- 13 STARRT-AKI Investigators. STandard versus Accelerated initiation of Renal Replacement Therapy in Acute Kidney Injury: study protocol for a multi-national, multi-center, randomized controlled trial. Can J Kidney Health Dis 2019; 6: 2054358119852937.
- 14 Fayad All, Buamscha DG, Ciapponi A. Timing of renal replacement therapy initiation for acute kidney injury. Cochrane Database Syst Rev 2018; 12: CD010612.

The key role of palliative care in response to the COVID-19 tsunami of suffering



Coronavirus disease 2019 (COVID-19) has brought a tsunami of suffering that is devastating even well resourced countries. The disease has wreaked havoc on health systems and generated immense losses for families, communities, and economies, in addition to the growing death toll. Patients, caregivers, health-care providers, and health systems can benefit from the extensive knowledge of the palliative care community and by taking heed of long-standing admonitions to improve access to essential medicines, particularly opioids for the relief of breathlessness and pain.¹⁻³

For low-income and middle-income countries (LMICs), the COVID-19 pandemic is likely to be even more severe than in high-income countries. There will probably be a high burden of COVID-19 in settings where there are weak health-care systems, lack of access to clean water and disinfectants, poor outbreak preparedness, severe shortages in personal protective equipment (PPE) and medical technology, challenges in enforcing physical distancing regulations, and reliance on informal employment. In such settings, it is expected that patients with severe COVID-19 who are unable to access the limited supply of intensive care resources or hospital beds will suffer and die at home, where they would be cared for by family members without PPE and access to relevant information, training, or palliative care resources. These caregivers will probably become infected and spread the disease. Additionally, if resources are reallocated to respond to COVID-19, patients with other life-limiting conditions could find themselves pushed out of their health-care settings with reduced access to opioid medication.

During the COVID-19 pandemic, access to essential palliative care at end-of-life, including bereavement support, will be limited in the face of high demands in all countries. There will be increased isolation and suffering for palliative care patients and those who are bereaved.^{4,5} Strict physical distancing regulations to

slow disease transmission mean that patients who die from COVID-19 will usually be without loved ones by their side, who in turn will be unable to say goodbye or undertake traditional grieving rituals.^{4,6} Providers of palliative care, including private hospices, will require additional human and financial resources.

Basic palliative care training to all medical and nursing students has been the recommendation of the palliative Published Online April 22, 2020 https://doi.org/10.1016/ S0140-6736(20)30964-8

Panel: Strategies to extend palliative care during and after the COVID-19 pandemic

Immediate responsiveness to adapt to pandemic parameters

Optimise cooperation and coordination

 Initiate formal and informal pathways for collective action and exchange by governments, bilateral and multilateral organisations, civil society, and the private sector based on the principle of solidarity.

Preserve continuity of care

- Ensure the availability and rational use of personal protective equipment and encourage self-care among palliative care health-care professionals and all caregivers.
- Ensure an adequate and balanced supply of opioid medication to all patients for relief
 of breathlessness and pain by instituting the simplified procedures of the International
 Narcotics Control Board.
- Conduct rapid training for all medical personnel to address additional palliative care needs of COVID-19 patients.
- Engage technology partners to equip community health workers with telehealth capabilities to virtually conduct home-based palliative care activities.
- Enable families to virtually visit and partake in health decisions with loved ones, especially at the end of life to address the almost universal fear of dying alone.

Enhance social support

Enlist informal networks of community-based and faith-based organisations to
mobilise and train a citizen volunteer workforce that is ready and able to teleconnect
with patients in need of basic social support, delivering on palliative care's cornerstone
feature—compassionate care.

Assess emerging needs

 Link with contact tracing activities and testing sites to collect data from the general public to better understand the social dimension of pandemic suffering.

Long-term preparedness strategies that embed palliative care into the core of

- Expand all medical, nursing, social work, and community health worker curricula, as well as training of clergy, to include core palliative care competencies.
- Establish standard and resource-stratified palliative care guidelines and protocols for different stages of a pandemic and based on rapidly evolving situations and scenarios.

care community for many years,¹ and had it been heeded, the health-care workforce would be more prepared for this pandemic. Online training is available to help prepare medical personnel to provide some palliative care at all levels of care. Now is the time to insist on rapid capacity-building for clinicians^{7,8} in symptom control and management of end-of-life conversations.^{3,9} Smartphones and telemedicine can facilitate at-home activities supported by health-care professionals and volunteers without physical contact for people who are isolating at home.¹⁰ Immediate-term and long-term strategies to extend palliative care during and after the COVID-19 pandemic are shown in the panel.

Support for health-care workers and strategies, such as peer counselling, regular check-ins with social support networks, self-monitoring and pacing, and working in teams, to mitigate the impact of continued exposure to death and dying, breathlessness, desperation, and suffering need to be deployed across health systems. These strategies need to include the palliative care workforce worldwide because their patient groups are usually at increased risk from COVID-19 and the least likely to be triaged into intensive care.^{4,11}

Adoption of triage for clinical decision making, including who will receive ventilator support, marks a deterioration in use of person-centred care in favour of utilitarian thinking.⁵ Palliative care rejects the comparative valuation of human life and upholds the allocation of resources using the key ethical principles of justice and beneficence such that previous treatment adherence should not be a consideration in defining access to care.¹² Universal do-not-resuscitate orders should be rejected. The cornerstones of clinical decision making must be strict differentiation of clinicians who provide care from those who make triage decisions⁵ and patient-centred assessment of the medical indication, applied in conjunction with the will of the patient.¹³

Most importantly, patients triaged not to receive intensive care or ventilatory support require adequate relief of suffering, especially for breathlessness. ¹⁴ In COVID-19 patients with breathlessness, clinical experience suggests opioids—a common palliative care intervention—can be safe and effective and should be widely available. ¹⁵

The relief of the COVID-19-related, huge additional burden of serious health-related suffering will require opioids and especially inexpensive, off-patent injectable and immediate release oral morphine. ¹⁶ Yet the poorest 50% of people in the world have access to only 1% of the globally distributed opioids in morphine-equivalent and as a result access to opioid medication in many countries, even for palliative care, is inadequate. ^{1,17} Patients in LMICs with respiratory failure from COVID-19 will be largely unable to access opioids, as pre-existing scarcity will be exacerbated by increased use of opioids in hospital intensive-care units.

We propose that LMICs need to rapidly adopt two strategies. First, national opioid medication reserves have to be increased to build up a stockpile for the COVID-19 pandemic. The International Narcotics Control Board (INCB) has called on governments to ensure continued access to controlled medicines including opioids during this pandemic, reminding them that in acute emergencies it is possible to use simplified procedures for the export, transportation, and provision of opioid medications.18 To avoid cost escalation, pooled purchasing platforms need to be adopted, including making information on price-points public and accessible. 1,19 Second, rapid, basic training on rational use of opioid medications must be offered to all primary caregivers and health-care professionals in emergency departments and intensive-care units and much of this can be done online. 20,21

In this most challenging time, health responders can take advantage of palliative care know-how to focus on compassionate care and dignity, provide rational access to essential opioid medicines, and mitigate social isolation at the end of life and caregiver distress. The call to fully incorporate palliative care into global health^{1,22} could finally be realised in the urgency of the pandemic. If so, the COVID-19 pandemic will have catalysed medicine to better alleviate suffering in life and death.²³

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- 1 Knaul FM, Farmer PE, Krakauer EL, et al. Alleviating the access abyss in palliative care and pain relief-an imperative of universal health coverage: the Lancet Commission report. Lancet 2018; 391: 1391-454.
- Arya A, Buchman S, Gagnon B, Downar J. Pandemic palliative care: beyond ventilators and saving lives. CMAJ 2020; published online March 31. DOI:10.1503/cmaj.200465.
- 3 Powell VD, Siveira MJ. What should palliative care's response be to the COVID-19 epidemic? J Pain Symptom Manage 2020; published online March 27. DOI:10.1016/j.jpainsymman.2020.03.013.
- 4 Costantini M, Sleeman KE, Peruselli C, Higginson I. Response and role of palliative care during the COVID-19 pandemic: a national telephone survey of hospices in Italy. medRxiv, 2020; published online March 20. https://doi.org/10.1101/2020.03.18.20038448 (preprint).
- 5 Rosenbaum L. Facing COVID-19 in Italy—ethics, logistics, and therapeutics on the epidemic's front line. N Engl J Med 2020; published online March 18. DOI:10.1056/NEJMp2005492.
- 6 Wallace CL, Wladkowski SP, Gibson A, White P. Grief during the COVID-19 pandemic: considerations for palliative care providers. J Pain Symptom Manage 2020; published online April 13. DOI:10.1016/j.jpainsymman.2020.04.012.
- 7 International Association for Hospice and Palliative Care. Palliative care and COVID-19. 2020. http://globalpalliativecare.org/covid-19/ (accessed April 4, 2020).
- 8 World Hospice and Palliative Care Association. Time to talk: a virtual hub for people experiencing serious illness and palliative care community during the COVID-19 pandemic. 2020. http://www.thewhpca.org/covid-19/latest-news/item/time-to-talk-a-virtual-hub-for-the-serious-illness-and-palliative-care-community-during-the-covid-19-pandemic (accessed April 2, 2020).
- 9 Weaver MS, Wiener L. Applying palliative care principles to communicate with children about COVID-19. J Pain Symptom Manage 2020; published online March 31. DOI:10.1016/j.jpainsymman.2020.03.020.
- 10 Wakam GK, Montgomery JR, Biesterveld BE, et al. Not dying alone—modern compassionate care in the Covid-19 pandemic. N Engl J Med 2020; published online April 14. DOI:10.1056/NEJMp2007781.
- 11 Downar J, Seccareccia D. Palliating a pandemic: all patients must be cared for. J Pain Symptom Manage 2010; 39: 291–95.

- 12 University of Toronto Joint Centre for Bioethics Pandemic Influenza Working Group. STAND ON GUARD FOR THEE: ethical considerations in preparedness planning for pandemic influenza. Toronto: University of Toronto Joint Center for Bioethics, 2005. http://www.jcb.utoronto.ca/ people/documents/upshur_stand_guard.pdf (accessed April 20, 2020).
- 13 Swiss Academy of Medical Sciences. COVID-19 pandemic: triage for intensivecare treatment under resource scarcity. Swiss Med Wkly 2020; 150: w20229.
- 14 WHO. Integrating palliative care and symptom relief into the response to humanitarian emergencies and crises: a WHO guide. Geneva: World Health Organization 2018. http://www.who.int/servicedeliverysafety/en (accessed April 2, 2020).
- Bajwah S, Wilcock A, Towers R, et al. Managing the supportive care needs of those affected by COVID-19. Eur Respir J 2020; published online April 8. DOI:10.1183/13993003.00815-2020.
- 16 Nehls W, Delis S, Haberland B, Maier BO, et al. Recommendations for treatment of patients with COVID-19 from the palliative care perspective V2.0. 2020. Deutsche Gesellschaft für Palliativmedizin/Deutsche Gesellschaft für Pneumologie und Beatmungsmedizin. 2020. https://www.dgpalliativmedizin.de/images/DGP_Handlungsempfehlung_palliative_Therapie_bei_COVID18_V2.0_English_version.pdf (accessed April 2, 2020).
- 17 Berterame S, Erthal J, Thomas J, et al. Use of and barriers to access to opioid analgesics: a worldwide, regional, and national study. Lancet 2016; 387: 1644–56.
- 18 International Narcotics Control Board, 2020. The International Narcotics Control Board calls on governments to ensure continued access to controlled medicines for pain relief and palliative care and for mental health and neurological conditions during the COVID-19 pandemic. March 17, 2020. https://www.incb.org/incb/en/news/press-releases/2020/incb-calls-on-governments-to-ensure-continued-access-to-controlled-medicines-during-the-covid-19-pandemic.html (accessed April 2, 2020).
- 19 De Lima L, Arias Casais N, Wenk R, Radbruch L, Pastrana T. Opioid medications in expensive formulations are sold at a lower price than immediate-release morphine in countries throughout the world: third phase of opioid price watch cross-sectional study. J Palliat Med 2018; 21: 1458–65.
- 20 Center to Advance Palliative Care. Symptom management courses. https://www.capc.org/training/symptom-management/ (accessed April 2, 2020).
- 21 Indian Association of Pallative Care. PalliKare mobile app for palliative care, designed by Karunashraya, Bangalore Hospice Trust. http://www.palliativecare.in/free-palliative-care-app-pallikare/ (accessed April 4, 2020).
- The Lancet. Palliative care and the COVID-19 pandemic. Lancet 2020; 395: 1168.
- 23 Horton H. Offline: COVID-19—what countries must do now. Lancet 2020; 395: 1100.

Reconnecting for our future: The Lancet One Health Commission



The evolution and sustenance of our planet hinges on a symbiotic relationship between humans, animals, and the environment that we share—we are interconnected. However, this past century has seen human dominance over the biosphere, manifest in technological innovations, accelerated mobility, and converted ecosystems that characterise industrialisation, globalisation, and urbanisation. ¹ These developmental trajectories have advanced human health in unprecedented ways. However, they also make humans increasingly vulnerable to contemporary global health challenges, such as emerging and re-emerging

infectious diseases,² as shown by the coronavirus disease 2019 (COVID-19) pandemic, antimicrobial resistance (AMR),³ and the increasing burden of noncommunicable diseases.⁴ These challenges are further impacted by climate change, poverty, conflict, and migration.⁵

The apparent dominance of the human species comes with a huge responsibility. Thus, in our quest to ensure the health and continued existence of humanity, consideration must be given to the complex interconnectedness and interdependence of all living species and the environment—the concept of One

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