The RELIEF App: A Feasible and Effective Remote Symptom Self-Reporting Tool for Patients with Palliative Care Needs

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INTRODUCTION

The RELIEF App is a novel self-reporting tool for patients with palliative care needs to remotely communicate symptoms to their healthcare team through validated measurements. Its primary purpose is to initiate proactive care aimed at reducing preventable emergency visits, unwanted outcomes, and their associated costs on the healthcare system.

2018 PILOT TRIAL

In 2018, a RELIEF pilot study was launched at a major community hospital in Ontario with 13 patient participants as users of the app for 2 months. At its conclusion, no patients had emergency visits due to symptom management, and an estimated CAD 60,000 was avoided. Patient engagement and staff feedback strongly favoured the RELIEF App as a feasible and effective tool for remote symptom self-reporting.

2021 RETROSPECTIVE REVIEW

In 2021, a retrospective cohort of control patients was matched to the RELIEF pilot participants based on diagnosis, stage of disease, age, and sex. Matched analyses were conducted to examine the significance of the pilot results. It was found that RELIEF patients had significantly fewer emergency visits ($p < 0.05$) and significantly fewer non-symptom related emergency visits than the control group ($p < 0.05$). However, no significant differences were found in the number of admissions or admission length of stay between the two groups.

Table 1. Characteristics of control and RELIEF patients.

Characteristic	Control Group	RELIEF Group
n	13	13
Age—Mean (SD)	63 (7)	67 (8)
Age range	52–74	53–74
Sex—% (n)		
Female	46% (6)	54% (7)
Male	54% (7)	46% (6)
Diagnoses (n)		
Metastatic lung cancer	2	2
Metastatic breast cancer	4	4
Metastatic pancreatic cancer	3	3
Metastatic ovarian cancer	1	1
Multiple myeloma	1	1
Metastatic cholangiocarcinoma	1	1
Metastatic colon cancer	1	1

Figure 1. Summary of patient outcomes over a 60-day period between the control and RELIEF-user groups.

denotes a significant difference
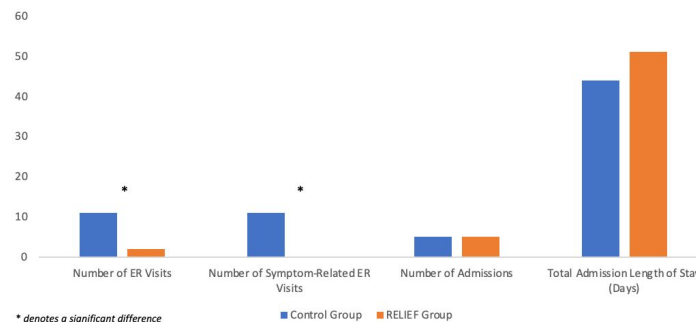
CONCLUSIONS

Overall, the RELIEF App has been demonstrated to be an acceptable and effective remote symptom self-reporting tool in reducing emergency visits for patients with palliative care needs and avoiding the associated healthcare costs. A larger multi-site RELIEF study is ongoing, and further results will be published.

REFERENCES

1. Bhargava, R. *et al*. RELIEF: A Digital Health Tool for the Remote Self-Reporting of Symptoms in Patients with Cancer to Address Palliative Care Needs and Minimize Emergency Department Visits. *Curr. Oncol.* **28**, 4273–4280 (2021).