

---

## CONFERENCE ABSTRACT

### Retrospective Analysis of Telemonitoring (RATE)

4<sup>th</sup> World Congress on Integrated Care, Wellington, NZ, 23-25 Nov 2016

Friedbert Kohler, Andrew Knight, Veronica Gonzalez-Arce, Josephine Chow

South Western Sydney Local Health District, Australia

---

**Introduction:** Telemonitoring may enable early detection of clinical deterioration facilitating early intervention to avoid emergency visits and hospital admissions. Experience of telemonitoring in Australian general practice is limited. The implementation of telemonitoring in South West Sydney is an opportunity to explore how it could be further developed and implemented.

In August 2015, 20 telemonitoring devices were introduced to clients in consultation with their general practitioners as a way for delivery of integrated care for distant communities which have restricted access to different levels of health care. This retrospective study analyses the data collected from the telemonitoring project to provide insight into the delivery of telemonitoring, the triage interventions and outcomes from those interventions.

**Methods:** The aim is to analyse the early findings from the telemonitoring data to evaluate and describe the events, as well as to obtain further information to develop an evidence based guide on the model of care and utilization of home telemonitoring. This is a retrospective qualitative and quantitative analysis on the events, interventions and data obtained from the home telemonitoring equipment.

Participants were identified as a cohort of COPD patients who had had multiple admissions following discussion with the primary care provider.

This study uses de-identified data including a range of information and results on biometrics and chronic condition self-assessment ('readings') performed on a routine basis as indicated on the management plan. Data was collected between July 2015 and April 2016. Entry and discharge into and from the programme was staggered.

**Results:** Data was extracted on 18 participants aged 44 to 87. There was equal numbers of males and females. Two participants were discharged due to condition evolving into palliative care needs/facility.

2,932 readings were available for analysis. 55% of readings were of high clinical risk. 25% of readings were within the normal range. 8% of data readings were missed and a further 10% were time delayed as there was no connectivity at the scheduled time.

14 participants had GP escalations. Of the total 93 escalations 23% were related to respiratory conditions. 9 participants had hospitalisations. 51% of hospitalisations were related to respiratory conditions. 1 participant was hospitalised 4 times (only 1 time related to COPD). Overall compliance with the programme was high.

**Discussion:** The analysis demonstrates that selection criteria were generally appropriate but leaves room for further analysis as 4 participants did not need GP intervention at all and 2 participants were discharged to Palliative care. Further analysis would be useful to investigate the actual intervention and outcome when GP intervention was required.

Missed data or the loss of connectivity and its interaction with the usefulness and reliability of telemonitoring needs to be explored. The role of technology in integrated models of chronic disease care in primary and hospital care requires further exploration.

**Conclusion:** This project demonstrates a preliminary model for engaging and empowering communities for self-management. It provides a platform for co-designing health service delivery across primary and secondary care. Future research will focus on the model of care, practical barriers and facilitators of telemonitoring in General Practice.

---

**Keywords:** integrated health care; telehealth; telemonitoring; telemedicine; telehomecare; telecare

---