



# Using Technology to Give Patients a Voice After Surgery for Head and Neck Cancer

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For patients with head and neck cancer, altered communication is a frequently occurring and highly upsetting issue that has been associated with psychological distress, fear, and anger among those with temporary or permanent speech impairment post-surgery. Many postoperative patients express that the most terrifying situation is to wake up from surgery and not be able to speak. Mobile devices have become part of everyday life, and augmentative and alternative communication mobile applications have the potential to enhance the healthcare journey of the patient and provider.

## At a Glance

- Patients with cancer undergoing head and neck surgery often experience psychological stress associated with the inability to effectively communicate.
- Communication challenges often occur in the postoperative period, and using technology to assist with communication can be beneficial to the patient and nurse.
- The use of mobile devices and augmentative and alternative communication mobile applications in the healthcare setting can lead to less stress, improved patient-provider communication, and increased patient satisfaction and outcomes.

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Patients with cancer who undergo head and neck surgery that results in impaired verbal communication have limited options to assist them in communicating their needs after surgery (Happ, Roesch, & Kagan, 2004). Because of this impaired verbal communication, nurses are challenged to find ways to aid these patients for optimal recovery. Patients who are scheduled for a tracheostomy or laryngectomy are often found to have greater communication concerns (Happ et al.,

2004). A mobile device can facilitate and bridge communication between patients and healthcare providers in the immediate postoperative period.

## Background

Through innovation and advances in technology, healthcare providers now have the opportunity to use mobile devices and mobile applications (apps) to provide better care and improve patient outcomes (Ventola, 2014). Patients can

benefit by making use of smartphones and the Internet to perform health-related searches and potentially become better-informed consumers. Although not all medical information on the Internet is credible, having this option can be beneficial for opening discussions with healthcare providers. Technology is being used more frequently in health care, but a review of the published literature showed minimal research where a communication app was used in the postoperative setting. A mobile device (e.g., smartphone, tablet computer) could be used as a tool for pre- and postoperative patients to communicate information that will help nurses and other healthcare professionals continue to deliver quality care (Flores et al., 2012).

According to the Pew Research Center (2014), 90% of Americans own a mobile device, and 64% own a smartphone. Introducing a mobile device with an augmentative and alternative communication (AAC) app can serve as a temporary means of communication, reduce stress, and enhance quality of life (Miglietta, Bochicchio, & Scalea, 2004). However, limited research was found regarding the use of communicative applications to facilitate communication among patients with head and neck cancer in the immediate postoperative period (Happ et al., 2004).

## Altered Communication

Various surgeries result in altered communication for patients. Head and neck surgery is a type of surgery that may lead to compromised communication. For example, following a total laryngectomy, immediate and permanent loss of the ability to speak can be