

Harnessing Remote Patient Monitoring Technology to Improve Transitions of Care



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Introduction

The COVID-19 pandemic has overwhelmed many hospital systems. In response, VCU Health developed a Transitional Remote Patient Monitoring program (tRPM) to leverage remote patient monitoring technology to improve transitions of care while conserving hospital resources.

Methods

Patients identified as high risk for readmission were referred to and enrolled in tRPM. They were provided with a tablet along with a pulse oximeter, blood pressure cuff and thermometer prior to discharge.



tRPM device (eVER-HOME, Dictum, Oakland, CA)

Vital signs were monitored by the tRPM nursing staff who received real time alerts for vital signs outside of preset parameters. Patients were seen by the nursing staff and tRPM provider virtually.

Retrospective review was performed of tRPM patients (04/2020 – 04/2021). The control group was matched by LACE score, need for home health, DRG and distance from hospital.

Results

The top 3 DRGs for accepted referrals (n=293) were: respiratory infections (n=147), CHF (n=84) and sepsis (n=62). 1/3 of tRPM patients were COVID-19 positive; their average LACE score was 11.7 and average age was 60.2 years.

Overall, tRPM group had lower readmission rate and similar LOS compared to the control group (15.2% vs. 23.3% & 1.1 vs. 1.2 days, respectively). 97.5% of patients reported that they were satisfied with the care received from tRPM.

DRG	GROUP	AVG. LACE	AVG. DAY OF RETURN	READMISSION %
RESPIRATORY INFECTIONS	Control (n=136)	11.3	3.5	15.4%
	tRPM (n=146)	10.8	2.9	12.3%
CHF	Control (n=229)	13.0	6.1	22.3%
	tRPM (n=83)	13.1	4.0	22.9%
SEPSIS	Control (n=265)	12.0	5.0	28.3%
	tRPM (n=61)	11.8	2.0	11.5%

DRG	GROUP	AVG. LACE	AVG. LOS
RESPIRATORY INFECTIONS	Control (n=90)	11.8	8.2
	tRPM (n=186)	10.8	8.1
CHF	Control (n=157)	13.2	6.7
	tRPM (n=109)	12.9	7.0
SEPSIS	Control (n=277)	12.5	10.2
	tRPM (n=82)	12.1	9.9

Conclusion

VCU's tRPM program has demonstrated its value in improving transition of care, particularly as shown by reduction in readmissions.

Further data analysis is needed to delineate its impact.