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COVID-19 palliative care toolkit development and military health system deployment

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ABSTRACT

Background: During the initial phase of the pandemic, we identified a critical gap in the Military Health System's access to palliative care. Our team of nurse scientists and evidence-based practice (EBP) facilitators aimed to develop and implement an evidence-based point of care palliative care toolkit for frontline workers in inpatient settings lacking established palliative care specialists.

Methodology: We utilized Melnyk and Fineout-Overholt's (2018) seven-step EBP process. Six central themes were derived from 17 publications providing an evidence-base for toolkit resource selection and development. Our practice change implementation was piloted at a large West Coast military treatment facility. We included iPads in the toolkit for patient communication and palliative mobile application use.

Results: The most significant finding was the critical and continued need for basic palliative care education and training. Integrating the palliative care toolkit into daily practice was promising yet challenging due to the high volume of deployed medical staff.

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Introduction

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), commonly referred to as COVID-19, continues to impact millions of lives globally through infection, death, and caregiver burnout. During the initial COVID-19 outbreak and surge in the United States (US) in the spring of 2020, more than 5.8 million individuals were infected worldwide, resulting in 360,000 deaths internationally and exceeding 102,000 in the US (Hopkins Coronavirus Resource, 2020). Vaccine research was pending, and our primary defense relied on evidence-based practices (EBP) in prevention, mitigation, and containment. Health care workers faced a duty to care, manage scarce resources, and provide compassionate care and transparent communication. A
significant focus was on crisis management and crisis standards of care, given the rapidly changing clinical environment (Hick, Hanfling, Wynia, & Pavia, 2020). Amidst the increased rates of death and dying, our team of military nurse scientists and EBP facilitators turned our attention to the vital need for palliative care. A widely utilized evidence-based model for advanced and serious life-limiting conditions, traditional palliative care practices faced unique COVID-19 challenges, specifically the uncertain and rapid decline of infected patients, isolation, visitor prohibition, and treatment and resource constraints (medication, equipment, staff). In communicating with regional civilian healthcare partners and professional palliative care organizations, and after conducting a brief review of the literature, we discovered that palliative care expertise and specialty teams were amongst the pandemic’s scarce resources. This left the brunt of palliative care efforts to frontline healthcare workers with limited palliative care training and experience. In facilities with robust palliative care departments, palliative care teams were frequently disbanded, and palliative care clinicians were diverted to fill critical shortages in intensive care and emergency departments (Koh, 2020).

The Department of Defense (DoD) provides healthcare to over 9.62 million beneficiaries through the Military Health System (MHS) (Congressional Research Service, 2021). The coverage includes delivery of care through civilian healthcare networks participating in the TRICARE insurance program and DoD-operated hospitals and clinics, referred to collectively as military treatment facilities (MTFs). As of 2020, when we were developing our toolkit, there were 721 MTFs worldwide and 109 MTFs located overseas (Congressional Research Service, 2021). Locally, prior to and during the pandemic, palliative care patients were routinely referred to the civilian healthcare network as our West Coast MTF capabilities did not include palliative care services. We discovered that only three MTFs in the MHS were equipped with palliative care departments; thus, we identified a critical gap triggering our clinical inquiry.

**Purpose**

Palliative care focuses on quality of life and symptom management and is founded on principles of holistic care to include patient preferences and open communication to address domains of physical, psychological, social, spiritual, ethical, and cultural care delivery (Aslakson et al., 2017). Regardless of age, diagnosis, prognosis, or setting, all seriously ill people are eligible for palliative care. The biopsychosocial-spiritual approach of palliation supports person-centered care linked to improved patient outcomes and is the most highly recommended approach to providing care for patients experiencing life-threatening illnesses such as COVID-19 (Galbadage, Peterson, Wang, Wang, & Gunasekera, 2020; Wade & Halligan, 2017). Understanding the foundation and principles of palliative care and the biopsychosocial-spiritual COVID-19 sequelae requires rapid enterprise-wide solutions and resources to optimize the care of vulnerable patients, family members, and staff. Therefore, the purpose of our evidence-based initiative was to develop a COVID-19 palliative care toolkit that could be rapidly utilized and implemented with primary care and frontline workers in inpatient settings lacking established palliative care specialists and formal programs.

**Methods**

Our clinical inquiry design followed Melnyk and Fineout-Overholt’s (2018) seven-step EBP process (Figure 1).

![Figure 1 – This graphic illustrates Melnyk and Fineout-Overholt’s (2018) seven-step evidence-based practice process.](https://example.com/figure1.png)
Step 0: Cultivate a Spirit of Inquiry

We chose a biobehavioral framework based on the Clinical Practice Guidelines (CPG) for Quality Palliative Care (Dahlin, 2004) to facilitate the integration of common biopsychosocial-spiritual needs of the seriously ill. The CPG framework features eight domains addressing the structure and process of care as well as physical, psychological, social, spiritual, cultural, ethical, legal, and care of imminently dying patients. We gave special consideration to the current COVID-19 barriers and challenges for patients and health care teams.

Step 1: Ask a Burning Clinical Question in PICOT Format

The PICO question guided our evidence search: In facilities caring for COVID-19 patients, how does having a palliative care team versus having no palliative care team affect the management of COVID-specific care challenges?

Step 2: Search for and Collect the Most Relevant Best Evidence

It is important to note that our processes and timelines were expedited due to the pandemic and the urgent need to bridge a critical gap with a point of care product. During the first quarter of 2020, literature specific to COVID-19 related palliative care was sparse and primarily found through novel COVID-19 databases. We conducted a nonsystematic rapid review of English language literature published between 2019 through May 2020 from Google Scholar, PubMed, and its LitCOVID open-resource literature center supported by the US National Library of Medicine (Chen, Allot, & Lu, 2020). Although specific search string construction varied by database, the search terms included descriptors of palliative care (palliative care, end of life care, hospice, terminal care) and COVID-19 (SARS-CoV-2, pandemic, COVID-19, coronavirus, COVID).

Step 3: Critically Appraise the Evidence

Our team critically appraised the evidence using Melnyk and Fineout-Overholt’s (2018) level of evidence table and rapid critical appraisal tools. The seven levels of evidence included: Level I (meta-analysis of systematic reviews of randomized controlled trials [RCT]), Level II (RCTs), Level III (non-randomized controlled trials), Level IV (cohort/case control studies), Level V (reviews of qualitative studies), Level VI (qualitative studies), and Level VII (expert opinion). Two primary team members independently screened all studies for eligibility and excluded publications with a primary focus on intellectual disabilities, pediatrics, nursing homes, and home care or outpatient settings. We resolved disagreements regarding study selection through secondary team member reviews and team discussion until we achieved consensus. We retained 17 articles from US and international literature relevant to developing a point-of-care COVID-19 palliative care toolkit. The retained literature focused on pandemic palliative care delivery and technology to communicate with isolated and ill COVID-19 patients. As expected, due to the novelty of COVID-19 and being in the early stages of the pandemic, the majority of the literature was lower-level evidence (systematic reviews of/or qualitative descriptive studies, expert opinion). The retained publications found in our evidence table (Table 1) ranged from Level V to VII (one Level V, six Level VI, and 10 Level VII). The quality of evidence retained was moderate to high.

Our literature synthesis identified six themes primarily centered on the critical necessity of ensuring high demand, high priority, and high impact education availability and resource management. The critical need for rapid palliative care training and the availability of quick use standardized order sets, protocols, and guidelines emerged as two overarching themes throughout the literature. Additionally, an understanding of pandemic crisis standards of care and a framework for managing the use of supplies, equipment, isolation, and overall systems emerged as an important capability for staff members and healthcare systems. Furthermore, a common previous practice of healthcare systems utilizing existing palliative care specialists as consultants and subject matter experts was recommended, however, this practice was often negated by the COVID-19 pandemic as these specialty providers were utilized at the bedside to deliver direct non-palliative care during staffing shortages. An additional theme identified the immediate need for frontline healthcare workers to realistically address patient goals of care and have difficult conversations with patients and families regarding patient status. The evidence for effective conversations regarding patient care and status emphasizes the importance of clear, direct, and transparent communication through in person, virtual, online, and video platforms. Finally, themes focused on the critical role of providing support for all caregivers and for mitigating social isolation through technology, specifically through the use of tablets and phones to ensure more effective communication between patients, families, and caregivers. Throughout the literature the significance of adequately addressing COVID-19 and symptom management utilizing a biopsychosocial spiritual approach was underscored and thus served as a framework for organizing the identified themes and developing the COVID-19 Palliative Care Toolkit.

Step 4: Integrate Best Evidence with Expertise, Preferences, Values to Make

Implementation Plan

After our core team appraised and synthesized the literature, we identified potential toolkit content, key
| Level of Evidence | Reference                                                                 | Key Elements                                                                                                                                                                                                                                                                                                                                 |
|-------------------|---------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| VI                | Arya, Buchman, Gagnon, and Downar (2020).                               | - Recommended symptom management, standard order sets, technology for patient/family communication.  
- Advised staff education: palliative care principles, triage, telemedicine, critical communication regarding patient wishes and likelihood of survival.  
- Recommended symptom management and standard order sets.  
- Advised staff education: palliative care principles, critical communication.  
- Discussed system development for expedited discharge home with needed resources.  
- Recommended family/caregiver support for the provision of community-based palliative care.  
- Discussed nonbeneficial or unwanted interventions to optimize limited resources; reduce staff burden.  
- Advised staff education: hospice and palliative care protocols, symptom management, psychological support, bereavement counseling, personal protective equipment (PPE).  
- Stressed need for: palliative and spiritual care experts, infrastructure for patient and family, virtual support.  
- Recommended shifting resources from inpatient settings to the community.  
| VII               | Chidiac, Feuer, Naismith, Flatley, and Preston (2020).                  | - Discussed inpatient response plan with conventional, contingency, and crisis capacity.  
- Recommended palliative care specialist consultation for inpatient providers.  
- Advised staff education to train and coach staff for crucial conversations.  
- Encouraged virtual (phone/video) consultation to conserve PPE and limit exposure.  
| V                 | Etkind et al. (2020).                                                   | - Discussed ‘Palliative Care Pandemic Pack’ guide for non-palliative staff in New Zealand.  
- Included symptom management and other primary care provider resources.  
- Empowered primary care teams to develop similar tools for their own communities.  
- Discussed the need for clear and concise treatment plans as well as rapid decision making.  
- Discussed United Kingdom (UK) and Switzerland response during the COVID-19 pandemic.  
- Described development of a COVID-19 assessment tool to assist with quick assessment.  
- Stressed identification of key symptoms in an emergency setting when time is limited.  
- Stressed importance of reviewing patient’s goals of care early in emergency department.  
- Described development of COVID-19 symptom management order sets.  
- Stressed the importance of debriefing sessions for emergency department staff.  
- Recommended aid in decreasing risk of compassion fatigue and burnout.  
| VI                | Fausto et al. (2020).                                                   | - Identified patient fears, isolation, need for virtual social connections.  
- Discussed negative impact on staff resiliency and support in Singapore.  
- Stressed the need for holistic care.  
| VII               | Ferguson and Barham, 2020                                              | - Discussed ‘Palliative Care Pandemic Pack’ guide for non-palliative staff in New Zealand.  
- Included symptom management and other primary care provider resources.  
- Empowered primary care teams to develop similar tools for their own communities.  
| VII               | Fusi-Schmidhauser, Preston, Keller, and Gamondi (2020).                | - Identified patient fears, isolation, need for virtual social connections.  
- Discussed negative impact on staff resiliency and support in Singapore.  
- Stressed the need for holistic care.  
| VII               | Hendin et al. (2020).                                                  | - Discussed ‘Palliative Care Pandemic Pack’ guide for non-palliative staff in New Zealand.  
- Included symptom management and other primary care provider resources.  
- Empowered primary care teams to develop similar tools for their own communities.  
| VII               | Koh, M. Y. (2020).                                                    | - Recommended symptom management, standard order sets, technology for patient/family communication.  
- Advised staff education: palliative care principles, triage, telemedicine, critical communication regarding patient wishes and likelihood of survival.  
- Recommended symptom management and standard order sets.  
- Advised staff education: palliative care principles, critical communication.  
- Discussed system development for expedited discharge home with needed resources.  
- Recommended family/caregiver support for the provision of community-based palliative care.  
- Discussed nonbeneficial or unwanted interventions to optimize limited resources; reduce staff burden.  
- Advised staff education: hospice and palliative care protocols, symptom management, psychological support, bereavement counseling, personal protective equipment (PPE).  
- Stressed need for: palliative and spiritual care experts, infrastructure for patient and family, virtual support.  
- Recommended shifting resources from inpatient settings to the community.  
- Discussed inpatient response plan with conventional, contingency, and crisis capacity.  
- Recommended palliative care specialist consultation for inpatient providers.  
- Advised staff education to train and coach staff for crucial conversations.  
- Encouraged virtual (phone/video) consultation to conserve PPE and limit exposure.  
| VII               | (Ferguson and Barham, 2020)                                            | - Discussed ‘Palliative Care Pandemic Pack’ guide for non-palliative staff in New Zealand.  
- Included symptom management and other primary care provider resources.  
- Empowered primary care teams to develop similar tools for their own communities.  
| VII               | (Fusi-Schmidhauser, Preston, Keller, and Gamondi, 2020)              | - Discussed ‘Palliative Care Pandemic Pack’ guide for non-palliative staff in New Zealand.  
- Included symptom management and other primary care provider resources.  
- Empowered primary care teams to develop similar tools for their own communities.  
| VII               | (Hendin et al., 2020)                                                 | - Discussed ‘Palliative Care Pandemic Pack’ guide for non-palliative staff in New Zealand.  
- Included symptom management and other primary care provider resources.  
- Empowered primary care teams to develop similar tools for their own communities.  
| VII               | (Koh, M. Y., 2020)                                                    | - Discussed ‘Palliative Care Pandemic Pack’ guide for non-palliative staff in New Zealand.  
- Included symptom management and other primary care provider resources.  
- Empowered primary care teams to develop similar tools for their own communities.  

(continued)
experts for toolkit development, and stakeholders to engage and educate prior to toolkit implementation. Team leads from the pilot implementation site at a large West Coast MTF collaborated with select members from the TriService Nursing Research Program’s Biobehavioral Research Interest Group. The team identified educational toolkit content and procured permissions for use of open source expert tools and resources from civilian palliative care professional organizations (Vital Talks, Respecting Choices, and Center to Advance Palliative Care). We initially reviewed content from the Clinical Practice Guidelines for Quality Palliative Care (Dahlin, 2004), End-of-Life Nursing Education Consortium (ELNEC) and various military pandemic resources. Our toolkit development and implementation proposal was reviewed by the 59th Medical Wing Institutional Review Board and determined to be non-research activity.

**Develop the Toolkit**

Based on the evidence appraisal, our team determined which established resources from both military (COVID-19 Practice Management Guide) and civilian open-source palliative care tools (hard conversations scripts) aligned best with the needs identified in the literature. We reviewed, standardized, and organized the resources and products for ease of use through an

| Level of Evidence | Reference | Key Elements |
|-------------------|-----------|--------------|
| VI                | Lovell et al. (2020). Characteristics, symptom management, and outcomes of 101 patients with COVID-19 referred for hospital palliative care. *Journal of Pain and Symptom Management*, 60(1), e77-e81. | - Discussed palliative care as an essential part of the COVID response in the UK. - Described commonly reported symptoms: dyspnea, agitation, drowsiness, pain, delirium. - Stressed that non-palliative care providers need education and training. - Recommended social worker, chaplain, and psychologist support. |
| VII               | Pattison, N. (2020). End-of-life decisions and care amid a global coronavirus (COVID-19) pandemic. *Intensive & Critical Care Nursing*, 58, 1028-62. | - Described UK pandemic plan inclusion of palliative care education, protocols, guidelines. - Discussed necessary medications and PPE. - Recommended focus on bereavement support for staff and families. |
| VII               | Powell and Silveira, 2020. What should palliative care’s response be to the COVID-19 pandemic? *Journal of Pain and Symptom Management*, 60(1), e1-e3. | - Recommended palliative care experts provide virtual consults rather than in-person. - Recommended provider education to include end of life, triage, clinical decision-making, symptom management and family grief management. |
| VII               | Radbruch, Knaul, de Lima, de Joncheere, and Bhadelia (2020). The key role of palliative care in response to the COVID-19 tsunami of suffering. *The Lancet*, 395(10235), 1467–1469. | - Recommended including core palliative care competencies in all healthcare related education. - Stressed need for PPE, telehealth, virtual family resources, symptom management, psychosocial support. - Highlighted need to establish standard and resource stratified palliative care guidelines. |
| VI                | Ryan, Quinn, and Leen (2020). Evidence summary: What are the palliative care considerations for COVID-19 patients at end-of-life? *Health Service Executive*. | - Described priorities: symptom control, psychological support, triage, complex decision making. - Discussed Association for Geriatric Palliative Medicine recommendations to integrate a palliative care approach into care of older adults in the inpatient setting and at home. |
| VI                | Sun, Lee, Meyer, Myers, and Blinderman (2020). Characteristics and palliative care needs of COVID-19 patients receiving comfort-directed care. *Journal of the American Geriatrics Society*, 68(6), 1162–1164. | - Characterized the symptoms experienced most commonly by New York hospital patients. - Discussed the most commonly used medications and interventions for COVID-19 patients. |
| VI                | Wallace, Wladkowski, Gibson, and White (2020). Grief during the COVID-19 pandemic: Considerations for palliative care providers. *Journal of Pain and Symptom Management*, 60(1), e70-e76. | - Discussed anticipatory, disenfranchised, and complicated grief. - Recommended mitigating grief through communication, advanced care planning, and self-care. |
| VII               | Wang, Teo, Teo, and Chai (2020). Virtual reality as a bridge in palliative care during COVID-19. *Journal of Palliative Medicine*, 23(6), 756-756. | - Provided a list of resources for each mitigation strategy. - Discussed how Virtual reality (VR) provides comfort and interaction during patients’ last days. - Described how VR can simulate physical locations and allow bucket list experiences. - Discussed how VR can record last lucid moments and simulate the presence of loved ones. |

Note. Original 2020 literature rapid review. Complete citations are found in the Reference list.
iterative process. Local stakeholders from our pilot implementation site (clinical nurse specialists, intensive care staff, EBP facilitator, nurse scientist, and MTF COVID expert known as the COVID czar) as well as subject matter experts from the MHS palliative care departments assisted in resource reviews. Feedback was collected regarding ease of use with the goal of a simple, standard, quick deployment product to assist patients, families, and staff in providing compassionate COVID-19 care. The 24-page PDF toolkit content (Figure 2) was organized into modules based on the six central themes from the literature: (a) Palliative Care 101, (b) Communication, (c) Symptom Management, (d) Pain Management, (e) Support for Caregivers, and (f) Mobile Applications.

Collaborate with Information Technology (IT)

In addition to the PDF toolkit, we provided the pilot unit with ten grant-funded iPads for patient communication with staff/family. The iPads were loaded with free-use mobile apps produced by Veterans Affairs (VA) Mobile. The apps titled: COVID Coach, Insomnia Coach, Mindfulness Coach, and PTSD Coach were selected to aid in decreasing anxiety, sleeplessness, stress, and other associated symptoms. We began early planning with the IT team and leadership from the pilot clinical unit to integrate technology into daily clinical practices on the “COVID unit” and optimize iPad integration. Prior to ordering, iPad capability was tested in various clinical settings as we prepared for potential bed expansions or consolidations. Our goal was to pilot the toolkit and iPads on the unit with the most COVID patients.

Pilot the Products

Our EBP Facilitator provided in-person and computer-based training on toolkit contents and iPad use for unit champions from two medical and/or surgical and intensive care units weekly during the two months before launch. We held several unit-based and facility-wide toolkit awareness and training events, including a brief to all MTF healthcare providers (n = 125). We provided hardcopy toolkit booklets and virtual links for toolkit accessibility to the pilot units and trained dedicated unit champions in preparation for toolkit implementation. We procured locking gooseneck iPad stands that allowed positioning for patients who could not hold the pad (ventilated/intubated) and assured iPad security, preventing removal from the room. Our team collaboratively developed standard operating procedures for securing and disinfecting iPads. Toolkit implementation outcome measures included a toolkit satisfaction survey (on the iPad and print version) and a frequency of utilization log. We planned to include feedback from the pilot implementation into one final refinement of the toolkit prior to deploying the toolkit to other MHS sites.

Findings

Step 5: Evaluate Outcomes of the Evidence-Based Practice Change

The originally proposed outcomes to evaluate the success of integrating and utilizing the toolkit in daily
nursing practice on the “COVID unit” depended upon individuals completing the toolkit satisfaction survey and signing out the iPads on a utilization log. Neither of the outcome methods proved realistic amidst pandemic conditions. Our team confronted multiple technical challenges primarily related to staffing and IT issues. During our initial implementation, after training unit champions and key stakeholders, 160 MTF staff deployed en masse for three months in support of Federal Emergency Management Agency, Defense Support for Civil Authority, to augment eight California civilian hospitals. The deployment of staff resulted in the consolidation of units, identification and training of new unit champions and a cyclical requirement for training as additional members deployed. Staff were stretched and fatigued with the additional stressors of COVID care; most non-mandatory requirements were deferred or diverted.

Issues with spotty and inconsistent internet connectivity were pervasive; some patient room connectivity was great while others had poor or zero connectivity. Moreover, at the onset of the practice change, patients had to set-up an individual Wi-Fi account on the iPad to use the guest Wi-Fi, increasing staff workload as IT assistants. We quickly coordinated generic log-on procedures and procured Wi-Fi hotspots for rooms with poor connectivity. Throughout the pilot we provided initial iPad training, sustainment support, and troubleshooting consults.

While the majority of lessons learned from our practice change were technical, the most significant lesson learned is that palliative care is a fundamental patient right and necessary essential nursing skill. The philosophy and holistic approach of palliative care is synonymous with the identity of nursing and the practice of nursing. At the very least, nurses should be trained and competent to deliver generalist palliative care during conventional, contingency, and crisis environments. Many of the nurses we trained reported never having a “hard conversation” to discuss goals of care with patients or families and attributed those conversations to the “provider’s role.” Moreover, few nurses were knowledgeable regarding crisis standards of care, communication scripts, or grief and bereavement practices.

**Step 6: Disseminate the Outcomes of the Evidence-Based Practice Change**

We briefed a 20 minute educational awareness presentation to Defense Health Agency Chief Medical and Nursing Officers (n = 82). An enterprise newsletter featured the toolkit reaching 80K medical personnel. We delivered a 1 hour education briefing online for continuing education credit which remained available for viewing from May 2021 through November 2021. The MHS website published an article featuring the toolkit in mid-May 2021 (Goodman, 2021), and an award-winning podium presentation describing the toolkit implementation and lessons learned educated an audience of over 300 nurses in September 2021 and a broader multidisciplinary audience in June 2022. The toolkit is available on three military enterprise websites for access: Defense Health Agency, TriService Nursing Research Program, and Joint Trauma System. The toolkit is currently being utilized at several MTFs as an adjunct resource for bedside palliative care, is being incorporated into nursing orientation programs, nurse transition and nurse residency programs, and most recently, is being recommended as an Air Force nursing pre-deployment education requirement. The approach, principles, and point of care format are ideally aligned for nurses and medics in positions to deliver prolonged field care in austere environments.

**Discussion**

The most significant limitation related to the development of this toolkit was the lack of knowledge pertaining to COVID-19 in the early phases of the pandemic. The original literature review served as the basis for developing the COVID-19 Palliative Care Toolkit and relied heavily on literature from other countries. Our team conducted an updated literature review to identify recent publications to evaluate the continued relevance of the toolkit, and to inform future work. Of the 10 articles identified as being relevant (Table 2), the following key themes emerged: (a) symptom management, (b) palliative care delivery methods, (c) staff training, and (d) support for staff and families (Fadul, Elsayem, & Bruera, 2021; Mitchell, Maynard, Lyons, Jones, & Gardiner, 2020; Mitchinson et al., 2021; Mottinger, Hendin, Fischer, des Ordons, & Hartwick, 2020; Rosa & Davidson, 2020; Rosa et al., 2021). The needs and challenges identified in the initial 2020 rapid review were similar to the findings of the updated 2021 review (Janssen, 2021; Lienheck et al., 2021; Mitchell et al., 2020; Mitchinson et al., 2021; Rosa & Davidson, 2020; Rosa et al., 2021). The updated review revealed that an interdisciplinary team of palliative care clinicians in Boston developed a Palliative Care toolkit with similar content and rationale for development, demonstrating that military and civilian needs were similar (Thomas et al., 2020).

Military medical personnel played a significant role in the COVID-19 pandemic surge response in military and civilian healthcare settings. Hernandez (2021) presented a case study involving Air Force Reserve nursing personnel who deployed to a civilian hospital in New York City to provide care to over 800 COVID-19 positive patients and support hospital personnel training. This case study demonstrated the value of providing focused training and resources through deployments to achieve the best outcomes during relief efforts and highlighted the need to develop a higher level of resilience and mitigate moral distress.
| Level of Evidence | Reference | Key Elements |
|-------------------|-----------|--------------|
| VI Fadul et al. (2021). Integration of palliative care into COVID-19 pandemic planning. BMJ Supportive & Palliative Care, 11(1), 40-44. | - Discussed primary planning considerations for palliative care during the pandemic.  
- Described decision algorithms for rationing care and effective symptoms management training.  
- Discussed alternative delivery methods of palliative care services.  
- Recommended death and bereavement support for surviving family members. |
| IV Hernandez, S. (2021). A case report of Air Force Reserve nurses deployed to New York City for COVID-19 support. Military Medicine, 186 (12 Suppl 2), 56–60. | - Recommended use of Crisis Standards of Care training for improved competency.  
- Focused on delivery of effective nursing care during the surge of COVID-19 patients.  
- Discussed the need to develop a higher level of resilience to mitigate moral distress. |
| VI Janssen, D. J. (2021). Palliative care in COVID-19. Current Opinion in Supportive and Palliative Care, 15(4), 199-204. | - Highlighted the needs, challenges, and development of COVID-19 palliative care.  
- Recommended integrated palliative care and palliative care skills training across specialties.  
- Identified need for intervention studies to generate evidence for COVID-19 palliative care. |
| I Lieneck et al. (2021). Provision of palliative care during the COVID-19 Pandemic: A systematic review of ambulatory care organizations in the United States. Medicina, 57(10), 1123. | - Identified palliative care barriers: lack of resources and access to care.  
- Identified palliative care facilitators: technology and advanced care planning.  
- Stressed the need for additional resources, training, and policy development within palliative care planning. |
| VI Mitchell et al. (2020). The role and responsibilities of primary healthcare services in delivering palliative care in epidemics and pandemics: A rapid review to inform practice and service delivery during the COVID-19 pandemic. Palliative Medicine, 34(9), 1182-1192. | - Identified key factors for successful primary healthcare palliative care response.  
- Stressed the importance of communication between policymakers and healthcare providers.  
- Recommended education, training, debriefing for workforce, support for family and caregivers.  
- Stressed the importance of continued delivery of equipment and access to support services. |
| VI Mitchinson et al. (2021). Missing the human connection: A rapid appraisal of healthcare workers’ perceptions and experiences of providing palliative care during the COVID-19 pandemic. Palliative Medicine, 35(5), 852-861. | - Discussed healthcare workers struggle to connect with patients due to increased work pressures and limited opportunities for human interaction.  
- Stressed early establishment of designated teams and processes for communication.  
- Recommended policies on care delivery include support for maintaining human connections with patients to retain the fundamentals of palliative care. |
| VI Mottiar et al. (2020). End-of-life care in patients with a highly transmissible respiratory virus: Implications for COVID-19. Canadian Journal of Anaesthesia, 67, 1417 –1423. | - Discussed non-specialists tasked with providing end-of-life care for COVID-19 patients.  
- Described goals of care discussions and essential aspects of symptom management during the COVID-19 pandemic to ensure high-quality end-of-life patient care. |
| VII Rosa et al. (2020). Coronavirus disease 2019 (COVID–19): Strengthening our resolve to achieve universal palliative care. International Nursing Review, 67(2), 160-163. | - Advocated for universal palliative care access during the COVID-19 pandemic.  
- Discussed the opportunity to promote dignity and relieve suffering for patients and their families at a time of vulnerability.  
- Recommended expanded nursing roles, policy changes, and resource allocation for increased access to resources and knowledge about palliative care. |
| VII Rosa et al. (2021). International consensus-based policy recommendations to advance universal palliative care access from the American Academy of Nursing Expert Panels. Nursing Outlook, 70 (1) 1-11. | - Focused on evidence-based recommendations to guide nurses, policymakers, government representatives, professional associations, and interdisciplinary and community partners to integrate palliative nursing services across health and social care settings. |

(continued)
Based on our experience piloting and promoting the use of our palliative care tool kit, we have determined that the MHS enterprise may benefit from standard palliative care order sets, protocols, and simulation training for staff/patient communication, specifically discussing goals of care during high-stress crisis situations. Ultimately, palliative care aims to improve quality of life, decrease suffering, and create more satisfied patients and families, despite life-limiting conditions. We need military and civilian nurses trained and skilled to deliver palliative care anytime, anywhere. While our toolkit was developed for use during the COVID-19 pandemic, the content may be valuable for future pandemics, disaster response, and humanitarian crises. There is a consensus among disaster response teams that palliative care has generally been absent in disaster response and humanitarian crises (Daubman, Cranmer, Black, & Goodman, 2019). Kelly, Mitchell, Walker, Mears, and Scholz (2021) conducted a systematic review of end-of-life care during natural disasters revealing the significant need for access to compassionate and respectful end-of-life care. By developing and applying Crisis Standards of Care, healthcare provider competency can be enhanced (Hernandez, 2021). Lessons learned during development and deployment of our evidence-based toolkit contribute to a body of evidence for healthcare providers and leaders facing similar situations in the future.

**Future Recommendations**

Since the onset of the COVID-19 pandemic, much additional research has emerged, and various toolkits are now available. Our future recommendations (Table 3) for toolkit development and deployment are generalizable and applicable for designing a host of organizational toolkits.

Our broader and most significant recommendations pertain to the need for generalist or basic palliative care training for all disciplines, most importantly for nursing. Our recommendations align with the American Academy of Nursing’s ELNEC primary palliative competencies (The American Association of Colleges of, 2018). Implementation of our simple, basic, point of care COVID-19 palliative care toolkit is an initial step and frontline effort to advise, train, and equip our military nurses with generalist palliative care principles and interventions and is beginning to impact training policy. We hope that in identifying the MHS palliative care gap, raising awareness of needs, and demonstrating quick wins through toolkit use, we can begin to pro-actively address the root cause of our knowledge deficit by integrating generalist palliative nursing care into all existing military nursing curriculum, education programs, and competency skills requirements. We pride ourselves on being “ready medics,” which means we must be ready to provide palliative care in normal operations, in the next massive disaster, in a combat zone, and anywhere an ongoing loss of life occurs.

### Authors’ Contribution

Laurie Migliore: conceptualization, methodology, investigation, resources, writing-original draft, review & editing, visualization, supervision, project administration, funding acquisition. Ceferina Brackett: conceptualization, methodology, investigation, resources, review & editing, supervision, project administration, funding acquisition. Sarah Huffman: conceptualization, writing-original draft, review & editing. Rebecca Heyne: conceptualization, methodology, resources, writing-original draft, review & editing, visualization. LeAnne Lovett-Flood: investigation, resources, methodology, writing original draft, writing review and editing, visualization. Lance McGinnis: writing - review & editing, visualization

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Table 3 – Future Recommendations for Toolkit Development and Deployment

| Future Recommendations |
|-------------------------|
| - Conduct risk assessments for environmental challenges before implementation (technology, manpower). |
| - Obtain written support from leadership and top-level executives to avoid delays in toolkit development. |
| - Form a team early in the process with clear roles, responsibilities, and deadlines. |
| - Triple redundancy for roles prevents delays if the primary leader is deployed or unavailable. |
| - Enlist the support of enterprise leadership early to assist with marketing and sustainment plans. |
| - Include subject matter experts and end-users early in development; integrate them into all decision-making. |
| - Involve information technology and supply chain early in the process and throughout the toolkit’s development to allow for any security patches, software, and hardware supplies necessary—verify operations. |
| - Ensure supply and IT departments purchase, maintain, and sustain devices to integrate future upgrades. |
| - Enlist additional support for unit and organizational processes such as creating patient accounts, trouble-shooting Wi-Fi, disinfecting, storing, and distributing iPads/tablets. |
| - Contingency planning for staffing and patient acuity changes that may require additional manpower. |
| - Provide copyright permissions/intellectual property guidance for professional organization collaboration. |
| - Ensure strategic communication aligns with the organization’s messaging and requirements. |
| - Identify an initial targeted and intentional dissemination plan for websites and education venues. |
| - Incorporate practice change or guidelines into policy for sustainability. |

Note. Recommendations noted are specific to our toolkit development but are generalizable to most toolkits designed for organizational deployment.

Table 3 – Future Recommendations for Toolkit Development and Deployment

Palliative Care (CAPQ); Respecting Choices; Vital Talk; Col Stephen Hernandez, PhD, RN; Kristin Callaghan, MSN, APRN, FNP-C, MBA; Linda Gowenlock, MSN, MPH, ACNS-BC, CCNS, ACHPN; and Diane A. Faran, MD, FAAHPM, Palliative Medicine Consultant.

The views expressed in this material are those of the authors and do not reflect the official policy or position of the Department of Defense, or the United States Government.

Disclaimer

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