



“You have to hold their hand”: experiences of providers integrating virtual care and communication methods while caring for ICU patients during the COVID-19 pandemic

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Background: The rapid expansion of synchronous telephone and video virtual care options allowed the Veterans Health Administration (VHA) to adapt to the coronavirus disease 2019 (COVID-19) pandemic and provided a unique opportunity to assess the potential for integration and utility of virtual care in VHA systems. The objective of this study was to highlight the perspectives of VHA providers caring for intensive care unit (ICU) patients during the COVID-19 pandemic and their views on the use of virtual care and communication for palliative and end-of-life patients.

Methods: Forty-eight semi-structured qualitative interviews were conducted with providers between April 2021 and March 2022 and were analyzed using steps informed by thematic content analysis. Participants were eligible if they delivered ICU care to surgical patients at VHA hospitals. Participants were recruited from 14 VHA facilities across the United States. Participants were asked questions about their experiences as providers working with ICU patients, including about the impacts of the COVID-19 pandemic and ways in which virtual care was adapted to deal with emerging challenges.

Results: When asked about their experiences with ICU patient care during the COVID-19 pandemic, participant experiences showed: (I) disruption of staff roles and responsibilities, (II) reduced opportunities for communication and rapport building with family members, and (III) increased patient isolation. In each case, virtual options were adapted to overcome these emerging barriers, but limitations for the utility of those options for palliative and end-of-life care patients remain.

Conclusions: Virtual options were an important adaptation for providers during the COVID-19 pandemic, but their use can be limited in palliative and end-of-life care settings. However, when visitation is limited, virtual options can support communication between providers, family members, and caregivers.

Keywords: Palliative care; virtual communication; end-of-life care; veterans; coronavirus disease 2019 (COVID-19)

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Introduction

The incorporation of technology to improve the health care experience, including virtual care options, is one of the Veterans Health Administration (VHA) Health Care Priorities (1). The utility of such options was highlighted during the coronavirus disease 2019 (COVID-19) pandemic and subsequent restrictions in patient visitation. The Department of Veterans Affairs (VA) implemented a “no visitation” policy for all VA medical centers on March 17, 2020 in order to protect patients and staff (2). In the weeks that followed, virtual care and communication options within the VHA increased significantly, with the delivery

of virtual care increasing from 14% to 58% between March and June 2020 (3). Within the VHA system, this infrastructure includes a wide variety of modalities (e.g., VA Video Connect, Doximity, FaceTime) (4) and digital health tools (e.g., mobile applications) (5). At the onset of the pandemic, VA leadership directed facilities to rapidly switch from face-to-face visits to virtual care and virtual modes of communication, and actual transitions and implementation varied by facility needs and resources (4). The rapid expansion of synchronous telephone and video virtual options allowed hospitals and healthcare systems to adapt to the pandemic and provides a unique opportunity to assess the role of virtual care in across different systems. It also changed the ways in which communication was managed between patients, providers, and loved ones who could not enter hospital facilities. As such, important questions arise surrounding its utility in contributing to high-quality care for certain patient populations, including those receiving palliative care and patients at the end-of-life.

A growing body of work has begun to assess the use of virtual care for seriously ill patients and patients nearing the end of life (6-9), and the use of virtual technologies for veterans receiving palliative care in particular (2,10). Recommendations for the role of virtual technologies for patients receiving palliative care during emergencies such as the COVID-19 pandemic are still being evaluated (10,11). However, several studies have identified strategies using telehealth communication for improving the quality of palliative care by enhancing family engagement when physical visitation is limited (12,13). The majority of these studies have derived data from caregivers, patients, or patient records, and only a few have highlighted the perspectives of providers caring for critical patients in acute care settings. In addition, only a few studies have used qualitative data collection to capture provider’s perspectives.

In this context, this study used semi-structured interviews conducted with providers at VHA facilities caring for surgical patients in the intensive care unit (ICU). Participants were asked about their experiences with palliative and end-of-life patients during the pandemic. Providers’ lived experiences can provide lessons about the usefulness and limitations of virtual care and virtual communication for palliative and end-of-life patients during

Highlight box

Key findings

- The coronavirus disease 2019 (COVID-19) pandemic impacted the ways that loved ones could visit and communicate with patients receiving palliative or end-of-life care in the intensive care unit (ICU).
- When loved ones couldn’t physically be present, some providers felt responsible for filling roles that loved ones usually provide.
- Rapport building between providers and loved ones was limited when most interactions occurred only over phone and video.
- Despite the existence of opportunities for virtual communication, participants believed that patients who died without the physical presence of a loved one were more likely to experience a “bad death”.

What is known and what is new?

- The majority of studies on the integration of virtual communication for these patients during the COVID-19 pandemic derive data from caregivers, patients, or patient records.
- This manuscript contributes to this growing body of literature by using qualitative data to highlight the perspective of providers working in acute care settings.

What is the implication, and what should change now?

- Interview results show that virtual methods of communication can benefit patients and providers during emergency events like pandemics when physical visitation by loved ones is limited, but providers did not believe that they could sufficiently replace in-person visitation for palliative and end-of-life patients.
- When physical visitation is limited, facilities may benefit from a hybrid model that allows for some in-person visitation for palliative and end-of-life patients.

emergencies, like the pandemic, as well as the provision of care outside of emergency times. We present this article in accordance with the COREQ reporting checklist (available at <https://apm.amegroups.com/article/view/10.21037/apm-24-98/rc>).

Methods

Study design

This project used an exploratory qualitative research design utilizing data derived from semi-structured qualitative interviews conducted with Veterans Health Administration (VHA) providers between April 2021 and March 2022. Exploratory qualitative designs have been recommended for studies on topics which have not been thoroughly described in the literature because it allows a researcher to investigate multiple areas of a single topic (14).

The study was conducted in accordance with the Declaration of Helsinki (as revised in 2013). The VA Ann Arbor Healthcare System Institutional Review Board (No. 1597514) deemed this study to be minimal risk human subjects research exempt from full review under federal Institutional Review Board regulations (15). Informed consent was obtained from all individual participants.

Participants

Participants were recruited using convenience sampling through the “Find VA Providers” search tool to identify potential participants based on facility, occupation, and service line. Participants were eligible if they delivered ICU care to surgical patients at VHA hospitals at the time of interview. Eligible participants were contacted by email. The research team had no previous relationships with participants prior to study commencement and participants did not know anything about the research team members.

Data collection

Prior to data collection, two research team members (P.A.S., C.A.V.) developed an exploratory interview guide, including domains designed to explore providers’ perspectives on factors that impact end-of-life care for surgical ICU patients. For validity and clarity, the preliminary guide was piloted with two nurse practitioners and one physician assistant. Due to changes to the content of the guide based on pilot feedback, pilot data were not included for analysis.

A total of 48 providers were recruited for individual interviews, representing 14 VHA facilities across the United States. An additional 4 participants agree to participate but did not complete interviews, 3 participants did not wish to participate, and 16 participants were deemed ineligible. Interviews took place over Zoom and lasted 30–60 minutes. All interviews were conducted solely by a female research team member who was an anthropologist with extensive training in qualitative data collection (C.A.V.). Before interviewing, study goals were described to participants, who gave verbal consent to participate and be recorded. In addition to field notes, all interviews were audio recorded and transcribed verbatim. No repeat interviews were conducted, and transcripts were not returned to participants for review. Data collection continued until thematic saturation was reached (16). Participants received a \$250 incentive for completing an interview.

Analysis

Deidentified transcripts were analyzed using steps informed by thematic content analysis (17). Two research team members (C.A.V., C.F.) initially reviewed and coded five transcripts independently to inductively develop an initial codebook based on recurrent and key themes in the transcript data. The same two research team members then met to discuss the similarities and differences in their coding and used consensus to define codes and develop a preliminary codebook. Following the completion of the codebook, each transcript was then coded by the two team members independently, with regular meetings to synthesize results, discuss codebook modifications, and iteratively assess the ongoing analysis process. Transcribed interviews were coded in MAXQDA 2022 (VERBI Software, Berlin, Germany). Secondary matrix analysis of codes related to the COVID-19 pandemic was conducted by one research team member (S.E.B.). All transcript text which had been coded as relating to the COVID-19 pandemic was entered into a descriptive matrix and re-coded for additional emergent themes (18). Participants did not provide feedback on the findings.

Results

A total of 48 providers completed interviews (*Table 1*). Of those participants, 48% identified as women (n=23) and 52% as men (n=25). When asked to describe their race or ethnicity, 71% of participants identified as white (n=34),

Table 1 Provider demographics, N=48

Category	Value, n (%)
Age (years) (mean 47.7)	
<30	1 (2%)
30–39	15 (31%)
40–49	11 (23%)
50–59	13 (27%)
60–69	6 (13%)
70–79	2 (4%)
Identified gender	
Woman	23 (48%)
Man	25 (52%)
Identified race/ethnicity	
Black or African American	4 (8%)
Hispanic	3 (6%)
Asian	7 (15%)
White	34 (71%)
Position	
Nurse practitioner	2 (4%)
Physician assistant	8 (17%)
Anaesthesiologist	1 (2%)
Surgeon	34 (71%)
Intensivist	1 (2%)
Internist	1 (2%)
Resident	1 (2%)

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15% identified as Asian (n=7), 8% identified as Black or African American (n=4), and 6% identified as Hispanic (n=3). The most common participant professional role was surgeon (71%, n=34), but other roles included physician assistant (17%, n=8), nurse practitioner (4%, n=2), anesthesiologist (2%, n=1), intensivist (2%, n=1), internist (2%, n=1), and resident (2%, n=1).

Analysis of participant responses revealed three primary themes describing care experiences during the COVID-19 pandemic: (I) disruption of staff roles and responsibilities, (II) reduced opportunities for communication and rapport building with family members, and (III) increased patient

isolation. Participants described the pandemic's impacts on these areas and how virtual care was adapted to deal with emerging challenges in these areas. Additional illustrative quotes are provided in *Table 2*.

Disruption of roles and responsibilities

One of the most common impacts of the pandemic on surgical ICU providers, especially in the early months of the pandemic, was a disruption to regular expectations for staff members to fulfill in their role as providers. For example, participants consistently described how facility restrictions for visiting family members and other loved ones meant that patients receiving palliative and end-of-life care were spending more time alone than they would have in more normal circumstances. Although loved ones could be contacted via virtual methods, participants witnessed hospital staff attempting to fill the role of the physically absent family members and caretakers.

“That puts more weight on the shoulders of the providers... Providers, including nurses, everyone, have a sense of almost becoming like a family member to your patient during those moments. They have no one to advocate for them, so you have to do it yourself. And you have to hold their hand. You have to rub the back. Make them comfortable.” (Nurse, female, age 30 years)

For some participants, fulfilling these extra responsibilities within the context of an ongoing pandemic led to emotional strain and feelings of professional burnout. In some cases, participants did not agree with the facility-level changes during the pandemic and would try to work around them for certain patients for whom they thought virtual communication was insufficient.

“I have a patient here who is on 100% oxygen, and he's not intubated, but he has pretty bad PTSD, and anxiety. The only thing that calms him for 24 hours is seeing his wife. So, I let her in every day...So, are we breaking the rules? Yeah...It's a good thing for them to have a loved one by them, and not having it has been rough.” (Surgeon, male, age 52 years)

Efforts to support patients' connections with their loved ones sometimes created an additional workload burden for staff. One participant called for allotted time for making phone calls because, although increased phone calls were beneficial for patients who were otherwise isolated from their loved ones, they created an additional burden for providers because of the disruption to the providers' workflow.

“We realize that telephone phone calls are work...So, [we need] supported institutional time for it, number one. Number two,

Table 2 Qualitative themes and illustrative quotes

Theme	Illustrative quotes
Disruption to roles	<p>I think during coronavirus disease [COVID] 2019 pandemic that a lot of the caretakers were trying to take the place of family or trying to be there for their patients. I don't think that it was necessarily a hit for the care that the patients were given. But I think that it is, of course it is not the same as having your family there, but I think that it was probably was definitely a different factor then it used to be... I have heard nurses say that they were trying to make sure that their patient did not die alone and that they were trying to make sure that somebody was with them. (Physician assistant, female, 57 years)</p> <p>I think burnout is a big one. Like especially with COVID and seeing some of these people dying. You know, one after another. We have been pretty lucky here in [City]. But I do have a lot of friends that they are just like, "Yep, someone died today." And you get very hardened to it. And you know there are nursing shortages. I really don't know how to fix that. So, I think that's part of it that I think is the biggest barrier at this time. It's just burnout. (Physician assistant, female, 33 years)</p> <p>During COVID, I can tell you that I didn't feel like we were doing very well with end-of-life care just because nobody was being allowed into the hospital. And that was horrible. (Surgeon, female, 57 years)</p> <p>I mean, I think it's just made it really, really hard. Obviously for the patients, but also for the providers. I mean we go into medicine because we really want to provide patients with fulfilling healthcare. And then the pandemic has definitely stripped a lot of that away. (Physician assistant, male, 30 years)</p> <p>It is horrible for the staff, because they want to have the families there, too. It has been horrible for everybody. I think that separation has made some deaths more isolated and has been more difficult on the staff. (Surgeon, female, 50 years)</p> <p>We are getting back to a point where family members can be around during these conversations. But there was a time where at best you would have them on the phone. But, again, time comes into it too, with surgery. They are working on a pretty tight schedule. So, you don't always have the time to be wrangling all the important parties to make sure that everybody is sort of engaged with it. So, yeah, it's been challenging. (Physician assistant, male, 30 years)</p> <p>I think COVID just kind of made me realize I am not a superhuman and that death is closer than I thought. Where before, it was just kind of like, I know death exists and I know that it is going to happen, but it is not part of my reality. Where now, it very much is. (Nurse practitioner, female, 38 years)</p>
Impact on communication/ rapport building between staff and patients and family members	<p>He had quite a bit of deficit coming out that had to be overcome slowly with PT coming to the home and all. So I would say, some of those services maybe have suffered because patient's family would probably say, "Could we do this?" And you don't have that going on. And there is nobody to watch if it doesn't get done. I guess accountability to families is important, and there is not as much of that if they are not there. (Surgeon, female, 60 years)</p> <p>It's not only them visiting the patient, but it's also you visiting with them and obviously while the technology and I-pads and all that things are great – and are better than nothing, it's really, really different than sitting down and just being face to face and reserve your time and see better the body language and show them really that you are, how much you care about that patient, I think that is important. (Surgeon, male, 58 years)</p> <p>And that's the other kind of really challenging thing, is it's hard to show that personal compassion and care when we're covered to our eyeballs with PPE and the families can't really get to see us as well. And, you know, likewise, it's uncomfortable I think to sit there with your family member masked and gowned and all of that stuff. (Surgeon, female, 41 years)</p> <p>I love meeting patient and family at bedsides saying, "This tube is for this. his is for that. This is for show and tell." The lack of ability to do that. I try to do it by video call, but you know, it's more challenging...So, I think ways around, and people have gotten very creative and excellent at it. Right? Video calls and so on and so forth. We just, it comes down to communicating more. It's hard though. We have things to do in a day. People ask the same questions over and over. It's extremely difficult to get out your personal self when people text you about rubbish on a Sunday. So, it's hard. (Surgeon, male, 59 years)</p>

Table 2 (continued)

Table 2 (continued)

Theme	Illustrative quotes
	<p>Yeah. I think that is the main thing. In the beginning of the pandemic, the family was not allowed at the bedside, and it was so heartbreaking to have to be the intermediary and tell family members how their loved one is doing. Which if they are facing end-of-life, then it is not well. And then, trying to tell the veteran that their family loves them, but you know you're not a good substitute. Because really, it is so inhumane to not let family come see their loved ones if they are dying. So, I've only experienced this once. In the beginning of the pandemic, my patient had COVID after surgery. And it was just gut wrenching. (Physician assistant, female, 35 years)</p> <p>A lot of people rely on their spouses, men especially, to make decisions for them. So, you know, you have to get them on the phone, or a conference call. I have face-timed patients from my phone in the room. Patient's families. Just so that we can all get together and it's almost like we're together, but we're not. (Surgeon, male, 38 years)</p> <p>Sometimes unfortunately families may not understand the totality of their loved one and how they are there. And so, they may disagree with us a lot. But if they were able to step foot into the intensive care unit (ICU), they would quickly see, 'Oh. Yeah. That's why they are saying what they are saying.' (Ophthalmologist, male, 32 years)</p>
Patient isolation	<p>There is frustration that the patient cannot go at these regular days to be able to see their relative during COVID. It is just frustrating to the family, frustrating to us. (Physician assistant, female, 57 years)</p> <p>[To have] a good death – well, one of the things that I saw in the past year, year and half, was the lack of a good death. Because we were not permitting family members to come to the bedside of their loved ones as they were reaching the end of life. (Surgeon, male, 77 years)</p> <p>It is the truth. There was this poor little old man who had been separated from his wife at the end. Separated from his kids at the end. Separated from his grandkids at the end. His little pet that can't be on his bed. Nothing sadder to me. (Surgeon, male, 66 years)</p> <p>COVID kind of ruined that. Where we had support groups for patients. Like before COVID, we had the Prostate Cancer Support Group. I don't have access to that anymore because people can't get together. (Nurse practitioner, female, 38 years)</p> <p>That has been heartbreaking. I think that there are a lot of patients who had to face death alone or seeing their family on skype or talking to them by the phone, or not talking to them on the phone if they were in a coma. I think that it has just been horrible. (Physician assistant, female, 57 years)</p> <p>The last year has been very difficult because, and I know that it has been in the media about so many patients dying alone in these rooms and everybody coming in and having to be all suited up and almost like a movie experience. Because nothing is real, and people are not face-to-face. I think that it has been difficult. (Surgeon, male, 52 years)</p> <p>I think patients feel a lot more isolated in that sense. Both physically and spiritually. And that's a real challenge to overcome. I think that leads to a lot more depression, denial and difficulty facing end-of-life issues. (Surgeon, male, 38 years)</p>

institutionalizing the demand for communication [is needed].”
(Surgeon, female, 47 years)

In this quote, the participant called for protected time in providers' schedules to make phone calls on behalf of patients. She also said that she believes that, at an institutional level, policies could be put in place to prioritize helping patients contact family members.

Communication and rapport building

A common theme in participant interviews was that pandemic policies, which limited staff interaction with patients' loved ones, were detrimental to communication and rapport building. Some participants believed that

phones and virtual communication effectively maintained providers' relationships with patients' loved ones, but others did not find them sufficient, especially for building trust between providers and family members. For example, one surgeon described how fewer in-person interactions meant fewer opportunities for family members to come to trust care providers through witnessing the effort staff put into patient care.

“The most emotionally disturbing to me is that we have much less interactions with family...Once the family sees how much every single detail is addressed and how much you really try hard to help the patient, everything else becomes very, very easy. Now people start to trust you, they understand that you are really caring, that you hopefully know what you're doing.” (Surgeon,

male, 58 years)

Similarly, another surgeon echoed these sentiments when she described that she felt it was easier for family members to trust their loved one's provider when the family members were able to witness more of the care the patient received. She did not think Zoom calls provided the same opportunity.

"When possible, we use Zoom calls because at least we can have some interaction with the families. But there's so much to be said for having the families observe the great care that they get, and the caring staff members and it builds the trust. I think that the trust is not nearly as strong in this COVID era." (Surgeon, female, 50 years)

Participants explained that ongoing and trusting communication with loved ones was especially important in critical care scenarios because family members or other loved ones often need to advocate for patients in palliative and end-of-life care decisions.

"Especially when a patient is intubated, there is already such a large language barrier, or a communication barrier I should say, with that patient and what they want. So, when the family can't physically be there and you can't get all of the non-verbal communication, that can be very important in understanding a patient's family's wishes, too. It's very challenging." (Surgeon, female, 33 years)

In addition, several participants explained that it is important for family members to be able to see patients so that the family knows the reality of the patient's condition and will accept a patient's prognosis and engage in conversations about palliative or end-of-life care.

"When you see a patient on a ventilator with a bunch of medication booked up on the IV, and just completely unresponsive, it probably goes a long way in driving home the fact of how sick the patient is. And then it makes it easier to make end-of-life decisions. But if the last time you saw the family member, they were up walking around, and now people are asking to take them off of life support, it's pretty difficult." (Surgeon, male, 64 years)

Patient isolation

In the participant interviews, the most discussed impact of the COVID-19 pandemic was the emotional impact of physical isolation on patients, even when virtual communication methods were available to them. For many participants, this was discussed in the context of ensuring that a patient had a "good death". Several participants said that the physical presence of loved ones was important for any death to be considered a "good death".

"I think a bad death would be when the family is not involved at all. Especially with Covid. You know, people are dying alone. Which is terrible." (Surgeon, male, 59 years)

While participants saw virtual care options create an opportunity for more connection between patients and loved ones outside the hospital, many did not believe those communication options were sufficient, especially at the end of life.

"Well you can do it virtually'. That was never the same as having a loved one at the bedside to hold their hand and whatever. And often, putting a computer screen in front of somebody, it just was not satisfactory...A good end of life experience does require loved ones, family members...for end of life for patients, I think that's very important." (Surgeon, male, 77 years)

The physical presence of loved ones was seen as just as important for quality of life of critical patients as it was for the quality of their death. Participants described mental health impacts they witnessed among patients and even suggested that outcomes may have been improved for some patients if they had had more physical contact with their families.

"It's definitely more depressing [for patients to be alone]. I wonder if, likely outcomes would probably be better if family could be involved. Just be around...It just causes general tensions because people are a little more panicky when, you know, 'I'm used to having my wife always around me. Why can't she be here?'" (Surgeon, male, 38 years)

One participant noted that the additional stress had increased the use of certain patient medications during the pandemic. This same participant noted that virtual methods were not always effective at decreasing stress among patient populations, especially when the patients were older.

"Our use of analgesics have gone up. Our use of antipsychotics has gone up. We use more drugs for much more anxious patients; nervous patients; angry patients. Now the hospital has tried – we got a bunch of iPads, we try to Facetime and all of this stuff; these are people that are 67 in age. They don't use iPads, and they definitely don't use Facetime." (Surgeon, male, 52 years)

Discussion

Interview data from providers who cared for surgical ICU patients during the COVID-19 pandemic described their experiences adapting to restrictions using virtual care and communication options. Participant experiences could be summarized by three primary themes: (I) impacts on staff through the disruption of roles and responsibilities, (II) impacts on family members and caregivers due to reduced

opportunities for communication and rapport building, and (III) impacts on patients who experienced increased isolation. In each case, virtual care options provided benefits for patients who were otherwise isolated from their family members, but providers continued to have reservations about using technologies as a replacement for in-person visitation. Previous studies of the integration of virtual options similarly demonstrate mixed feelings among providers about virtual communication for patients receiving palliative care and the potential benefits of a blended model of care using virtual methods to support existing in-person care options (8,20-22).

Our findings are consistent with previous work detailing how COVID-19 disrupted the regular roles and responsibilities of providers and required staff to fill new roles (23). The disruption of preexisting roles and responsibilities sometimes required more work than usual, creating an additional burden for providers. In previous studies, this was seen in cases where, for example, virtual communication between family members and patients required a greater presence at the patient's bedside (23). While training of health care providers is a commonly suggested facilitator for the successful integration of virtual care (24), any intervention must take into consideration the existing burden of provider workload. Awareness of how the integration of virtual options could increase pressure on providers or add to their workload is critical for the sustainability of any intervention. Lessons learned from the expansion of the virtual care infrastructure necessitated by COVID-19 shows the importance of workflow planning and a recognition of supports that providers may need within a blended in-person/virtual model of palliative and end-of-life care during events like pandemics.

Regular communication with family members and caregivers is an important component of palliative and end-of-life care and was one of the most significantly disrupted aspects of care during the pandemic (9). Our interview participants did see the benefits of using video and phone calls to communicate with family members, and many providers described using this type of communication. Previous assessments of the pandemic's impact on end-of-life care in VHA facilities have shown that regular remote communication had a significant positive impact on bereaved families who were prevented from being physically present (2). However, studies have also shown limitations in virtually maintaining communication between providers and family members (2,25,26). As in this study, building rapport can be especially challenging (27,28), with particular

impacts on sensitive conversations (29,30). Participants in this study notably mentioned impacts on the development of a trusting relationship between providers and patients' loved ones. There is an emphasis in existing literature on the involvement of family members and caregivers in goals-of-care conversations, which are critically important for patients receiving palliative care (10,12,31,32). Because of this, trust building between providers and loved ones when face-to-face communication is limited is an area for future research. In addition, when physical visitation is limited, providers should focus on maintaining communication with families about advanced care planning, end-of-life care goals, and care decisions. These areas were shown to be important for family members and caregivers' perceptions of the quality of a patient's death during the pandemic (9).

In addition to maintaining communication between patients and family members, when considering the quality of a patient's death during the pandemic, participants were particularly distressed in cases where patients died without loved ones present. Previous studies of palliative and end-of-life patients during the pandemic also emphasized the fear of patients "dying alone" (2,7,9). Clinicians have perceived patient isolation leading both to faster deterioration of health and increased mental health concerns among patients (23) and to lasting symptoms of anxiety and depression among loved ones (33,34). As mentioned by providers in this study, previous research has also documented that virtual communication does not sufficiently portray a patient's decline in all cases, so the severity of the patient's condition can come as a shock to family members only able to see their loved one virtually (9,33). Much of the existing literature calls for an exemption from visitor bans for these patients since virtual care cannot completely replicate the experience of having a family member present (35,36). However, there are documented advantages for tele-palliative care in circumstances where family members cannot easily leave home or live too far away, as they would not be able to be at the bedside in any capacity without it (6). Experiences during the pandemic suggest the need for a holistic approach that considers a variety of relevant factors (e.g., clinical setting, patient population, community prevalence) when making determinations about patient visitation, rather than a blanket policy.

Limitations

This study has several limitations. The use of convenience sampling can introduce selection bias. Therefore, future

studies may benefit from a purposive sampling strategy to ensure greater diversity among participants. Surgeon perspectives in this study are predominantly represented. Future studies could emphasize other provider roles, as surgeon perspectives may not fully capture the experiences of other healthcare providers. Future studies on this topic may also benefit from a comparison of surgeon experiences to the experiences of non-surgeons. Similarly, the majority of participants are white and non-Hispanic, which may limit applicability to more diverse populations. Additionally, all participants were providers within the VA healthcare system, which differs from other health care systems and therefore may limit the generalizability of the findings to other healthcare settings with different patient populations, structures, and resources. However, we aimed to recruit providers from hospitals in settings which varied by location, size, and patient population to include a variety of perspectives, and findings of this study can build on work conducted outside of VHA settings.

Conclusions

Emergencies like the COVID-19 pandemic can lead to very atypical palliative and end-of-life experiences for patients and providers and provide an opportunity to consider the utility of virtual care. This study contributes to existing literature in this area through firsthand provider accounts and highlights the importance of innovations that would support synchronous virtual communication between patients and loved ones without causing a significant burden to staff. A blend of virtual and in-person care options could allow physical visits to the bedside at end-of-life when appropriate, with benefits for staff, patients, and loved ones. Since virtual care will remain a priority area for VHA its utility and limitations should continue to be considered. Lessons learned apply to any situation where in-person visitation options are limited, including future pandemics.

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Footnote

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Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. The study was conducted in accordance with the Declaration of Helsinki (as revised in 2013). The study was deemed exempt by the VA Ann Arbor Health Care System Institutional Review Board (No. 1597514) and informed consent was obtained from all individual participants.

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