

# Virtual Reality as a Bridge in Palliative Care during COVID-19

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## Dear Editor:

The ongoing COVID-19 pandemic has invoked a global outpouring of fear, anxiety with much media attention focused on rising death tolls, strained health care systems, and crashing economies. With limited resources and rapidly increasing number of patients, the desperate race to fight for the living has understandably but regrettably led to inattention to the dying.<sup>1</sup> The needs of those who are on their deathbeds are often overlooked, with the most vulnerable population such as the elderly, immunocompromised, often being disproportionately affected.<sup>2</sup> The act of dying alone is irrefutably traumatizing, aggravated by the fact that upon being diagnosed with COVID-19, patients often undergo rapid deterioration, giving them little or no chance to find closure with their loved ones before demise.<sup>2</sup> The potential psychological impact on loved ones can be complicated—ranging from grief and depression from acute loss to immense guilt for not being physically present, all of which may last a lifetime.

Virtual reality (VR) has a burgeoning role to play in palliative care, particularly during COVID-19 where physical interactions are strictly prohibited till death.<sup>1</sup> Currently, video conferencing (VC) is the choice of communication, but recent advances in VR technologies has opened up experiential modalities that can push the boundaries of communication in ways that VC cannot offer.

VR can simulate physical locations and can hence be employed in paving the way for a good death by allowing patients to undergo experiences on their bucket list such as visiting Japan during cherry blossom season.<sup>3,4</sup> Likewise, as most patients do not wish to die in a hospital and would prefer the comfort of their home and company of their loved ones, patients can choose their ideal location of care during their last days using VR.<sup>3,4</sup>

VR can also be used to record patients in their last few weeks during their lucid moments. The recordings, with its hologram-like projections, will enable loved ones to treasure their last memorable moments with the patient in a way that VC is unable to rival, and is better able to offer emotional closure and fulfillment.

Last but not least, VR devices that are currently being developed may possess the potential to allow real-time interaction in an augmented reality setting that simulates physical presence

itself. Although this is not fully established yet, the potential joy of being able to feel as though one is physically surrounded by loved ones during times of illness cannot be understated.

VR cannot replace the inexplicable comfort and support that arises from physical presence of loved ones, but it is the next best alternative that currently exists. Patients and families should hence be briefed that they will be experiencing a simulation that would help set appropriate expectations and maximize satisfaction. Technology should enable patients and families to have more meaningful relationships with each other, with the goal of overcoming emotional isolation that invariably accompanies physical isolation.<sup>1</sup> If done appropriately, VR technology can bring psychological care and comfort for patients and their families by enabling remote interaction with dying patients or fulfilling dying wishes.

## References

1. Usher K, Bhullar N, Jackson D: Life in the pandemic: Social isolation and mental health. *J Clin Nurs* 2020 [Epub ahead of print]; DOI: 10.1111/jocn.15290.
2. Arya A, Buchman S, Gagnon B, Downar J: Pandemic palliative care: Beyond ventilators and saving lives. *CMAJ* 2020;192:E400–E404.
3. Baños RM, Espinoza M, García-Palacios A, et al.: A positive psychological intervention using virtual reality for patients with advanced cancer in a hospital setting: A pilot study to assess feasibility. *Support Care Cancer* 2013;21:263–270.
4. Niki K, Okamoto Y, Maeda I, et al.: A novel palliative care approach using virtual reality for improving various symptoms of terminal cancer patients: A preliminary prospective, multicenter study. *J Palliat Med* 2019;22:702–707.

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