

Supplemental Material S4. Communication breakdowns reported by providers.

Theme	Sub-Theme	Number of participants [ID]	Percentage (N = 52)	Quote
Strategies providers used to support patients' communication and attempt to resolve communication breakdowns	Ask yes/no questions	14 [3, 4, 5, 7, 9, 17, 21, 22, 24, 26, 38, 40, 51, 52]	26.9%	<p>Patient's able to nod yes or no but who experience difficulty with expressing their needs get frustrated and give up after several attempts to clarify what they are asking or looking for.</p> <p>Try to elaborate more or try to ask follow up yes/no questions that can be nodded to.</p> <p>I run down the list of things I think they might want and count on them to shake their head yes and no.</p> <p>I sometimes offer some possible problems and have them answer yes or no.</p>
	Use whiteboards	10 [3, 7, 8, 12, 16, 27, 36, 46, 50, 51]	19.2%	<p>... things to write on a board and then giving up when handwriting unintelligible.</p> <p>I used a whiteboard with a number of different words identifying possible need.</p> <p>I obtained a whiteboard, but that was a process.</p> <p>...usually they are restrained secondary to risk of self-extubation which makes it difficult to use a whiteboard.</p>
	Read patients' lips while they were mouthing words	12 [1, 17, 19, 21, 25, 26, 31, 33, 34, 44, 49, 50]	23.1%	<p>Lip reading another language (Spanish speaking trach/vented) is difficult--they have often given up after I have gone through as many options of what they may mean or need.</p>

				The patient had a trach in place, so I was trying to lip read what he was saying. He was also tetraplegic thus unable to move his arms to assist with communication.
				If they can't write or I can't read their lips, I will go to simple yes/no questions and have to shake their head.
	Use communication boards (i.e., message boards, picture boards, spelling/letter boards)	6 [4, 26, 30, 36, 44, 50]	11.5%	We tried a spelling board.
				We tried to guess what he wanted then went to an alphabet board to attempt to spell out what he wanted.
				She did not have her glasses and was unable to read the message board and was too weak to write.
				Additionally dependent upon a patient's weakness they may not be able to accurately point or write which limits use of whiteboards and picture boards.
	Paraphrase, questions, provide more details	4 [4, 9, 10, 29]	7.7%	Try to elaborate more.
	Ask patients to point	1 [7]	1.9%	...ask them to point to where there is a problem.
	Ask other providers (e.g., nurses) for help	1 [2]	1.9%	Ask the bedside nurse for help.
Negative consequences followed by unaddressed communication breakdowns	Patients experienced emotional distress (e.g., frustration) and gave up communication attempts	14 [6, 22, 24, 25, 27, 28, 30, 31, 41, 44, 45, 46, 51, 52]	26.9%	...patient was trying to get my attention and request something. I used a whiteboard with a number of different words identifying possible need. The patient became more agitated and insistent with her expression. Until finally, I noticed in their eyes that they had just given up the effort. Then, after a few minutes of frustration on patient's behalf, and my attempted empathy to understand the patient, the patient then used his eyes to indicate a backpack in the room, and finally after searching through the backpack,

we settled on a phone and indicating his wife's contact. That's how I knew he wanted me to get in touch with his wife. The whole encounter took me near 20 minutes.

Patient attempting to communicate with therapist during initial evaluation. Therapist unable to discern concern and patient rolling eyes, giving up and shut off remainder of session.

The patient had a trach in place, so I was trying to lip read what he was saying. He was also tetraplegic thus unable to move his arms to assist with communication. We tried to guess what he wanted then went to an alphabet board to attempt to spell out what he wanted. Unfortunately, our understanding or his spelling was ineffective, and we were not able to figure out what he wanted quickly enough so he gave up instead out of frustration.

This has happened in several instances where a patient is unable to write due to condition and simply cannot mouth clear words. Sometimes the patient tries to mouth too many words at once. Other times the patient thinks they are making sense but are not and are writing things that don't make sense.

After a patient tried 4 times to mouth something, he became fatigued and proceeded to close his eyes and shake his head as if to say, "never mind." We continued to try to decipher what he was trying to convey, but he was exhausted physically, cognitively, an emotionally (and probably frustrated).

I had a trached patient that had a lot of questions and if I was unable to guess what her gestures/weak handwriting meant Within the first 2 or 3 tries she would give up. This led to her being increasingly frustrated and uncooperative with care. She did not have her glasses and was unable to read the message board and was too weak to write.

I had a patient that was a new quadriplegic but could communicate with head nods/shakes appropriately. The patient got frustrated trying to communicate their needs and being limited to yes/no questions. I spent extra time at bedside and included family members to try to communicate. The patient ended up expressing desire to withdraw life sustaining treatments which was done with support of medical team and family.

I run down the list of things I think they might want and count on them to shake their head yes and no. After that, i apologize for being unable to understand them and move on to my next task. I always make sure when i leave the room that I have addressed everything I possibly can. Sometimes I get lucky and find what they wanted after addressing all the things I personally thought they'd want.

Providers experienced emotional distress	4 [6, 22, 27, 48]	7.7%
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We both get frustrated when this happens.

Many times. It's hard to think of an exact example but I feel like I let them down when I am unable to understand.

			Patient got angry and frustrated because multiple attempts didn't convey their messages; I obtained a whiteboard, but that was a process ... I told them I was sorry, and I wished I could help more.
Cost of extra time	5 [22, 24, 31, 51, 52]	9.6%	I spent extra time at bedside and included family members to try to communicate.
			The whole encounter took me near 20 minutes.