



Case #651

Ventalect – Quick and Easy Communication Tool for Ventilated ICU Patients

Ventilator patients often experience difficulties with communication due to intubation, and in the US alone, 800,000 ICU patients per year are awake, but unable to talk. Currently-used technology is slow, cumbersome, and not nuanced enough to allow adequate patient participation in detailed decision making. Using current technology 50% of ICU patients need communication assistance from a family member or caregiver, which results in anxiety, frustration, and panic, and three times the rate of preventable adverse events compared to verbal patients. The financial cost of these adverse events in the US alone is \$1 billion. The Ventalect technology is a system and method to allow patient communication in an ICU, rehabilitation, or long-term care setting where the patient is unable to talk due to mechanical ventilation or other disorder. The technology allows the patient to communicate independently with healthcare providers and family, engaging in complex conversations, and participating in their care decisions, even when unable to speak. The technology is simple to learn and can be used by patients with limited upper extremity mobility.

Applications:

- ICU patients with acute respiratory failure on mechanical ventilation
- ICU patients and chronically ill patients with communication disorders

Advantages:

- Patient can use tool to initiate communication
- Patient use is independent and does not need a third party to assist
- Not dependent on extremity mobility and can be used easily by patients with restraints or muscle weakness.
- Can be used immediately on waking up from sedation
- Needs minimal instruction to use, creates accurate and timely communication
- Allows patient to participate in complex discussions and participate in their care decisions
- Can generate speech, interact with nurses' station and interface with EHR and other patient monitoring systems

Intellectual Property and Development Status:

Software copyright and proprietary database. Potential algorithm.
Looking for both licensing and industry partners for development

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