Do the clinical management guidelines for Covid-19 in African Countries reflect the African quality palliative care standards? A rapid review.

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Abstract

Palliative care should be a component of COVID-19 management to relieve suffering, improve patient outcomes and save cost. We identified and appraised palliative care recommendations within COVID-19 management guidelines in Africa using rapid document analysis. All guidelines of any language published between December 2019 and May 2020 were retrieved through online search and email to in-country key contacts. We appraised the documents using African Palliative Care Association standards for providing quality palliative care. Fifty-five documents were retrieved from 29 out of 54 African countries. Fifteen documents from 15 countries were included in the final analysis, of which eight countries have identifiable PC recommendations in their COVID-19 management guidelines. The other seven countries have statements of recommendations which are relevant to palliative care. Governments and policymakers in Africa must prioritise palliative care within case management guidelines to ensure patients with COVID-19 have access.

Background

COVID-19 was declared a pandemic by the WHO within three months of its emergence.[1] The number of cases and deaths are escalating in African countries. As of 21 May 2020, 95,201 cases and 2,997 deaths have been reported from all 54 African countries.[2]

COVID-19 case fatality rates range from 0·35 to 11%.[3] Risk factors for severe illness and mortality in COVID-19 include being elderly, the presence of pre-existing health problems, multi-morbidities,[4] and being of black and ethnic minority heritage.[5] In addition to these, severity and case fatality patterns in Africa may also be influenced by the lowered immunity in individuals with existing and undiagnosed conditions such as HIV/AIDS, tuberculosis infections, respiratory, cardiovascular, and metabolic conditions. Approximately 14% of patients have been reported to have the severe form of the disease, and 0·16% to 5% needed intensive care admission to manage severe respiratory symptoms.[6, 7] Inadequately resourced health systems in Africa face challenges of providing needed critical care medications and mechanical ventilators for intensive care.[8]

COVID-19 patients and their families report distressing multidimensional symptoms and concerns. These range from distressing physical symptoms such as fever, breathlessness, fatigue, cough;[9] psycho-social concerns, and spiritual /existential distress caused by the threat to survival, worry, and clinical uncertainty.[10] WHO recommendations for isolation means families and patients risk additional distress and poor access to social support.[10]

Palliative care is a core component of Universal Health Coverage and is required by WHA73.3 resolution as part of member state responses to COVID-19[11]. However, the neglect of palliative care among the dying and the resulting unnecessary serious health-related suffering is well established.[12, 13] WHO's omission of palliative care from COVID-19 response plans has been highlighted.[14] Palliative care must be a component of COVID-19 case

management to relieve suffering, improve outcomes for patients and their family members, and save costs.[15, 16] Within limited resources, palliative care teams are supporting complex decision making for patients with severe COVID-19 illness.[17] Evidence from previous fatal viral epidemics demonstrates that hospice and palliative care play essential roles including providing protocols for symptom management, training non-specialists, being involved in triage, and providing psychosocial and bereavement care.[18]

Given the low coverage of palliative care services and fragile health systems in Africa, health care professionals should be supported to deliver palliative care through clear comprehensive case management guidelines. This review aims to identify and critically appraise the palliative care recommendations within COVID-19 case management guidelines in Africa. The research questions were;

a) Are palliative care recommendations present within COVID-19 case management guidelines in these countries?

b) What are the specific palliative care recommendations?

c) Are the palliative care recommendations adequate when compared to the African Palliative Care Association (APCA) standards for providing quality palliative care across Africa?

Method

Design

We conducted a rapid document analysis using a systematic procedure to retrieve and analyse COVID-19 clinical case management guidelines from all 54 countries in Africa.

Search Strategy

We searched the Guidelines International Network database for specific guidelines for the management of COVID-19 cases from Africa. In addition, we searched online sources

including government agencies and ministry of health websites. In situations where guidelines were not available online or where documents available do not meet our inclusion criteria, key contact persons (ministry of health official, leaders of national palliative care associations, or palliative care champions) were contacted to obtain these documents. The process was coordinated by the African Palliative Care Association (APCA), the regional body that supports and coordinates the development and sustainability of palliative care. We emailed key contact persons in 39 countries.

Inclusion Criteria

We included guidelines for case management of COVID-19 published between December 2019 and 10 May 2020, written in any language. Our search was restricted to Guidelines prepared by a national government ministry or nationally recognised government body tasked with this responsibility. We included only guidelines prepared by the government as we were interested in assessing whether the government is considering and prioritising palliative care in the delivery of care to COVID-19 patients. Where a country has more than one version of the guideline, the most recent version was used.

Exclusion Criteria

We excluded: guidelines that were regional or hospital-based; guidelines that were prepared by NGOs or national associations not commissioned by the government; High-level strategy documents focusing on National Preparedness and Response Plan; Opinion pieces, commentaries, communique and editorials.

Data extraction (selection and coding)

A data extraction sheet was designed, piloted, and used to extract the following variables: 1) characteristics of each guideline i.e. country, title, date, and version of the guidelines. 2) Verbatim palliative care recommendations and content using related terms such as supportive

care, supportive treatment, supportive therapy, hospice care, and end of life care. OA and MAO reviewed and extracted all guidelines together. Any guideline for which inclusion was unclear was discussed with second reviewers (AO, EC, EN, and KN). AO, EC, EN and KN also conducted independent checking and verification of all extracted data so that data extracted from each guideline was reviewed by a second researcher, and any disagreement was adjudicated by a third reviewer (RH). Guidelines in french language were independently forward translated by official French speakers (HA and SB) and their translations were compared for consistency.

Data Analysis

We conducted a narrative synthesis of the extracted data. We analysed the palliative care-related contents of the guidelines using content analysis. In order to grade adequacy of the palliative care recommendations, we developed a matrix based on Principle 2 of the APCA standards for providing quality palliative care across Africa [19]. The APCA standards document was developed through wide consultation with service beneficiaries and providers to establish a framework for the development of evaluation and performance indicators to facilitate palliative care programme improvement and development across Africa. The document contains 37 standard statements grouped under four main principles including organisational management, holistic care provision, children's palliative care, education and training, and Research and Management of Information.[19] As we were reviewing case management guidelines and protocols, we assessed adequacy with respect to Principle 2 (Holistic Care provision) which has 17 standard themes (Table 1). This principle is most relevant to the direct patient and family care and support.

OA and MAO independently graded and checked the adequacy of the COVID-19 case management guidelines assigning fully met, partially met, not met, or not applicable. EN, EC,

AO and KN verified the grading and any disagreement was resolved through discussion. 'Fully met' was assigned when a recommendation in a guideline comprehensively addresses the APCA summary statement for a standard. 'Partially met' was assigned when a guideline's recommendation addressed some or part of the quality standard summary statement. 'Not met' was assigned when a guideline's recommendation was deemed not to have met any aspect of the quality standard. Recommendations were assessed as 'Not applicable' where we could not assess a standard due to the complexity of the criteria and where it is not directly involving patient care.

Role of the funding source

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Results

Out of the 54 African countries, 31 documents from 14 countries (Nigeria, South Africa, Ghana, Libya, Tunisia, Chad, Cameroun, Djibouti, Equatorial Guinea, Eritrea, Morocco, Cote D'Ivoire, Cape Verde, and Algeria) were retrieved through online searches and 23 documents from responses of 16 Key contact persons (Cote D'Ivoire, Togo, Mozambique, Namibia, The Gambia, Botswana, Tanzania, Uganda, Burundi, Malawi, Kenya, Zimbabwe, Ethiopia, Eswatini, South Sudan, and Sudan). Two responded with no document to provide (Mauritius) or referred us to their website for documents (Rwanda). We had no response from the remaining 21 countries after two reminders were sent and we could not identify a key contact in Niger and Sao tome and Principe where. In total, we retrieved 55 documents from 29 countries. Figure 1 shows the process of retrieval and selection of documents. We included 15 documents (11 in English and four in French) from 15 countries (Algeria, Botswana, Cote D'Ivoire, Eswatini, Ethiopia, Gambia, Morocco, Namibia, Nigeria, South Africa, South Sudan,

Sudan, Tanzania, Togo, and Uganda) in this review. 40 documents were excluded with reasons indicated in Figure 1: PRISMA flow chart

Data extracted from the guidelines are shown in Supplementary File 1. Of the 15 countries' guidelines reviewed, only eight countries (Algeria, Botswana, Namibia, South Africa, Sudan, South Sudan, Togo, and Uganda) had identifiable inclusion of palliative care or supportive care. Other countries (Eswatini, Ethiopia, Cote D'Ivoire, Gambia, Morocco, Nigeria, and Tanzania) have statements of recommendations which are relevant to palliative care within the document.

All 15 guidelines proposed recommendations on the management of physical symptoms, especially managing breathlessness with oxygen and nebulizer or bronchodilators, secondary bacterial infections with antibiotics, and fever with paracetamol. South Sudan and Tanzania's guidelines were the only ones to provide a set of comprehensive recommendations on psychosocial support and ensuring effective communication with patients and families. Tanzania also recommended psychosocial support for healthcare professionals; Cote D'Ivoire, Ethiopia and Eswatini recommended some level of psychosocial support while Namibia and Uganda mentioned psychosocial support only when referring to care of pregnant women with COVID-19. Further details on the palliative care recommendations proposed in the guidelines are in the extraction table (see Supplementary File 1).

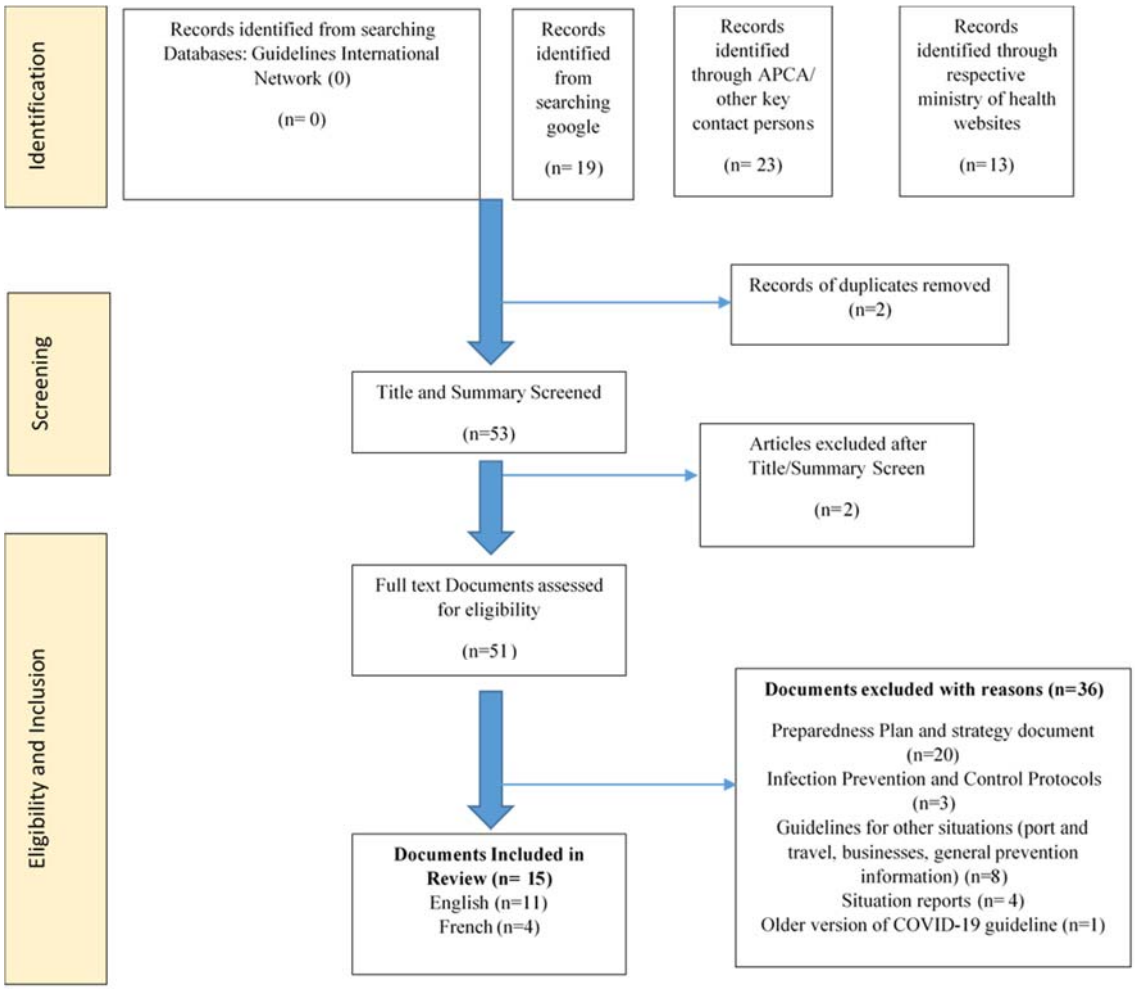

Figure 1: PRISMA flow chart

Reference to information and communication was only present within Cote D'Ivoire, Ethiopia, South Sudan, Sudan, Tanzania, Uganda, and Eswatini guidelines. Recommendations on meeting spiritual needs were only available in Ethiopia and South Sudan guidelines. In addition, only guidelines from South Sudan, Eswatini, Ethiopia, and Uganda have recommendations on decision making and choice in care; while only guidelines from South Sudan, Eswatini, Ethiopia, Tanzania, and Uganda, made recommendations on supporting families whose relations have severe COVID-19 disease.

Table 1 reveals the adequacy of the palliative care recommendations within the guidelines and protocols when evaluated using standard statements listed in principle 2 of the APCA standards for providing quality palliative care. The majority of the standards were not met. Standards 2.1

(Planning and coordination of care), 2.2 (Access to Specialist Palliative care), 2.4 (Pain and symptom Management), 2.6 (Management of Medications), 2.11 (Care for special needs populations), and 2.17 (Providing support to care providers) were partially met by the majority of the guidelines and only standard 2.5 (Management of opportunistic infections) was fully met by 14 out of 15 guidelines. Standard 2.15 (Clinical Supervision) was deemed not applicable and the remaining standards were unmet in the majority of the countries.

Table 1: The adequacy of the guidelines against the APCA standards for quality palliative care in 15 countries

Countries	2.1: Planning and Coordination of Care	2.2: Access to Care	2.3: Communication in palliative care	2.4: Pain and Symptom Management	2.5: Management of Opportunistic Infections (OIs)	2.6: Management of Medications	2.7: Psychosocial Care	2.8: Spiritual Care	2.9: Cultural Care	2.10: Complementary therapies in palliative care	2.11: Care for special needs populations	2.12: End-of-life care	2.13: Grief, loss and bereavement care in adults	2.14: Ethical care, human rights and legal support	2.15: Clinical Supervision	2.16: Inter-disciplinary Team	2.17: Providing support to care providers
Algeria	+	x	x	+	++	+	x	x	x	x	x	x	x	x	N/A	x	+
Botswana	+	+	x	+	++	+	x	x	x	+	+	x	x	x	N/A	x	+
Cote D'Ivoire	+	+	+	+	x	+	+	x	x	x	+	x	x	x	N/A	+	+
Ethiopia	+	+	++	+	++	+	+	+	+	x	+	+	+	+	N/A	x	+
The Gambia	+	+	x	+	++	+	+	x	x	x	+	x	x	x	N/A	x	+
Morocco	+	x	x	+	++	+	x	x	x	x	x	x	x	x	N/A	x	+
Namibia	+	+	x	+	++	+	+	x	x	x	+	x	x	x	N/A	x	+
Nigeria	+	x	x	+	++	+	x	x	x	+	+	x	x	x	N/A	x	+
South Africa	+	+	x	+	++	+	x	x	x	x	+	+	x	x	N/A	x	+
South Sudan	++	++	++	++	++	+	++	+	+	+	++	x	x	+	N/A	++	+
Sudan	+	+	+	+	++	+	x	x	x	+	+	x	x	x	N/A	x	+
Eswatini	+	x	+	+	++	+	+	x	+	x	+	+	x	+	N/A	x	+
Tanzania	+	+	++	+	++	+	++	x	+	x	+	++	++	x	N/A	++	++
Togo	+	+	x	+	++	+	x	x	x	+	x	x	x	x	N/A	x	+
Uganda	+	+	+	+	++	+	+	x	x	x	++	x	x	+	N/A	++	+

Legend
++ - Fully met
+ - Partially Met
x- Not Met
N/A- Not Applicable

Discussion

Our study set out to critically appraise the case management guidelines for COVID-19 in Africa for their palliative care content and evaluate the adequacy of this against APCA standards for quality palliative care provision across Africa.

The majority of the countries with specific sections on palliative care are in Southern and Eastern Africa. This reflects the development of palliative care in these countries with strong advocacy networks and well-developed services and national policies.[20] Also, these countries named their treatment and therapeutic management sections supportive therapy or supportive treatment to recognize the absence of curative treatment for COVID-19 as against other countries.

While some case management documents made recommendations for some symptoms, there were no recommendations on other palliative care problems that may accompany breathlessness in COVID-19 such as delirium, anxiety, and cough.[21] Also, except for guidelines in South Sudan, Ethiopia, Eswatini, and Uganda, there were no clear recommendations for giving patients and families choices regarding care decisions such as the use of mechanical ventilation. In a continent where healthcare delivery has been known to be paternalistic [22] and palliative care training and education are limited,[20] there is need for explicit recommendations on shared decision making, fostering autonomy of choice, providing psychosocial care, patient-centred referrals to palliative care, and encouraging adequate communication with the patient and families at a time of high anxiety.

The importance of religious and cultural practices around dying in contributing to the spiritual needs of patients and families have been documented.[23] However, most of the guidelines we reviewed did not meet the standards of spiritual and cultural care (2.8 and 2.9 respectively). While there were sections on managing dead bodies in recommendations from some countries,

caring for the dying is omitted in all the case management guidelines. This suggests a lack of priority on supporting the dying phase to reduce distress and suffering.[12] This might also be indicative of the pervasive reticence and taboos around discussing the death and dying in African cultures.[24]

There are limitations which may affect the interpretation of our findings. The wording of the APCA standard influenced our analysis. The specific wordings within the APCA standard is arguably HIV/AIDS and cancer-focused. For example, standard 2.5 heading and summary statement read, "Management of Opportunistic Infections (OIs): Appropriate management of opportunistic infections, including tuberculosis (TB), improves the quality of life among people living with HIV and AIDS, and those with other life-threatening illness." We applied this by looking at treatment recommendations for secondary/ superimposed bacterial pneumonia infections within the context of COVID-19. We acknowledge that the HIV/AIDS pandemic and cancer have largely influenced the development of palliative care in Africa. However, there is a wider debate that people with other progressive serious illnesses aside from HIV/AIDS and cancer have poor access to palliative care in Africa. This highlights the need for APCA to review and expand the standards to make it more inclusive within the context of wider serious health-related suffering.[25] Our findings are also based on documents that we were able to retrieve online or from key contact persons. We are aware that there might be other guidelines from government and NGOs which address some of the areas that we identified as weak. In addition, we only did forward translation for guidelines in the French language; therefore some meanings might have been lost in translation.

Furthermore, we applied standard 2.6 (the management of medications) by considering oxygen and other medication recommended in majority of the guidelines as serving palliative care or supportive therapy purposes. In the context of poorly resourced health systems in Africa, even oxygen for the management of breathlessness (which many of the guidelines recommended)

may be unavailable, and as such might require rationing. In addition, the detailed criteria for this standard are related to medications commonly used in palliative care such as opioids which require proper training to prescribe and use. Therefore, clear guidance must also be recommended on the use of opioids as an additional line of management for breathlessness in patients dying of COVID-19 [21] and systems must be put in place to ensure their availability.

Like the HIV/AIDS pandemic before it, the COVID-19 pandemic might catalyse the development of palliative care in Africa to meet the needs of the non-COVID population. The focus of palliative care is on managing serious health-related suffering [12, 25] and this is the only type of care we can offer patients with severe COVID-19 disease while we conduct further research into developing vaccines and curative treatment. There is extensive palliative care evidence on approaches to managing serious health-related suffering. It is therefore imperative for governments, policymakers, and stakeholders in Africa to prioritise the role of palliative care in the management of patients with COVID-19.

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Conflict of interest statement
All authors have declared no conflict of interest.

SUPPLEMENTARY FILE 1: Palliative care recommendations in included Guidelines

Table 1: Palliative Care Recommendations within the included guidelines

Country	Title, date, version and source of the guidelines	Availability of Specific Palliative care recommendations	If YES Verbatim palliative care recommendations	If NO Other recommendations that are palliative in approach	Principle 2: Holistic Care Provision															
					2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	2.10	2.11	2.12	2.13	2.14	2.15	2.16	2.17
Algeria	Preparation and Response Plan to the Threat of Coronavirus Covid-19 No date and no version	Yes	2- Symptomatic treatment (Pg105-107) a) Oxygen therapy: (2.4) Objective: Obtain an oxygen saturation greater than or equal to 92%. (2.1) The modes of administration of O2 vary according to the administered rates: • Oxygen glasses: flow between 0·5 to 5l / min; • Oxygen mask: flow between 5 to 8 l / min; • Oxygen mask with reserve above 8l / min (only in the absence of a respirator) b) Mechanical ventilation: If not improved after 1 to 2 hours 3- Associated treatment: - Adapted vascular filling - Vasopressors: Noradrenaline, Adrenaline, Dobutamine - No broad spectrum antibiotic - Systematic antibiotic therapy in the case of ARDS or if there are foci of alveolar condensation. We will prescribe a 3rd generation cephalosporin associated with a quinolone; (2.1, 2.5) - Prevention and treatment of complications.		Partially met	Not met	Not met	Partially met	Fully met	Partially met	Not met	Not met	Not met	Not met	Not met	Not met	Not met	Not met	Not met	Not Applicable	Not met	Partially met

			4- Specific treatment For all patients with a moderate form, a form with pneumonia and / or a severe form suspected of Covid-19 infection: it will be prescribed, In the absence of contraindications and under medical supervision: 1st intention: Chloroquine: 500 mg twice a day for 5 to 7 days Or Hydroxychloroquine: 200 mg, 3 times a day for 10 days 2nd intention: Lopinavir / ritonavir: (tablet 200/50 mg) at a rate of 2 tablets, twice a day respecting the rules of use for 5 to 7 days Or Atazanavir: 300 mg / day for 2 weeks.																				
Botswana	Interim Clinical Guidance for the management of patients with Coronavirus disease 2019 (COVID-19) in Botswana Version: 1.0 2nd April 2020	Yes	Early supportive therapy in hospitalised COVID-19 patients (page 20) Oxygen • Oxygen therapy is likely to be the single most effective supportive measure in COVID-19 patients overall. (2.4) • Give supplemental oxygen therapy immediately to patients with low oxygen saturation. (2.4) • Start oxygen therapy if the Sp02 falls below 90% in adults and children or if below 92% in pregnant women(15). (2.1, 2.4) • Once commenced, aim for an Sp02 of 92-96%. • Do not over oxygenate as this is associated with harm. • Titrate oxygen therapy up and down to reach targets by means of nasal cannula, a simple face mask or a face		Partially met	Partially met	Not met	Partially met	Fully met	Partially met	Not met	Not met	Not met	Partially met	Partially met	Not met	Not met	Not met	Not Applicable	Not met	Partially met

			mask with reservoir bag, as appropriate. Fluids (page 20) • Use conservative fluid management in patients with SARI when there is no evidence of shock. (2.4) • Aggressive fluid resuscitation may lead to pulmonary oedema and worsen oxygenation. • In resuscitation for septic shock in adults, give 250–500 mL crystalloid fluid (normal saline or Ringer's Lactate) as rapid bolus in first 15–30 minutes and reassess for signs of fluid overload after each bolus. Vasoactive Agents (page 21) • Aim for a mean arterial pressure of 60-65 mmHg. • Only start vasopressors once confirming that patients are fluid replete.(2.1, 2.4) • We suggest using norepinephrine as first line vasoactive agent. If unavailable we suggest using vasopressin or epinephrine. • If signs of poor perfusion and cardiac dysfunction persist despite achieving MAP target with fluids and vasopressors, consider an inotrope such as dobutamine. Antibiotics (page 21) • If clinical suspicion for co-infection exists, consider empirical antimicrobials to treat copathogens causing the syndrome. (2.5) • Treat suspected or confirmed pneumonia with:																					

			o Co-amoxiclav 625mg PO TDS or 1·2gram IV TDS for seven days AND o Azithromycin 500mg OD/IV for seven days Specific therapies (page 21) • Ensure patients have thrombo-prophylaxis prescribed if not contraindicated. (2.1, 2.6) • Do not routinely give systemic corticosteroids for treatment of COVID- 19 unless they are indicated for another reason(17, 18). • There is no current evidence from RCTs to recommend any specific anti-nCoV treatment for patients with suspected or confirmed COVID-19 infection. • Do not therefore give hydroxy-chloroquine or chloroquine to patients. • If pneumocystis pneumonia is strongly suspected start high dose CTX and steroids, if necessary. • Consider a blood transfusion if the Hb < 70 g/L (7·0g/dL) in the absence of extenuating circumstances such as myocardial infarction, severe hypoxaemia or acute haemorrhage. Targeting higher Hb thresholds (>90-100 g/L) does not lead to better outcomes in patients with sepsis. Give early enteral nutrition (within 48 hours of admission). 2.10																					
Cote D'Ivoire	Guide de la Société Ivoirienne de Pneumo-Phtisiologie (SIPP) pour la	No		Care and management pg 17-19 Whatever the clinical form, the care must necessarily include personnel protection measures, an appropriate assessment and a consistent therapeutic attitude	Partially met	Partially met	Partially met	Partially met	Not met	Partially met	Partially met	Not met	Not met	Not met	Partially met	Not met	Not met	Not met	Not Applicable	Partially met	Partially met

	prise en charge de la COVID- 19Version du 16 avril 2020			- Staff protection measure (2.17) - Therapeutic attitude (2.7, 2.3) - psychological support (2.7) - oxygen therapy if SaO2 ≤ 95% (2.1, 2.4) - treatment of symptoms (fever, runny nose, abundant drink) (2.4) - patient and family education (2.3, 2.1, 2.17): barrier measures, establish telephone connection daily (2.7), daily temperature monitoring, ban visits - Transfer of the patient to the intensive care unit (2.2) - Assessment to be made in the care unit (2.1) Treatment of special cases (2.11) Management must be multidisciplinary, (2.16) particularly for: o children o elderly subjects o pregnant women o subjects with disabilities All basic asthma and COPD treatmentsshould be continued (corticosteroids inhaled, possibly associated with other molecules (LABA, LAMA, montelukast, oral corticosteroid therapy at minimum effective dose ...) (2.6)																			
Ethiopia	NATIONAL COMPREHENSIVE COVID19 MANAGEMENT HANDBOOK	No		General principle of clinical mangement for COVID-19 (page 40 to 41) ▪Underlying /chronic diseases should be identified as early as possible with detailed history from patient, close family members or friends. (2.1.) ▪Drug interactions, adverse effects of drugs and drug allergies must be	Partially met	Partially met	Fully met	Partially met	Fully met	Partially met	Partially met	Partially met	Partially met	Not met	Partially met	Partially met	Partially met	Partially met	Not Applicable	Not met	Partially met

	First edition APRIL 2020			considered during managing the patient with COVID-19. (2.6) ▪Patient care should be with respect and dignity which include: respect/dignity, medical support, food/water, and information. (2.14, 2.3) ▪ Give supplemental oxygen therapy to patients with low oxygen saturation: (2.4) ▪No proven anti-viral therapy or vaccine against COVID-19 so far necessitating supportive care for specific symptoms. (2.4) ▪Provide symptomatic therapies with antipyretic /analgesic (2.4) ▪In COVID 19 superimposed bacterial infection is common and to treat all likely pathogens antibiotics administration (2.5) ▪Notify the family and provide grief counseling according to the ethical standards (2.3, 2.13, 2.14, 2.17) ▪Close families should be allowed to see the body after tubes removed and wound sites dressed under strict IP precautions (2.13) ▪Religious rituals are to be conducted at the mortuary but coffin should not be opened (2.8, 2.13) ▪Individuals are treated with respect and dignity. (2.14, 2.3) ▪The final decision about which medical interventions to accept, if any, belongs to the patient. (2.3, 2.14, 2.1) ▪Patients should also be allowed to access family members and significant others through phone. (2.3, 2.17, 2.7)																			

				▪Information on patient‘s condition should be communicated to their family regularly and upon request by the treating physician. (2.3) ▪Determine methods for patient/family information provision including alternate languages/interpretive services. (2.3, 2.14) ▪Ensure regular and timely communication with and feedback to family, friends or other relations of patients who are admitted regarding their health status (2.3) ▪Make sure to speak to patients in a tone that is customary for providing comfort and building trust when speaking to family or community members. (2.3) ▪Do not make promises regarding if a family member will recover – this may lead to mistrust if the patient does not recover. (2.3, 2.12, 2.13, 2.14) ▪Allow family members to view patients or provide for basic needs of their family members (e.g. clean clothes, food, etc.) as per appropriate IPC protocols. (2.7,) ▪If a patient dies, be sure to inform the family as soon as possible and calmly explain the process of body treatment (burial ground or cremation options as culturally appropriate). (2.9, 2.3, 2.13)																				
Gambia, The	COVID-19 National case management guidelines April 2020, version 1	No		*Paracetamol 1 g tds PO for 48 hrs, then review (2.4). *Rehydrate with IV Fluids N/saline with 5% Dextrose IL over 8 hrs in adults for 24 hrs then review (2.4). *Oral Antibiotics if suspected secondary bacterial infection	Partially met	Partially met	Not met	Partially met	Fully met	Partially met	Partially met	Not met	Not met	Not met	Partially met	Not met	Not met	Not met	Not Applicable	Not met	Partially met

				Azithromycin 500 mg daily orally for 3 days (2.5). *Closely monitor patients with moderate COVID-19 disease for early signs of clinical deterioration, such as rapidly progressive respiratory failure and sepsis and respond immediately with supportive care interventions. The ability to identify, assess and escalate care for deteriorating hospitalised COVID-19 patients appropriately can make some difference in our outcomes. Use of the MEWS Score (Modified Early Warning Score) can identify patients who are deteriorating or at risk of deteriorating to ensure timely assessment and intervention (2.1, 2.2, 2.4). * IV Antibiotics if suspected secondary bacterial infection, IV Ceftriaxone 2g Daily for 5 days initially, then review. If suspected CAP, follow with macrolide, Azithromycin 500 mg daily orally for 3 days (2.5, 2.6). * Oxygen therapy via fixed oxygen delivery masks to keep Sp02 between 95-96% if no COPD . If COPD, keep SpO2 between 88-92% If a patient is failing to respond to oxygen delivered via a face mask, then consider non-invasive ventilatory (NIV) support if persistent hypoxia (SpO2 < 92%) despite high flow oxygen Check Arterial Blood Gas (ABG) if available. Initiate oxygen therapy at 5 L/min and titrate flow rates to reach target SpO2																			

				≥ 93% during resuscitation; or use face mask with reservoir bag (at 10–15 L/min) if patient in critical condition. Once patient is stable, the target is > 90% SpO2 in non-pregnant adults and ≥ 92–95% in pregnant patients. Oxygen should be turned down if saturations are consistently 99-100%) (2.1, 2.4). * Maintain the airway and give oxygen therapy during resuscitation to target SpO2 ≥ 94%; otherwise, the target SpO2 is ≥ 90% (25). *The ability to identify, assess and escalate care for deteriorating hospitalised COVID-19 patients appropriately can make some difference in our outcomes. Use of the MEWS Score (Modified Early Warning Score) can identify patients who are deteriorating or at risk of deteriorating to ensure timely assessment and intervention. (2.1, 2.2) *Treat any associated co-morbidity appropriately Care for pregnant women and neonates * Pregnant women should be treated with supportive therapies as described above. So far, there is no evidence on mother-to-child transmission of COVID-19 when infection is in the third trimester. There is no evidence that pregnant women present with different signs or symptoms or are at higher risk of severe illness (2.1, 2.11). * Encourage and support mother and baby to be together. Consider																				

				separating mother and baby partially or completely (e.g. discharging baby home before unwell mother) only after taking into account limited local capacity, disease severity, psychological wellbeing, parental preferences, if method exists to feed baby e.g. bottle or cup feeding (2.1, 2.7, 2.11). *Provide oxygen via nasal cannula to maintain SPO2 >90% (>88% for preterm neonates). Avoid potentially aerosolizing techniques if possible (E.g. suctioning, CPAP). If a neonate requires CPAP for clinical reasons (Silverman score ≥4 or persistently hypoxic despite oxygen (2.11). * Provide routine maintenance fluids according to age and weight, as per standard care. Provide expressed breast milk as soon as possible as per standard neonatal care including use of gastric tubes and cup feeding (2.4, 2.11). Children with COVID-19 *Older children and adolescents should receive oxygen via a face mask. Face masks with reservoir bags should be reserved for those with severe disease to deliver 10 – 15 L/min. Head boxes or other devices to maximise oxygen delivery should be used where possible. CPAP is not currently available for children with confirmed or suspected COVID-19 (2.4, 2.11). *Children with asthma should be treated as usual but with salbutamol																				

				given via a spacer rather than nebulized to reduce the risk of aerosolization of COVID-19. Oral steroids should be used as normal for children with asthma (2.1, 2.4, 2.11).																	
Morocco	Protocole de prise en charge des patients atteints de COVID-19 et leurs contacts. (Management protocol for patients with COVID-19 and their contacts.) Circulaire No.029/DELM/ 2020 du15 Avril 2020	No		6. Therapeutic protocol (pg3) Antibiotic therapy: Not systematic, indicated if secondary bacterial infection. (2.1, 2.5) Amoxicillin + clavulanic acid, 3g per day Or Moxifloxacin 400mg / d in one Or Levofloxacione 500 mg / day in a single dose Nebulization: use if necessary, with the necessary precautions to prevent healthcare-associated infections. (2.1, 2.4)	Partially met	Not met	Not met	Partially met	Fully met	Partially met	Not met	Not met	Not met	Not met	Not met	Not met	Not met	Not met	Not met	Not Applicable	Not met	Partially met
Namibia	Coronavirus Disease (COVID-19) Standard Operating Procedures (SOP) Apr-20	Yes	Patients with severe COVID-19 (page 47) Oxygen therapy and monitoring *Give supplemental oxygen therapy immediately to patients with SARI and respiratory distress, hypoxaemia or shock and target > 94% and ≥ 92–95% in pregnant patients (2.4). *Closely monitor patients with COVID-19 for signs of clinical deterioration, such as rapidly progressive respiratory failure and sepsis and respond immediately with supportive care interventions (2.1, 2.4). *Application of timely, effective and safe supportive therapies is the		Partially met	Partially met	Not met	Partially met	Fully met	Partially met	Partially met	Not met	Not met	Not met	Partially met	Not met	Not met	Not met	Not Applicable	Not met	Partially met

			cornerstone of therapy for patients that develop severe manifestations of COVID-19 (2.1, 2.2, 2.4). *Understand the patient's co-morbid condition(s) to tailor the management of critical illness (2.1, 2.5) *Monitor for drug-drug interactions (2.6). *Use conservative fluid management in patients with SARI when there is no evidence of shock (2.1, 2.4). Treatment of co-infections (page 47) *Give empiric antimicrobials to treat all likely pathogens causing SARI and sepsis as soon as possible, within 1 hour of initial patient assessment for patients with sepsis (2.4, 2.5). *Empiric therapy should be de-escalated based on microbiology results and clinical judgment (2.1). Acute Respiratory Distress Syndrome (ARDS) (page 47) *Recognize severe hypoxemic respiratory failure when a patient with respiratory distress is failing standard oxygen therapy and prepare to provide advanced oxygen/ventilatory support (2.1, 2.4). *Endotracheal intubation should be performed by a trained and experienced provider using airborne precautions (2.1, 2.4). *Rapid sequence intubation is appropriate after an airway assessment that identifies no signs of difficult intubation (2.1, 2.4). *Aim for an initial tidal volume of 6mg/kg.16 Tidal volume up to 8 ml/kg																					

			predicted body weight is allowed if undesirable side effects occur (e.g. dyssynchrony, pH <7·15) (2.1, 2.4). *Use lower inspiratory pressures (plateau pressure <30 cmH2O). (2.1, 2.4). *Hypercapnia is permitted if meeting the pH goal of 7·30-7·45 (2.1, 2.4). *Application of prone ventilation >12 hours a day is strongly recommended for patients with pressures (2.1, 2.4) *In patients with moderate or severe ARDS, moderately higher PEEP instead of lower PEEP is 16 targets (2.1, 2.4). *In patients with moderate-severe ARDS (PaO2/FiO2 <150), neuromuscular blockade by continuous infusion should not be routinely used (2.1, 2.4). Septic Shock (page 48) *Recognize septic shock in adults when infection is suspected or confirmed AND vasopressors are needed to maintain mean arterial pressure (MAP) ≥ 65 mmHg AND lactate is ≥ 2 mmol/L, in absence of hypovolemia (2.1, 2.4). *Recognize septic shock in children with any hypotension (systolic blood pressure [SBP] < 5th centile or > 2 SD below normal for age) or two or more of the following: o Altered mental state o Tachycardia or bradycardia (HR < 90 bpm or > 160 bpm in infants and HR < 70 bpm or > 150 bpm in children)																				

			o Prolonged capillary refill (> 2 sec) or feeble pulses; tachypnoea; mottled or cold skin or petechial or purpuric rash o Increased lactate; oliguria; hyperthermia or hypothermia (2.1, 2.4). Pregnant women with COVID-19 (page 48) *Considering asymptomatic transmission of COVID-19 may be possible in pregnant or recently pregnant women, as with the general population all women with epidemiologic history of contact should be carefully monitored (2.1, 2.4, 2.11). *Pregnant women with a suspected, probable or confirmed COVID-19 infection, including women who may need to spend time in isolation with obstetric, foetal medicine and neonatal care, as well as mental health and psychosocial support, with readiness to care for maternal and neonatal complications (2.1, 2.4, 2.7, 2.2.11). *Currently no evidence that pregnant women present with increased risk of severe illness or fetal compromise. *Pregnant and recently pregnant women who have recovered from COVID-19 should be enabled and encouraged to attend routine antenatal or postpartum care as appropriate. (2.1, 2.11) Infants and Mothers with COVID-19 (page 48)																				

			*Infants born to mothers with suspected, probable or confirmed COVID-19 infection, should be fed according to standard infant feeding guidelines, while applying necessary precautions for IPC (2.1, 2.1, 2.11). *As with all confirmed or suspected COVID-19 cases, symptomatic mothers who are breastfeeding or practicing skin-to-skin contact or kangaroo mother care should practise respiratory hygiene, including during feeding (for example, use of a medical mask when near a child if with respiratory symptoms), perform hand hygiene before and after contact with the child, and routinely clean and disinfect surfaces which the symptomatic mother has been in contact with (2.1, 2.4, 2.11). *Breastfeeding counselling, basic psychosocial support and practical feeding support should be provided to all pregnant women and mothers with infants and young children, whether they or their infants and young children have suspected or confirmed COVID- 19 (2.1, 2.4, 2.7, 2.11). *In situations when severe illness in a mother due to COVID-19 or other complications prevent her from caring for her infant or prevent her from continuing direct breastfeeding, mothers should be encouraged and supported to express milk, and safely provide breastmilk to the infant, while applying appropriate IPC measures (2.1, 2.4, 2.11)																					
Nigeria	NATIONAL INTERIM	No		Clinical management of COVID-19 (page 21 to 25) ▪Commence oxygen if	Partial	Not	Not	Partial	Fully	Partial	Not	Not	Not	Partial	Partial	Not	Not	Not	Not	Not	Partial

	GUIDELINES FOR CLINICAL MANAGEMENT OF COVID-19 Version 1 14 March 2020			RR >30/min, or SpO2 < 90% (<92% in children). (2.4, 2.11) ▪Provide further supportive care as appropriate (2.4) ▪Continue supportive care as appropriate (2.4) ▪Ensure optimal oxygenation (2.4) ▪Use broad spectrum antibiotics based on local epidemiology (2.5) ▪Early supportive therapy and monitoring is recommended for a favourable outcome (2.1, 2.4) ▪Manage symptoms fever, cough, sore throat, nasal congestion, malaise, headache and muscle pain – with antipyretics, cough medicine, rest, (2.4) ▪Provision of supplemental oxygen therapy is a hallmark of treatment for severe cases (2.4) ▪Supplemental oxygen therapy (2.4) ▪Commence High-Flow Nasal Oxygen (HFNO) or Non-Invasive Ventilation (NIV) at 10-15L/ minutes (2.4) ▪Give supportive therapy as the need arises. (2.4) ▪Maintain nutrition support (enteral or parental as indicated) (2.4) ▪Give oxygen therapy (2.4) ▪Give supportive therapy as need arises to ensure sufficient fluid and electrolyte balance (2.4) ▪Maintain nutrition support (enteral or parental as indicated) (2.4) ▪Supportive therapies as generically described, taking into consideration, physiologic adaptations of pregnancy. (2.11)	ly met	met	met	ly met	met	ly met	met	met	met	ly met	ly met	met	met	met	Applicable	met	ly met
South Africa	Clinical management of	Yes	4.2 Early supportive therapy in hospitalised COVID-19 patients (page		Partial	Partial	Not	Partial	Fully	Partial	Not	Not	Not	Not	Partial	Partial	Not	Not	Not	Not	Partial

	suspected or confirmed COVID-19 disease Version 3 (27th March 2020)		11) ▪Give supplemental oxygen therapy immediately to patients with low oxygen saturation. (2.4) • Oxygen therapy is likely to be the single most effective supportive measure in COVID-19 patients overall. Target SpO2 ≥90% in non-pregnant adults and SpO2 ≥92% in pregnant patients.7 Children with emergency signs (obstructed or absent breathing, severe respiratory distress, central cyanosis, shock, coma or convulsions) should receive oxygen therapy during resuscitation to target SpO2 ≥94%; otherwise, the target SpO2 is ≥92%. (2.1, 2.5) • Titrate oxygen therapy up and down to reach targets by means of nasal cannula, a simple face mask or a face mask with reservoir bag, as appropriate: (2.1, 2.5) ▪Use conservative fluid management in patients with COVID-19 when there is no evidence of shock. (2.4) ▪Aggressive fluid resuscitation may worsen oxygenation, especially in settings where there is limited availability of mechanical ventilation. ▪If a clinical suspicion for co-infection exists, consider empiric antimicrobials to treat copathogens causing the syndrome, particularly in severe cases. This may include conventional and atypical bacterial pathogens, influenza and PJP (see section 3.3 above). (2.1, 2.5) ▪Closely monitor patients with SARI for signs of clinical deterioration, such as rapidly		ly met	ly met	met	ly met	met	ly met	met	met	met	met	ly met	ly met	met	met	Applicable	met	ly met

			progressive respiratory failure and sepsis, and apply supportive care interventions immediately. (2.1, 2.2, 2.4)																			
South Sudan	Covid-19 Clinical Care Management Guideline for South Sudan Version 1, 2020	Yes	Management for Severe Illnesses (pages 10-13) The aim is to provide early optimized supportive care and monitoring (2.2). Oxygen therapy and monitoring 2.4, 2.6 *For clients presenting with respiratory distress, hypoxaemia or shock, providing supplemental oxygen therapy immediately is the hallmark of care for severe illnesses. *For Adults/Adolescents presenting with emergency signs such as obstructed or absent breathing, severe respiratory distress, central cyanosis, shock, coma or convulsions should receive airway management and oxygen therapy during resuscitation to reach a target of > 90% SpO2 in non-pregnant adults and ≥ 92–95% in pregnant patients. *Initiate oxygen therapy at 5 L/min and titrate flow rates to reach target SpO2 ≥ 93% during resuscitation; *For patients in critical condition and face mask with reservoir bag is available, provide oxygen therapy at 10–15 L/min (2.1, 2.4) *For children presenting with emergency signs (obstructed or absent breathing, severe respiratory distress, central cyanosis, shock, coma or convulsions) should receive airway management and oxygen therapy during resuscitation to reach a target		Fully met	Fully met	Fully met	Fully met	Fully met	Partially met	Fully met	Partially met	Partially met	Partially met	Fully met	Not met	Not met	Partially met	Not Applicable	Fully met	Partially met

			of SpO2 ≥ 94%. Use of nasal prongs or nasal cannula is preferred in young children, as it may be better tolerated *Perform Haematology and biochemistry laboratory testing, and ECG where available at admission and as clinically indicated to monitor for complications, such as acute liver injury, acute kidney injury, acute cardiac injury or shock. *All patient must be closely monitored for signs of clinical deterioration, such as rapidly progressive respiratory failure and sepsis and respond immediately with supportive care interventions. *Remember application of timely, effective and safe supportive therapies is the cornerstone of therapy for patients that develop severe manifestations of COVID-19 (2.1, 2.4). Fluid management: Cautious and conservative fluid management in severely ill patients is recommended and must be under direct guidance of an experienced physician. *Patients should be treated cautiously with intravenous fluids, because aggressive fluid resuscitation may worsen oxygenation, especially in settings where there is limited availability of mechanical ventilation (2.1, 2.4) Anti-microbials: Empiric use of antibioticsmaybe considered when bacterial superinfection (Bacterial Sepsis/pneumonia) is being suspected based on clinical judgement (high index of suspicion). In such a case,																				

			give appropriate, empiric broad-spectrum antimicrobials as soon as possible following laboratory confirmation of causative organisms from respiratory and/ or blood samples. *Amoxicillin/ Clavulanic acid and Metronidazole combination for patient who can take oral medication is the first line antibiotic to consider. *Where oral medication is not feasible, give IV ceftriaxone and monitor for clinical improvement. *Empiric antibiotic treatment should be based on the clinical diagnosis (community acquired pneumonia, health care-associated pneumonia [if infection was acquired in health care setting] or sepsis), local epidemiology and susceptibility data, and treatment guidelines. *Empiric therapy should be de-escalated on the basis of microbiology results and clinical judgment (2.1, 2.4, 2.5). Anti-viral : There are no known effective antivirals for coronavirus infections and multiple clinical trials are ongoing to evaluate the activities of various antivirals in COVID-19 (2.5). Bronchodilator : If bronchodilator treatment is required, provide metered dose inhalers and spacers instead of nebulizers to prevent aerosolization of the virus (2.1, 2.4, 2.6). . Nutritional Support																				

			*Consider medical nutrition therapy for all patients staying in the ICU, mainly for more than 48 hrs. *Oral diet shall be preferred over Enteral Nutrition or Parenteral Nutrition in critically ill patients who are able to eat, and if not possible, initiate early enteral nutrition within 48 hours. *In case of contraindications to oral and Enteral Nutrition, Parenteral Nutrition should be initiated within three to seven days *Gastric access should be used as the standard approach to initiate Enteral Nutrition using nasogastric tube feeding *Hypocaloric nutrition (not exceeding 70% of Estimated Energy) should be administered in the early phase of acute illness and increased from day 3 to day 7 to 80-100% based on stability and tolerance of the patient. *Micronutrients (i.e. trace elements and vitamins) should be provided daily with Parenteral Nutrition and should be included for better recovery. *In non-intubated patients not reaching the energy target with an oral diet, oral nutritional supplements should be considered first and then Enteral Nutrition (2.1, 2.4). Energy *Critically ill adult patients should receive feedings at rates of 25 to 30 kcal/kg. *The amount of glucose (PN) or carbohydrates (EN) administered to ICU patients should not exceed 5 mg/kg/min.																					

			*For intravenous lipids the upper recommendation is 1 g/kg body weight/day with a tolerance up to 1·5 g/kg/day (2.1, 2.4). Protein *For the unstressed adult patient with adequate organ function requiring nutrition support, 1.3 g/kg/day to 1·5g/kg/day may be adequate. *Requirements may rise with metabolic demands to levels of about 2 g/kg/day (2.1, 2.4).. Providing Psychological support: Staff should introduce self and the facility. Be sensitive to culture, ethnicity, gender, sexuality, and maintain a safe distance (2 metres). Be empathetic. Build a therapeutic relationship. Briefly highlight the services provided by the treatment centre (isolation of suspected cases and contacts, treatment of confirmed cases). Explain in clear terms the need for isolation and the use of PPE. Assess and respond to emotional reactions. Recognize cognitive coping strategies e.g. denial, blame, intellectualization. Explore what the news means to the patient. Offer realistic hope/optimism. Establish measures to reduce the negative impact of social isolation in quarantine e.g. communication with family and friends to reduce loneliness and psychological Isolation. Institute measures that promote autonomy (e.g. choice in daily activities). Offer complete assessment at admission. If there are mental health needs, request																					

			for a mental health assessment and care (2.1, 2.3, 2.4). a) Psychological First AID (PFA) (pages 28-29) This is a humane, supportive and practical help offered to those suffering serious crisis/ distressing events. PFA strives to provide and share accurate information that can help in dispelling myths and provides messages about healthy behaviour and better knowledge on people's understanding of the COVID-19 disease. PFA is provided to all persons diagnosed with COVID-19 by applying the main principles of Look, Listen, and Link (2.2,2.7) b) Health Education: Assess the knowledge of patient. Speak frankly, but compassionately. Avoid euphemisms and medical terms. Allow silence and tears. Avoid the urge to talk to avoid your own discomfort. Proceed at the patient's pace. Have the patient tell you his or her understanding of what you have said. Encourage questions. Encourage and validate emotions (2.1, 2.3). c) Emotional support: Use of detailed and extensive psychoeducation; cognitive restructuring; active listening; seek for clarification; reflect on thematic issues discussed during the health talk and counselling session. Summarize discussions and provide feedback during session (2.1, 2.4, 2.8).																				

			d) Spiritual support: Provide Spiritual Support on request by the patient. Link patient with a well-informed spiritual leader. Interaction should be supervised by the counsellor at the treatment center (2.8) e) Psychiatric support: For all patients who manifest psychiatric symptoms, a trained Psychiatrist should evaluate and offer treatment options appropriate for the patient. The mhGAP-HIG approach is recommended. Treatment modalities are: Supportive Psychotherapy and Cognitive Restructuring. Use of medications only when necessary (to be prescribed by a trained healthcare worker). Conduct regular review and mental state monitoring 2.1, 2.4, 2.7). Evaluation at discharge and post discharge: Assess the patient's psychosocial stability through clinical interview and formal assessment tools. Assess social needs and available resources. Assess occupational needs and available resources (2.1, 2.4) Post Discharge: Evaluate worry about stigma and coping Skills. Discourage maladaptive coping skills e.g. social withdrawal, misuse of alcohol and psychoactive substances. Help patient and relatives plan social and occupational reintegration (involve the social workers). Discuss the plan for home visit (if applicable) and future																				

			contact. The Oslo Social Support Scale should be administered to assess for social support at home. (See reference). Explore for symptoms of post-trauma and treat if present (2.1, 2.4, 2.16). Support to survivors: A survivor network (where possible) should be established in conjunction with the treatment centres. Engage peer educators (if available) to facilitate group counselling. Provide testimony with the aim of inspiring others. Share coping skills (2.1, 2.4). Management of COVID-19 in Special Populations (pages 18-19) a) Pregnant and breastfeeding women with COVID-19 *Presently, there is paucity of data on clinical presentation and perinatal outcomes after COVID-19 infection during pregnancy. *There is no evidence that pregnancy increases the risk of severe illness or that pregnant women present with different sign and symptoms. *There is no evidence yet of mother-to-child transmission reported. *Just like the general population, pregnant women with history of contact should be monitored closely. *Suspected, probable or confirmed case should be provided with appropriate services: Isolation, obstetric, maternal, foetal and neonatal care																					

			*Pregnant women presenting as mild/ moderate, severe and critical cases should be managed as generically described above. A multidisciplinary approach must be adopted with consultations from obstetricians, paediatricians and intensive care experts. * IPC measures also apply to pregnant and breastfeeding women. *For pregnant women who are recovering from COVID-19 infection, psychosocial support and counselling should be provided. *Assessment of patient's co-morbid condition(s) must be conducted, and management tailored accordingly (2.11) b) Infant & Mother with COVID-19 *No vertical transmission has been reported (During pregnancy, birth and breastfeeding) *Infants whose mothers are suspected or confirmed COVID-19 patients should be breastfed according to the infant feeding guidelines while maintain necessary precautions for IPC. (Wear mask, hand hygiene before and after contact with infant, disinfect surfaces the mother may have come in contact with. *If the mother presents with severe illness, or other complications prevent her from direct breastfeeding, she should be encouraged to express milk. (must maintain IPC measures) *Breastmilk substitutes, feeding bottles and teats, pacifiers or dummies is not recommended.																					

			*Encourage mother-baby-pair to remain together regardless of if mother or child is a suspect, probable or confirmed COVID-19 infection (2.11). c) Elderly patients with COVID-19 *Comorbidities and old age have been reported as risk factors for mortality with people with COVID-19. *Elder people are at higher risk of severe illness and death if infected. *Manage such patients with a multidisciplinary approach especially in the decision-making process to address multiorgan involvement and clinical deterioration. *Also involve caregivers and family members in the decision-making throughout the management of the patient (2.1, 2.3, 211). d) People Living with HIV (PLHIV) *There are no data or specific information on the risk of COVID-19 in PLHIV. *There is a suggested risk amongst PLHIV who are not on ART (yet to start) and those not adhering to ART (started but non-adherent to ART) (2.11).																					
Sudan	COVID-19 Case Management protocol Version 1 (April 2020)	Yes	Early supportive therapy and monitoring (page 5) *Give supplementary oxygen therapy immediately to patient with SARI and respiratory distress, hypoxia, or shock (2.4) *Use conservative fluid management in patients with SARI when there is no evidence of shock (2.4)		Partially met	Partially met	Partially met	Partially met	Fully met	Partially met	Not met	Not met	Not met	Partially met	Partially met	Not met	Not met	Not met	Not Applicable	Not met	Partially met

			*Give empirical antimicrobials to treat all likely pathogens casing SARI. Give antimicrobials within one hour of initial patient assessment for patients with sepsis (2.4, 2.5) *Don't routinely give systemic corticosteroids for treatment of viral pneumonia or ARDS outside of clinical trials unless they are indicated for another reason (2.4, 2.6) *Closely monitor patients with SARI for signs of clinical deterioration, such as rapidly progressive respiratory failure and sepsis and apply supportive care interventions immediately (2.1, 2.2, 2.4) *Understand the patient co-morbid condition/s to tailor the management of critical illness and appreciate the prognosis. Communicate early with patient and family (2.4, 2.3, 2.1) Management of hypoxemic respiratory failure and ARDS (page 6) * Recognize severe hypoxemic respiratory failure when a patient with respiratory distress is failing standard oxygen therapy (2.4) *Endotracheal intubation should be performed by a trained and experienced provider using airborne precautions (2.4) *Implement mechanical ventilation using lower tidal volumes (4-8 ml/kg predicted body weight PBW) and lower inspiration pressure (plateau pressure □ 30 cmH2O) (2.4) *In patient with severe ARDS, prone ventilation for more than 12 hours per day is recommended (2.4)																					

			*Use a conservative fluid management strategy for ARDS patients without tissue hypo perfusion (2.4) Management of septic shock (page 6) *Recognize septic shock in adult when infection is suspected or confirmed and vasopressors are needed to maintain MAP 65mmHg and lactate 2mmol/L in absence of hypovolemia and in children with any hypotension or 2 to 3 of the following: altered mental state, tachycardia or bradycardia, tachypnea, oliguria, hyperthermia, hypothermia, mottled skin or petechial or purpuric rash (2.4, 2.11) *In resuscitation from septic shock in adult give at least 30ml/kg isotonic crystalloid in the first 3 hours, and in children give 20ml/kg as a rapid bolus and up to 40-60 ml/kg isotonic in the first 1 hour (2.4, 2.5, 2.11) *Administer vasopressin when shock persists during or after fluid resuscitation, the initial blood pressure target is MAP 65mmHg in adults and age appropriate targets in children (2.4) Special consideration for pregnant and lactating women (page 7) *For pregnant women suspected of COVID-19 or confirmed and due for labor, to deliver in isolation centers (2.4, 2.11) *Isolation centers should be equipped with a surgical setup																				

			*If operation room not available, deliver in nearest facility and adherence to infection control measures *Lactating mothers should continue to breastfeed her infant/young child while taking all infection prevention precautions (2.4, 2.11) *If condition of mother deteriorates then separate child from mother and extract breast milk for feeding infant/young child (2.4, 2.11) *A midwife should be present in every isolation center *A nutritionist should be present in every isolation center Nutritional guideline during the isolation period for children age 6-59 months (page 7 to 8) *Severe Acute Malnutrition (SAM), should apply SAM protocol for treatment (2.4, 2.11) *Moderate Acute Malnutrition (MAM), should apply MAM protocol for treatment *Child without Acute Malnutrition, should be provided Vitamino/plumpy doz *Healthy children without malnutrition should give one preventive dose of Vitamin (A), if she/he did not take any dose during the previous six months (2.4, 2.11) Additional Supportive Measures (page 13) *Optimize nutritional support *Rationalize medications and guard against interactions (2.6)																					

			*VTE risk assessment and appropriate prophylaxis of admitted patients (2.4, 2.6)																			
Eswatini	COVID-19 CASE MANAGEMENT GUIDELINES in the Kingdom of Eswatini 8th APRIL 2020 V1.0	No		COVID-19 management approach (page 14 to 19) ▪Prioritised care including oxygen therapy should be offered to patients with severe acute respiratory infections. (2.1, 2.4) ▪Case management focal point to call the patient and explain the procedures to be taken and allay anxiety among close relatives living with the patient (2.1, 2.3, 2.7) ▪Patient should be provided with symptomatic treatment (e.g. Paracetamol for fever) (2.4) ▪Consider hospitalization if the client is at high risk for severe disease (e.g. >60 years or pre-existing co-morbidities including diabetes mellitus, hypertension, heart or lung disease) (2.1) ▪Give empiric antimicrobials to cover both typical and atypical causes of Pneumonia within 1 hour of initial patient assessment as per standard protocol (2.5) ▪Consider the patient's comorbidities and manage them concurrently. (2.6) ▪ Physiological changes with age lead to declines in intrinsic capacity such as malnutrition, cognitive decline, depressive symptoms, and those conditions should be managed comprehensively. (2.11, 2.7) ▪ Early detection of inappropriate medication prescriptions is recommended to prevent adverse drug events and drug interactions (2.6)	Partially met	Not met	Partially met	Partially met	Fully met	Partially met	Partially met	Not met	Partially met	Not met	Partially met	Partially met	Not met	Partially met	Not Applicable	Not met	Partially met

				▪ Involve caregivers and family members in decision-making and goal-setting throughout the management of COVID-19. (2.3, 2.14, 2.17) ▪Provide patient-centred support for patients currently not taking treatment or if struggling with adherence. (HIV) (2.1) Handling Dead Bodies (page. 26) ▪The dignity of the dead, their cultural and religious traditions, and their families should be respected and protected throughout. (2.16, 2.9)																		
Tanzania	Standard Operating Procedures (SOPs) for Case Management and Infection, Prevention and Control (STANDARD OPERATING PROCEDURE FOR CLINICAL MANAGEMENT OF COVID 19 CASES) March 2020	No		Management of severe cases (page 12 to 13) *Provide supplemental O2 to achieve O2 sats >93% (2.1, 2.4). *May deteriorate rapidly: continuously monitor O2 sat and vital signs; escalate oxygen dose and delivery devise if hypoxia remains with maximal oxygen doses (2.1) *Provide basic care of severe/critical illness: o A:maintain an openairway. If low conscious level–nurse patient in recovery position notlying flat-on-back. Insert oro-pharyngeal airway if needed. Suction if airway secretions. o B: nurse in sitting up position. Provide simple chest physio. o C: give IV or NG fluids for shock o Supportive care – turn unconscious patients regularly. Provide adequate nutrition and pain relief * Non-invasive positive pressure ventilation is NOT recommended as it can aerosolize the virus and increase	Partially met	Partially met	Fully met	Partially met	Fully met	Partially met	Fully met	Not met	Partially met	Not met	Partially met	Fully met	Fully met	Not met	Not Applicable	Fully met	Fully met

				spread. If additional respiratory support is required, patients should be intubated (2.1, 2.4). *Begin arranging for transfer to higher level of care as needed (2.2). Management of critical cases (page 13 to 14) *Provide basic care of severe/critical illness: o A: maintain an open airway. If low conscious level–nurse patient in recovery position notlying flat-on-back. Insert oro-pharyngeal airway if needed. Suction if airway secretions. o B: nurse in sitting up position. Provide simple chest physio. o C: give IV or NG fluids for shock o Supportive care – turn unconscious patients regularly. Provide adequate nutrition and pain Relief (2.1, 2.4). *Test and treat co-infections, if possible, including influenza or other viruses, malarial blood tests, and blood cultures (2.4, 2.5). *Ventilator triage will likely be necessary o If resources are limited, determine which patients have the best chance of survival with mechanical ventilation (2.1). *End of life discussions should be held with patients and their families if resources are not available or appropriate, especially the elderly, terminally ill, and co-morbid with poor baseline functioning (2.3, 2.12).																				

				Psychosocial Team and support (page 22 to 26) The psychosocial team is composed of Social Workers, Social Welfare Officers, Clinical and Community Psychologists, Risk Communication and Health Promotion experts, Charity Social care organization representatives, Community Development Officers and Psychiatric Medic such as Clinical Officer and Nurses.(2.16) The following are the roles of the psychosocial team during and after COVID outbreak: *Reaching out to communities in order to identify affected people, and those who are vulnerable, address social stigma and discrimination, neglected people and provide Psychosocial support to the affected people in all social and psychological needs (2.7) *Assessing affected people for psychological conditions and advise or link them to treatment interventions (2.1, 2.4, 2.7) *Enhancing psychosocial wellbeing of affected people and health workers on the task force (2.7, 2.17) *Networking with other service providers for psychosocial care of people (2.2,2.7, 2.16) *Communicating with other institution for supporting families of affected individuals (social service needs or material support) (2.2,2.7, 2.16,2.17) *Engaging other social welfare structures to facilitate restoration of																			

				livelihood activities in post epidemic phase. (2.2,2.7, 2.16,2.17) *Training of frontline healthcare workers, community health workers and other responders in first psychological aid and risk communication (2.3) SOPs for Psychosocial Support to COVID Taskforce Health Workers Working In COVID Outbreak (2.17') In order to provide psychosocial support to COVID healthcare workers, it is recommended to follow this guidance before, during and after deployment of teams, in conjunction with the SOPs “Health Workers’ Occupational Safety and Health Management in the Context of COVID-19. Before deployment *Perform psychological evaluation of each healthcare worker, as part of the pre-deployment health check, ensure they are well informed of terms and conditions, possible occupational health and safety risks. * Provide psychosocial awareness among the taskforce members about nature of illness, signs and symptoms, mode of spread and case fatality. *Discuss with and train them on what medical and occupational health preparations they need to make/have in place and ask whether they are confident in use (PPEs, immunization, prevention of violence, fatigue, first psychological aid, buddy systems, *Ensure that heath care workers are informed of the emotional issues																				

				associated with the kind of work they are going for *Orient the team on self-help mechanisms needed to manage stress and relaxation methods, stimulating health-promoting coping strategies (sufficient rest, healthy food, physical activity, stay in contact with family and friends, relax and distress, first psychosocial aid, buddy systems) and avoiding unhealthy family, e.g. avoid wearing uniform in public, avoid bringing working clothes at home, digital connection with loved ones *Inform health workers about their rights and responsibilities as humanitarian workers 10)Specific attention should be paid to repurposed health workers, i.e. medical and nursing students, volunteers, other health workers which don't have previous experience in working under public health emergencies and providing patient care to patients with infectious diseases and using PPE During deployment *Arrange sessions (once weekly) for healthcare workers to voluntarily attend and share COVID experiences 2) Discuss with the healthcare workers on how to enhance coping mechanisms and to maintain a respectful working relation and encourage those with serious distress (if any) to seek medical or psychological care. *Work with the logistic team to ensure that health workers are availed with recreational facilities such as																		

				films and documentaries sharing COVID experiences especially for survivors *Ensure there are mechanism for deployed health workers to contact their families (loved once) while you promote team work among them and clear definitions of tasks, responsibilities and reporting lines *Always be sure that social issues for health workers are all addressed for them to improve their working environment *Explain how to deal with stigma or fear against health workers in the community, workplace, and violence against health workers and social support After deployment *Psychosocial personnel must evaluate the level of distress/worries about exposure and conduct stress management session to the workers *Encourage positive self-talk, attitude and disclosure to treatment in case the health workers are suspecting contracting COVID. *Ensure that fellow staff are provided with appropriate time for moment of grieving *Arrange through Clinical Psychiatrist to conduct medical evaluation using standard tools for health workers coming back from COVID mission *Refer to mental health care, as appropriate, all cases of mental health disorders and substance abuse, caused by or aggravated by the work in emergency response																			

				When providing psychosocial support to individuals, families, rejected persons and community members follow these steps: *Interact with the client but avoid direct contact. Establish rapport/alliance. *Promote active listening to the client and show that you are willing to offer help to them while expressing empathy, using open-ended questions and understandable language. *Client must be provided with adequate information to counteract false beliefs about the disease and told that anxiety is a common reaction in the face of extreme situations like what they are going through. (2.3) *Promote positive thinking among community members at risk, stress management and relaxation techniques, encourage healthy eating and drinking habits as recommended by medical experts. (2.7) *During confinement, allow contact to connect with their social networks either by phone or through alternative safe approaches (2.3, 2.7) *When connecting COVID contacts to their social networks or spiritual support ensure that client's social network (family members and significant others) are oriented about COVID and safety precautions before linking with the client. (2.7, 2.8) *Encourage family members to regulate their emotions before contact with client and provide necessary support through the available safety procedures. (2.7, 2.17)																			

				*When preparing COVID 19 survivors before discharge, follow the following steps: . Provide Psychosocial support (PSS) with survivor's family, neighbourhood and community members to avoid discrimination and stigmatization for individual and family member at the community level. . Talk to the survivor about anticipated stigma, and stress. Equip them with stress management skills. (2.7) *When communicating death to the family members after confirmation of death from case management team, it is advised to the psychosocial team to follow the following steps: . Contact and invite family members of the deceased to witness the body of their relative. . Communicate the death of their beloved one, the time he died, the cause of death (use laboratory results) and burial arrangements . In case of a very ill relative to the deceased within the Treatment Unit the psychosocial team will consider their health state to or not to communicate information about the death of a beloved one. . In case the very sick relative is aware of the death of a close relative within the Treatment Unit , support the person in grief process. . Discuss with family member about alternative ritual practices and safe mourning. (2.3, 2.13, 2.17)																			

Togo	Protocole de prise en charge thérapeutique des cas de Covid -19 confirmés au Togo (Protocol for therapeutic management of confirmed covid -19 cases in Togo) Version 001 from 16 april 2020	Yes	5.4 Treatment for symptoms and complications - Paracetamol 1000 mg every 8 hours in case of fever (2.4) Reduce throat pain with lemon and honey (2.10) - Oral rehydration / 3 liters per day - Vitamin C 1 tablet per day - Amoxicillin and clavulanic acid or ceftriaxone if lung infection (2.5) - Anti histamine like (desloratadine, loratadine, mequitazine) if cold -Oxygen therapy in case of dyspnea with respiratory rate greater than 30 cycles per minute and or a pulse oxygen saturation lower at 92% (the flow must be set to have a saturation ≥ 92%). (2.1, 2.4) For oxygen therapy, use: Glasses for flow rates between 1 and 5 liters/min Masks for flow rates from 6 to 10 liters per minute o Mask at high concentration for flow rates greater than 10 liters per minute -Ventilation assistance to be considered if persistence of respiratory distress with lower saturation 90% despite oxygen therapy (2.1, 2.2, 2.4)		Partially met	Partially met	Not met	Partially met	Fully met	Partially met	Not met	Not met	Not met	Partially met	Not met	Not met	Not met	Not met	Not Applicable	Not met	Partially met
Uganda	Guidelines on Clinical care COVID-19 No date and no version	Yes	Management of severe COVID-19 (Page 22) •Give supplemental oxygen therapy immediately to patients with SARI and respiratory distress, hypoxaemia or shock and target > 94% and ≥ 92–95% in pregnant patients . • Closely monitor patients with COVID-19 for signs of clinical deterioration, such as rapidly		Partially met	Partially met	Partially met	Partially met	Fully met	Partially met	Partially met	Not met	Not met	Not met	Fully met	Not met	Not met	Partially met	Not Applicable	Fully met	Partially met

			progressive respiratory failure and sepsis and respond immediately with supportive care interventions. (2.1, 2.2) • Application of timely, effective and safe supportive therapies is the cornerstone of therapy for patients that develop severe manifestations of COVID-19. (2.1) • Understand the patient's co-morbid condition(s) to tailor the management of critical illness. (2.1) • Monitor for drug-drug interactions. (2.6) • Use conservative fluid management in Septic shock (page 26 to 27) • Recognize septic shock in adults when infection is suspected or confirmed AND vasopressors are needed to maintain mean arterial pressure (MAP) ≥ 65 mmHg AND lactate is ≥ 2 mmol/L, in absence of hypovolemia. • Recognize septic shock in children with any hypotension (systolic blood pressure [SBP] < 5th centile or > 2 SD below normal for age) or two or more of the following: altered mental state; tachycardia or bradycardia (HR < 90 bpm or > 160 bpm in infants and HR < 70 bpm or > 150 bpm in children); prolonged capillary refill (> 2 sec) or feeble pulses; tachypnea; mottled or cold skin or petechial or purpuric rash; increased lactate; oliguria; hyperthermia or hypothermia • In resuscitation for septic shock in adults, give at 250–500 mL crystalloid fluid as rapid bolus in first 15–30																				

			minutes and reassess for signs of fluid overload after each bolus. • In resuscitation from septic shock in children, give 10–20 mL/kg crystalloid fluid as a bolus in the first 30–60 minutes and reassess for signs of fluid overload after each bolus. (2.1, 2.4) • Monitor for overload Caring for Pregnant women with COVID-19 (page 28) • Considering asymptomatic transmission of COVID-19 may be possible in pregnant or recently pregnant women, as with the general population all women with epidemiologic history of contact should be carefully monitored. • Pregnant women with a suspected, probable or confirmed COVID-19 infection, including women who may need to spend time in isolation with obstetric, foetal medicine and neonatal care, as well as mental health and psychosocial support, with readiness to care for maternal and neonatal complications. • At this point, there is no evidence that pregnant women present with increased risk of severe illness or fetal compromise. •Pregnant and recently pregnant women who have recovered from COVID-19 should be enabled and encouraged to attend routine antenatal, postpartum or post-abortion care as appropriate. patients with SARI when there is no evidence of shock (2.11). Treatment of co-infections (page 23) • Give empiric antimicrobials to treat																					

			all likely pathogens causing SARI and sepsis as soon as possible, within 1 hour of initial patient assessment for patients with sepsis (2.5). • Empiric therapy should be de-escalated on the basis of microbiology results and clinical judgment. Acute Respiratory Distress Syndrome (page 24) •Recognize severe hypoxemic respiratory failure when a patient with respiratory distress is failing standard oxygen therapy and prepare to provide advanced oxygen/ventilatory support. (2.1) • Endotracheal intubation should be performed by a trained and experienced provider using airborne precautions. • Rapid sequence intubation is appropriate after an airway assessment that identifies no signs of difficult intubation . Caring for Infants and Mothers with COVID-19 (page 29) • Infants born to mothers with suspected, probable or confirmed COVID-19 infection, should be fed according to standard infant feeding guidelines, while applying necessary precautions for IPC (2.11). • As with all confirmed or suspected COVID-19 cases, symptomatic mothers who are breastfeeding or practicing skin-to-skin contact or kangaroo mother care should practise respiratory hygiene, including during feeding (for example, use of a medical mask when near a child if with respiratory symptoms), perform hand																					

			hygiene before and after contact with the child, and routinely clean and disinfect surfaces which the symptomatic mother has been in contact with. • Breastfeeding counselling, basic psychosocial support and practical feeding support should be provided to all pregnant women and mothers with infants and young children, whether they or their infants and young children have suspected or confirmed COVID-19. • In situations when severe illness in a mother due to COVID-19 or other complications prevent her from caring for her infant or prevent her from continuing direct breastfeeding, mothers should be encouraged and supported to express milk, and safely provide breastmilk to the infant, while applying appropriate IPC measures Caring for Older Persons with COVID-19 (pg 30) • Ensure multidisciplinary collaboration among physicians, nurses, pharmacists, other health care professionals in the decision making process to address multi morbidity and functional decline (2.16). • Early detection of inappropriate medication prescriptions is recommended to prevent adverse drug events and drug interactions for those being treated with COVID-19 (2.6). • Involve caregivers and family members in decision-making and goal- setting throughout the management of COVID-19 (2.1, 2.3, 2.14)																				

Legend

Standard 2.1: Planning and Coordination of Care
Standard 2.2: Access to Care
Standard 2.3: Communication in palliative care
Standard 2.4: Pain and Symptom Management
Standard 2.5: Management of Opportunistic Infections (OIs)
Standard 2.6: Management of Medications
Standard 2.7: Psychosocial Care
Standard 2.8: Spiritual Care
Standard 2.9: Cultural Care
Standard 2.10: Complementary therapies in palliative care
Standard 2.11: Care for special needs populations
Standard 2.12: End-of-life care
Standard 2.13: Grief, loss and bereavement care in adults
Standard 2.14: Ethical care, human rights and legal support
Standard 2.15: Clinical Supervision
Standard 2.16: Inter-disciplinary Team
Standard 2.17: Providing support to care providers