

 OUTCOMES RESEARCH

Improving outcomes demands patient-centred interventions and equitable delivery

Gabrielle B. Rocque  and Abby R. Rosenberg

A recent study not only confirms mounting evidence that technology-facilitated symptom monitoring improves care and should be considered for all patients with cancer, but also suggests that patient navigators can help to deliver such interventions. Herein we discuss how such an approach can minimize disparities and maximize access to culturally appropriate patient-centred care.

Refers to Mir, O. et al. Digital remote monitoring plus usual care versus usual care in patients treated with oral anticancer agents: the randomized phase 3 CAPRI trial. *Nat. Med.* <https://doi.org/10.1038/s41591-022-01788-1> (2022)

hospitals. These transitions might be indicative of responses to certain patient-reported symptoms. Importantly, the care coordination efforts of patient navigators extend across medical oncology, radiation oncology and surgical oncology. The ability of these navigators to interface with multiple disciplines is important, given the reality that many patients with cancer also have comorbid conditions and symptoms that are not directly related to their cancer or its treatment. Nurse navigators not only have the skill to manage symptoms, but also the ability to interact with other care providers and triage the patient's needs to the appropriate member of their care team. Thus, navigators are uniquely positioned to lead home-based programmes, including CAPRI, that facilitate the early detection of symptoms and care coordination.

Using navigators, both lay and nurse, to deliver other evidence-based interventions has proven successful in comparative research studies. For example, trained lay navigators can successfully facilitate advance care planning conversations with adult patients with cancer, ultimately reducing end-of-life hospitalization rates (46% versus 56% in patients declining participation; $P = 0.02$)⁵. Another navigator-led caregiver intervention reduced reporting of depression and anxiety in caregivers of adults with cancer⁶. In a study involving adolescents and young adults, a lay coach-led resilience-building programme improved patient-reported quality of life, hope, resilience and psychological distress⁷. Together, these experiences highlight opportunities to expand the role of navigators to better support patients. As the oncology community further defines the core evidence-based interventions needed to deliver high-quality care, navigation programmes can have an important role in their implementation and sustainability.

“Remote symptom monitoring is, in fact, another form of screening with the same potential for improving outcomes”

A key limitation of the intervention of Mir et al. is the exclusion of patients without access to a phone and/or the internet, which prompts us to question who was left behind

Robust evidence indicates that provision of symptom monitoring and triggered clinical support services, outside of the four walls of oncology offices, improves patient outcomes. In adults with advanced-stage cancers, technology-facilitated remote monitoring using patient-reported symptoms improves symptom control, quality of life, health-care use and, ultimately, overall survival¹. In children, studies suggest that oncology, health-care providers tend to minimize, whereas parents and caregivers tend to exaggerate, symptom incidence and severity². Systematic collection of patient-reported outcomes is necessary to accurately assess a child's symptoms and make corresponding medical decisions.

A study by Mir and collaborators adds to this mounting evidence base by demonstrating that the CAPRI intervention, which combines technology-facilitated monitoring with usual symptom management in adult patients receiving oral anticancer agents, improves patient outcomes, as compared with usual care. Relative dose intensity (the primary end point) was higher in the CAPRI group (93.4% versus 89.4% in the control group; $P = 0.04$), as was treatment experience (Patient Assessment of Chronic Illness Care score of 2.94 versus 2.67; $P = 0.01$). These improvements were

associated with reductions in the incidence of grade ≥ 3 toxicities (27.6% versus 36.9%; $P = 0.02$) and duration of hospitalization (2.82 days versus 4.44 days; $P = 0.02$)³. Collectively, these findings support the increasingly undeniable value of using technology-assisted programmes to monitor and support patients at home.

Although few in the oncology community deny the potential utility of this approach, the operational logistics and costs associated with deploying remote-monitoring programmes are not trivial. Adding workload to an already strained clinical workforce facing pandemic-related burnout presents a substantial challenge. Even though Mir et al. focused on patient outcomes, their research also presents an important implementation approach that addresses these key operational challenges³. The use of nurse navigators to deliver the intervention demonstrates feasibility with a sustainable workforce whose natural roles align with the intervention. Indeed, patient navigators (either nurses or lay individuals) empower patients by helping them to identify and overcome barriers to accessing high-quality health and psychosocial care⁴. Patient navigators are accustomed to connecting with patients at home and assisting them with transitions between home, clinics and

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by this approach. In a study conducted in 2021 by the Pew Research Center in the USA, only 65% and 71% of patients who identified as Hispanic and Black, respectively, had home broadband internet access, compared with 85% of those who identified as white⁸. In another study involving cancer survivors in the USA, those who reported not using the internet were more likely to be older, less educated, live in a rural area, or identify as having an ethnicity other than white, as compared to those who used the internet⁹. For children and adolescents, the technology divide has additional implications: a child is not only reliant on their household internet access, but also on the availability of their parents or caregivers to help to access electronic devices, supervise intervention delivery, and navigate the overall health-care system. Integrating technology-based solutions into standards of clinical care thus risks exacerbating health disparities. During the COVID-19 pandemic in the USA, for example, patients who were older, Black, and/or from lower-income areas reported the lowest use of telehealth services, another key technology-facilitated intervention⁹. Moving forward, it will be crucial that effective technology-based interventions are accessible to all patients.

Here again, we see the advantage of delivering technology-based interventions within the context of patient navigation. Patient navigation was created in the 1990s as a solution designed to overcome health disparities in cancer screening. The first navigation programme, led by H. Freeman, focused on providing better access to cancer screening and subsequent medical care at Harlem Hospital Center (New York), which serves

a predominantly Black community. Over a period of 22 years, the navigation programme changed the proportion of patients presenting with early stage breast cancer (as opposed to late stage) from 6% to 41%. The improvement in screening and access to treatment ultimately improved 5-year overall survival for breast cancer from 39% to 70% in this community¹⁰.

Remote symptom monitoring is, in fact, another form of screening with the same potential for improving outcomes, but also for challenges in access and equity. When considering how to deploy new types of technology-facilitated interventions in otherwise difficult-to-reach communities, oncologists should draw lessons from the history of cancer screening endeavours. As demonstrated by Mir and collaborators, a similar navigator-led approach to symptom monitoring might become a key strategy for overcoming disparities and improving outcomes.

The time has come for the oncology community to challenge health-care providers, institutions, and payers to drive forward the equitable implementation of novel patient-centred interventions, including remote, technology-facilitated symptom monitoring and other evidence-based supportive care programmes. Our current models for implementing interventions are insufficient and, thus, we must redefine how we deliver care to ensure that these successful supportive-care interventions truly reach all patients. As Mir and collaborators demonstrate, patient navigation has the potential to meet this challenge and enable change.

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