

the poor RN is sitting in the middle with the GP is ordering to refer, to send to the hospital, and then if the RN rings the ambulance the ambulance will then question …when it is not that 100% indicating to go. And then the hospital will then challenge the poor RNs and then the poor RN doesn't know what to do because they sit in the dilemma (GP-NP1)

Participants noted that whilst residents of RACFs often have complex needs, sometimes GPs are also called for relatively minor issues.

These patients are sick, quite sick and really intensive. If I was seeing these patients in general practice each one would be my difficult patient for the day. Every patient at the nursing home is my difficult patient for the day. (GP-P3)

They want to report every single thing; even minor things they report to you. They ring me just for advice, even things like, "This patient has a bruise," or "This patient has a tear." They fall overnight or similar things. It generally means that, for me, it's taking a lot of my time (GP-P4)

Challenges with availability of medication

A number of interviewees described a lack of access to medications in RACFs and delays in administering them. This was especially noted in relation to palliative residents. However, some suggested potentially extending the capacity of RACFs to provide medications.

They [RACFs] don't keep all the stock of all the antibiotics …sometimes you may prescribe something which is not in their stock, then they have to wait until the chemist get them back again. By the time you post them and by the time they fax to the chemist, by the time they get it back, there could be delay of 24 to 48 hours. (GP-P5)

saving those [dying] patients a trip to the ED – some cases I've been able to palliate the patient in the nursing home, and all we did was prescribe morphine, midazolam, et cetera and they have that. Once it was a Saturday… but they didn't have any stock and that just seemed such a shame that because of just the simple fact of them not having the medication locked up somewhere. (MED1)

…many times patients have to be transferred to hospital because they've got an acute chest infection. So they give IV antibiotics for two, three days and then send them back with oral antibiotics. So there is talk about being able to use intravenous antibiotics in the nursing home. (GP-NP2)

Difficulties of afterhours RACF care

General practitioners spoke about being burdened with afterhours care and some declined to do this work. However, other GPs reported changing their work practices to focus on RACF work or to

collaborate with colleagues thereby sharing the load. Although GP deputising services were noted to provide cover, these were said to have very limited availability.

we were doing so much telephone work, enormous amounts every day, lots and lots of phone calls and being on call 24/7. (GP-P3)

I don't want to do afterhours, I don't want to be in the middle of the night, as much as possible, I don't want that (GP-P1)

We would ring 13SICK… an after-hours GP service…but we would book an after-hours GP to come out and often more than not they would never turn up because they just got so busy even though you had an appointment booked they didn't get out here (RACF MG6-RN3)

Whilst at times GPs provided advice remotely, when GPs were unavailable, prior to the MED service, residents were often automatically referred to the hospital.

I get some advice, some support from other staff members in cases of emergencies which reduces the risk of neglect for the patient, because you can't – you are stretching the system by sending everyone that you can't see to the hospital (GP-P2)

Our nurses would normally ring the doctors and if we couldn't get the doctors, and the clinical decision was that the resident was unwell and needed GP interactions, they would go into hospital, ambulance (RACF-MG2)

Poor remuneration for GPs

Many GP interviewees commented that poor remuneration discouraged them from providing afterhours RACF care. Not all GPs were aware of the rules governing MBS remuneration of RACF work and though some valued the new COVID related telehealth funding others noted its limitations.

I'm still not very happy about it. I say, "Look, after hours, ring the after-hours service," because I'm not happy to be woken up at 2:00 am for $40 (GP-P3)

That's quite fair now in the sense that you might spend time advising them [RACF staff) and I do use it. (GP-P4)

you can charge those item numbers only if I talk to the patient, but I'm not talking to the patient, I'm talking to the staff, so I can't charge for that… if the patient's guardian is in the room, I can charge the patient. If the guardian rings from home, I can't charge that. (GP-P5)

The frustration and resentment with GP remuneration also impacted on GP acceptance of the MED program with one GP questioning PHN funding for this service when it aimed to prevent ambulance calls and hospital presentations. A number of GPs recommended greater investment in primary care management.

if the end point is to reduce hospital and ambulance admissions then I think the money shouldn't be coming from the PHN. The money should be coming from the hospital if that's their end point because they've got more money and I think the PHN money would be more effectively used by hiring more nurse practitioners or providing more community services (GP-P3)

Issues related to the MED Model of Care

This key theme included subthemes addressing Principles of management in RACFs; Scope of MED; and GP Model of Care Compared to MED Model of Care.

Principles of management in RACFs

Respondents noted the importance of choosing the correct locus of care. There were times when the RACF was the best place for managing care and times when hospitalisation was more appropriate. Making a decision about when to transfer to hospital was often described as challenging. Considerations in making such a decision were described as including the resident's quality of life, the nature of the medical problem and risks for that patient of transfer of care especially after hours.

it's quality of life around the residents because they're not going into the hospital. They don't have that disruption. Often when they go in an ambulance to hospital, they're not taking sometimes dentures with them or glasses with them, just things like that, because everything is just quite rushed. So this way they stay in their home. Their quality of life while they're just recovering from whatever the incident is or the deterioration is, it's far healthier for them (RACF MG2)

000 is called when for example someone's fallen and there is a cut in the head, someone has fallen and you can see that one leg is shorter than the other (RACF MG4)

there's a spectrum as well. You could have a very minor injured older person and then the nuances obviously, we have to balance the risks of transferring someone with maybe cognitive impairment at one to two am versus could we wait a little bit until six or eight o'clock in the morning (MED2)

Many interviewees described team based care that included residents and families and the importance of working with them. Decisions were often made in multidisciplinary teams, and trust was described as underpinning good decision making. However, family members were not always consulted.

Everyone is involved in the care…it's a chain of professionals that do the care for the residents. Obviously, at the front are the RNs and then it goes to the doctors and then next-of-kins (RACF MG4)

you have to inherently trust, if nurses give us the wrong vital signs there could be trouble. I guess trust goes both ways. They are receiving instructions or reassurance from us and we have to receive, so radiology and pathology, most of clinical medicine, I guess we rely on a good history or if possible a good video look, looking at the patient (MED2)

and I've suggested things that nobody seems to want to listen to me. Because I'm only a relative, sort of thing. And maybe I haven't got the right to do that, I don't know. (RG1)

The team based care model was also said to rely on good communication between team members. Often an advance care directive was noted to be a key component in that communication.

we have a doctor's book for the GPs that they look at every time they come. So they can see what we were wanting them to do for each resident, but we've also got our handover sheet which gets discussed at each handover and as well as being documented in the progress notes and care plan (RACF MG6-RN6)

Simple things like expecting every patient to have an advanced care directive and have their advanced care directive reviewed every three months. (GP-P3)

Scope of MED

Interviewees reflected on the role of MED. Some GPs considered MED a service for them rather than for RACF residents. It was generally agreed that MED was for acute afterhours care and less appropriate for chronic conditions or when a procedural intervention was required.

it's not really a service for the patients. It's a service for the doctors. So really, it's not being provided for patients because we were providing the service previously. It's mainly a service –– I don't think anyone is selling it to the patients because it's not the patients making decisions. It's the nurses and the doctors that make decisions about whether we're going to use it. (GP-P3)

It's being used after hours and where we would normally have rung an ambulance and/or a GP at this point. (RACF MG2)

Not for the chronic problems at all. It's only meant for acute issues…purely meant to provide an opinion, advice in an emergency situation, really can't do much for the normal case-to-case management in the long term at all. It has no role in that (GP-P5)

there's no way that we can manage an aspiration here. We don't have high flow oxygen (RACF MG2)

Challenges were noted with telehealth and video-health consultations. Concerns were expressed that MED did not have access to all patient records including medication lists and that telehealth may not enable an accurate assessment of the patient's condition.

there's a big issue with communication in that emergency doctors don't have very good access to the records, the patients' records. So they can't really understand what's really going on with the patients. (GP-P3)

That's where I think there's a lot of difficulty, when the patient is on 20 different medications and you've got a relatively junior nurse trying to read them all out to us. And the past medical history, it's just very, very complex. That can be very time consuming (MED1)

I just worry because Telehealth is not 100% fool-proof, in the sense that some conditions really need to be assessed physically by a doctor to see what's wrong with this patient – whether there's a life-threatening condition or whether it's just a simple thing. I'm just worried that one day the Telehealth doctors will miss something more serious and the patient dies the next day (GP-P4)

The video capability of MED was recognised as being better than other forms of telehealth. However, it was also noted that MED communicated more with staff than patients.

they can actually speak to a doctor rather than talking over the phone. They can actually see the doctor and they can actually explain what's going on and show the doctor the resident rather than just doing something by phone. (RACF MG6-RN3)

Some of the patients, they're cognitively fine, whereas in this case a lot of them have the nurse with them, so then most of the instructions go to the nurse really, in the nursing home (MED1)

Nonetheless, the need for face to face contact was raised by many interviewees. Some GPs considered it preferable to physically examine the patient while others accepted that it was not needed in all cases and at times was impractical. Patients were also regarded as preferring face to face contact with their GPs.

I personally like to do face-to-face medicine, not so much Telehealth, because you learn so much looking at the patient. And with Telehealth you can't really get that idea from what they are in or other things they are describing. (GP-NP2)

I know that in many of the cases, by having the telephone call, I don't think that the patients need to be seen personally face-to-face. (GP-P2)

they all love their GPs and they would prefer to see their GP, but it's the difficulty of trying to get a GP out here when you need them. Obviously, they're all in general practice as well. So it can be quite difficult to do that. (RACF-MG2)

The MED service was considered complementary to usual care. It assisted GP and also nurse decision making, relieving some of the pressure they felt.

we're complementing them [GPs], so … the GP might have sent off a urine test on the Thursday, but the result didn't come until the Saturday morning, and then we can be reviewing the patient and prescribed the antibiotic (MED1)

it [MED] has a big role to assist decision-making to the RNs and the nursing staff. Even if it is emotionally taking the responsibility and the burden off the shoulders, it's already a big role. (GP-NP1)

GP Model of Care compared to MED Model of Care

General practitioners described their local knowledge and knowledge of their patients as important in working effectively in RACFs. However, the MED specialist skills and training were also recognised as relevant to RACF work.

it would probably be better delivered by GPs than emergency specialists … I just think GPs are better trained for nursing home work than emergency doctors are…It's community medicine, not hospital medicine that we're doing. (GP-P3)

the emergency doctor, you feel comfortable that you have experienced people who will take care of the concern of the nursing staff and patients. Because they are specialists dealing with this situation. They are trained by emergency… (GP-P2)

Continuity across both the MED service and usual GP care was considered critical and ways of supporting continuity of care were described.

we would definitely be complementing the face-to-face GP – it will always be necessary to have a local GP looking after a resident to have that continuity of care and ongoing management plan, so our service will never replace that and that's definitely not our aim (MED3)

We've got a system where the senior clinical group, with MED, will audit the paperwork, a discharge summary and all their notes, to make sure that it includes everything relevant and necessary- all of us understand that that is our legal – it sounds bad but it's the legal record for continuity of care for the patient, it's our legal defence. (MED1)

The costs of the MED service were an important consideration for many interviewees. They spoke about the additional costs of FACEMs and the sustainability of the service. One GP commented on duplication of service provision when GP review following telehealth was required. Another questioned the legitimacy of using an upfront 12 month referral process to enable Medicare funding for MED consults.

it would be more cost-effective because we [GPs] don't bill as much as emergency specialists do. Even if you compromised and met them halfway it would still save a lot of money I would think… it's quite an expensive service. (GP-P3)

after March next year [end of pilot], if the after-hours doctors still can be paid by the Telehealth, or are they going to be paid by the PHN or what? (GP-P4)

the after-hours Telehealth [MED] could occasionally be a duplicate service because they will ring Telehealth – I'm talking a lot of Telehealth consults is at night. And then the next day, when I come

back, obviously I have to review the patient again the next day, I look at the report and I have to review the patient (GP-P4)

Medicare specialists need to have a referral letter. So these guys are gaming the system a little bit. … So to bill, they ask us to write a referral at the start of every 12-month period and it's an open referral to see them for emergency issues and we provide a little summary. (GP-P3)

Implementing the MED Program

Interviewees highlighted a range of issues generally addressing the implementation of the MED program. These are described below under the subthemes: Expectations of MED; Promoting MED; and Process of implementing the program in RACFs.

Expectations of MED

The interviewed GPs expected their workload to be reduced through fewer calls and to also reduce the load on emergency departments. There was also an expectation that all telehealth consultations should be clinically and medico-legally rigorous.

really I expect them to call the whole after hours completely without me getting the calls in between (GP-P5)

I think with Telehealth, actually, my expectation is to reduce the over-crowdedness of the emergency centre. (GP-P4)

I think my expectations are…it's not just about the calls, it's about the framework that we provide and medico-legal structure, follow up, access to notes. (MED2)

Promoting MED

This subtheme identified strategies for promoting MED to its residents and families, although one resident only found about MED through this evaluation. The GPs relied on RACF staff to promote MED to their patients.

We initially talked about it at resident meetings and we sent out a flyer, we put flyers up about it. And we also put it in our newsletter …to remind the residents …and the families, that that service was in place. (RACF-MG6 RN3)

Well, I didn't know about the after-hours telehealth until they handed –these sheets from Western Sydney University to my son, who handed them to me. I read through them and I thought, well, that would probably be the first time I'd really know about the after-hours telehealth service (RG1)

I don't personally promote it, because most of our patients have dementia, have problems with communication. So promotion is really through the nursing staff, the Care Manager. (GP-P4)

Some GPs had little knowledge about MED and this made them reluctant to refer to the service. Other GPs reported that RACF staff appeared to be unaware and continued to call them afterhours. The MED service noted high RACF staff turnover and provided training sessions for new staff.

I apologise. I did not understand the concept fully well and I simply ticked no saying that I provide my own… If I can understand it a bit more, what does it involve? (GP-NP2)

I don't know whether the nursing home or the staff are aware of the services, because…what I find is in the middle of the night, they would fax me about what is happening to this resident... I don't know whether they are aware (GP-P1)

facilities with higher staff turnover –we do offer regular refresh training sessions for the staff, just so that any new members of staff who come through are aware of the service (MED3)

Process of implementing program in RACFs

Comments addressing this subtheme related to engagement and support, training, consent, privacy, and communications processes.

RACFs implemented a process for providing afterhours care that used MED.

most of the local protocols would still be for the nursing staff to phone the local GP in the first instance, and when they are not available, to then approach My Emergency Doctor. (MED3)

Challenges were identified in engaging GPs with some preferring to provide their own care and others resenting payment to MED for what they considered to be their role.

I provide my own afterhours care. And even during my, let's say, holiday or time off, I still provide my own care (GP-NP1)

initially he [another practice doctor] said, "Look, I'm not going to do it. I'm really pissed off. Bugger paying them. They can pay me." (GP-P3)

Staff in RACFs were considered to be time pressured and there was a belief that using the MED service took time away from caring for other patients.

you need to speak to the nurse as the patient's communicator most of the time to tell us exactly and that, I think, for some nurses… they feel like it's a bit more time consuming. They need to spend time on the phone, looking through medications, talking to us, I think, they are feeling they can't deliver care to other residents. I think they really feel a sense of pressure and rush (MED2)

However, the support from the PHN was considered very helpful with the MED program regarded by many as easy to set up and use. Some staff did need to adapt to the new technology and were assisted by other staff.

the program lead [from PHN] was just phenomenal, she actually drove out to some of the medical practices and had conversations with them and she also helped drive that initial getting all of the consents and the GP referral forms in (MED3)

We didn't really have any challenges in setting up, it was nice and simple and easy really (RACF MG6-RN3)

some previous staff, they're not really into technology. But with the assistance of our care managers or whoever's working with them, just assisting each other…we manage to sort that issue. (RACF MG5-RN1)

Training was an important issue discussed in interviews. RACF staff were given education and training by MED and then staff trained other staff. Training refreshers and service reminders were provided. This appeared to impact positively on communications with MED.

they provided us with the iPad and then they did training with me specifically and I then trained my deputies and my RNs. (RACF MG2)

And we've done that again more recently because we've had new RNs starting and just to refresh all of us to make sure that we all remembered how to do it so (RACF MG6-RN3)

they would have had some training and would have had some expectations, I think, they use an ISBAR [Introduction, Situation, Background, Assessment, Recommendation] format, and so even when they speak, obviously they are time pressured, I spend the first three minutes just listening and absorbing. I've never had a consult without vital signs (MED2)

Other prominent issues in implementing the program were consent and privacy. Consent process were established to participate in MED.

before we start anyone to be interviewed by an emergency doctor when they get admitted, we ask for consent from the families and also the GP signs off the consent as well (RACF MG3)

Processes around privacy were established to respect the dignity of residents and others. Privacy also included de-identifying data that needed to be reported

[RACF] has developed a telehealth policy, that's only just come out a couple of months ago, around use of telehealth and confidentiality and stuff like that (RACG MG6-RN3)

you just have to make sure when people are recording a resident they are in dignified manner, the roommate is not being shown, it's only focussing on what the issue in relation to that resident that they're calling for (RACF MG3)

also for de-identified data to be shared back at the end of the month via reporting to the PHN. (MED3)

Communication processes were established early. Communication was a high priority for MED. They ensured the RACF and GP received detailed information about consultations.

we got that in place, so everything is documented, the time that it was called, whatever ambulance has been called or after hour doctors have been called so that's all been logged in. (RACF MG4)

we always send a clinical record or discharge summary to the aged care facilities, and a copy of that usually goes to the GP if we've got the GP's number, and often if I've had the chance to speak to the GP looking after them, I will ask for their fax numbers. It's not always readily available (MED2)

The RACF staff forwarded communication from MED and recorded clinical information in resident files. They also communicated this information to families and residents. Similarly, the RACF staff communicated any advance care information they had for a resident to MED.

after the call we get the report from the My Emergency Doctors, and we keep it for the next time GP comes, so that GP reviews what they did, the after-hours doctor has written (RACF MG3)

they're [instructions/treatment plans] discussed verbally with the family members and the resident (RACF MG6-RN3)

we look at the advanced care plan and if it says palliative, not for hospitalisation, whatever, then we discuss that with the Emergency doctor, we talk to the family member as well, and the resident if the resident's able to talk (RACF MG6-RN3)

The GPs also provided health summaries to the RACF which informed MED in their consultations, while care plans from MED were implemented by RACFs and communicated back to GPs.

sometimes I do a comprehensive health summary…The care plan is always there for the emergency doctor to review… (GP-P4)

the registered nurse would be liaising with the Emergency doctor and then putting a plan of care in place that the care staff would follow and follow-up with. (RACF MG6-RN3)

So the nurse would just fax to me the assessment and the plan that has been made. (GP-P1)

Experience of the MED program

This final key theme centred on the experiences participants reported with the MED program and included a range of subthemes detailed below: Variable GP engagement; MED fills specific needs; MED program is reliable and provides valuable outcomes; Use of other services; and Improving Afterhours Care in RACFs and the MED Program.

Variable GP engagement

Interviewees reported that some GPs either declined or set conditions on their engagement in the MED service.

I would have liked to utilise it [MED] a bit more and see how it goes but one of our GPs who had quite a few residents refused to participate in the program and she said, "Nobody's seeing my residents except me." But the rest of the GPs were happy for another doctor to review their residents' after-hours, they actually ticked a box that said only if I can't be contacted. So we still contact them first (RACF MG6-RN3)

There were a number of GPs at each of the facilities who just point blank refused to sign any consent…I know for one of the facilities the GPs had actually changed their mind and agreed to sign consent for his residents (MED-3)

MED fills specific needs

The care provided by MED was seen as beneficial by the vast majority of interviewees, particularly its coverage of afterhours and acute care, and ability to provide care "in the home".

nursing home patients need 24-hour care. If there is a case where I am away at night-time, they still can find someone if they have any problem and if there is any need of care, they can contact someone to review the patient, I'm happy. The patient is happy; the family are happy. (GP-P4)

they're doing a good job because we use them for specific things. In the middle of the night a patient gets sick, which means the patient needs to be checked by a doctor. So it's good for that (GP-P3)

I've been really surprised at how much we are able to make a difference without the patient leaving their home and without us leaving our home. That's been, for me, a real surprise and makes it incredibly satisfying as a job. (MED1)

The MED service was experienced as suitable for all populations including for cross-cultural situations and for non-verbal patients. It was described as assisting all care providers to ensure residents had good quality of life.

it's [MED] a great app –very versatile for everyone. Anyone can use it. I hundred percent love it and support it because it's something that it can be used from toddlers right up to elderly and all culture and backgrounds (RACF MG4)

our specialist Emergency doctors are well trained in dealing with people from different cultural backgrounds and also…diverse language backgrounds…they'll always have the nursing staff available to translate if required – but we do have access to a translator service if needed (MED3)

If some people have any difficulty we will just use the non-verbal sign— we will tell the doctor, he can't speak (RACF RN2)

we're all in collaboration with the care staff and emergency doctor. We give assurance that the residents are cared for, and their quality of life is met as much as we can. (RACF MG3)

However, interviewees also noted that MED was sometimes used inappropriately for repeat prescriptions of medications and that sometimes GPs needed to recheck prescriptions for medication provided by MED.

We have been called for routine medications and that has created a bit of angst amongst us, but I see it is as if the patient or the resident does not have any other options, and for some reason, due to their aged care facilities, if it's inherent busyness or their time constraints are unable to get a GP to fill out the medication charts, and I will just say look, I will just do it. (MED2)

They [MED]… might write down "I prescribe Endone" for a few days or weeks. But the thing is, I don't know whether the change now can be written by the doctor who is actually prescribing in the Telehealth, because most of the time, I have to go back and write down what the doctor ordered, especially S8 drug. I usually don't like to write S8 myself unless I feel that it's necessary. I have to go and check because I didn't prescribe (GP-P4).

MED program is reliable and provides valuable outcomes

General Practitioners reported that MED assisted in focussing their attention on priority patient needs.

I have to say that in the case of My Emergency Doctor, when they review a patient they direct your attention to what you need to review the patient because sometimes the patient may have a poly pharmacy and medication and they tell what you should do. So the general healthcare, the help is good because they direct your attention to what you need to do. (GP-P2)

MED was reported to provide rapid support meaning care and advice were readily accessible.

the top benefit is that we can provide care for them straightaway. I think that's the best part of it, is that if we are in doubt, we can immediately call them, regardless of what the question is or what it is, they're there to support and they will answer any questions that we have. That's been a really big support. (RACF MG4)

It meets my needs, because I get some advice, some support from other staff members in cases of emergencies which reduces the risk of neglect for the patient (GP-P2)

it has a very – great impact, …we can provide the immediate treatment that those residents that need. So it is less time for us our end as well because – we can just press the button, and wait for someone to pick it up… so it's very good, very helpful (RACF MG5-RN1)

MED provided follow up and reassured nurses.

… where the nurse is very worried, I've actually called back in three or four hours to check how the patient's doing and I've found that just that one or two-minute call back after that, they found really reassuring, and it's often the patient has picked up. (MED1)

Interviewees found the video aspect of telehealth particularly helpful.

it's great to have it there to know that we can ring somebody and they can actually visually see the resident after-hours if we need them, it's a great backup tool to have (RACF MG6-RN3)

I work in such busy hospitals, often –you're so busy you don't have time to thoroughly examine every patient yourself anyway…You're relying on what the intern or the resident has told you. So in that

sense I find it easier with the video app because I haven't got any other cognitive biases affecting me (MED1)

e*ither they have dementia, they have a mixture of chronic illness, they often have a terminal condition. So you don't usually get to talk to them… it's a way of communication through the nursing staff, and if they have…the video, we can look at the condition (GP-P4).*

Care in the home was faster than transferring to ED and families appreciated this. Interviewees often spoke about MED reducing ambulance transfers to ED and afterhours hospitalisation, and they felt that in this respect the service was likely to be cost effective.

by the end of the day it saves time for the patient by having to wait for the emergency and gives them the service at the facility. (GP-P2)

feedback from the relatives or the guardians…from the nursing staff, they always say, "Look, I've rung the guardian or the next of kin," that this patient has been relieved by the after-hours Telehealth (GP-P4)

It's certainly reduced the amount of ambulances that are coming here and the hospital presentations which benefits the residents at the end of the day. (RACF MG2)

It's cost effective because it will save people going to hospital, use the resources or the ambulance because we know how expensive it is, and the hospital, stretching the facilities the emergency (GP-P2)

The MED service was seen as reducing the burden and stress for GPs as well as the stress for residents and their families. Residents and families were reassured by MED consultations and the avoidance of ED transfer.

has relieved my burden in answering calls. So, I get fewer calls from them now than other facilities (GP-P4)

So now I get to sleep, and I get to have my weekends off (GP-P3)

When they go to hospital, particularly if they remain in ED all day, they come back distraught. They come back upset. It's an unsettling experience for them. And it's not necessary when you've got something like My Emergency Doctor (RACF MG2)

some residents, they don't really want to be transferred to the hospital. They want to stay here, which is good. Also, it lessens the anxiety of the family (RACF MG5-RN1)

We had a lot of positives. Just two nights ago, for example, we had a resident who was having a panic attack and wanting to go to hospital and she was determined that she was going to die if we didn't transfer her to hospital, but a call to My Emergency Doctors, she was able to settle and not needing to go. (RACF MG4)

Many interviewees described good relationships between MED and RACF staff and commented on efficient communication from MED which included residents in a team based approach.

there's a rapport you end up building with the aged care nurses…I think that's a huge benefit (MED1)

we automatically get the results straightaway…they automatically send the report. We communicate this to the clinical team and then it gets followed up with whatever needs to be followed up and then filed. (RACF MG1)

Generally, it would be a joint discussion where our emergency doctor will have the discussion with the nursing staff member and the residents if possible. (MED3)

MED clinicians found learning how to provide community care a welcome challenge.

one of the good things that have come out is it has improved my communication. It improves my emphasis of certain things. I need to think out of the box when I look at a patient, or how else can I provide care remotely. (MED2)

Staff at MED recognised that RACF nurses were often isolated. Their support provided nurses with confidence to care for residents in the RACF.

I found actually the nurses have been really happy – I personally felt a lot of positive feedback from the staff, and especially because it is out of hours and it must be quite isolating for the nurse. You know, they're often one nurse, to a whole nursing home. (MED1)

So what it's done is allowed us to just give the RNs the confidence that you can monitor them like you would normally do in hospital and then go from there (RACF MG2)

GPs observed that MED was complementary to GP care and that this service could attract more GPs to nursing home work.

at the end of the day, you want to give them the care that they need…this is really important…I think it will be a very good complement to the care that we, as GPs, give to our residents. (GP-P1)

We need to attract GPs to work in nursing homes and the after-hours service is actually an incentive because if you can say to GPs, "Well, you're not on call in the middle of the night, you're not on call 24/7 365 days a year," then it's much more attractive for GPs to work in nursing homes (GP-P3)

Use of other services

Interviewees acknowledged that VACS with their specialist nurse practitioner services provide valued service however, they were not available afterhours. The secondary triage service, whereby RACF calls to triple zero call were transferred to the MED service, was noted as assisting to avoid unnecessary hospitalisation.

I have the mobile phone of the VACS in my phone, I have consulted with them over the phone regarding my patients when I am hesitating about the treatment that the hospital can provide. I'm very well-aware that the VACS team is a specialist level and they don't work afterhours (GP-NP1)

secondary triage when we used to call the ambulance they used to come but now if they think that's not urgent they transfer us to them [MED] and they will determine whether we should actually call the ambulance or not so it's made it a little bit less transporting residents to hospital. (RACF MG2)

Improving afterhours care in RACFs and the MED program

Although our interviewees generally expressed satisfaction with the MED service, many suggestions were provided for improving the afterhours care in RACFs. For example, there were requests to increase community funding to improve staffing in the RACFS, enhance nurse practitioner models of care, and fund afterhours GP services. Some interviewees recommended continuing to fund MED as a complementary service to community based health service but concerns were raised as to how funding would be sustained. Regular training in the use of MED was noted as important for RACFs with high staff turnover.

A lot of money spent on a program just to help the hospitals when the actual thing we really need is more staff in the nursing homes. All that money could have been spent on some extra nurse practitioners (GP-P3)

It's important I think to fund afterhours consults with GPs (MED2)

My Emergency has been financially subsidised by the PHN. At the end of this trial or pilot trial any aged care facility who would like to continue on, will have to pay themselves, and the cost is not cheap – any future decision about continuity with financial sustainability has to be considered well. (GP-NP1)

the main thing is just consistent level of communication - a few of the facilities with higher staff turnover – so re-engaging with the new staff so that any new members of staff who come through are aware of the service. (MED3)

Although collaboration was mostly regarded as good, some interviewees thought this should be enhanced, particularly with the VACS teams especially if they were able to see the patient. Many provided practical suggestions for improving MED such as good internet connections and ensuring that MED clinicians had local knowledge. Increased use of My Health Record was also recommended.

I wish that sometimes they [VACS] can be able to see the patient, but unfortunately it's not an option - if they can communicate with the Virtual After Hours, or they can send the nurse practitioner to come down and check the patient as well. (GP-P2)

I think government investment in funding for good Wi-Fi solutions. I think the technical and incentives for all aged care facilities to subscribe to at least one sort of telehealth provider and either through investment through a good 5G available or 4G available, having good Wi-Fi services is really, really important. (MED2)

I would love for [MED] doctors who know the locality and the area, it's very important. I trust their medical knowledge, but one thing I am a little bit reluctant or hesitant is that they don't have the knowledge of locality. (GP-NP1)

I think if there are some facilities which have the My Health Record and if there's no opt out, the notes are on the My Health Record, that's useful for the next clinician who sees the patient, whether it's through the My Emergency Doctor or somewhere else to access the notes. (MED2)

There were requests for better access to Advance care plans and directives as these were acknowledged as ensuring appropriate care is provided. Some interviewees recommended extensions of the MED service to palliative care, to cover routine office hours when the GP was unavailable and beyond nursing homes, to private residents and those with disabilities.

Our life would be made a million times easier if every nursing home resident had an advanced care directive. It would save so much pain to the poor old patient, and of course save the country millions, hundreds of millions. (MED 1)

I personally think palliative care via video consult with someone who is pretty sick or they are expected to pass away, I think there is value in us trying to save them to go to hospital. (MED2)

It would be so good if it was available throughout the day and we had our GPs on board to do that, then we could make a call through to them without having to present at ED, instead of waiting and chasing GPs to get things done and residents looked at, I think for me it'd certainly reduce day admissions. (RACF MG2)

so many senior people at Springwood at homes this would be a good service. This would be the expectation if it could extend to that. And people with disability at home of course. (GP-P2)

A synthesis of findings (Discussion)

To address the need for greater access to timely afterhours medical care in RACFs in its region, NBMPHN commissioned My Emergency Doctor service (MED) to deliver afterhours medical assessment and treatment using telehealth technology in six RACFs. This service was piloted for a 12-month period. In addition to providing timely and appropriate afterhours care, the aim was to reduce unnecessary use of ambulance services, ED presentations and hospital admissions, as well as reducing the afterhours workload on general practitioners.

We used a range of data sources to evaluate the MED program over the 12-month trial period. Our evaluation goals were to understand how the program was working from the experiences of stakeholders and to evaluate the success of the program in achieving its stated aims. The following discussion draws together our findings and considers these in the context of the broader literature. Based on our research, and as noted in the executive summary at the beginning of this report, we identify the facilitators and barriers encountered by the pilot program and offer recommendations for the future.

Did the pilot afterhours telehealth program in NBM RACFs achieve its stated aims?

Telehealth services have been shown to promote quicker access to primary care thereby avoiding patient deterioration and the necessity for hospitalisation (35, 51). The NBMPHN used emergency specialists rather than a GP led model of telehealth but achieved similar outcomes to other telehealth programs piloted in Australia (19, 60). Access to afterhours care improved in the current telehealth pilot, whilst preserving continuity of care and flexibility to enable residents and families to be engaged in decision making. Changes in clinical management could be implemented rapidly in the RACFs.

Our findings showed that RACF residents received timely and appropriate afterhours care when their GP could not attend or be contacted. During the 12-month pilot period there were 209 calls from the six RACFs to MED and our interviewees reported that calls placed to MED were usually answered immediately. In most cases (179/209), residents had their care needs attended to within the RACF. Where similar in-situ care has been provided in other settings, resident outcomes and quality of life have improved (48, 53) and our interviewees also noted that such immediate, homebased care avoided the distress that residents and their families often experience with ambulance attendance and in-hospital care.

Consistent with other Australian telehealth programs (20-22), the greater provision of in-situ care by MED was reported by RACFs to support a reduction in calls to NSW Ambulance and subsequent transfers of residents to the ED. Out of the 209 calls to MED only 30 were recommended for ambulance transfer. According to our interviewees and the RACF data, many of those calls to MED (87/209) would have normally been placed to triple zero instead. Data from the NSW Ambulance Service also showed a slight reduction amongst participating RACFs, in afterhours ambulance transfers in 2020 (and also specifically the pilot period) compared with trends from 2017 – 2019. The data from all RACFs in the region showed an increase in numbers of afterhours ambulance transfers for each year between 2017 and 2020.

Interestingly however, ambulance data showed the number of afterhours calls from RACFs increased substantially in 2020 (including for the trial period) in both participating and all RACF groups. The

increased number of calls may have been due to the COVID-19 pandemic, with RACF staff unsure how best to manage patients in this context.

The data also suggests that some other intervention may have occurred between the call to NSW Ambulance and the ED transfer which impacted on the number of ED transfers at that time. This could have been due to the secondary triage service introduced across all RACFs some two months after the MED pilot program commenced, however we were unable to obtain data that separated calls to NSW Ambulance and ED transfers due to secondary triage. We received anecdotal information that only a small number of calls from RACFs to triple zero resulted in a secondary triage (that could also be escalated to ambulance attendance). This leaves us unclear on the contribution made by either the secondary triage or the MED program on the observed reduction in afterhours ED transfers in the participating RACFs.

Telehealth is considered cost effective by comparison to traditional service delivery and especially through the reduction in ambulance use and hospital transfers (63, 66-68). In response to the Royal Commission into Aged Care, a recent report from the Australian Medical Association (AMA) noted that if immediate reforms were to be implemented in the aged care system, $21.2bn in savings could be achieved over 4 years from preventable hospitalisations alone ($1.4bn from nursing homes) (84). The AMA recommended increasing primary care access and RACF nurse to patient ratios that could enhance patient centeredness and continuity of care including medication management. These reforms and the related cost savings were also identified by the participants in our study who frequently mentioned overuse of ambulance and long waits in ED which did not necessarily result in better health outcomes.

Telehealth approaches also have an important role in reducing medical practitioner workload and burden especially afterhours (20-22). Our interviewees reported that sometimes GP deputising services are called but have very limited availability. General practitioners spoke about being able to take a holiday and not having to answer the telephone in the middle of the night since the implementation of MED. They often confirmed the need for an appropriate afterhours telehealth service in RACFs when they were unable to attend to their patients.

Further to this, a number of interviewees identified a reluctance by GPs to provide afterhours services in RACFs due to poor remuneration for their work. This key finding aligns with other research. For example, The AMA reported to the Royal Commission into Aged Care that poor remuneration was the main reason that 30% of general practitioners intended to stop taking on new patients in residential aged care, reduce their visits or stop visiting nursing homes altogether (85). A recent report recommended that GPs receive greater remuneration through MBS items to provide RACF care (86). Funding for telehealth services in RACFs is especially important with the COVID-19 pandemic posing such a risk to the elderly (87). However, the importance of face to face consultations has also been recognised by the Australian government with funding recently announced to support 120,000 additional services in RACFs by GPs (88). Across all of these recent reports into aged care in Australia, there is agreement that continued and expanded funding is essential to maintain appropriate standards of care delivery in this health sector.

Despite the recognition that an afterhours telehealth service was needed in RACFs, some GPs in the NBM region preferred to provide their own patient care in RACFs and declined to participate in the MED pilot program. Our review of the process diary confirmed that it was also difficult to recruit RACFs to join the program. Some RACF staff cited time constraints, a perception that the service was not needed and that their GPs provided adequate afterhours care. In other settings similar difficulties have

been observed and the importance of strong promotion of the evidence for telehealth in this setting has been recommended (65).

In the NBM MED pilot program, we found varying levels of engagement with the program. In RACF 3 there were only four GPs involved, however this facility had a large number of patients and by far the most calls to MED. Those GPs and RACF staff particularly noted the MED service as helpful and effective in managing a large number of patients afterhours. In this setting effective promotion may have contributed to early GP engagement and use of the MED service. Other GPs and RACF staff reported a lack of promotion which may have negatively influenced their engagement. However, those who participated in the MED afterhours telehealth pilot generally valued the service and described many positive experiences and outcomes.

Our participants described the use of the MED afterhours service and how it complemented the care GPs were providing in RACFs. Although GPs had more knowledge about their patients and local services, they respected the expertise and advice of the MED clinicians and valued the treatment they provided to their patients. Aligning with other research (23, 51), we found good communication and collaboration between MED, the RACFs and GPs supported continuity of patient care, and bridged the gap in afterhours services in RACFs.

The MED service also provided re-assurance and guidance to RACF staff afterhours. Our RACF participants described the dilemma they experienced when there was conflict between GP and ambulance service instructions. The MED service was helpful to GPs and considered an incentive to engaging more of them in RACF work as it provided them with the opportunity of afterhours cover. This is an important finding when the Royal Australian College of General Practitioners acknowledges that RACF work is often not attractive to GPs (88).

Given that the afterhours telehealth service in NBM provided many positive outcomes, some participants expressed a desire for it to continue. However, they asked how it would be funded and by whom. Some RACF staff were concerned about a future cost burden to them. Others questioned whether Australian government funding was appropriate when the goals included reducing costs incurred in the NSW health system. These will be important considerations for the sustainability of an afterhours service in RACFs.

The key program aims were largely achieved. Our evaluation provides evidence that RACF residents received timely and appropriate afterhours care, there was a reduction in the unnecessary use of ambulance services and need for ED presentations, and the workload of GPs was reduced.

Facilitators and barriers implementing the afterhours telehealth service in Nepean Blue Mountains

By drawing on our different data sources, we identified some important facilitators and barriers that need to be considered when implementing afterhours telehealth in RACFs. This information, and the recommendations that follow, will further inform the future of the NBMPHN afterhours telehealth pilot program. The learnings from our evaluation may also be helpful to others seeking to establish similar programs.

Facilitators

Strong leadership is widely recognised as essential in program implementation (12, 62, 63, 72). Our participants often spoke about the support received from NBMPHN and how the program lead visited RACFs, medical practices and helped drive engagement including collecting consent forms and GP referrals.

The simplicity of using the MED app and engaging the service was often noted by our participants. New RACF staff were quickly oriented to the system by their colleagues and MED conducted initial and refresher training.

Use of the "video" app by MED reduced concerns that patients were not being physically assessed as would normally occur in face to face consultations. Interviewees acknowledged that face to face consultations were often impractical, particularly afterhours.

Setting up effective data collection and reporting processes in the RACFs and MED made implementation easier, and ensured that GPs were quickly informed of the care provided to their patients afterhours. The importance of effective data collection and reporting is noted also in other programs (12).

Barriers

The issue of funding for telehealth service was contentious among GPs interviewed with many stating that this funding should have been provided to GPs to adequately reimburse them for such afterhours care.

Concerns were raised that MED as emergency physicians were not familiar with local services and may not have access to all relevant patient information including complex medication regimens. Some GPs reported that they needed to recheck medications that were changed or prescribed by MED and considered this to be duplicative.

Promotion is considered crucial (65) but did not reach all stakeholders effectively. Some GPs stated there was only minimal consultation and other GPs not opting in informed us they had only learnt about this service by engaging in an interview with us. Staff in RACFs noted that they sometimes needed to remind other staff that their first call must be to MED and not the ambulance service. This tendency to call the ambulance immediately without considering the MED option was reflected in the ambulance data.

Recommendations

A range of recommendations to improve care in RACFs, identified in the literature and proposed by our interviewees are relevant to the future of the MED program in the NBM region. These include:

- Increase funding to enhance community based nurse practitioner models of care and afterhours care provided by GPs. This will support face to face care and continuity of the care provided by a personal GP;
- Increase funding to RACFs to enhance resident/nurse ratios, particularly afterhours;
- Promote MED as a complementary service and opportunity to work together, and also continue promoting MED in RACFs - especially those with high staff turnover;
- Consider extending the MED service to other populations including elderly people living in their homes and people with disabilities or requiring palliative care;
- Ensure all RACF residents have an advance care plan which is periodically reviewed and shared with care providers;
- Encourage greater use of the Electronic Health Record. This will allow other clinicians ready access to patient information, including medications and advance care plans; and
- Support RACFs to stock an adequate supply of medications. Medication was a major reason for calls to MED and prescriptions sometimes took days to supply. Consider stocking medications suited to palliative care.

Strengths and Limitations of the Evaluation

Strengths

- Our methodological approach was a clear strength in this evaluation. Conducting a focused review of the academic and grey literature provided strong contextualisation, allowing us to better establish the background and contrast our findings;
- Collecting data from multiple sources strengthened the evaluation;
- Continued promotion of the evaluation among key stakeholders by NBMPHN, and extending the recruitment timeframe, encouraged interview participation from most stakeholder groups; and
- Another key strength was interviewing GPs who did not opt in to elicit their views on the afterhours telehealth service.

Limitations

- It was very difficult to recruit residents and guardians. This is clearly a very important stakeholder group however RACF staff were overly busy, especially during the COVID-19 pandemic, and could not assist with recruitment as expected;
- We were unable to conduct face to face interviews because of the COVID pandemic. These may have provided a different dynamic where body language and other non-verbal information could have been explored;
- We were unable to obtain detailed data that separated calls to NSW Ambulance and ED transfers that were managed through the secondary triage service implemented during COVID-19;
- The qualitative data collection concluded prior to quantitative data being provided which prevented further interrogation of this data through interviews; and
- Historic ambulance data was only provided for calendar years rather than February to February which precluded direct comparisons with the pilot year.

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Appendix A Semi Structured Interview Schedules

All participants:

Thank you for agreeing to participate in this interview. I anticipate the interview will take approximately 30-40 minutes. The purpose of this interview is to understand how the new afterhours telehealth service (provided by My Emergency Doctor) in Residential Aged Care Facilities (RACFs) is working. We realise that a secondary triage service provided over the phone by the same organisation has also been made available since the start of the COVID pandemic for calls to NSW Ambulance from RACFs. We are not evaluating that service. "There has also been GP access to bulk billing for telehealth services during this time". You have been provided with a Participant Information Sheet and Consent Form. Have you read and understood these documents? Do you consent to this interview being recorded and your data being used in this project?

Do you have any questions before we begin?

Telehealth service provider (MyEmergencyDoctor-MED) – Manager and clinical staff

<u>*Prior experience and planning*</u>

1. What experience do you have providing afterhours telehealth in RACFs? *(Manager and clinical staff)*

2. When you began the MED telehealth service pilot for afterhours care in NBM RACFs, what arrangements were already in place? *(Manager)*

Prompts: At your end?

In the NBM RACFs?

3. What needed to happen for you to deliver the service in the NBM? *(Manager)*

Prompt: How did NBMPHN assist you?

4. What links did you have in NBM with local healthcare providers? *(Managers and clinicians)*

Prompts: Staff at RACFs?

GPs, hospitals, other specialists, pharmacies?

5. How did these links need to be developed (explain)? *(Managers and clinicians)*

Can you tell me about protocols that were developed – what these were and who was involved in their development? (*Manager*)

Prompts:

- Staff training and availability/ rosters
- Ethical/legal concerns (incl. consent/ Privacy)
- Communications in RACFs, with GPs and with hospital and other services (incl. pharmacies)
- Technology availability, quality and maintenance
- Data collection (e.g. telehealth logs, ambulance calls, hospital transfers) and reporting.
- Patient management/ care planning

6. How were these protocols followed?

Operations of the service (all questions for manager and clinicians)

1. Could you please describe how (if at all) the contracted "afterhours" telehealth service provision in NBM RACFs has been impacted since MEDs implementation of the secondary triage service for ambulance calls coming from RACFs for COVID-19 and other conditions?

We would like to understand how RACFs are using the MED telehealth service for afterhours care.

1. Are some RACFs in NBM using MED telehealth more than others, or differently (explain)?

2. Is MED telehealth substituting for or complementing F2F GP consultations? OR GP telephone advice? OR services provided by the Local Health Districts specialist aged care team who also provide services via telehealth?

3. Have the new COVID Telehealth Medicare item numbers for GPs affected your provision of afterhours telehealth? If so, please describe the impact.

4. In what clinical settings is your MED telehealth service used? E.g. for routine, acute issues?

5. Have you found there are particular conditions, health issues that are suited to/ not suited to MED telehealth (explain)?

6. What sorts of residents/patients do you find MED telehealth useful/ not useful for?

Prompts: Do older patients or those with cognitive decline struggle with telehealth?
Has telehealth been delivered to Aboriginal and Torres Strait Islander people or those from culturally and linguistically diverse backgrounds?

What particular considerations are needed for these populations (explain)?

7. How are decisions made about care?

Prompts: How are nursing staff or the residents/guardians, or the GP involved?

Are the RACF nurses sufficiently engaged and experienced to assist (explain)?

How confident are you in assessment of the resident by MED telehealth (given there may be limited pathology or radiology information available)?

How do you access/consider any advance care plan (ACP) the resident may have?

Prompt: How (if at all) do ACPs influence your decisions in recommending further care?

8. Have there been times when actual care was inconsistent with expected care (explain)? E.g.…

Prompts: With an ACP or directive?

With expectations of the RACF staff

With GP instructions?

With resident/guardian expectations?

Communication (manager and clinicians)

1. How do you communicate information about the advice you have provided back to the resident/guardian, RACF, and GP?

2. Are there any difficulties in communication (explain)? Or in collaboration?

<u>*Outcomes*</u> *(manager and clinicians)*

A key purpose of the MED Telehealth service in NBM was to determine if more timely access to afterhours care could reduce patient deterioration, ambulance usage, or ED presentations and avoidable hospitalisations.

1. Do you have any follow up with residents or hear back from staff about outcomes from the MED telehealth service?

What sort of outcomes can you report on (pos/neg examples)?

Prompts: For residents?

For RACFs?

Other?

Could anything else explain those outcomes beside the telehealth service?

2. Were your expectations of the MED telehealth service met (or not)? *(managers and clinicians)*

Prompts: What worked for you?

What other challenges did you face?

For clinicians…

e.g. difficulties resolving care issues within the RACF

e.g. RN capacity to assist (time, skills, language barriers, other)?

e.g. Is diagnosis and treatment more difficult than in a F2F consultation?

How do you address this?

e.g. How well can you guide patient self-care using telehealth?

(Final questions for managers and clinicians)

1. Are you aware of any unexpected benefits or unintended consequences of the program?

2. What recommendations could you make to improve the afterhours MED telehealth service in NBM?

Thank you for your time today and the information you have provided. The transcript of this interview can be provided to you if you wish to check its accuracy. Would you like it made available to you? Is there anything else you would like to add before we conclude this interview?

Residential Aged Care Facility Nurses/Managers

Planning and implementation (nurses and managers unless specified)

1. How were afterhours GP services being provided in your facility before MED telehealth?

   How has this changed since implementing the MED telehealth service?

2. What did you have to do or change to assist in getting the MED telehealth service up and running in this RACF? *(Manager)*

3. What supports were provided by the NBMPHN to establish the MED afterhours telehealth service in the RACF? *(Manager)*

   Prompts: What equipment (e.g. v/conferencing) was needed and how was this organised?

   How important was this support in getting the service up and running?

4. What supports were provided by MED to establish the afterhours telehealth service in the RACF? *(Manager)*

   Prompts: What equipment (e.g. v/conferencing), training was needed and how was this organised?

   How important was the support from MED in getting the service up and running?

5. Can you tell me about protocols that were developed – what these were and who was involved in their development? *(Manager)*

   Prompts:

   - Staff training and availability/rostering
   - Ethical/legal concerns (incl. consent/ privacy)
   - Communications in RACFs and for GPs
   - Technology availability, quality and maintenance
   - Data collection (e.g. telehealth logs, ambulance calls, hospital transfers) and reporting.
   - Patient management/ care planning

   How were these protocols followed?

6. How is MED telehealth promoted to your residents/guardians? *(Manager and nurses)*

7. What challenges did the RACF face in implementing the MED telehealth service and how were these addressed? *(Manager and nurses)*

   Prompts: E.g. afterhours staffing, language difficulties, staff expertise

8. Are there any ongoing challenges (explain)?

   Prompt: Also ask about resident/ guardian understanding/ consent and *(for manager)* the protocols above.

Operations of the service (Manager and nurses)

1. *(use script to introduce and describe secondary triage)* Could you please describe how (if at all) the "afterhours" telehealth service provision in NBM by MED has been impacted since the

implementation of the secondary triage service for ambulance calls for COVID-19 and now extending to all conditions?

Prompts: Are residents still receiving the timely and appropriate afterhours care they need? If not-why?

Has this impacted how afterhours telehealth services are provided by MED? In what way?

2. *Use script to introduce and describe VACS.* Since the Virtual Aged Care Services (VACS) have extended their hours of support, has this impacted the provision/need of afterhours telehealth services by MED? How?

3. Under what circumstances would you use these other services instead of or as well as the MED afterhours service?

Prompt: E.g. when would you call triple zero instead?

We would like to understand how RACFs are using the MED telehealth service for afterhours care

1. Do some of your residents refuse MED telehealth? Why?

Prompts: Prefer F2F consultations?

Negative attitudes on telehealth?

2. When is MED Telehealth being used?

Prompts: Routine, acute issues?

3. Are there particular conditions, health issues that it is suited to/ not suited to (explain)?

4. Is it substituting for or complementary to F2F consultations? OR telephone advice?

5. What sorts of residents do you find it useful/ not useful for?

Prompts: Has MED telehealth been delivered to Aboriginal and Torres Strait Islander people or those from culturally and linguistically diverse backgrounds?

What particular considerations are needed for these populations (explain)?

Decisions and communication (Manager and nurses)

1. Who usually initiates the MED telehealth consultation?

Prompt: How is that decision and its outcomes communicated to others (to whom)?

2. How are decisions made about care?

Prompt: How involved are nursing staff, the usual treating GP, and residents/guardians in deciding care?

3. How are care instructions or treatment plans from the MED telehealth provider communicated to the resident/guardian and GP and RACF?

4. How are any advance care plans (ACPs) the resident may have accessed?

Prompts: How is the ACP communicated to the MED telehealth provider?

How (if at all) do ACPs influence decisions in recommending further care?

Outcomes (manager and nurses)

1. To what extent has MED telehealth improved care for residents? How?

Prompts: Does it meet their needs (describe)?

Has their afterhours access to other health specialities improved (how)?

With whom (e.g. physiotherapists, pharmacists, hospital services)?

2. Were there any situations where care for the resident has worsened? (explain)?

Prompts: Continuity of care?

Communication between MED telehealth provider and the treating GP regarding treatment decisions?

Communication between RACF and GP?

3. Were there times when actual care was inconsistent with expected care?

Prompts: With recommendations from MED telehealth practitioner (explain)?

With an advance care plan or directive (explain)?

With GP instructions?

With resident/guardian expectations?

4. What have been the benefits of the MED telehealth service for the RACF?

Were there any negative consequences (explain)?

5. Are you aware of any unexpected benefits or unintended consequences of the program?

A key purpose of the MED Telehealth service pilot was to determine if more timely access to afterhours care could reduce patient deterioration, ambulance usage, or ED presentations and avoidable hospitalisations.

1. What outcomes can you report (pos/neg examples)?

Prompts: Have you noticed any changes in acute events (e.g. due to improvement in patient health), patient self-care, QoL? Please describe these?

How big a part did the MED telehealth service play in these changes?

What feedback do you receive from families on outcomes of care?

Could anything else explain the outcomes and changes?

2. What recommendations would you make to improve the MED telehealth service?

Thank you for your time today and the information you have provided. The transcript of this interview can be provided to you if you wish to check its accuracy. Would you like it made available to you? Is there anything else you would like to add before we conclude this interview?

Participating General Practitioners (opting in to MED service)

GP engagement

1. Can you please describe your type of general practice (e.g. solo, group, corporate)?

    1 a. Which RACFs do you provide services to?

2. How did you provide afterhours GP services in residential aged care facilities before MED and Telehealth?

    And after MED and Telehealth?

3. What are the challenges of providing care in residential aged care facilities?

4. How did you hear about the MED telehealth pilot?

5. How were you involved in the MED telehealth pilot?

    Prompts: Did you refer some or all of your patients (explain)? Proportion?

    Did you refer those patients for all or only some health conditions (explain)?

6. Why did you participate in the MED telehealth pilot?

    What were you hoping would be achieved?

7. What sort of changes did you need to make in your practice to participate in the MED telehealth pilot?

    Prompts: Staffing (e.g. changes in hours, additional liaison)?

    Changes in the care provided at the RACF? E.g. Changes in patient management (e.g. collaboration, communication)?

    Data collection and recording/reporting?

    Paperwork such as consents for referrals and reviewing and filing reports for each patient

8. How were you supported by the NBMPHN to participate in the MED telehealth pilot?

Use of service

1. Approximately what proportion of your RACF patients participate in MED telehealth?

2. How do you promote MED telehealth to your patients?

    Are there patients to whom you don't promote the service? Why?

3. What sorts of residents do you find it useful/ not useful for?

    Prompts: Has MED telehealth been delivered to Aboriginal and Torres Strait Islander people or those from culturally and linguistically diverse backgrounds?

    What particular considerations are needed for these populations (explain)?

4. How are you using MED telehealth with your patients in residential aged care?

    Prompts: Is it substituting or complementing F2F consultations? OR telephone advice?

Has this changed since Medicare rebates for telehealth consultations were introduced?

Who decides to initiate the telehealth consultation with MED Telehealth?

How are your patients being offered MED consultation?

How does this work from your perspective?

When is it being used? Routine, acute issues, chronic?

Are there particular conditions, health issues that MED telehealth is suited to/ not suited to?

5. Does MED telehealth impact the relationship you have with your patients? How?

6. Can you describe your patients' attitudes toward telehealth technologies?

7. Does MED telehealth impact the relationship you have with staff at RACFs? How?

8. Do you have any concerns about MED telehealth? Explain?

Prompt: Is privacy a concern for you? How?

9. *(Use script to introduce and describe)*. Are you aware of the secondary triage service (also provided by MED) for calls from RACFs into NSW Ambulance?

10. Has this secondary triage telehealth service affected usual afterhours telehealth care? How?

11. *(Use script to introduce and describe)* Are you aware of the Virtual Aged Care Service (VACS) extending their hours of support due to COVID?

12. Has the extended VACS hours affected usual afterhours care? How?

13. Do the new telehealth item numbers for GPs affect how you provide afterhours care to your RACF patients? How?

14. Have the new telehealth item numbers for GPs impacted your view on the MED after hours telehealth service?

15. Under what circumstances would you use these other services instead of or in addition to the MED afterhours service?

Communication

1. How are care plans you have authored, or any ACP the resident may have, made available to the MED telehealth service (and RACF)?

2. How is the initiation of a MED telehealth consultation and its outcomes communicated to you?

Did this process meet your needs? If not, what was needed (e.g. a consult without your knowledge)?

Outcomes

A key purpose of the MED telehealth pilot was to improve timely access to afterhours care for RACF residents and reduce ambulance use, ED presentations and hospital admissions.

1. How has MED telehealth impacted on the care provided for your patients (examples if able to)?

Prompts: How well does it meet their needs?

Is the care timely?

Is the care provided appropriate in your opinion?

Changes in acute events (e.g. from improvement in acute condition)

What changes have occurred in ambulance and hospital use?

Have you noticed any changes in QoL for patients/guardians?

Could anything else explain those outcomes and changes?

2. Has the MED telehealth service enhanced patient access to other specialist services (how)?

With whom (e.g. allied HP, hospital specialists, pharmacists)?

3. Has MED telehealth impacted the way you are able to care for your patients (pos/neg)?

Prompts: Do you have any difficulties incorporating the care plan or recommendations from the MED telehealth provider into your patient management (explain)?
How has continuity of patient care been affected (if at all)?

4. Were there times when actual care was inconsistent with expected care? E.g.…

Prompts: With your expectations (explain)?

With recommendations from the MED telehealth practitioner (explain)?

With an advance care plan or directive (explain)?

With patient/guardian expectations?

5. Were there any negative outcomes from MED telehealth for the patient (explain)?

Impact on GP

1. Was participation in MED telehealth cost effective/ ineffective for you (explain)?

2. How has your workload been affected through this pilot?

3. How were your expectations of the MED telehealth service met (or not)?

Prompts: What worked for you?

What challenges did you encounter?

4. Are you aware of any unexpected benefits or unintended consequences of the program?

5. Would you recommend the afterhours MED telehealth service to your patients?

6. What could be done to improve the afterhours MED telehealth service?

7. How if at all has the MED t/h service and/or the GP bulk billing t/h items changed your attitude / capacity / willingness to provide services to RACFs?

Thank you for your time today and the information you have provided. The transcript of this interview can be provided to you if you wish to check its accuracy. Would you like it made available to you? Is there anything else you would like to add before we conclude this interview?

Non-Participating GPs (not opting in to the MED service)

Can you please describe your type of general practice (e.g. solo, group, corporate)?

GP provision of afterhours care

1. How do you provide afterhours GP services in residential aged care facilities (e.g. F2F, telephone)?

2. Which facilities do you provide services to?

3. What challenges do you face in providing care in residential aged care facilities (explain)?

Prompts: How are you able to provide timely care to your patients?

Are there times when you are not available and the RACF has to initiate management?

Can the RACF provide timely and appropriate care to your patients?

How well can you resolve patient issues within the RACF?

Including instructions to RACF RNs (and feedback to you)?

How well are you able to avoid escalation of care (e.g. ambulance use, ED/hospital presentation and admission)?

Provide care according to the expectations of patients (and guardians)?

Continuity of care?

4. Have you changed the way you provide afterhours care since the MED telehealth pilot began (explain how and why)?

5. Do the new telehealth item numbers for GPs affect how you provide afterhours care to your RACF patients? How?

Prompt: Have the new telehealth item numbers for GPs impacted your view on the MED after hours' telehealth service? How?

5. *(Use script to introduce and describe).* Are you aware of the secondary triage telehealth service (also provided by MED) for calls from RACFs into NSW Ambulance?

6. Are you involved in the MED secondary triage telehealth services being provided for patients?

Prompt: Has this impacted on your views about the afterhours MED Telehealth? How?

7. *(Use script to introduce and describe).* Are you aware of the Virtual Aged Care Service (VACS) extending their hours of support due to COVID?

Prompt: How are you involved in the VACS service being provided for patients?
How has this impacted on your views about afterhours telehealth?

Non-participation in MED telehealth

1. Where did you hear about the afterhours MED telehealth service?

2. Why did you decide not to participate?

3. Are there particular challenges for you in participating?

4. Have your patients (or guardians or RACF staff) asked you about including them in the MED telehealth service (explain)?

5. Where do you see MED telehealth fitting in to afterhours patient care in RACFs?

Prompts: Should it substitute or complement F2F consultations? OR telephone advice (or GP Bulk Bill T/H)?

When should it (MED) be used? Routine, acute issues, other?

Are there particular conditions, health issues that MED telehealth is suited to/ not suited to?

Or patient types?

6. Can you describe any benefits (or negative outcomes) of the MED telehealth service that you are aware of?

7. If you were to participate, what support would you need?

8. What recommendations could you make to improve the afterhours MED telehealth service?

Thank you for your time today and the information you have provided. The transcript of this interview can be provided to you if you wish to check its accuracy. Would you like it made available to you? Is there anything else you would like to add before we conclude this interview?

Aged Care Facility Residents and Guardians

1. What was afterhours medical care like for you before the MED telehealth service (explain)?

Prompts: Was medical care provided when needed it?

Was it the right care for you?

Was there a time when care did not meet your expectations (explain)?

2. How did you hear about the afterhours MED telehealth service? (RACF, GP, other)

3. Did you have any concerns about telehealth before you participated in the service?

What were they?

Prompts: Uncertainty about telehealth technology?

Privacy?

Changes in the relationship you have with your GP?

How were these concerns addressed (and by whom)?

Use of MED telehealth

We would like to understand how you are using the afterhours telehealth service

1.How often have you used the afterhours MED telehealth service?

Prompt: Once or twice or more often

Was this for flu/ COVID related concerns or for other concerns?

2. Did you get the care you needed through the MED telehealth afterhours service (example)?

Prompt: Did you get the care more quickly than usually?

3. Does your GP still provide treatment for you afterhours? How?

Prompts: In person?

by telephone?

through the RACF nurse?

Communication

1. How well does the RACF listen to you when they provide your care?

2. How well does the MED telehealth provider listen to you when they provide your care?

3. How well were the plans for your treatment communicated to you?

Or to your GP?

4. Do you have an advance care plan?

Did the care you received from the MED telehealth service match the information in your ACP (explain)?

Outcomes

1. What did you like about MED afterhours telehealth?

2. How well did the care you received meet your expectations (explain)?

Prompts: Did you receive care more quickly than previously?

Did the treatments provided work for you?

How could treatment have been better?

Did MED telehealth also look after other health concerns you had (explain)?

3. How do you think you have benefited from the MED telehealth service?

Prompts: Have you needed to use the ambulance less?

Visit the ED less?

Fewer hospital admissions?

How has the service helped you look after yourself (provide you with instructions)?

4. What don't you like about using the MED afterhours telehealth service?

5. Will you continue to use the afterhours MED telehealth service if it was available?

6. Would you pay a fee to use this service?

7. What do you think would improve the afterhours MED telehealth service?

Thank you for your time today and the information you have provided. The transcript of this interview can be provided to you if you wish to check its accuracy. Would you like it made available to you? As the guardian, would you also like the interview transcript made available to your resident should they regain capacity to check its accuracy? Is there anything else you would like to add before I close this interview?

Non-participating Aged Care Facility Residents and Guardians

Current afterhours care

1. Does your GP provide treatment for you afterhours? How?

Prompts: In person?

by telephone?

through the RACF nurse?

Non-participation in telehealth

1. What is your understanding of the afterhours MED telehealth service?

2. Why did you decide not to participate?

3. Are there particular challenges for you in participating?

Outcomes

1. Can you comment on your satisfaction with the afterhours care you are currently receiving?
2. What could improve afterhours care for you in this RACF?

Thank you for your time today and the information you have provided. The transcript of this interview can be provided to you if you wish to check its accuracy. Would you like it made available to you? As the guardian, would you also like the interview transcript made available to your resident should they regain capacity to check its accuracy? Is there anything else you would like to add before I close this interview?

Appendix B

Thematic table: Qualitative evaluation NBMPHN Afterhours Telehealth Service in Residential Aged Care Facilities

KEY:
RACF-MG = RACF Manager
RACF-MG/RN = both roles
RN = RACF Registered Nurse
MED= My Emergency Doctor manager or FACEM
GP-P = Participating GP (opting in to MED Service)
GP-NP= Non participating GP (not opting in to MED Service)
RG= Resident/guardian

Systems issues related to care in RACFs (p.61)	**Issues related to the MED Model of Care (p.64)**	**Implementing the MED Program (p.72)**	**Experience of the MED program (p.81)**
Challenges of delivering care in the RACF Challenges with availability of medication	Principles of management in RACFs **Choosing the right locus of care* **Team based care including residents and families*	Expectations of MED	Variable GP engagement MED fills specific needs
Difficulties of afterhours RACF care	Scope of MED **Perceptions of MED Role* **Challenges with Telehealth and role of video-health* **Face to face contact* **Complementary to usual care*	Promoting MED	MED program is reliable and provides valuable outcomes **Communication from MED is efficient* **Satisfaction of RACF staff*
Poor remuneration for GPs	GP Model of Care Compared to MED Model of Care **Local Knowledge* **Skill sets for RACF care* **Continuity of care* **Costs of service*	Process of implementing the program in RACFs **Training* **Consent* **Privacy* **Communications processes*	Use of other services Improving Afterhours Care in RACFs and the MED Program

Systems issues related to care in RACFs	
Challenges of delivering care in the RACF Complex patient needs	• the public hospitals are shifting all these quite ill patients into nursing homes without realising that the level of care is not the same… advanced cardiac failure or late stage pal care and cellulitis and dressings, extensive dressings that take a lot of time and a lot of nursing care to do… there's not that many nursing hours and doctor hours there to do that (GP-P3) • These patients are sick, quite sick and really intensive. If I was seeing these patients in general practice each one would be my difficult patient for the day. Every patient at the nursing home is my difficult patient for the day. (GP-P3)
GPs are called for minor issues	• They want to report every single thing; even minor things they report to you. They ring me just for advice, even things like, "This patient has a bruise," or "This patient has a tear." They fall overnight or similar things. It generally means that, for me, it's taking a lot of my time (GP-P4)
Poor RACF funding and pressure on staffing numbers and time	• the big challenge is there is not enough money in residential aged care – just the overall funding, so the nurse to patient ratio is very low and that is a barrier…the nursing homes are 10 to one or 20 to one. Maybe two RNs on for 80 patients and the others are ENs, maybe seven or eight ENs. So 10 to one patient to nurse ratio as opposed to three to one in the public hospitals and doctors. (GP-P3) • …when I suggested that they should take his blood pressure more often and check his urine more often so we get a clearer picture, they obviously, haven't got the time to do that. (RG1)
Nurses dilemma when GP and ambulance decisions conflict	• the poor RN is sitting in the middle with one way the GP is ordering to refer, to send to the hospital, and then if the RN rings the ambulance the ambulance will then question when it is not that 100% indicating to go. And then the hospital will then challenge the poor RNs and then the poor RN doesn't know what to do because they sit in the dilemma (GP-NP1)

Challenges with availability of medication Delay implementing instructions and medications after hours	• the instructions and medications to give them, there'd be lot of delay by the time they implement it, so they will call you in the Sunday morning, will go and get antibiotics but they won't get the antibiotics until Tuesday again. (GP-P5)
Lack of available medications in RACF	• They [RACFs] don't keep all the stock of all the antibiotics …sometimes you may prescribe something which is not in their stock, then they have to wait until the chemist get them back again. By the time you post them and by the time they fax to the chemist, by the time they get it back, there could be delay of more or less 24 to 48 hours. (GP-P5) • saving those [dying] patients a trip to the ED – some cases I've been able to palliate the patient in the nursing home, and all we did was prescribe morphine, midazolam, et cetera and they have that. Once it was a Saturday, I can't remember which nursing home it was, but they didn't have any stock and that just seemed such a shame that because of just the simple fact of them not having the medication locked up somewhere. (MED1)
Potential for increasing RACF capacity to provide extended care	• Day care is a short stay admission to the hospital. We are trying to avoid that by giving, for example, patients needing iron infusions; we write a prescription and get that iron and the RN can set up the drip up and do the infusion there. So they're also talking about allowing to use IV antibiotics but many times patients have to be transferred to hospital because they've got an acute chest infection. So they give IV antibiotics for two, three days and then send them back with oral antibiotics. So there is talk about being able to use intravenous antibiotics in the nursing home. It hasn't happened yet, but they are talking about it (GP-NP2)
Difficulties of afterhours RACF care GPs are burdened with AH care	• we were doing so much telephone work, enormous amounts every day, lots and lots of phone calls and being on call 24/7. (GP-P3)
GPs refuse to work after hours	• I don't want to do afterhours, I don't want to be in the middle of the night, as much as possible, I don't want that (GP-P1)

But some GPs only do RACF work and share the load	• I don't have private practice anymore, I'm one of the doctors who provides pretty well seven-days' service [to RACFs]. If I'm away, then I get somebody to cover for me (GP-NP2)
Other afterhours services can be utilised although with limited availability	• We would ring 136… an after-hours GP service and they actually come out to you, but we've found that their workload –that we would book an after-hours GP to come out and often more than not they would never turn up because they just got so busy even though you had an appointment booked they didn't get out here (RACF MG6-RN3) • I always work between 6.00 and 10.00 so I am always there until 10.00 so the only problem for me is between 10.00 and a few hours before 8 o'clock in the morning. But we used the after-hours doctors... Dial-a-Doctor or whatever, this is the service that we used to have – a deputising service. (GP-P2)
Importance of advice from RACF staff	• I get some advice, some support from other staff members in cases of emergencies which reduces the risk of neglect for the patient, because you can't – you are stretching the system by sending everyone that you can't see to the hospital or get the after-hours doctor (GP-P2)
If GPs unavailable, patients referred to ED	• Our nurses would normally ring the doctors and if we couldn't get the doctors, and the clinical decision was that the resident was unwell and needed GP interactions, they would go into hospital, ambulance (RACF-MG2) • we just sent to hospital, I just asked them, like the patient's condition deteriorated or there was a change in their condition, then we just sent to hospital before the afterhours. (GP-P1)
Poor remuneration for GPs	• I'm still not very happy about it. I say, "Look, after hours, ring the after-hours service," because I'm not happy to be woken up at 2:00 am for $40 (GP-P3) • I think some of the resistance that some of them [GPs] had mentioned in the past was they had to provide afterhours care and not be paid for it (MED3)

Poor MBS remuneration for work in RACF	• you can charge those item numbers only if I talk to the patient, but I'm not talking to the patient, I'm talking to the staff, so I can't charge for that… if the patient's guardian is in the room, I can charge the patient. If the guardian rings from home, I can't charge that. (GP-P5) • I haven't got time to do care plans for 40 patients. I would love to be paid to sit in a nursing home and do care plans for my patients…I think you can't claim them on Medicare. So the care plan billing on Medicare, you're not allowed to claim it for nursing home patients (GP-P3)
Introduction of Medicare Telehealth items improve GP remuneration Concerns about PHN funding role	• I'm much happier doing telehealth these days in the nursing homes… beforehand you're so bitter about all this telehealth that we did being effectively unpaid –it was unpaid before the telehealth was brought in that you would sort of avoid it or you would answer late (GP-P3) • But now if they [RACF] call me, I usually call them back because I know actually, I'm getting paid for it, I'll call them back and we'll go through it (GP-P3) • That's quite fair now in the sense that you might spend time advising them [RACF staff) and I do use it. (GP-P4) • if the end point is to reduce hospital and ambulance admissions then I think the money shouldn't be coming from the PHN. The money should be coming from the hospital if that's their end point because they've got more money and I think the PHN money would be more effectively used by hiring more nurse practitioners or providing more community services (GP-P3)
Issues related to the MED Model of Care	
Principles of management in RACFs	
Choosing the right locus of care Residents are better managed in the RACF	• it's quality of life around the residents because they're not going into the hospital. They don't have that disruption. Often when they go in an ambulance to hospital, they're not taking sometimes dentures with them or glasses with them, just things like that, because everything is just quite rushed. So this way they stay in

Hospital can be best place in some circumstances including when residents or families prefer	their home. Their quality of life while they're just recovering from whatever the incident is or the deterioration is, it's far healthier for them (RACF MG2) • the whole experience of being transferred from an environment that they feel safe and comfortable in to going into Emergency Department where often they would need to wait for a couple of hours before actually being seen to, so I believe that there was a gap in that particular area (MED3) • one resident where the emergency doctor said that we need to send him off because he really needs to be transfused, or whatever. Or the catheter needed to be changed, or needed to be given IV antibiotics in the hospital, instead of them being septic in here (RACF MG3) • 000 is called when for example someone's fallen and there is a cut in the head, someone has fallen and you can see that one leg is shorter than the other (RACF MG4) • Somebody collapsed on the floor, they just call for an ambulance. I don't think they'll triage with the afterhours doctor, they don't (GP-P5) • it's very few. But these are like, let's say, traditional people who think that the hospital is the best place for someone if something happens to them. (RACF MG3)
Challenges of deciding when to transfer care to hospital	• like all doctors, the art is to predict whether it's going to get worse, and the decision-making will then be, is that something that is manageable and can wait until the morning or is it something that is going to escalate and be too much for the patient or for the best practice management criteria. Then that's the decision-making (GP-NP1) • I just break it down as to, do they need to go to hospital today? If the answer is yes, would they benefit from going to hospital today? And then once I've figured that out then it doesn't really matter. We don't really need to know if they had a mini-stroke on the Saturday or the Friday…especially for the patients that have

	already had strokes and already on aspirin because, they're already on maximal medical therapies. Sending them in on a Saturday night isn't necessarily going to add to their quality of life or add to anything really. (MED1) • there's a spectrum as well. You could have a very minor injured older person and then the nuances obviously, we have to balance the risks of transferring someone with maybe cognitive impairment at one to two am versus could we wait a little bit until six or eight o'clock in the morning (MED2)
Team based care including residents and families Importance of resident and family involvement in decisions	• if the resident is able and capable, then obviously they make that decision in conjunction with the doctor and the care team, or if they cannot decide for themselves obviously. We get in touch with the doctor, Public Guardian or the nominated Power of Attorney or person responsible (RACF MG1) • when required, case conferencing by phone or sometimes we do have face-to-face meetings with one of the children or sometimes with two if required. And we then have a good discussion about what are their expectations. We explain to them what the condition is, what the prognosis is, what are the medications. (GP-NP2) • and I've suggested things that nobody seems to want to listen to me. Because I'm only a relative, sort of thing. And maybe I haven't got the right to do that, I don't know. (RG1)
Care is collaborative and multidisciplinary	• Everyone is involved in the care…it's a chain of professionals that do the care for the residents. Obviously, at the front are the RNs and then it goes to the doctors and then next-of-kins (RACF MG4) • Obviously, we're utilising dieticians and we're doing pharmacy and all that stuff through Telehealth as well (RACF MG4) • I work hand in hand with them, and I know the people quite well. The nurses that come to the facility, I work with her – there's one nurse that I know so well that we work together. (GP-P4)
Trust in other members of the team underpins good decision making	• you have to inherently trust, if nurses give us the wrong vital signs there could be trouble. I guess trust goes both ways. They are

Continuity of care in a team based care model Current Advance Care plans for all RACF residents	receiving instructions or reassurance from us and we have to receive, so radiology and pathology, most of clinical medicine, I guess we rely on a good history or if possible a good video look, looking at the patient (MED2) • we have a doctor's book for the GPs that they look at every time they come. So they can see what we were wanting them to do for each resident, but we've also got our handover sheet which gets discussed at each handover and as well as being documented in the progress notes and care plan (RACF MG6-RN6) • I just forward email communications, letters on what stage we are at with our process. And disseminating this information. Is being added in her (RN) end shift report which is provided to all the registered nurse team including the Care Manager and myself, of the General Manager. And then the registered nurse is also updating the family members or whoever is the guardian or if ok for the resident (RACF MG1) • Simple things like expecting every patient to have an advanced care directive and have their advanced care directive reviewed every three months. (GP-P3) • I would say 95% of my patients do have one. They call it a Care Directive. (GP- P4) • we're very on top of that, advance care directive are being sent together with records to the hospital…it's also recorded on our computer system, it's an electronic system, documentation system (RACF MG1)
Scope of MED	
Perceptions of MED Role GPs perceive MED Telehealth is a service for them not RACF patients	• it's not really a service for the patients. It's a service for the doctors. So really, it's not being provided for patients because we were providing the service previously. It's mainly a service — I don't think anyone is selling it to the patients because it's not the patients making decisions. It's the nurses and the doctors that make decisions about whether we're going to use it. (GP-P3)

Afterhours only	• the whole idea of us being involved is to be the primary care for emergency after hours care (MED2) • It's being used after hours and where we would normally have rung an ambulance and/or a GP at this point. (RACF MG2)
Acute care rather than ongoing management	• Not for the chronic problems at all. It's only meant for acute issues…purely meant to provide an opinion, advice in an emergency situation, really can't do much for the normal case-to-case management in the long term at all. It has no role in that (GP-P5) • they're useful for emergency calls after hours basically. Palliative care, probably not so much because the palliative care are all expected to go downhill so we plan it out. In general it's not suited to most chronic health condition problems. It's only really suited to acute health conditions (GP-P3)
MED suited to many but not all emergency conditions	• Suited to all of the emergencies that we have, like patients who have falls or need to make a decision about to send them to hospital or not to do a scan, the patient has got confusion or delirium, and the patients have got chest pain, the patient has abdominal emergency, acute abdominal. So all of these emergencies, are suitable for me for the Telehealth doctors to contact and make a decision based on the information available from the staff, and from the patient as well (GP-P2) • I'm an ex hospital DON [Director of Nursing], so there's no way that we can manage an aspiration here. We don't have high flow oxygen (RACF MG2)
Challenges with Telehealth and role of video-health MED may be unable to access all records	• there's a big issue with communication in that emergency physicians don't have very good access to the records, the patients' records. So they can't really understand what's really going on with the patients. (GP-P3)
Telehealth may not provide an accurate assessment	• I just worry because Telehealth is not 100% fool-proof, in the sense that some conditions really need to be assessed physically by a doctor to see what's wrong with this patient – whether there's a life-threatening condition or whether it's just a simple thing. I'm

Difficulty charting medications but new software is helpful MED provides a video benefit to telehealth Telehealth communication is mostly with staff than with patients **Face to face contact** Some GPs prefer to physically assess patient	just worried that one day the Telehealth doctors will miss something more serious and the patient dies the next day (GP-P4) • the only challenge that we got, was that – the charting of the medications if need be (RACF-MG3). • That's where I think there's a lot of difficulty, when the patient is on 20 different medications and you've got a relatively junior nurse trying to read them all out to us. And the past medical history, it's just very, very complex. That can be very time consuming (MED1) • The challenges are the medications, which is one thing that you need to supply them with this prescription, but now with the software, it's easier. (GP-P2) • they can actually speak to a doctor rather than talking over the phone. They can actually see the doctor and they can actually explain what's going on and show the doctor the resident rather than just doing something by phone. (RACF MG6-RN3) • you're talking about patients – 50% of my patients have dementia, so they can't communicate for that reason…or Parkinson's disease. I think there's a whole lot of reasons that people in nursing homes can't communicate. Advanced cerebral palsy, all these sort of issues. (GP-P3) • Some of the patients, they're cognitively fine, whereas in this case a lot of them have the nurse with them, so then most of the instructions go to the nurse really, in the nursing home (MED1) • even though you might be able to see the patient it's not the same as being there with them. (GP-NP1) • let's say I have a patient with acute abdomen and then they say, "Okay, give them some Panadol." After of course having the consultation with the staff, and things like that. I don't think acute abdomen should be treated like that, and this is why then I went over there and examined the patient. Because I didn't think that this is the right thing to do. (GP-P2) • I personally like to do face-to-face medicine, not so much Telehealth, because you learn so much looking at the patient. And

Some GPs say that F2F is not needed in many cases Impractical to do all consults F2F Residents and families prefer face to face care	with Telehealth you can't really get that idea from what they are in or other things they are describing. (GP-NP2) • I know that in many of the cases, by having the telephone call, I don't think that the patients need to be seen personally face-to-face. (GP-P2) • they all love their GPs and they would prefer to see their GP, but it's the difficulty of trying to get a GP out here when you need them. Obviously, they're all in general practice as well. So it can be quite difficult to do that. Obviously, they'd love to see their doctors more, but it's not within reason (RACF-MG2) • most of our patients prefer face-to-face, they prefer to talk to you and discuss with you what they have. Especially with our senior community. (GP-P2) • challenges are to be able to see the patient or to make decisions about sending them to the hospital or not, because sometimes families insist on getting the doctor to see the patient. (GP-P2)
Complementary to usual care Assists nurse decision making Complements GP care	• we're using the After-Hours Emergency – every time after 5 o'clock when the doctor is not available and when the registered nurses are feeling, they need more support and assistance for the medical and clinical intervention of the resident. (RACF MG1) • it [MED] has a big role to assist decision-making to the RNs and the nursing staff. Even if it is emotionally taking the responsibility and the burden off the shoulders, it's already a big role. (GP-NP1) • we're complementing them [GPs], so … the GP might have sent off a urine test on the Thursday, but the result didn't come until the Saturday morning, and then we can be reviewing the patient and prescribed the antibiotic (MED1)
GP Model of Care compared to MED Model of Care	
Local Knowledge GPs know patients and local services	• if you know the person it's a lot easier to treat otherwise, it takes a long time to treat especially on the phone, it's impossible to advise on the phone unless you know that patient, unless you know the family…what the family expectations are. Teleconsultation without knowing the patient is not easy in the aged care setup (GP-P5)

	• they're [NBMPHN] getting these doctors who don't know the patients to review the patients. It's not like when I come in, I really assess the patient, I know them, I've got a relationship (GP-P3) • I'm not happy, that My Emergency, he might be in Melbourne, so when the patient is in Springwood, the decision would be go to Katoomba or go to Nepean Hospital, and he would not know that Katoomba would be lovely for our older patients. (GP-NP1)
Skill sets for RACF care GPs more suited to RACF care than emergency specialists	• it would probably be better delivered by GPs than emergency specialists because despite emergency specialists being – I just think GPs are better trained for nursing home work than emergency physicians are…It's community medicine, not hospital medicine that we're doing. (GP-P3)
MED has specialist emergency skills	• the emergency doctor, you feel comfortable that you have experienced people who will take care of the concern of the nursing staff and patients. Because they are specialists dealing with this situation. They are trained by emergency, which is what the patient is going to see because I understand that this emergency specialist will manage it (GP-P2) • I don't think all – a lot of GPs would be – would have that skill set. We've always – a lot of our staff with at least 10 years of hospital training in emergency medicine, but some of the other consultants they're in their mid-50s or older, so huge amounts of hospital experience. (MED 1)
Continuity of care MED provides continuity of care	• the resident remains in the nursing home, there's still continuity of care. He or she doesn't feel that they're strangers, different strangers again looking after me (RACF MG3)
Importance of GP in continuity of care	• we would definitely be complementing the face-to-face GP – it will always be necessary to have a local GP looking after a resident to have that continuity of care and ongoing management plan, so our service will never replace that and that's definitely not our aim (MED3)
Mitigation of risks to continuity of care	• We've got a system where the senior clinical group, with MED, will audit the paperwork, a discharge summary and all their notes, to

Costs of service Additional costs of FACEMs Sustainability Telehealth may be duplicative Legitimacy of use of Medicare funding for MED questioned	make sure that it includes everything relevant and necessary- all of us understand that that is our legal – it sounds bad but it's the legal record for continuity of care for the patient, it's our legal defence. (MED1) • it would be more cost-effective because we [GPs] don't bill as much as emergency specialists do. Even if you compromised and met them halfway it would still save a lot of money I would think… it's quite an expensive service. (GP-P3) • after March next year, if the after-hours doctors still can be paid by the Telehealth, or are they going to be paid by the PHN or what? (GP-P4) • My Emergency has been financially subsidised by the PHN. At the end of this trial any aged care facility who would like to continue on, have to pay themselves, and the cost is not cheap because of course the fees of the Medicare does not cover the whole bit… any future decision about continuity was financial sustainability (GP-P3) • the after-hours Telehealth could occasionally be a duplicate service because they will ring Telehealth – I'm talking a lot of Telehealth consults is at night. And then the next day, when I come back, obviously I have to review the patient again the next day, I look at the report and I have to review the patient (GP-P4) • Medicare specialists need to have a referral letter. So these guys are gaming the system a little bit. … So to bill, they ask us to write a referral at the start of every 12-month period and it's an open referral to see them for emergency issues and we provide a little summary. (GP-P3)
Implementing the MED Program	
Expectations of MED GPs expected their workload to be reduced through fewer calls Reduce load on ED	• really I expect them to call the whole after hours completely without me getting the calls in between (GP-P5) • I think with Telehealth, actually, my expectation is to reduce the over-crowdedness of the emergency centre. (GP-P4)

All TH consultations should be clinically and medico legally rigorous	• I think my expectations are…it's not just about the calls, it's about the framework that we provide and medico-legal structure, follow up, access to notes. I just would prefer, it would be nice if all telehealth consults can be a face to face, like using an app or using an iPad to look at (MED2)
Promoting MED Strategies for promoting to residents and families	• We initially talked about it at resident meetings and we sent out a flyer, we put flyers up about it. And we also put it in our newsletter …to remind the residents …and the families, that that service was in place. (RACF-MG6 RN3) • We let them know during our family case conferences, because you also have to get consent if they have been – before we send anyone to hospital. (RACF MG3) • We are informing the family as well. Let's say, during case conference or, let's say, we were observing that this resident, that they have some medical concern. We are informing the family as well, via phone calls, that we are using this one as well, in case that the doctors are not available after-hours (MG5 RN1)
A resident only found out about MED through the evaluation	• Well, I didn't know about the after-hours telehealth until they handed – well, they actually handed these sheets from Western Sydney University to my son, who handed them to me. I read through them and I thought, well, that would probably be the first time I'd really know about the after-hours telehealth service (RG1)
GPs rely on RACFs to promote	• I don't personally promote it, because most of our patients have dementia, have problems with communication. So promotion is really through the nursing staff, the Care Manager. (GP-P4)
Poor GP understanding	• I didn't really know that it is a special service, this Emergency My Telehealth, I thought that the nurse was just able to speak to the ED doctor and was given the advice…I don't know whether it's just me or other GPs providing care have this information and it's quite good to know that there are these services. It would probably be better if we receive more information about the services (GP-P1)

	• I apologise. I did not understand the concept fully well and I simply ticked no saying that I provide my own… If I can understand it a bit more, what does it involve? (GP-NP2)
Some RACFs and RACF staff are unaware and preferring to still call GPs afterhours	• I don't know whether the nursing home or the staff are aware of the services, because usually in the nursing home they're good, they contact the GP first, but then what I find is in the middle of the night, they would fax me about what is happening to this resident, but how could I see that in the middle of the night or after 6 o'clock when I'm home. So at least I think if they know that there is this service – I don't know whether they are aware (GP-P1) • I don't think they are using that much yet. Because I still get quite a few calls…at least once or twice on the weekend (GP-P5) • facilities with higher staff turnover – so it's been also just – so re-engaging with the new staff, so we do offer regular refresh training sessions for the staff, just so that any new members of staff who come through are aware of the service (MED3)
Process of implementing program in RACFs Challenges engaging GPs and RACF staff	• I think the major barrier initially was just getting the GP buy-in, and then, I suppose, the next barrier is just actually getting the facilities to use the service that is available to them (MED3) • … it took the RNs a little while to sort of understand what that process is, and what it means. Obviously with COVID, it pushed us all into a situation of not wanting to send our people to hospital. So it took a little while for them just to grasp that this is the first call that they make to do that (RACF MG2)
GP reluctance to engage	• initially he [another practice doctor] said, "Look, I'm not going to do it. I'm really pissed off. Bugger paying them. They can pay me." (GP-P3) • There were a number of GPs at each of the facilities who just point blank refused to sign any consent (MED 3) • I provide my own afterhours care. And even during my, let's say, holiday or time off, I still provide my own care (GP-NP1) • After hours mainly on the phone, because, depending on the situation, whether they need to go to the hospital – we just give

	them advice like get the ambulance and send the patient to hospital straightaway. If it's something that is not urgent, it can be seen the next day, then I will go first thing in the morning the next day and see them. (GP-NP2)
Time pressure for RACF staff	• you need to speak to the nurse as the patient's communicator most of the time to tell us exactly and that, I think, for some nurses… they feel like it's a bit more time consuming. They need to spend time on the phone, looking through medications, talking to us, I think, they are feeling they can't deliver care to other residents. I think they really feel a sense of pressure and rush (MED2)
PHN support to set up program	• the program lead [from PHN] on `the pilot project, was just phenomenal, she actually drove out to some of the medical practices and had conversations with them and she also helped drive that initial getting all of the consents and the GP referral forms in (MED3) • They provided the templates for our doctors to fill out, so the consent forms. They provided the spreadsheets to keep up-to-date residents' charts (RACF MG2) • They were good. They were quite helpful. They always ask me if there are any problems. They can always come and talk to me about this problem. But so far, there's not much problem that I can see. (GP-P4)
MED is easy to set up and simple to use	• We didn't really have any challenges in setting up, it was nice and simple and easy really (RACF MG6-RN3) • not just the registered staff in the ward, anybody can do it in the middle of the emergency situation. She can easily grab the – call her care staff to get the iPad and press the call, and then do the video calling for her (RACF MG3)
RACF staff need to adapt to technology (challenge)	• some previous staff, they're not really into technology. But, of course, with the assistance of our care managers or whoever's working with them, just assisting each other. So we manage to

Training RACF Staff are educated and trained RACF staff train other staff Training refreshers and in service reminders provided and for new staff Staff efficacy with telehealth - easily adapted to COVID telehealth consultations RACF staff are also trained how to communicate with MED	sort that issue, and it's not really a big thing, but other than that, everything is okay. (RACF MG5-RN1) • They [MED] provided the iPad education to the staff. We scheduled for online module education and handover. (RACF MG3) • So they [MED] educated about it on how to use it [app]. And then, there's the contact numbers as well, that we can contact in case that we need some follow up (RACF MG5-RN1) • they provided us with the iPad and then they did training with me specifically and I then trained my deputies and my RNs. (RACF MG2) • they [RACF] did it when we were rostered. So they do it, because not all nurses are on. So they do it daily. And then it was mentioned as well, in an RN meeting too. (RACF MG5-RN1) • And we've done that again more recently because we've had new RNs starting and just to refresh all of us to make sure that we all remembered how to do it so (RACF MG6-RN3) • The system we have is that there's a manager on-call - and so if the registered nurses are concerned about a resident and they're having trouble getting on to the doctors [GPs] … we remind them about the after-hours telehealth doctor and say, "Why don't you give them a ring first before you ring an ambulance?" So that would jog their memories to do that. (RACF MG6-RN3) • I feel like my team knows it better for when the COVID – was implemented, because they're already used to the Telehealth After-Hours emergency calls. (RACF MG1) • they would have had some training and would have had some expectations, I think, they use an ISBAR [Introduction, Situation, Background, Assessment, Recommendation] format, and so even when they speak, obviously they are time pressured, I spend the first three minutes just listening and absorbing. I've never had a consult without vital signs (MED2)

Infection control processes RACFs implement a process for escalating care that uses MED **Consent** Consent processes to participate in MED **Privacy** Ensure resident's dignity and privacy of others Privacy is balanced against need	• With the iPad, there is one supplied after hours, iPad, for the whole facility. But the staff are aware of the infection control practices, is to just wipe the iPad before and after use. (RACF MG3) • there is a consent form and there is a protocol in place where you have to call the GP up to 6 o'clock where you know if their GP is available, they come and review them but if they're not then you call My Emergency (RACF MG4) • most of the local protocols would still be for the nursing staff to phone the local GP in the first instance, and when they are not available, to then approach My Emergency Doctor. (MED3) • before we start anyone to be interviewed by an emergency doctor when they get admitted, we ask for consent from the families and also the GP signs off the consent as well (RACF MG3) • we provided them with a draft letter or a template – which they could then amend as they would need for the facility, print on their aged care facility letterhead and arrange for signing with the patient or their next of kin (MED3) • they asked me to sign the forms. Give all the information about my patients, who I have in the nursing homes. I had to supply them my – the family contact, family on the patient file. (GP-P5) • getting consent from the GPs, that was our biggest challenge and the way that we tackled it was educating the GPs that we are really not taking their residents away from them but just making life more comfortable for residents as well as families and the hospitals by not sending residents to hospital when we can't get onto the GPs after 6 o'clock. (RACF MG4) • you just have to make sure when people are recording a resident they are in dignified manner, the roommate is not being shown, it's only focussing on what the issue in relation to that resident that they're calling for (RACF MG3) • I think if I cannot see the patient, for example, a couple of weeks ago a facial swelling, and the video app wasn't working, so I asked the nurses, obviously this brings up a can of worms. Would you be

RACFs and MED have privacy policies in place	able to send me a picture, and it brings up to another more ethical consideration about privacy. There needs to be balances of duty of care and emergent clinical need (MED2) • [RACF] has developed a telehealth policy, that's only just come out a couple of months ago, around use of telehealth and confidentiality and stuff like that (RACG MG6-RN3) • it's a confidential consultation, so when that occurs it's in a – I think they call it an encrypted space, I'm not entirely sure about the terminology there, and then also we adhere to privacy rules within the company. (MED3)
Privacy includes de-identifying reporting data	• also for de-identified data to be shared back at the end of the month via reporting to the PHN. (MED3)
Communication processes	• we got that in place, so everything is documented, the time that it was called, whatever ambulance has been called or after hour doctors have been called so that's all been logged in. (RACF MG4) • we have a log for the telehealth that was provided to us by [PHN] and that gives you the date that it happened, what time, the resident's name, date of birth, age, gender, reason for presentation. It says the clinical impression or diagnosis, outcome as in do you need to call an ambulance, do you need to go to hospital, treat onsite? And whether the after-hours telehealth organised a script or pathology requests or anything like that, so that's the sort of paperwork that we fill out for telehealth. (RACF MG6-RN3)
Clarify guidelines (afterhours)	• So we just had to remind the staff to understand what time is after hours (RACF-MG3)
PHN engaging GPs	• when My Emergency was about to be initiated by PHN, all the GPs were also at our meetings, GPs meeting informed and asked and consulted. PHN really did above board (GP-NP1) • We had an initial meeting about how to do it. That's about it. Maybe we might have had one or two communications from PHN about it. Very little actually. (GP-P3)

	• I think that GPs – I don't know whether it's just me or other GPs providing care have this information and it's quite good to know that there are these services. It would probably be better if we receive more information about the services. To be honest, I am not aware really of the extent of the services that can be offered to the residents (GP-P1).
Good communication is a priority for MED	• part of the program requirements is that we provide feedback to the client [NBMPHN] on a monthly basis and report against very specific key performance indicators… it would be the number of calls received per facility and then also confirm the number of calls that we managed in situ or the number of calls that were sent to an Emergency Department. (MED3) • I always ask them, "Would you like it faxed or emailed?" they tell them and then I'll always remind the support officers of that, just so that that's done quickly. We've got a system where the senior clinical group, with My Emergency Doctor, will audit the paperwork, a discharge summary and all their notes, to make sure that it includes everything relevant and necessary (MED1) • in all instances the [MED] administrative team will send back a clinical summary of the consultation and that will be via communication preference as stipulated by the facility, and they will also receive any imaging or pathology requests – that is sent directly to the facility. In some instances, a script is required that is our administrators will contact the pharmacy and fax through the script to the pharmacy to then fill. (MED3)
MED ensures reports go to GP	• we always send a clinical record or discharge summary to the aged care facilities, and a copy of that usually goes to the GP if we've got the GP's number, and often if I've had the chance to speak to the GP looking after them, I will ask for their fax numbers. It's not always readily available (MED2)
RACF staff forward communication and record in files	• after the call we get the report from the My Emergency Doctors, and we keep it for the next time GP comes, so that GP reviews what they did, the after-hours doctor has written (RACF MG3)

	• the paperwork is always there, and next time when I come, I always see there the paperwork generated, and the Telehealth doctors have write – some of them are quite detailed, some of them not so detailed. They put down the recommendation, what sort of treatment they have. (GP-P4)
Communication with families and residents	• The carers, they're involved with the plan also. Any calls, any issues with residents, we call the family straight away. (RACF MG3) • they're [instructions/treatment plans] discussed verbally with the family members and the resident (RACF MG6-RN3) • For example, if they have had a minor head injury and they've been completely well and you did a risk assessment and you've had a discussion with the family and you say look, this is what we will do and you get them to repeat that. Verbal repetition is important. Writing it down on paper, the specifics and discussions [MED2)
Communicating advance care plans	• if it's really straightforward and the patient's unwell that's very straightforward, yes, they should go to hospital and then I always check, do they have an advanced care directive? Is that documented and what did the family think (MED1) • we look at the advanced care plan and if it says palliative, not for hospitalisation, whatever, then we discuss that with the Emergency doctor, we talk to the family member as well, and the resident if the resident's able to talk (RACF MG6-RN3)
GPs provide health summaries and care plans which inform MED	• sometimes I do a comprehensive health summary. …The care plan is always there for the emergency doctor to review… (GP-P4) • the Emergency doctor will have a discussion with the nurse regarding the resident and discuss any relevant information to that particular presentation. So if there is any information that – or a care plan that the GP may have in place, that it's then up to the nursing staff member, who would be familiar with that and who would have the actual resident's file in front of her or him, to discuss that with our specialist doctor (MED3)
Care Plans from MED implemented by RACFs and communicated to GPs	• the registered nurse would be liaising with the Emergency doctor and then putting a plan of care in place that the care staff would

	follow and follow-up with. If the care required isn't a medication or something, well, the RN would be responsible for making sure that that gets sent to the pharmacy to be dispatched first thing in the morning. (RACF MG6-RN3) • any updates we automatically add to our care plans anyway. That's the normal process. (RACF MG2) • So the nurse would just fax to me the assessment and the plan that has been made. (GP-P1)
Experience of the MED program	
Variable GP engagement	• I would have liked to utilise it [MED] a bit more and see how it goes but one of our GPs who had quite a few residents refused to participate in the program and she said, "Nobody's seeing my residents except me." But the rest of the GPs were happy for another doctor to review their residents after-hours, they actually ticked a box that said only if I can't be contacted. So we still contact them first (RACF MG6-RN3) • There were a number of GPs at each of the facilities who just point blank refused to sign any consent…I know for one of the facilities the GPs had actually changed their mind and agreed to sign consent for his residents (MED-3)
MED fills specific needs GPs willing to refer to MED when they're unavailable	• if it's anything of emergency nature that needs urgent attention and I am unable to come, I always direct them to contact you [MED] (GP-P2)
24-hour care seen as benefit by all	• nursing home patients need 24-hour care. If there is a case where I am away at night-time, if they still can find someone if they have any problem and if there is any need of care, they can contact someone to review the patient, I'm happy. The patient is happy, the family are happy. (GP-P4)
MED extensively covers afterhours and acute care	• they're doing a good job because we use them for specific things. In the middle of the night a patient gets sick, which means the patient needs to be checked by a doctor. So it's good for that (GP-P3)

	• the GPs that comes here in the home, but at times, of course, it's very difficult. There's nothing; it's not as accessible as it is when we had the My Emergency Doctor (RACF MG5-RN1)
Care in the home is more available	• I've been really surprised at how much we are able to make a difference without the patient leaving their home and without us leaving our home. That's been, for me, a real surprise and makes it incredibly satisfying as a job. (MED1)
MED prescribing needs to be reviewed by GPs	• They [MED] might recommend that this patient should be on antibiotics, or this patient had a fall, has a lot of pain in the back, and they might write some analgesic or other drugs. They might write down "I prescribe Endone" for a few days or weeks. But the thing is, I don't know whether the change now can be written by the doctor who is actually prescribing in the Telehealth, because most of the time, I have to go back and write down what the doctor ordered, especially S8 drug. I usually don't like to write S8 myself unless I feel that it's necessary. I have to go and check because I didn't prescribe (GP-P4).
MED can be used for all populations	• it's [MED] a great app –very versatile for everyone. Anyone can use it. I hundred percent love it and support it because it's something that it can be used from toddlers right up to elderly and all culture and backgrounds because it is something that you can utilise straightaway (RACF MG4) • different cultures backgrounds do benefit from it, even Aboriginals or the Chinese. (GP-P4)
RACF staff provide reassurance to residents	• we're all in collaboration with the care staff and emergency doctor. We give assurance that the residents are cared for, and their quality of life is met as much as we can. (RACF MG3)
MED can provide care in cross cultural situations and for non-verbal patients	• our specialist Emergency doctors are well trained in dealing with people from different cultural backgrounds and also different language, diverse language backgrounds…they'll always have the nursing staff available to translate if required – but we do have access to a translator service if needed (MED3)

Sometimes MED used inappropriately ***MED program is reliable and provides valued outcomes*** MED prioritises need MED contributes to ongoing care priorities Ready access to care and advice	• For example, there's a lot of Filipinos working there, there are Filipino patients. The Filipino can interpret for them. There are other people – patients who are of Indian origin, there's an Indian there, there's a Chinese nurse there. So there are some nurses who speak their language that can interpret for them (GP-P4) • If some people have any difficulty we will just use the non-verbal sign— we will tell the doctor, he can't speak (RACF RN2) • We have been called for routine medications and that has created a bit of angst amongst us, but I see it is as if the patient or the resident does not have any other options, and for some reason, due to their aged care facilities, if it's inherent busyness or their time constraints are unable to get a GP to fill out the medication charts, and I will just say look, I will just do it. (MED2) • it's better than, for example in Nepean calls the aged care and the patient is really unwell, then the nurse will say, "This patient's really unwell" and they would get prioritised compared to, for example, a patient from Victoria who just needed a new prescription for their blood pressure medicine that they'd pick up the next day. (MED1) • I have to say that in the case of My Emergency Doctor, when they review a patient they direct your attention to what you need to review the patient because sometimes the patient may have a poly pharmacy and medication and they tell what you should do. So the general healthcare, the help is good because they direct your attention to what you need to do. (GP-P2) • sometimes, you just need advice, even for chronic cases and then something changed, then sometimes just getting advice perspective from another doctor, I think, helps us give care or manage our residents. (GP-P1) • that telehealth service is much faster to get my patients seen by a doctor afterhours. (GP-P4)

Nurses have rapid support	• look, it's good, it's good. It means I have after hours cover. So they're [RACF staff] much happier. I think they're comfortable they can contact someone after hours. (GP-P3) • the top benefit is that we can provide care for them straightaway. I think that's the best part of it, is that if we are in doubt, we can immediately call them, regardless of what the question is or what it is, they're there to support and they will answer any questions that we have. That's been a really big support. (RACF MG4) • It meets my needs, because I get some advice, some support from other staff members in cases of emergencies which reduces the risk of neglect for the patient (GP-P2) • GPs are confident that whatever recommendation from the telehealth, this is – it's from their expert knowledge (RACF MG3) • it has a very – great impact, …we can provide the immediate treatment that those residents that need. So it is less time for us our end as well because – we can just press the button, and wait for someone to pick it up… so it's very good, very helpful (RACF MG5-RN1) • it's basically given them another person to go to where the phone gets answered straightaway. So when you've got a resident who is unwell and there's only so much we can do as registered nurses, and when you're sitting and waiting for that doctor to get back to you, it is a little bit nerve wracking because you're waiting to see, okay, what are we doing here? (RACF MG2) • Before this was introduced, there were a few times where they [nurses] tried to book an after-hours GP to come for a resident, but it's already 6 o'clock in the morning, there's no-one who's come… the after-hours GPs in the area are all fully booked. But with after-hours telehealth, just press the button and then they're there. Easier access to meet their needs, and easier for them to be reviewed immediately (RACF MG3)
MED follow up with RACF staff provides reassurance	• when the GP has said, "I think the patient should go to ED"- the nurses have actually been really good when we reassure them, we

	say, "Look, we are emergency specialists and we will be sending you a letter" and what I have done a couple of times, where the nurse is very worried, I've actually called back in three or four hours to check how the patient's doing and I've found that just that one or two-minute call back after that, they found really reassuring, and it's often the patient has picked up. (MED1)
Video consultations are helpful	• it's great to have it there to know that we can ring somebody and they can actually visually see the resident after-hours if we need them, it's a great backup tool to have (RACF MG6-RN3) • the benefit has been that the RNs know that there's something that's just a phone call away, that they can actually speak to a doctor rather than talking over the phone. They can actually see the doctor and they can actually explain what's going on and show the doctor the resident rather than just doing something by phone. So knowing there's a backup there if they need it. (RACF MG6-RN3)
In aged home service is faster than ED	• by the end of the day it saves time for the patient by having to wait for the emergency and gives them the service at the facility. (GP-P2) • in the evenings and of a night and the weekend where it's been very hard to get someone to come here and see them, and we've been able to care for our residents here rather than sending them to hospital for them get reviewed, ten minutes and then be sent back. So it has been a great help (RACF MG4)
Families appreciate fast access to care	• We regularly get feedback from families that they're thankful that resident really needed to be sent to the hospital, or that patient needed to be seen by a doctor. And even if it's a night time, they're thankful that they are notified that their loved ones have been cared for, and that they're being addressed and assessed in the middle of the night. (RACF MG3) • feedback from the relatives or the guardians…from the nursing staff feedback, they always say, "Look, I've rung the guardian or the next of kin," that this patient has been relieved by the after-hours Telehealth (GP-P4)

MED reduces ambulance transfers to ED and afterhours hospitalisation	• It’s certainly reduced the amount of ambulances that are coming here and the hospital presentations which benefits the residents at the end of the day. (RACF MG2) • there’s a lot of falls in nursing homes and in the past, falls, they are always sent to hospital. But I feel that all this hospital admission or hospital consult in the emergency centre has reduced (GP-P4) • it's great to know and gratifying to know that we do provide that extra level of support for them, because in the majority of cases, in 80% of the cases, we were able to help them avoid unnecessary transfer to ED. (MED3)
MED is cost effective	• It’s cost effective because it will save people going to hospital, use the resources or the ambulance because we know how expensive it is, and the hospital, stretching the facilities the emergency (GP-P2) • from an efficiency point of view and a time management point of view, it’s certainly added to the aged care home. (RACF MG2)
Reduced stress and burden for GPs	• the GPs aren’t fielding a lot of calls, which I’m sure is giving them a better quality of life. (RACF MG2) • I know when some of our doctors give us feedback too- having that My Emergency Doctor, we don't really have to message them, especially at night-time, during after-hours (RACF MG5-RN1) • has relieved a little bit of my burden in answering calls. So, I get fewer calls from them now than other facilities (GP-P4) • So now I get to sleep, and I get to have my weekends off (GP-P3) • So I think it just lessens the stress from the GPs (GP-P1) • sometimes I am away or I would be away on holiday, I couldn’t find any doctor to cover for me. So that was the advantage, I could go away for a few days and then I would say, look, I have no cover, so they could call the afterhours, that’s really very important (GP-P1) • it saves my time because I don’t have to see everyone who is having an emergency, because when I have all the nursing homes, I can’t visit all of them. (GP-P2)

	• if I actually attended them, I bring in more money through Medicare. But I think quality of life is better for me anyway. So that means probably that the income is a bit less; it doesn't matter (GP-P4)
Reduced stress for residents when care managed in RACF	• its created a better quality of life for the residents- less discomfort, less waiting time, less anxiety that they feel that they're going to an unfamiliar environment or people that they're going to see. (RACF MG1) • if the emergency doctor says, we have to keep the resident in the facility, just monitor them. If they deteriorate, that's the only time we send them to hospital. So that feeling where they stay in their home environment. They don't get stressed being transferred from one bed to the other stretcher, and then wait there for hours. That's one positive thing. (RACF MG3) • When they go to hospital, particularly if they remain in ED all day, they come back distraught. They come back upset. It's an unsettling experience for them. And it's not necessary when you've got something like My Emergency Doctor (RACF MG2)
In home care reduces stress for families	• some residents, they don't really want to be transferred to the hospital. They want to stay here, which is good. Also, it lessens the anxiety of the family (RACF MG5-RN1) • the resident was fairly comfortable, it was the family member, the daughter, that was really, really upset and emotional and demanding that he be seen right this minute and all this sort of stuff. So it was able to allay her fears knowing that she was actually there when the Emergency doctor was talking to her dad and reviewing him and she had it straight from the Emergency doctor that, no, he didn't need to go to hospital (RACF MG6-RN3)
Residents reassured by MED consultations	• We had a lot of positives. Just two nights ago, for example, we had a resident who was having a panic attack and wanting to go to hospital and she was determined that she was going to die if we didn't transfer her to hospital, but a call to My Emergency Doctors, she was able to settle and not needing to go. (RACF MG4)

	• they are reassured that they're not just left there overnight without no-one seeing them. So they get reassurance that they've been seen by a specialist doctor from emergency, that their conditions are okay. That they don't need to be sent to hospital (RACF MG3)
Good relationships between MED doctors and RACF staff	• there's a rapport you end up building with the aged care nurses. There are some that you wouldn't normally have much to do with, because they'd be in the facility and we'd be in the hospital and seeing how much work some of them are able to do out there in the community. I think that's a huge benefit (MED1)
MED learning how to provide care in the community	• one of the good things that have come out is it has improved my communication. It improves my emphasis of certain things. I need to think out of the box when I look at a patient, or how else can I provide care remotely. How else can I assist the client remotely with delivery of medications? We used to think the patient needs to go to hospital to get a medication, now we think out of the box. Can we get a pharmacy to deliver the medication on this hopefully it has assisted us in shifting our paradigm or delivering care in hospitals and delivering care onsite, and I think telehealth over any other vehicle has done that. (MED2)
Communication from MED is efficient	• we automatically get the results straightaway. Sometimes when they go to hospital, they come back with no discharge summary and things like that. So, they automatically send the report. We communicate this to the clinical team and then it gets followed up with whatever needs to be followed up and then filed. (RACF MG1)
MED can be suboptimal at times	• the RN mentioned that this patient [of another GP] is complaining he's got no vision. I said, "Since when?" So they said, "Maybe two days" …sometimes there is lack of communication maybe Saturday he had vision and after that he has no vision in his left eye and I said, "that's an emergency, I will ring the ophthalmologist and he will contact the family and ask them to take him straightaway." I think because that patient, maybe on the weekend, must have accessed this after-hours service. (GP-NP2)

MED offers team based care involving patients	• Generally, it would be a joint discussion where our Emergency doctor will have the discussion with the nursing staff member and the residents if possible. (MED3)
Satisfaction of RACF staff MED supports an isolated workforce	• I found actually the nurses have been really happy – I personally felt a lot of positive feedback from the staff, and especially because it is out of hours and it must be quite isolating for the nurse. You know, they're often one nurse, to a whole nursing home. (MED1) • general feedback via the facilities themselves seemed to be that they were quite happy with the service and just knowing that their residents are looked after during the after hours when the GPs are not available (MED3) • So when you've got a resident who is unwell and there's only so much we can do as registered nurses, and when you're sitting and waiting for that doctor to get back to you, it is a little bit nerve wracking because you're waiting to see, okay, what are we doing here? What's the plan of attack? You've got a resident who is potentially quite upset or quite distraught and being able to just pick up the iPad and go straight through to an emergency doctor is just far more efficient for time as well, because nurses aren't waiting for those calls to make (RACF MG2)
RACF duty of care is supported	• They [RACF] get someone to depend on. Nursing home nowadays always have to document every single thing, because with the accreditation they want to make sure that the patient's safety is first. So if they can't get me, they can at least get the Telehealth doctor's advice and video facility, whether this patient needs to be in a hospital, whether it just be observation, 24 hours is sufficient. So in this case, the nursing home other staff are covered. (GP-P4)
Provides nurses with confidence	• So what it's done is allowed us to just give the RNs the confidence that you can monitor them like you would normally do in hospital and then go from there (RACF MG2) • My Emergency will take away the clash or the friction between the nurse, the ambulance and the hospital because My Emergency Doctor will then be the third opinion… takes away the dilemma and

Complementarity with GP care MED provides an incentive to attract more GPs to nursing home work	the hard feelings or the argument over the phone, which stress the RN more (GP-NP1) • at the end of the day, you want to give them the care that they need…this is really important, I think that now…I would be accessing this service and I think it will be a very good complement to the care that we, as GPs, give to our residents. (GP-P1) • We need to attract GPs to work in nursing homes and the after-hours service is actually an incentive because if you can say to GPs, "Well, you're not on call in the middle of the night, you're not on call 24/7 365 days a year," then it's much more attractive for GPs to work in nursing homes (GP-P3)
Use of other services	
RACFs prioritise MED over other afterhours services Other services when needed VACS and nurse practitioner services provide valued service within limited hours	• now our first call is to My Emergency Doctor. (RACF MG4) • only we're calling on My Health [MED]. We didn't call other after-hour doctors. (RACF RN2) • If ever they call the My Emergency Doctor it says to be followed up by Nepean Hospital VACS, then they come in here and they see that patient face to face (RACF MG3) • I work hand in hand with them [VACS], and I know the people quite well. The nurses that come to the facility …often my patients might come from the hospital, and their service will … review the patient … after the patient has been discharged. (GP-P4) • I think the nurse practitioners are better because they're embedded in the local community, they actually have knowledge of the community and they will often come in and physically see the patients as well. (GP-P3) • I have the mobile phone of the VACS in my phone, I have consulted with them over the phone regarding my patients when I am hesitating about the treatment that the hospital can provide. I'm very well-aware that the VACS team is a specialist level and they don't work afterhours (GP-NP1) • We have a nurse practitioner that we call upon but the hours that we use My Emergency Doctor is very different to the hours we can

	utilise the nurse practitioner. She does come on the weekend or the afternoon but still doesn't cover all the hours that My Emergency Doctor covers, so both hand in hand are perfect (RACF MG4)
Secondary triage helps avoid hospital	• The secondary triage when we used to call the ambulance they used to come but now actually if they think that's not an urgent thing they transfer us to them and they will determine whether we should actually call the ambulance or not so it's made it a little bit less transporting residents to hospital. (RACF MG4)
MED works with other services	• we have a physio here on site, so if there's something that comes out of My Emergency Doctor, it gets referred to our physiotherapist straightaway, like any of our referrals would. Our medications can obviously be dealt with straightaway. So if My Emergency Doctor didn't have the capacity, for example, to change the meds, we would fax Med charts through to them. They'd change them and we'd deal with our pharmacy. (RACF MG2) • we're utilising dieticians and we're doing pharmacy and all that stuff through Telehealth as well (RACF MG4) • I entered the database this morning and I see that there is a local health district flying squad or a geriatric follow up or outreach service, so, we always emphasise that the ongoing care or the more complex management of a certain issue like, for example, changing medications or a more family meetings or another reassessment face to face would be through them, because they're better suited for it (MED2)
Improving Afterhours Care in RACFs and the MED Program	
Increase community funding to enhance nurse practitioner models of care	• A lot of money spent on a program just to help the hospitals when the actual thing we really need is more staff in the nursing homes. All that money could have been spent on some extra nurse practitioners (GP-P3) • I think as an adjunct to telehealth whether it could involve some clinical nurses or clinical support staff from a network point of view to do a phone assessment of certain things as well. (MED2)

	• I think the whole COVID thing has made me realise that the most important thing for nursing homes is that they have a stable nursing workforce (GP-P3)
Need to promote MED as a complementary service and opportunity to work together	• we need to reframe so this is something new for them, new for the consumers and new for us, and we need to work together (MED2) • I think at this time it's for all of us to be more aware that there is this service. I feel that, maybe there's a need for another series of information, just to reiterate or re-establish this again. (GP-P1)
Need to continue promoting MED in RACFs and address high staff turnover	• the main thing is just consistent level of communication - a few of the facilities with higher staff turnover – so re-engaging with the new staff so that any new members of staff who come through are aware of the service. (MED3)
Increase consultation between PHN and local GPs	• I think it's a good idea if we can have one of these meetings that we can give the program coordinator [NBMPHN] ideas, because we can share ideas, do a meeting through the Blue Mountain Division or webinar when we have time, we can talk together about how to - say in case of emergency, what do you want to do, Telehealth or do you want visit the facility (GP-P2)
Consider after hours funding for GPs Sustainability needs to be considered	• It's important I think to fund afterhours consults with GPs (MED2) • My Emergency has been financially subsidised by the PHN. At the end of this trial or pilot trial any aged care facility who would like to continue on, will have to pay themselves, and the cost is not cheap – any future decision about continuity with financial sustainability has to be considered well. (GP-NP1)
Importance of good internet connections	• I think government investment in funding for good Wi-Fi solutions. I think the technical and incentives for all aged care facilities to subscribe to at least one sort of telehealth provider and either through investment through a good 5G available or 4G available, having good Wi-Fi services is really, really important. (MED2)
Emergency doctors should have local knowledge	• I would love for [MED] doctors who know the locality and the area, it's very important. I trust their medical knowledge, but one thing I am a little bit reluctant or hesitant is that they don't have the knowledge of locality. (GP-NP1)

Increased collaboration across services needed	• would maybe be useful for us, for example, if we got a call on the Saturday maybe the virtual geriatrics team [VACS] could review the patient on the Monday morning because we've had some cases where the GPs don't seem to visit that often either for some nursing homes (MED1) • I wish that sometimes they can be able to see the patient, but unfortunately it's not an option - if they can communicate with the Virtual After Hours, or they can send the nurse practitioner to come down and check the patient as well. (GP-P2)
Refining RACF communications with MED including through use of My Health Record	• the difficulty frequently…I would just love a system where they automatically took a photo of the drug chart and the past medical history and allergies. That's where I think there's a lot of difficulty, when the patient is on 20 different medications and you've got a relatively junior nurse trying to read them all out to us. And the past medical history, it's just very, very complex. That can be very time consuming… Even if they included the blood pressure and heart rate, that would just make it so much easier and then you could just focus on the actual presenting complaint. (MED1) • I think if there are some facilities which have the My Health Record and if there's no opt out, the notes are on the My Health Record, that's useful for the next clinician who sees the patient, whether it's through the My Emergency Doctor or somewhere else to access the notes. (MED2)
Better access to advance care plans	• if they're already known to palliative care physician, to have that plan ready. And then also have an advanced care directive, if that could be provided (MED1)
Advance care directives save costs in afterhours care	• Our life would be made a million times easier if every nursing home resident had an advanced care directive. It would save so much pain to the poor old patient, and of course save the country millions, hundreds of millions. (MED 1)
Increase Telehealth to include palliative care	• I personally think palliative care via video consult with someone who is pretty sick or they are expected to pass away, I think there is value in us trying to save them to go to hospital. (MED2)

Extend telehealth service to normal hours with GPs Extend service beyond nursing homes to private residents and with disabilities Continue MED afterhours service	• It would be so good if it was available throughout the day and we had our GPs on board to do that, then we could make a call through to them without having to present at ED, instead of waiting and chasing GPs to get things done and residents looked at, I think for me it'd certainly reduce day admissions. (RACF MG2) • so many senior people at Springwood at homes this would be a good service. This would be the expectation if it could extend to that. And people with disability at home of course. (GP-P2) • it would be good if we continue on with the service, for long as the service is available to us. Because it's really good that there is something that's readily available to assess or see the residents in times of emergency after hours (RACF MG3)

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