

Remote Monitoring and Continuous Care program improves patient experience and outcomes in patients on systemic treatment for gynecologic malignancies

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Background

Extended patient survival has shifted focus in oncology to patient experience and quality-of-life, measured through patient-reported outcome (PROM) instruments. Increasing use of oral therapies and the advent of digital technologies allow scaling back in-person encounters with healthcare teams. Building on pandemic-driven experience, we developed a remote monitoring and continuous care program (RMCC) for gyn oncology patients on systemic treatment, aimed to provide a comprehensive, continuous care experience and to optimize outcomes.

Methods

Patients beginning systemic treatment for gynecologic cancers at a tertiary cancer center are offered enrollment. Following initial multidisciplinary evaluation, patients are monitored with wearable devices for physiological measures and digitally collected PROMs for disease- and treatment-associated symptoms and toxicities, using a customized app (Datos Health). A case-manager follows a virtual dashboard and manages pre-defined system alerts, patient symptoms and concerns with guidance from responsible physicians. Pre-defined outcomes, including clinical and functional measures, patient experience and healthcare services consumption are collected.

Results: 36 patients have been enrolled (18 ovarian ca, 14 endometrial ca, 3 cervix ca, 1 sarcoma). 30 are receiving 1st line systemic chemotherapy. 7507 system alerts were triggered: 30% by PROMs, 16% by physiologic measures and 42% self-initiated (Figure 1). EORTC PATSAT questionnaires demonstrated high participant satisfaction in healthcare team-dependent domains (Table 2). Patients enrolled in RMCC had fewer ER visits and unplanned admissions per quarter, and more planned supportive ambulatory encounters than patients receiving standard care (n=290) (Table 1).

TABLE 2: EORTC PATSAT C33 questionnaire sum results (RMCC patients) (avg score - of 5)

Medical team			Nursing team		Services organization			
professionalism	information	attention	attention	professionalism	care providers & teamwork	information	medical tests	physical environment
4.4	4.3	4.2	3.5	4.2	4.2	4.1	4.2	4.0

FIGURE 1: System Alerts triggered by abnormal PROMs, physiologic measures or self-initiated patient messaging

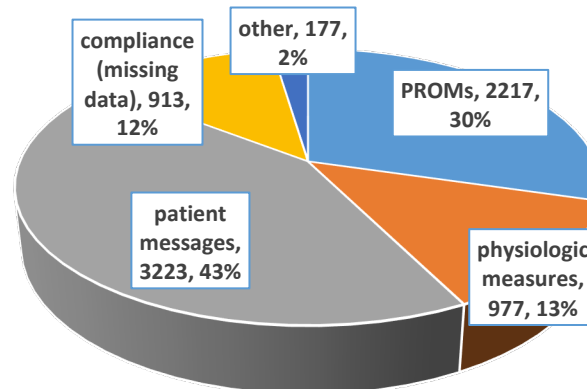


TABLE 1: Health Services consumption by patient population by program

Visits, average # per quarter (Q)	Enrolled in RMCC program	Standard Care	p value
Ambulatory visits with MRP / Q	7.93	5.91	0.038
Nursing counseling sessions / Q	7.04	0.62	<0.001
Psychology encounters / Q	6.28	0.22	0.001
Social Work encounters / Q	1.38	0.58	0.016
Nutritionist encounters / Q	0.62	0.41	0.375
Complementary Medicine encounters / Q	1.03	0.35	0.146
Supportive care counseling / Q	0.33	0.60	0.608
ER visits / Q	3.93	4.28	0.793
Unplanned admissions / Q	0.91	2.20	0.088

Conclusions: The use of remote monitoring systems creates a valuable patient experience with high patient satisfaction scores. It also reduces consumption of emergency medical services, and could expand access to tertiary services in remote communities. Increased elective ambulatory service consumption is scalable thanks to virtual care platforms. Longer-term outcomes and associations with changes in physiologic measures will be assessed over time and with a larger patient sample.