Integration of palliative care into COVID-19 pandemic planning

Nada Fadul 1, Ahmed F Elsayem,2 Eduardo Bruera 3

ABSTRACT
The COVID-19 pandemic is expected to surpass the healthcare system’s capacity to provide intensive care to all patients who deteriorate as a result of the disease. This poses a unique challenge to healthcare teams of rationing care during pandemic when resources are scarce. Healthcare providers will need to acquire new skills in care decision making and effective symptom control for patients who do not receive life-saving measures. In this review, we describe some of the important palliative care considerations that need to be incorporated into COVID-19 pandemic planning. The main aspects to be considered include decision algorithms for rationing care, training on effective symptoms management, alternative delivery methods of palliative care services such as telemedicine and finally death and bereavement support for surviving family members who are likely to be isolated from their loved one at the moment of death.

INTRODUCTION
The coronavirus disease 2019 (COVID-19) pandemic has thus far caused over a hundred thousand deaths globally, mostly in the USA and Europe.1 While most patients with COVID-19 are either asymptomatic or have mild symptoms, 5% require hospitalisation and 1%–2% need intensive care unit (ICU) admission and ventilator support.2 Mortality is highest in older adults and patients with chronic medical conditions and malignancies.3–5 By 1 May 2020 in the USA, COVID-19 has been reported in all 50 states, caused over 1.1 million infections and resulted in over 60,000 deaths.1 Some states bear a higher burden of the disease and its mortality than others do, but as community transmission continues, the impact on states is expected to increase. With the rapidly increasing community transmission in the USA and globally, it is expected that the disease will soon outpace the capacity of the healthcare system, specifically ICU beds and ventilators.6–7 Healthcare providers are already faced with difficult ethical decisions of prioritising ICU care and ventilator support for patients who have a higher chance of survival. Integration of palliative care into pandemic planning is crucial in order to equip healthcare providers with the resources needed to prepare for these unforeseen circumstances.

RATIONING CARE WHEN RESOURCES ARE LIMITED
Considering the limited number of ventilators and ICU resources available, the healthcare system will not be able to provide adequate support for all those who experience respiratory failure. Emergency physicians, hospitalists and intensivist will soon be faced with the difficult decision of prioritising ICU care and ventilator support for patients who have a higher likelihood of benefiting from these interventions.

While it is evident that mortality increases with age and with the number of organs involved, there is currently limited data on mortality scores and indexes that can assist physicians in making those decisions. This will lead to a great deal of uncertainty in making such decisions, especially in a healthcare system that has thus far emphasised patient autonomy, curative treatment intent and technological advances to prolong life. The dilemma imposed by COVID-19 will create a paradigm shift in the way healthcare providers handle prioritisation of care, and there is a need for locally applicable guidelines to support them in recommending foregoing ICU care when appropriate. Many European societies have issued criteria to assist healthcare providers in making treatment limitation decisions, equating them to wartime triage and catastrophic medicine principles.7–9 These recommendations are based on the ethical principle of utilitarianism-maximising benefit for
the largest number. A recently proposed multiprinciple allocation framework for rationing care during the COVID-19 pandemic in the USA takes into account several factors including likelihood of survival to hospital discharge and likelihood of long-term survival, while prioritising individuals who play an essential role in saving lives such as healthcare workers.\textsuperscript{10} Healthcare systems can use these principles to develop and continuously update their own local guidelines.\textsuperscript{11}

**WITHHOLDING NON-BENEFICIAL TREATMENT**

Reports from Wuhan and Washington State showed mortality rates of up to 86\% among patients with COVID-19 who required intubation and mechanical ventilation.\textsuperscript{12,13} Given this high mortality rate, many elderly and patients with advanced chronic diseases may choose to forgo intubation and mechanical ventilation. Most physicians receive little to no training on withholding non-beneficial treatment and conducting end-of-life care discussion. In situations when these invasive interventions are likely to cause more harm and discomfort than provide benefit, the ethical principle of non-maleficence can be applied. A recently proposed framework outlines the process for informed assent, which can assist healthcare providers in reaching these difficult decisions, especially in patients who place a higher emphasis on quality of life over longevity.\textsuperscript{14}

Goals of care discussion should ideally occur before the patient succumbs to a severe illness in order to lift the burden of decision making from next-of-kin in countries like the USA or the healthcare team in countries like the UK. In a recent article, Curtis et al\textsuperscript{14} emphasised the immediate need for clinicians to begin having goals of care and do not resuscitate (DNR) discussions with patients in the community and nursing home settings, especially those who are older or with advanced chronic diseases.

**SYMPTOM CONTROL AND PALLIATIVE INTERVENTIONS**

In order to be comfortable with implementing such guidelines, physicians will need to receive training on how to effectively control symptoms such as dyspnoea, pain and delirium in patients who are not candidates for ICU care in order to maintain comfort at end of life. Immediate training on symptom control is essential as lack of comfort can cause distress to patients and caregivers and to the healthcare team leading to burnout and compassion fatigue.\textsuperscript{15,16} In addition, inadequate symptom control may lead to interventions that can increase the risk of disease transmission to healthcare workers such as non-invasive mechanical ventilation for dyspnoea and placement of physical restraints for agitated delirium. Table 1 highlights some potential recommendations on how to palliate symptoms and implement palliative care interventions, especially in DNR patients.\textsuperscript{17,18} It is important to note that while intensive care approach and palliative care approach to patients with COVID-19 have several differences, many of these patients will end up dying in the ICU, and it is important to integrate both approaches in such cases.

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Suggested palliative care approach for patients with COVID-19 and comparison with other approaches</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assessment of symptoms</strong></td>
<td></td>
</tr>
<tr>
<td>Dyspnoea</td>
<td>Face to face during interdisciplinary team rounds.</td>
</tr>
<tr>
<td></td>
<td>Opioids.</td>
</tr>
<tr>
<td></td>
<td>Steroids.</td>
</tr>
<tr>
<td></td>
<td>Nebulisers.</td>
</tr>
<tr>
<td><strong>Deltirium</strong></td>
<td>Minimise psychoactive drugs.</td>
</tr>
<tr>
<td></td>
<td>Palliative sedation in refractory cases.</td>
</tr>
<tr>
<td><strong>Goals of care and DNR</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Discuss with patients and family members in clinics or during hospitalisation.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Family support/ family meetings</td>
<td>Usually during clinic visit or hospitalisation.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>End-of-life care.</strong></td>
<td>Hospice mainly at home.</td>
</tr>
<tr>
<td></td>
<td>Combination of family members and visiting nurses.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Bereavement</strong></td>
<td>Provided to close family members for up to 1 year from patients death.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ARDS, acute respiratory distress syndrome; DNR, do not resuscitate; ICU, intensive care unit; PPE, personal protective equipment.
patients. An example of that is compassionate extu- 
bulation of patients that requires critical care expertise 
in order to minimise aerosol generation during tube 
withdrawal and palliative care expertise in order to 
minimise respiratory distress. Steroids can be helpful 
in palliating dyspnoea in patients with advanced 
cancer, and they have recently been recommended 
for patients with COVID-19 and acute respiratory 
distress syndrome and on mechanical ventilation. 

Another important aspect to incorporate into palli-
ative care planning is support for healthcare providers 
dealing with daily losses, including their own. Reports 
from Italy and China showed that over 4800 health-
care workers had been infected (9% of total cases), 
with 24 doctors dead, and 3300 healthcare workers 
infected, with 23 doctors dead, respectively. In 
the first few 2 months of the spread in the USA, over 9000 
infections have been reported in healthcare workers 
including 27 deaths. Caring for own colleagues and 
witnessing their death can further add to the distress 
faced by healthcare teams and increase the risk for 
burnout.

**PALLIATIVE CARE DELIVERY METHODS**

Pandemics pose a unique challenge to palliative care 
services as they result in a surge of patients who 
need palliative and hospice care during their end 
of life, which can surpass the capacity of palliative 
care teams. Palliative care programmes will need 
to be prepared to be able to handle this surge while 
maintaining the health and well-being of their staff. 
This underscores the importance of palliative care 
providers taking the lead in training primary teams 
on effective symptoms control and communication 
strategies. Another challenge posed by this pandemic 
is the isolation and social distancing procedures 
that can negatively impact the effective provision 
of holistic interdisciplinary palliative care. This 
is especially challenging during the current COVID-19 
pandemic where healthcare facilitates are trying to 
conserve personal protective equipment and are 
therefore limiting the number of staff who can enter 
patient’s room. There is emerging evidence on the 
utility of telemedicine in the provision of palliative 
care; however, adequate preparation and technical 
expertise are needed to effectively implement this in 
the acute care setting. Palliative care and hospice 
teams will need to be proactive in identifying, imple-
menting and training on the most suitable remote 
platform to deliver services to patients and families.

**DEATH AND BEREAVEMENT SUPPORT**

Several issues can arise during the death and berea-
vement process in those affected by COVID-19. Dying 
alone in an ICU setting is difficult on patients and 
their loved ones. Surviving family members who were 
not allowed to be with their loved ones during this 
critical time are at high risk for complicated grief. 

After death, the body will need to be handled in a 
special way to prevent spread of infection. Dispose-
tion of the dead body through burial or cremation, 
and other religious rituals such as washing the body 
before burial, will need to be done in a sanitary way 
to avoid further transmission. All of these require-
ments will further complicate the grief process for 
surviving family members who are likely to be quar-
tantined themselves. Interventions to deliver berea-
vement counselling should incorporate online and 
virtual reality based methods. During these times 
of social isolation, virtual support groups may assist 
grieving family members in sharing experiences and 
finding hope.

**FUTURE DIRECTIONS**

All of these challenges taken together underscore the 
importance of generating evidence-based medicine on 
the implementation of palliative care during pandemics. 
It is crucial that we learn from the COVID-19 
pandemic, and there is an urgent need to document 
outcomes. There is also a need for innovative point-
of-care training methods for healthcare providers who are 
already overwhelmed by the demands of patient surge. 
Such training should balance attending to the well-
being of providers while educating them on palliative 
care principles. Such training should balance attending 
to the well-being of providers while educating them on 
palliative care interventions.

**CONCLUSIONS**

The COVID-19 pandemic is expected to surpass the 
capacity of the healthcare system and will create a 
need for integration of palliative care into pandemic 
planning. First, there is an immediate need for health-
care provider education on palliative care principles 
and how to triage patients when resources are scare. 
Second, there is a need for alternative methods for 
provision of palliative care such as telemedicine, tele-
counselling and online bereavement support groups. 
Finally, we need to learn from this experience and 
document outcomes in order to assist the healthcare 
system with preparedness for future pandemics.

**Contributors** NF is responsible for the overall content as 
guarantor; all authors contributed to the planning, outline 
and first draft as well as editing of paper.

**Funding** The authors have not declared a specific grant for this 
research from any funding agency in the public, commercial or 
not-for-profit sectors.

**Competing interests** None declared.

**Patient consent for publication** Not required.

**Provenance and peer review** Not commissioned; internally peer 
reviewed.

This article is made freely available for use in accordance with 
BMJ’s website terms and conditions for the duration of the 
covid-19 pandemic or until otherwise determined by BMJ. You 
may use, download and print the article for any lawful, non-
commercial purpose (including text and data mining) provided that all copyright notices and trade marks are retained.

ORCID iDs
Nada Fadul http://orcid.org/0000-0001-5022-9063
Eduardo Bruera http://orcid.org/0000-0002-8745-0412

REFERENCES
10 Vranas K, Kross EK, Stapleton RD. The importance of watching patients suffering and emotional display rules among ICU. BMJ Supportive Palliative Care 2021;11:40–44. doi:10.1136/bmjspcare-2020-002364
11 Fadul N, et al. BMJ Supportive & Palliative Care 2021;11:40–44. doi:10.1136/bmjspcare-2020-002364


