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## FRACTIONATION AND CHANGES IN PATIENT CARE

# Propelling a New Era of Patient Education into Practice—Cancer Care Post—COVID-19

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The need for patient education is widely recognized. Patients who are educated about their illness are better equipped to understand and manage their health and medical care.<sup>1,2</sup> Patient education is effective when patients receive information from health care providers that is supplemented with patient education materials to help them to recall and take action on what was communicated to them.<sup>1,2</sup> The integration of patient education materials into clinical care has lagged behind best practices for decades<sup>3,4</sup>; however, the COVID-19 pandemic has propelled the provision of patient education into the 21st century. COVID-19 created an immediate sense of urgency to integrate and deploy innovations in patient education into standard clinical care. It provided traction for collaboration across professions and facilitated access to decision makers within the organization to advance the agenda of upgrading patient education processes. As a result, the provision of digital patient education has been integrated into the standard of work for a variety of health care professionals.

Patient education is a critical aspect of quality cancer care.<sup>5</sup> Patient education has been found to reduce repeat hospitalizations and visits to emergency departments<sup>6</sup> and to improve patient and caregiver quality of life.<sup>1</sup> Although the science of patient education and health communication has steadily progressed, only modest gains have been

realized in routine clinical cancer care.<sup>4</sup> This is attributable to a number of factors, including a lag in translating evidence to action at the health systems level; the lack of widespread adoption of patient education skills competency development in health professional training programs<sup>7</sup>; competing priorities in clinics, including time constraints,<sup>8</sup> lack of health care provider awareness of and access to quality patient education materials<sup>8</sup>; and challenges with traditional models for patient education. This editorial will focus on how the move to virtual care to contain the spread of COVID-19 has provided an opportunity for advancing digital patient education.

Traditionally, patient education is conducted in person through one-on-one teaching with health care providers, group classes, and the provision of written materials (eg, pamphlets or printed lists with links to web-based materials). However, this approach, which requires patients and families to learn a significant amount of new information at a time when they are unwell, overwhelmed, and experiencing fear and distress contravenes key principles of adult learning, including motivation to learn and learning being an active exchange between educator and learner. In addition, owing to the prevalence of low health literacy, patients are unlikely to appreciate how taking an active role in their care can improve their outcomes.<sup>9</sup> In this context, most

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patients and caregivers are not prepared or positioned to absorb new information from their health care providers when it is provided to them.<sup>10</sup>

Another challenge with in-person education is that it commonly requires patients (many while very sick) and caregivers to make additional visits to the cancer center.<sup>11</sup> Data from an ongoing study at Princess Margaret Cancer Centre (UHN REB waiver #18-0228) revealed that in the current paradigm of in-person patient education, 86% (338/391) of patients who attended a group patient education class made an extra visit to the hospital to attend it and 41% (124/304) of patients who were currently working reported having to take time off work to attend a class. This raises concerns regarding equity of access to critical education programs.

Multiple other factors also can limit patients' participation in in-person educational opportunities, including out-of-pocket expenses related to time off work and travel (parking and transportation), feeling unwell, limited English proficiency, and discomfort with group learning about difficult topics in cancer that can be personal and emotional. Combined, these factors unintentionally limit equity and inclusion and may increase cancer disparities for patients with lower socioeconomic status, patients who live in regions geographically distant from the cancer center, patients with low English proficiency, and other key determinants of health.<sup>12</sup> These considerations present an urgent need for patients and caregivers to access information without the barriers of distance, cost, and health status.

Reducing in-person clinical care has been an essential aspect of protecting patients, health care providers, and health system resources during the COVID-19 pandemic.<sup>13,14</sup> To achieve a 50% to 80% in-person service reduction, the Princess Margaret Cancer Centre rapidly moved to a virtual care model. A multiprofessional group of key stakeholders worked collaboratively over a short period of time to realize this transformation. This responsive and cohesive collaboration, commonly seen during pandemics,<sup>15</sup> was due to a united focus on maintaining safe and timely care during the pandemic via virtual care. The united focus on virtual care allowed for communication between the education team at the cancer center and broader cancer program stakeholders. Although the benefits of virtual care at this time are indisputable, the vast reduction in in-person services has had significant impacts on the transmission of critical information and education between health care providers and patients<sup>16-18</sup> and the patient experience and may have consequences that affect the quality and safety of clinical care. The COVID-19 pandemic and the subsequent rapid deployment of virtual care provided a unique opportunity to advance the delivery of digital cancer patient education.

Princess Margaret had a robust digital patient education ecosystem in place before the COVID-19 pandemic. This includes 3 core education tools: the Princess Margaret Cancer Answers (PMCA) search engine, Princess Margaret Cancer Classes Online, and the Digital Education Stations.

The PMCA<sup>19</sup> is a search engine that is designed to help individuals with low health literacy find reliable cancer-related patient education materials. PMCA searches a database of high-quality cancer consumer health materials that adhere to best practices, including plain language. The PM Cancer Classes Online ([pmcancerclasses.ca](http://pmcancerclasses.ca)) is a website where patients and family can access more than 45 multimedia classes about cancer anywhere and at any time. Users can stop and restart classes where they left off, share classes with family and other care providers, print learning summaries, and view a range of topics in cancer from prevention to survivorship. Each of these online classes were cocreated by subject matter experts including a multiprofessional team of clinicians to create a connected narrative; patients and their families for provision of lived experience; and the education team specializing in health literacy, plain language, and plain design to optimize accessibility and user experience. The Digital Education Stations is an online system that contains curated inventories of patient education materials by disease and treatment modality, developed to help clinicians order materials for their clinics.

Despite the existence of the digital ecosystem of patient education tools, the education team was challenged in getting health care providers to routinely use them to refer patients and patients' families to patient education materials within the digital ecosystem. During the pandemic, to respond to the rapid move to virtual care, these digital education tools were integrated into a Digital Education Prescription, enabling health care providers to tailor a list of multimedia patient education materials to their patients and email them the list, in place of in-person teaching. The prescription accesses materials from PMCA, PM Cancer Classes Online, and the Education Stations database, pulling over 1500 patient education materials including videos, pamphlets, eLearning modules, and drug information sheets.

The Digital Education Prescription has a number of benefits; chief among them is increasing patient access to critical education. As a result of the integration of digital education with virtual care, we have seen significant uptake in usage of the tools within the digital ecosystem among health care providers, patients, and families. For example, since its launch in September 2019, PM Cancer Classes Online has had a steady stream of new users on a monthly basis; however, when in-person classes were cancelled in March 2020 due to the pandemic, there was more than a 40% increase in new users. Another benefit is that patients receive education materials that are endorsed directly by their health care providers. The literature shows that patients prefer and trust information that is given to them by their health care providers over information they find themselves,<sup>20</sup> and the Digital Education Prescription facilitates this exchange. In addition, the digital patient education ecosystem houses standardized course content for consistent teaching across professions; all of the materials included adhere to patient education best practices,

including adult learning principles, plain language, and plain design, which can support health literacy.<sup>1</sup> Finally, the digital patient education ecosystem may also facilitate greater interinstitutional collaborations, realizing educational materials as global public goods.

When restrictions on in-person care ease, we will be able to realize an optimal blended model of patient education that leverages the strengths of in-person teaching and digital education. However, despite the enthusiasm we feel in addressing some of the limitations of traditional patient education models within clinical care, we must critically examine these new blended models for unintended effects. Such a radical change in practice requires attention to areas of particular risk where these changes may increase disparities. These include patients with limited access to digital resources and those with limited digital literacy.<sup>12</sup>

In conclusion, COVID-19 has ushered in a new era for the delivery of patient education, a merger of in-person and digital education drawing on the strengths of both approaches, which may increase access to education, reduce disparities, and ultimately quality of care. Further work to study this digital paradigm in diverse patient groups is required.

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