



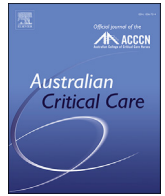
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Editorial

## Coronavirus disease 2019 (COVID-19) cuts ties with patients' outside world<sup>☆</sup>



### 1. Mechanisms and manifestations of altered communication function in the intensive care unit during COVID-19

Communication relies on more than words. Facial expressions, gestures, and voice qualities convey essential meaning and context to conversations. The importance of clear and effective communication is an essential aspect of care within the intensive care unit (ICU), impacting safety, delivery of care, and patient experience. The COVID-19 pandemic has altered the manner and mode of communication in the ICU for both patients and healthcare professionals. The transmission risk of the highly infectious SARS-CoV-2 has necessitated the use of personal protective equipment including masks and face shields, radically impeding oral communication and the human interactions that support it.<sup>1</sup>

Before COVID-19, face-to-face conversations were only affected by masks in isolation rooms and surgical suites. In the context of COVID-19, healthcare professionals in the ICU are sporting different attire. Use of personal protective equipment is ubiquitous, including face masks, face shields, goggles, and gowns, each obscuring important facets of communication among healthcare providers (HCPs) and between HCPs and patients. All promote safety, while impeding communication in some form. Perhaps the most obvious barrier to communication is the unassuming face mask, impeding facial expressions, preventing lip reading, reducing voice volume, distorting speech, and muffling voice intonations. Not to be outdone, face shields and goggles bring with them glare and difficulty seeing the speaker's eyes. Gowns simply cover HCPs' IDs, removing the last verifiable method for identifying the person with whom you are speaking. The ICU environment itself, with constant noise and alarms, provides limited context to aid conversations. Ease of "normal" speech intelligibility is reduced by 13–17% while using N95 masks, with HCPs confirming communication difficulty with patients during their clinical use.<sup>2,3</sup> Loss of speech intelligibility negatively impacts the strength of the outgoing message and understanding key messages. Altered communication may leave patients vulnerable for compromised medical care.<sup>4,5</sup>

### 2. Augmentative and alternative communication systems and strategies during COVID-19

Communication between HCPs and critically ill patients can be significantly impacted and creates challenges for both parties.<sup>6</sup> Considerations for best use of augmentative and alternative communication (AAC) systems and strategies across the continuum of

intensive care and recovery are required during this pandemic. Visual supports, such as photographs of nurses, doctors and therapists, to support identification of communication partners and age/education-sensitive visual aids for instructions and medical procedures (e.g. tracheal suctioning, bed repositioning), can increase comprehension and communication. Emphasised use of vocal characteristics, such as increased volume and intonation, serve to improve speech distortion on the listener's side of the face mask.

AAC systems, specifically those used during mechanical ventilation via a tracheostomy, may involve aerosol-generating procedures and increase transmission risk for HCPs and other patients. Specific interventions to facilitate voice, such as above-cuff vocalisation, leak speech, and inline speaking valves, are considered aerosol-generating procedures and have recommendations to minimise their use as a communication intervention during COVID-19.<sup>7</sup> Communication can be facilitated with use of alphabet boards, picture boards and other low- and high-tech devices; however, these may be considered inferior to aids that enable speech.<sup>8</sup> Successful implementation of AAC systems requires access to a variety of equipment to meet communication need diversity, dedicated staff training, and—ideally—family presence and sufficient staffing.<sup>9</sup> The increased need and use of AAC systems and strategies is parallel with the global need and use of additional staff resources and ICU beds during this pandemic, potentially resulting in reduced patient support during its implementation. Caution must be exercised, however. Any physical communication system is a potential source of viral transmission, requiring proper disinfection after use, especially with SARS-CoV-2 remaining viable for as long as 3 d on plastic.<sup>10</sup>

### 3. Impact of restricted visiting and physical isolation

Family presence in the ICU is important. Family visitors provide a sense of safety, security, and comfort to patients, at a time when they are extremely vulnerable.<sup>11</sup> Details and decisions relating to patient care in the ICU often involve communication and discussions around the bedside, with family members taking the roles of advocates and translators—sources of detailed patient history and wishes. Visitors are restricted entry to the hospital, let alone ICUs during COVID-19, limiting patients' access to engage in and receive support from their loved ones. Although remote communication with family is possible via an electronic device, not all patients or families access/use this type of communication.<sup>12,13</sup> Communication may be further impeded with inadequate access to assistive devices, such as glasses, hearing aids, and/or magnifying glasses. Loss of fine motor skills and strength associated with ICU-acquired weakness

<sup>☆</sup> The content of this manuscript was not presented.

compounds difficulties for communication assistive device manipulation while ventilated or even shortly after extubation. Laryngeal injury from intubation is also common, with an average of 76% of patients experiencing disordered voice quality.<sup>14</sup>

#### 4. Communication solutions during the COVID-19 pandemic ... and beyond

Technology continues to enable increased and varied communication opportunities, and effective use of this technology is also reliant on ensuring adequate access to speech-language pathology services in intensive care units.<sup>15</sup> For those patients with the cognitive and physical abilities, independent use of mobile devices can be used to connect with families and friends, even aided by clinicians during acute rehabilitation. Mobile devices afford opportunities to communicate face-to-face, support visualisation of facial expressions and clear voice intonation in video calls, improving potential for communication success. Messages may be pre-recorded by families so that patients can access electronic messages when they are most alert. Delirium is common in critical illness; assessment and strategies to minimise the occurrence of delirium are equally important.<sup>16</sup> Familiar voices can have a positive effect on reduction of patient delirium and may provide a sense of calm to an otherwise distressed patient.<sup>17</sup> Use of mobile devices allows the family to participate with clinician–patient interactions when physical presence is not possible. The lack of these valuable resources has given rise to innovation, including new industry collaborations to enable communication solutions and connect voices again.<sup>18</sup>

#### 5. Summary

Communication is a human right and an essential need during the COVID-19 pandemic. Innovation, technology, and skilled health professionals are all joining together to increase communication opportunities for patients isolated in ICUs with COVID-19. Now is the time to maximise and capitalise on engagement of multidisciplinary approaches within the ICU team, starting with efforts to improve clinician–patient and patient–family/friends communication, the effects of which will last long after hospital discharge and when the pandemic is over.

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