

COVID-19 Content

Preparedness of African Palliative Care Services to Respond to the COVID-19 Pandemic: A Rapid Assessment



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Abstract

Context. Palliative care is an essential component of the coronavirus disease 2019 (COVID-19) pandemic response but is overlooked in national and international preparedness plans. The preparedness and capacity of African palliative care services to respond to COVID-19 is unknown.

Objectives. To evaluate the preparedness and capacity of African palliative care services to respond to the COVID-19 pandemic.

Methods. We developed, piloted, and conducted a cross-sectional online survey guided by the 2005 International Health Regulations. It was electronically mailed to the 166 African Palliative Care Association's members and partners. Descriptive analyses were conducted.

Results. About 83 participants from 21 countries completed the survey. Most services had at least one procedure for the case management of COVID-19 or another infectious disease (63%). Respondents reported concerns over accessing running water, soap, and disinfectant products (43%, 42%, and 59%, respectively) and security concerns for themselves or their staff (52%). Two in five services (41%) did not have any or make available additional personal protective equipment. Most services (80%) reported having the capacity to use technology instead of face-to-face appointment, and half (52%) reported having palliative care protocols for symptom management and psychological support that could be shared with nonspecialist staff in other health care settings.

Conclusion. Our survey suggests that African palliative care services could support the wider health system's response to the COVID-19 pandemic with greater resources such as basic infection control materials. It identified specific and systemic weaknesses impeding their preparedness to respond to outbreaks. The findings call for urgent measures to ensure staff and patient safety. *J Pain Symptom Manage* 2020;60:e10–e26. © 2020 The Authors. Published by Elsevier Inc. on behalf of American Academy of Hospice and Palliative Medicine. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Key Words

Palliative care, preparedness, COVID-19, pandemic, epidemic, Africa

Key Message

This study is the first to assess the preparedness of African palliative care services to respond to coronavirus disease 2019 and future outbreaks. The findings

call for more resources to implement existing procedures. Urgent measures to ensure infection control and a safe provision of services are needed, especially in the community.

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Introduction

Risk factors for severe illness and mortality in coronavirus disease 2019 (COVID-19) include being elderly, the presence of pre-existing health problems, and multimorbidities.^{1–3} Race and ethnicity are also associated with higher incidence and poor prognosis.^{4,5} On the African continent, prevalent comorbidities such as HIV and tuberculosis pose a higher risk of mortality for patients with COVID-19. Patients with moderate to severe forms of the disease and distressing symptoms such as breathlessness may require intensive care, which is poorly available within weak health systems.^{2,6}

Case management of COVID-19 must include palliative care to relieve suffering, improve outcomes, and save costs.^{7,8} This is especially true in resource-limited settings, where palliative care teams are supporting complex decision making for patients with severe COVID-19.⁹ Early evidence of needs among COVID-19 patients referred to palliative care include distressing physical symptoms, such as fever, breathlessness, fatigue, and cough;^{2,10} spiritual or existential distress caused by the threat to survival; and psychological distress among patients and families associated with clinical uncertainty.¹¹

Palliative care is an essential health service within Universal Health Coverage goals. However, serious health-related suffering because of neglect of palliative care in global health disproportionately affects African countries.^{12–14} The 2005 International Health Regulations (IHR) requires countries to develop and implement preparedness and response plans in case of public health threats of international concern.¹⁵ In a pandemic, the need for palliative care is amplified¹⁶ but has been overlooked in preparedness and response plans to public health emergencies and humanitarian crises.^{15,17} This results in a failure to protect highly vulnerable populations from unnecessary suffering. Prior evidence shows palliative care's key role in pandemics to integrate protocols for symptom management, train nonspecialists, support triage, and provide psychosocial and bereavement care.¹⁸

A 2020 World Health Organization (WHO) assessment of COVID-19 readiness showed moderate preparedness for 62% of the 34 participating African countries.¹⁹ As with other preparedness assessments, palliative care was not included.¹² An appraisal of COVID-19 case management guidelines in Africa found that only eight countries had identifiable palliative care components.²⁰

Palliative care services are well placed to support health systems in caring for patients and families facing clinical uncertainty, assist complex decision making, and avoid unnecessary suffering. However, there

is limited evidence of their preparedness to respond to a pandemic. This study aimed to evaluate the preparedness and capacity of palliative care services in Africa to respond to the COVID-19 pandemic.

Methods

We developed, piloted, and conducted a cross-sectional online survey, using the 2005 IHRs¹⁵ and online survey methodological guidelines.^{21,22}

Participants

Eligible participants were palliative care services in any African country, including inpatient or outpatient hospice, community-based, or hospital-based care. We used nonprobabilistic sampling to recruit representatives of palliative care services part of the African Palliative Care Association's (APCA) members or nonmember partners. APCA is a pan-African nonprofit organization promoting and delivering culturally appropriate palliative care with 166 members and partners in 48 of the 52 African countries.²³ An invitation electronic mail with a link to the online survey was sent out via APCA.

Data Collection

The survey questionnaire was originally designed by researchers from Italy and U.K. for an assessment of the Italian palliative care situation early in the epidemic.²⁴ It was adapted for the African context with APCA and further developed to include existing international recommendations and evidence for generic preparedness to response to infectious disease outbreak or pandemic^{15,25–32} and recommendations for palliative care response and roles in epidemics and pandemics.^{17,18} The questionnaire addresses 1) service characteristics; 2) current COVID-19 situation; 3) written procedures; 4) measures in place for infection control; 5) communication and coordination; 6) resources; 7) perceived effects on staff and 8) risks; and 9) potential support to offer to the wider health system. Questions in Section 1 were single and multiple choice; in Sections 3–6 and 8 and 9, single, multiple choice, and open-ended questions; and Sections 7 and 8 also included 1–10 Likert scales. The full questionnaire is provided in [Appendix I](#).

The questionnaire was uploaded on the Smart Survey™ platform where only one response per computer was permitted to avoid duplicate responses. If Internet connectivity issues made online completion difficult, potential participants were given an option to complete the survey using a Word™ questionnaire or by phone with E. N. These data would be entered onto

the online platform, and the paper version stored securely at the office of the APCA .

Data collection was conducted from April 17, 2020 to May 1, 2020. Reminders to complete the survey were sent out twice during the two-week period of data collection.

Data Analysis

Data were imported from the survey platform into Excel and subsequently into Stata® (Version 16, Stata-Corp LLC). Only fully complete questionnaires were included in the analysis, as incomplete questionnaires contained more than 60% of missing data. Descriptive analysis was conducted. Categorical data were described using frequency and percentage; continuous variables were described by median and interquartile range (IQR). Open-ended questions were thematically analyzed.³³ Dominant themes from the analysis of the open-ended questions are reported.

Results

Participants

Of 166 palliative care services invited to participate, 122 completed the survey at least partially (participation rate: 73%). We excluded 39 because of missing data and conducted analysis on data from 83 respondents in 21 countries (completion rate for those invited to participate: 50%). Of these, four questionnaires were completed using a Word version. None chose to participate by telephone.

Table 1 presents the characteristics of participating services. Most were nonprofit charity or public services, and half were hospital-based services. These services provided care for a median of 500 patients per year (IQR 200–2500).

COVID-19 Situation in the Service, Perceived Effects, and Risks for Staff

A third of services reported having at least one probable, suspected, or confirmed case of COVID-19 with a median of 4.5 overall cases (IQR 2–10.5). Half of cases concerned a patient, with the remaining cases among patients' relatives or service staff (details in Appendix II).

Respondents perceived high levels of anxiety and worry among service staff regarding the effects of COVID-19 (Table 2). Staff were perceived to be highly anxious about being infected themselves (on a 1–10 Likert scale, median 9; IQR 8–10) and worried about potential issues for their interaction with the community if the service is known to manage a potential COVID-19 case (on a 1–10 Likert scale, median 8;

Table 1
Description of the 83 Participants

	n (%)
Country	
Kenya	18 (22)
South Africa	14 (17)
Tanzania	9 (11)
Nigeria	7 (8)
Uganda	7 (8)
Malawi	6 (7)
Ethiopia	3 (4)
Mozambique	2 (2)
Sierra Leone	2 (2)
Sudan	2 (2)
Togo	2 (2)
Zimbabwe	2 (2)
Other ^a	9 (10)
Type of service	
Public or governmental	25 (30)
Private	2 (2)
Nonprofit charity	32 (39)
Mixed ^b	13 (16)
Missing	11 (13)
Type of service	
Hospital-based ^c	42 (51)
Nonhospital-based ^d	39 (47)
Missing	2 (2)
Services having beds	33 (40)
Beds in hospital	13 (39)
Inpatient beds (not within hospital)	8 (24)
Inpatient and/or hospital beds	7 (21)
Outpatient beds	4 (12)
Missing	1 (3)
Respondent's current role(s)	
Doctor	17 (20)
Nurse	12 (14)
Psychosocial professional	1 (1)
Manager or responsible of the service	25 (30)
Manager or responsible of the service and doctor, nurse, or psychosocial professional ^e	21 (25)
Other ^f	7 (8)

^aOther: Burundi, Democratic Republic of the Congo, Republic of the Congo, Cote d'Ivoire, Eswatini, The Gambia, Liberia, Mauritius, and Zambia ($n = 1$).

^bPublic and private ($n = 2$); public and nonprofit charity ($n = 1$); private and nonprofit charity ($n = 6$); and public, private, and nonprofit charity ($n = 4$).

^cDetails: Within hospital ($n = 12$); within hospital and within community ($n = 10$); within hospital, within community, inpatient, and outpatient ($n = 9$); within hospital and outpatient ($n = 5$); within hospital, inpatient, and outpatient ($n = 3$); within hospital, within community, and inpatient ($n = 2$); within hospital and inpatient ($n = 1$).

^dDetails: Within community, outpatient ($n = 15$); within community ($n = 9$); outpatient ($n = 7$); inpatient and outpatient ($n = 3$); within community, inpatient, and outpatient ($n = 3$); inpatient ($n = 1$); within community and inpatient ($n = 1$).

^eDoctor and manager ($n = 7$), nurse and manager ($n = 10$), and psychosocial professional and manager ($n = 1$).

^fOther: Clinical officer, health officer/palliative care trainer, palliative care clinical officer, pharmacist, project officer, rehabilitation technician-palliative care provider, and ward attendant.

IQR 7–10). About one-third reported a perceived increase in staff absenteeism.

Half of respondents reported security concerns for themselves or their staff. These included socioeconomic concerns, such as loss of employment and

Table 2
Perceived Effects on Staff and Potential Risks in the Upcoming Week (N = 83)

	Median (IQR) ^a
Perceived effects on work staff	
Staff anxious about the need to care for their children who may not be at school ^b	8 (6–9)
Staff anxious about the need to care for their own relatives ^b	7 (5–9)
Staff anxious about getting infected themselves	9 (8–10)
Worried regarding potential issues for your interaction with the community if your service is known to manage a potential COVID-19 case ^c	8 (7–10)
Perception of the risks in the coming week	
Staff are at risk of being infected by COVID-19 ^b	7 (5–9)
Service is at risk of closing because of an infection in the service ^c	5 (2–9)

IQR = interquartile range; COVID-19 = coronavirus disease 2019.

^aOn a scale from 1 to 10.

^bOne missing data.

^cTwo missing data.

livelihood and fear of civil unrest related to the lockdown enforcement (e.g., curfew and police involvement in enforcement and staff's exposure to infection at work, in their home communities, or during their commute to work).

Policies and Mitigation in Place

Table 3 describes the procedures and policies in place as well as their modifications in relation to COVID-19 case management. Three in five services had a case definition for COVID-19 (59%) and at least one written procedure for COVID-19 case management or for another infectious disease such as tuberculosis, HIV, or Ebola. Four in five services had at least one written service procedure specific to COVID-19. Most palliative care services had modified at least one existing policy or procedure, mostly regarding visitors or relatives.

With respect to staff support and training, less than half of respondents reported having a procedure to support health care providers to manage stress. One in five did not provide recommendations for situations of staff member (or someone in their household) becoming ill with COVID-19. Forty-one respondents gave comments on procedures for staff stress, and most of these included having a staff support program available, counseling (59%), or discussions in team meetings (17%).

Two in five reported that not all health care providers have been trained in handling highly infectious conditions, such as COVID. Of the 51 services reporting such training, half had been trained before the pandemic and half in response to COVID-19. Three in five palliative care services declared that cleaning

Table 3
Written Procedures, Policies, and Recommendations in Place

	Yes	No	Unsure/Do Not Know	Missing
	n (%)			
Case definition for confirmed, probable, and suspected COVID-19 cases	49 (59)	25 (30)	8 (10)	1 (1)
A written procedure for what to do in case of COVID-19 case among the following				
Patients	58 (70)	17 (20)	3 (4)	5 (6)
Relatives and visitors	55 (66)	16 (19)	6 (7)	6 (7)
Health care professional staff member	56 (67)	17 (20)	5 (6)	5 (6)
Volunteers and medical staff	49 (59)	23 (28)	4 (5)	7 (8)
Staff and volunteers going in the community (N = 46)	27 (59)	13 (28)	3 (7)	3 (7)
A written procedure for what to do in case of other infectious diseases among the following				
Patients	54 (65)	11 (13)	2 (2)	16 (19)
Relatives and visitors	43 (52)	19 (23)	2 (2)	19 (23)
Health care professional staff member	54 (65)	13 (16)	1 (1)	15 (18)
Volunteers and medical staff	42 (51)	21 (25)	4 (5)	16 (19)
Staff and volunteers going in the community (N = 46)	26 (57)	11 (24)	2 (4)	7 (15)
Policies or procedures modified as a measure to avoid contagion				
Policy for visitors/relatives (number of visitors, hours, etc.)	65 (78)	14 (17)	4 (5)	0 (0)
Policy for operator protection (PPE)	59 (71)	19 (23)	5 (6)	0 (0)
Policy for patients' admission	46 (55)	27 (33)	8 (10)	2 (2)
Volunteer support policy	46 (55)	26 (31)	10 (13)	1 (1)
Policy regarding care of the relatives after the patient's death	42 (51)	32 (39)	8 (10)	1 (1)
Procedure to support health care providers to manage stress	37 (45)	37 (45)	0 (0)	3 (4)
Recommendations if you or someone in your household becomes ill with COVID-19 symptoms	57 (69)	19 (23)	6 (7)	1 (1)
Cleaning staff included in information sharing and training regarding managing COVID-19	48 (58)	25 (30)	7 (8)	3 (4)

COVID-19 = coronavirus disease 2019; PPE = personal protective equipment.

staff were included in information sharing and training regarding managing COVID-19.

All but one service had put in place at least one measure to avoid contagion in their service. Additional handwashing facilities were introduced in the vast majority of services (82%). However, two in five services did not have any or make available additional personal protective equipment (PPE) for clinical staff (41%) and cleaning staff (45%). Fifty-seven respondents provided details on the PPE available and revealed that the PPE is not always complete. They mainly reported having access to masks (61%) and gloves (49%). Of 28 services having inpatient or managing patients in hospital beds, 19 reported having identified an isolation room for COVID-19 cases (68%).

Communication, Information, and Coordination

Table 4 presents the mechanisms in place to receive information if there is a confirmed case or a suspected case in the service or surrounding community. Respondents stated that they would receive information from the local hospital or health center, the facility or the hospital, the COVID-19 task team or the rapid response team, and/or the Ministry or Department of Health. The head of nursing or palliative care, person in charge, or project manager and/or hospital or facility management or health services coordinator were identified as recipients of this information. One in four respondents reported either no designated focal point identified in the service as responsible for collecting and sharing up-to-date information or being unsure of who that person is.

Communication reliant on mobile phones could be used to disseminate COVID-19 or other urgent information with staff, patients, visitors, or relatives. The most reported means to share information with staff were WhatsApp/Viber (71%) and phone calls (65%) as well as phone calls with patients (71%) and relatives or visitors (76%). About one in five services reported having no communication means for sharing information with patients (18%) or relatives (19%). Other means included face-to-face communications, posters, or noticeboards in the facility or the hospital, and radio or other media. Respondents identified a lack of mobile phones or airtime to communicate with patients.

Table 5 describes the information systems available to palliative care services for contact tracing and investigation. Almost all services had up-to-date lists of staff and patients and records of patients' symptoms and

Table 4
Communication Mechanisms in Place to Receive Information if There Is a Confirmed or Suspected Case in the Service or in the Locality

	<i>n</i> (%)
Institutions or person who would inform the service ^a	
Local hospital or health center	16 (19)
Facility or hospital	14 (17)
COVID-19 task team/rapid response team	13 (16)
Ministry or Department of Health	12 (14)
Staff doing screening or exchanges on social media between staff	9 (11)
Community and volunteers in the community	9 (11)
National Center for Diseases Control/National Hygiene Institute	5 (6)
Media	4 (5)
Local authority or committee	4 (5)
None reported	3 (4)
Other ^b	3 (4)
Missing	5 (6)
Person who would be informed in the service ^a	
Head of nursing or palliative care, person in charge or project manager	40 (48)
Hospital or facility management or health services coordinator	28 (34)
All staff/team	9 (11)
Medical staff	7 (8)
None reported in the facility or hospital	6 (7)
COVID-19 response team in the hospital or facility	2 (2)
Other ^c	2 (2)
Missing	5 (6)
Communication system(s) that will be used to receive information	
Mobile phone available 24/7	66 (80)
Telephone (in the service)	39 (47)
E-mail	32 (39)
WhatsApp/Viber group	47 (57)
None reported	4 (5)
Other ^d	12 (14)
Designated focal point person identified in the service responsible for collecting and sharing up-to-date information	
Yes	60 (72)
No	15 (18)
Unsure	6 (7)
Missing	2 (2)

COVID-19 = coronavirus disease 2019.

^aData obtained from the analysis of open text questions.

^bOther: Central laboratory; public health team; Medical Research Institute.

^cOther: Nonmedical staff or volunteers.

^dOther: Text messages/SMS ($n = 3$); word of mouth ($n = 2$); in person; using the peer system; where mass communications are done; administration; Facebook messenger; media; verbal; referral forms; and written documents.

Table 5
Information Systems Available

	Paper-Based Registry	Electronic Record	None	Other ^a
	n (%)			
Up-to-date contact list of				
All staff working in or for the service	64 (77)	43 (52)	3 (4)	1 (1)
All patients who attended or have attended the hospice or service	69 (83)	32 (39)	5 (6)	1 (1)
All relatives who visited or have visited the service	34 (41)	12 (14)	40 (48)	3 (4)
Patients visited in the community (N = 46)	35 (76)	22 (48)	3 (6.52)	0 (0)
System collecting information about				
Patients' symptoms	71 (86)	19 (23)	5 (6)	2 (2)
Patients' outcomes	68 (82)	20 (24)	9 (11)	2 (2)
Treatment given	69 (83)	19 (23)	7 (8)	2 (2)
Dates of patients' visits or stay	68 (82)	24 (29)	5 (6)	2 (2)
Dates of relatives' visits	35 (42)	10 (12)	36 (43)	2 (2)

^aOf seven respondents who replied other: visit register; register; patient files and interdisciplinary minutes and inpatient record book; four missing.

Table 6
Concerns About Access to Infection Control Resources in the Service or Surrounding Community

	Facility, n (%)			Surrounding Community, n (%)		
	Yes	No	Missing	Yes	No	Missing
Running water	36 (43)	46 (55)	1 (1)	49 (59)	25 (30)	9 (11)
Soap	35 (42)	47 (57)	1 (1)	47 (57)	23 (28)	13 (16)
Hand sanitizers (with 60% alcohol)	40 (48)	42 (51)	1 (1)	53 (64)	23 (28)	7 (8)
Electricity	39 (47)	42 (51)	2 (2)	51 (61)	22 (27)	10 (12)
Thermometers (contactless, Thermoflash-type)	48 (58)	34 (41)	1 (1)	50 (60)	27 (33)	6 (7)
Disinfectant products	49 (59)	33 (40)	1 (1)	48 (58)	27 (33)	8 (10)
Other ^a	20 (24)	12 (14)	51 (61)	16 (19)	15 (18)	52 (63)

^aAnalyzed using 16 open-ended questions of 23 respondents who replied other: lack of PPE (n = 10); lack of supplies for consumables and medicines as well as appropriate infrastructure to manage referrals (n = 1); appropriate infrastructure to allow of patient isolation (n = 1); unsafe waste disposal practices for infectious waste in communities (n = 1); lack of hygiene material in the community and for medical waste (n = 2); financial concerns (n = 2); and dependence on Department of Health (n = 1).

outcomes. Most of the information systems were paper based. However, half did not have up-to-date lists of relatives who have visited and did not record their visit dates.

Table 6 describes the concerns regarding access to basic resources for infection control and highlight respondents' concerns over essentials like accessing running water, soap, and disinfectant products for the service and community.

A third of respondents reported not having, or not being sure of having, adequate material and facilities to dispose of highly infectious waste within the service (28% and 8%, respectively), especially in the community (61% and 15%, respectively, for the 46 services delivering community care). Most services had up-to-date inventories of medicines and medical supplies

(72%) and of protective materials for staff, patients, and visitors (57%).

Most services (80%) reported having capacity to use technology instead of face-to-face appointments to provide remote care; 76% could use phone calls. Half of the services knew how to access additional staff in case of emergency, lockdown, or quarantine (47%); three-fifth how to access medicines and other medical supplies (63%); and less than half of the 50 services providing inpatient or hospital-based services knew how to access food (42%).

Fifty-four services had education material available (65%). Of these, most services were available for the surrounding community (70%), and almost all services displayed posters where staff, patients, and visitors can see them (94%).

Table 7
Potential Means for Palliative Care Services to Offer Support to the Wider Health System

	<i>n</i> (%)
Palliative care protocols for symptom management and psychological support that could be shared with nonspecialist staff and/or COVID-19 response teams in other health care facilities	43 (52)
If yes, capacity to train nonspecialist in using these protocols	40 (93)
Plans to support other health care services in the triage of patients in case of COVID-19 outbreak	60 (72)

COVID-19 = coronavirus disease 2019.

Palliative Care Support to COVID-19 Management

Half of services reported having palliative care protocols for symptom management and psychological support that could be shared with nonspecialist staff in other health care facilities (Table 7). Of these 43 services, all but three had the capacity to train nonspecialists in using these protocols. Three in four services reported having plans to support other health care services in the triage of patients in case of COVID-19 outbreak. Twelve respondents specified these plans, which included support in screenings, advanced care planning with newly admitted hospital patients, care of the dying, and beds supply because of service closure.

Half of the services (52%) reported having a plan to redeploy health care providers, volunteers, or resources outside inpatient settings, in case of outbreak. Forty-four respondents reported limitations in their ability to share expertise. They included mostly financial concerns related to the lack of funding and cost of communication as well as a lack of resources for training (including human resources).

Discussion

Palliative care services on the African continent have put in place several measures to prepare and respond to COVID-19 but are limited by a lack of resources and the wider context within which they operate. The participating services had adapted their policies and procedures. They reported existing data collection and communication systems and had the capacity to use technology to provide care remotely, mostly relying on mobile phones that could help prevent the spread of COVID-19. Those with existing symptoms management and psychosocial support protocols are ready to train nonspecialists in using them.

The sharing of these skills is essential to meet potential population level of palliative care needs. Yet, their capacity to support the preparedness and response to an outbreak has some limitations. Our study reveals high level of staff anxiety and a lack of training, material, and facilities to handle highly infectious diseases, especially in the community. The findings demonstrate that the context surrounding the provision of palliative care, such as concerns over security and the lack of running water and soap in the facility and community, may limit the safe implementation of policies and epidemic control measures. These limitations represent barriers to further supporting the national responses to COVID-19 and other outbreaks.

The serious concerns we identified over access to water, sanitation, and hygiene concurs with existing evidence.³⁴ This exposes a lack of basic infrastructure preventing palliative care team to work safely and confirms wider gaps in the health systems, which are likely to persist beyond the COVID-19 pandemic. Most African countries have reported community transmissions,³⁵ whereas public health preventive measures including restricted movements would most likely result into a surge in the use of primary and community-based care. Urgent measures must be taken to ensure infection control and safety in the community and could be based on the already existing expertise in the provision of community-based palliative care for drug-resistant tuberculosis patients and their families.³⁶

Our study highlights staff safety and security concerns. Like in Italian palliative care services,²⁴ respondents reported an increase in absenteeism and a high level of anxiety among the staff, which may be explained by the lack of protective equipment, and procedures and resources to support staff stress. This may also relate to potential risk of violence in the community as a result of poverty and lockdown enforcement.^{37,38} Further research on the effects of epidemics and pandemics on palliative care staff health, safety, and security is needed.

We assessed preparedness and capacity in light of the recommendations of Etkind et al.¹⁸ for African palliative care services to support the COVID-19 response by sharing palliative care clinical protocols, training nonspecialists in their use, and using mobile phones to provide remote care. M-health offers great potential to expand access to palliative care in sub-Saharan Africa.³⁹ However, not all patients and relatives have mobile phones as some respondents highlighted. The shifting of resources in the community and redeployment of staff may need to be considered carefully considering the security and availability of basic resources to ensure infection control.

The findings highlight the importance of palliative care services beyond hands-on care, which should be integrated to strengthen the wider health system response. The common use of outcome measures among African palliative care services to improve patient care may be used to enable health care professionals across the health system to assess and monitor patient and family symptoms and concerns. Although palliative care services have expertise and protocols to build capacity among colleagues across the health system, they lack the resources to deliver this crucial contribution of palliative care during public health emergencies.

To the best of our knowledge, this study is the first to provide a comprehensive assessment of the preparedness and capacity of palliative care services to respond to a pandemic in palliative care services, using the WHO IHRs. Although our sample may not be representative as there is no comprehensive list of all palliative care services in the continent, using the network of APCA offered a unique and heterogeneous sample that enabled us to integrating the inputs from remote services in 21 countries. Our sample includes mostly English-speaking African countries as time restraints prevented us from translating it, although it includes three French-speaking (Democratic Republic of the Congo, Republic of the Congo, and Côte d'Ivoire) and one Portuguese-speaking countries (Mozambique), respondents from Kenya (22%) and South Africa (17%) represented two-fifths (38%) of our sample, which may be because these are the countries with the second and third highest number of hospices and palliative care services in Africa.¹³ The use of the SmartSurvey platform has enabled a fast and user-friendly data collection while preventing multiple completion from a single computer. Although we piloted the survey, the choice of coding generated missing data, and it took longer to complete than estimated (median of 40 minutes in practice rather than 15 minutes estimated). The length of the questionnaire may also explain why 39 respondents only completed the survey partially. We excluded these records because they completed a maximum of two questions after describing their COVID-19 situation (Section 2 of the questionnaire of nine sections). We felt that including these records would carry a high number of unnecessary missing data in the sections that actually described their preparedness and capacity to respond. Participation relied almost solely on Internet completion, even if alternative means were provided.

This study provides much-needed evidence on the preparedness and capacity of African palliative care services to respond to COVID-19 and future outbreaks. With adequate resources, they could ensure the safe provision of care and support health systems' pandemic response and IHR implementation.^{15,40,41} Our findings support calls to include palliative care in preparedness and response plans,^{12,16–18} and WHO should incorporate palliative care into its evaluation of countries' preparedness. Beyond the current pandemic, the service-level responses and contextual challenges identified for delivering essential palliative care must be addressed to integrate palliative care into the broader health system and reach Universal Health Coverage goals.

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References

1. Du R-H, Liang L-R, Yang C-Q, et al. Predictors of mortality for patients with COVID-19 pneumonia caused by SARS-CoV-2: a prospective cohort study. *Eur Respir J* 2020;55:2000524.
2. Huang C, Wang Y, Li X, et al. Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. *Lancet* 2020;395:497–506.
3. Guan W-j, Ni Z-y, Hu Y, et al. Clinical characteristics of coronavirus disease 2019 in China. *New Engl J Med* 2020;382:1708–1720.
4. Yancy CW. COVID-19 and African Americans. *JAMA* 2020;323:1891–1892.
5. Khunti K, Singh AK, Pareek M, Hanif W. Is ethnicity linked to incidence or outcomes of COVID-19?. London, UK: British Medical Journal Publishing Group, 2020.
6. Murthy S, Leligdowicz A, Adhikari NK. Intensive care unit capacity in low-income countries: a systematic review. *PLoS One* 2015;10:e0116949.
7. Reid EA, Kovalerchik O, Jubanyik K, Brown S, Hersey D, Grant L. Is palliative care cost-effective in low-income and middle-income countries? A mixed-methods systematic review. *BMJ Support Palliat Care* 2019;9:120–129.
8. Potts M, Cartmell KB, Nemeth L, Bhattacharjee G, Qanungo S. A systematic review of palliative care intervention outcomes and outcome measures in low-resource countries. *J Pain Symptom Manag* 2018;55:1382–1397.e7.
9. WHO. Clinical management of COVID-19: interim guidance, 27 May 2020. Geneva: World Health Organization, 2020.
10. Lovell N, Maddocks M, Etkind SN, et al. Characteristics, symptom management and outcomes of 101 patients with COVID-19 referred for hospital palliative care. *J Pain Symptom Manage* 2020;60:e77–e81.
11. Arya A, Buchman S, Gagnon B, Downar J. Pandemic palliative care: beyond ventilators and saving lives. *CMAJ* 2020;192:E400–E404.
12. 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;391:1391–1454.
13. Rhee JY, Garralda E, Namisango E, et al. The African Palliative Care Association (APCA) Atlas of palliative care development in Africa: a comparative analysis. *The Lancet Glob Health* 2018;6:S21.
14. Sleeman KE, de Brito M, Etkind S, et al. The escalating global burden of serious health-related suffering: projections to 2060 by world regions, age groups, and health conditions. *The Lancet Glob Health* 2019;7:e883–e892.
15. WHO. IHR monitoring and evaluation framework. International Health Regulations (2005). World Health Organization, Geneva, 2018.
16. The Lancet. Palliative care and the COVID-19 pandemic. *Lancet* 2020;395:1168.
17. Nouvet E, Sivaram M, Bezanson K, et al. Palliative care in humanitarian crises: a review of the literature. *J Int Humanitarian Action* 2018;3:5.
18. Etkind SN, Bone AE, Lovell N, et al. The role and response of palliative care and hospice services in epidemics and pandemics: a rapid review to inform practice during the COVID-19 pandemic. *J Pain Symptom Manage* 2020;60:e31–e40.
19. World Health Organisation. WHO African Region COVID-19 Readiness Status v2 2020 [cited 2020 09/05/2020]. Available from <https://app.powerbi.com/view?r=eyJrIjoiMzQwODk3NDYtOTIwYy00MWRjLWJiMTUtOTgzZmJmYmJmZDcxIiwidCI6ImY2MTBjMGI3LWJkMjQtNGlZOS04MTBiLTNkYzI4MGFmYjU5MCIsImMiOjhh9>. Accessed May 9, 2020.
20. Afolabi O, Abboah-Offei M, Namisango E, et al. Do the clinical management guidelines for COVID-19 in African Countries reflect the African quality palliative care standards? A rapid review. *Bull World Health Organ* 2020.
21. Eysenbach G. Improving the quality of web surveys: the checklist for reporting results of internet E-surveys (CHERRIES). *J Med Internet Res* 2004;6:e34.
22. Regmi PR, Waithaka E, Paudyal A, Simkhada P, van Teijlingen E. Guide to the design and application of online questionnaire surveys. *Nepal J Epidemiol* 2016;6:640–644.
23. African Palliative Care Association. Home page. 2020. Available from www.africanpalliativecare.org. Accessed September 1, 2020.
24. Costantini M, Sleeman KE, Peruselli C, Higginson IJ. Response and role of palliative care during the COVID-19 pandemic: a national telephone survey of hospices in Italy. *Palliat Med* 2020;34:889–895.
25. Reperant LA, Osterhaus A. AIDS, Avian flu, SARS, MERS, Ebola, Zika... What next? *Vaccine* 2017;35:4470–4474.
26. WHO. Clinical. Management of patients with viral haemorrhagic fever: A pocket guide for front-line health workers. Interim emergency guidance for country adaptation. Geneva: World Health Organization, 2016.
27. Palagyi A, Marais BJ, Abimbola S, Topp SM, McBryde ES, Negin J. Health system preparedness for emerging infectious diseases: a synthesis of the literature. *Glob Public Health* 2019;14:1847–1868.
28. Jacobsen KH, Aguirre AA, Bailey CL, et al. Lessons from the Ebola outbreak: action items for emerging infectious disease preparedness and response. *EcoHealth* 2016;13:200–212.
29. Abubakar A, Elkholy A, Barakat A, et al. Pandemic influenza preparedness (PIP) framework: progress challenges in improving influenza preparedness response capacities in the Eastern Mediterranean Region, 2014–2017. *J Infect Public Health* 2020;13:446–450.
30. Ortu G, Mounier-Jack S, Coker R. Pandemic influenza preparedness in Africa is a profound challenge for an already distressed region: analysis of national preparedness plans. *Health Policy Plan* 2008;23:161–169.
31. Sambala EZ, Kanyenda T, Iwu CJ, Iwu CD, Jaca A, Wiysonge CS. Pandemic influenza preparedness in the WHO African region: are we ready yet? *BMC Infect Dis* 2018;18:567.

32. Rajakaruna SJ, Liu WB, Ding YB, Cao GW. Strategy and technology to prevent hospital-acquired infections: lessons from SARS, Ebola, and MERS in Asia and west Africa. *Mil Med Res* 2017;4:32.
33. O’Cathain A, Thomas KJ. “Any other comments?” Open questions on questionnaires - a bane or a bonus to research? *BMC Med Res Methodol* 2004;4:25.
34. UNICEF Wa. WASH in health care facilities: Global baseline report 2019. Geneva: World Health Organization and the United Nations Children’s Fund, 2019. Report No.: 9241515503.
35. Martinez-Alvarez M, Jarde A, Usuf E, et al. COVID-19 pandemic in west Africa. *Lancet Glob Health* 2020;8:e631–e632.
36. Harding R, Foley KM, Connor SR, Jaramillo E. Palliative and end-of-life care in the global response to multidrug-resistant tuberculosis. *Lancet Infect Dis* 2012;12:643–646.
37. Miller NP, Milsom P, Johnson G, et al. Community health workers during the Ebola outbreak in Guinea, Liberia, and Sierra Leone. *J Glob Health* 2018;8:020601.
38. Tearfund. Ebola outbreak ending as Congolese face new ‘triple threat’ of COVID-19, poverty and violence ReliefWeb2020 [updated 08 Apr 2020]. Available from <https://reliefweb.int/report/democratic-republic-congo/ebola-outbreak-ending-congolese-face-new-triple-threat-covid-19>. Accessed May 9, 2020.
39. Okunade K, Bashan Nkhoma K, Salako O, et al. Understanding data and information needs for palliative cancer care to inform digital health intervention development in Nigeria, Uganda and Zimbabwe: protocol for a multicountry qualitative study. *BMJ Open* 2019;9:e032166.
40. Suthar AB, Allen LG, Cifuentes S, Dye C, Nagata JM. Lessons learnt from implementation of the International Health Regulations: a systematic review. *Bull World Health Organ* 2018;96:110–121E.
41. WHO. Integrating palliative care and symptom relief into responses to humanitarian emergencies and crises: a WHO guide. Geneva: World Health Organization, 2018. Report No.: 9241514469.

Appendix I

Survey Questionnaire (Word Version)

Note: * means compulsory reply.

Welcome page

APCA COVID-19 Preparedness Online Survey (Version 3.3)

Are you a representative of a hospice of palliative care service in an African country?

- If yes, the APCA and the Cicely Saunders Institute for Palliative Care and Rehabilitation (CSI) at King's College London invite you to complete the following survey about preparedness to face the current COVID-19 pandemic.
- If no, you cannot take part in the survey. <Send to Thank You page with resources>

Aim of the survey: To rapidly assess the preparedness and capacity to face the COVID-19 pandemic of hospices and palliative care services in Africa.

Why Are We Doing it?

Hospices and palliative care services provide complex care to a population considered at high risk to develop severe to critical forms of COVID-19. We aim to assess the level of preparedness of hospice and palliative care services in Africa to identify the resources and support that are needed.

The findings will inform recommendations to strengthen preparedness and potential response to the current COVID-19 and the potential reoccurrence. We hope to use the data to urgently lobby for the appropriate resources within the country and from external donors.

Who Are We?

The APCA and the CSI at King's College London

The APCA is a pan-African nonprofit organization mandated with promoting and supporting culturally appropriate palliative care across Africa, through education and training, advocacy, and development of standards of care. It works collaboratively with existing and potential providers of palliative care services to help expand service provision and work with governments and policymakers to ensure that the optimum policy and regulatory framework exists for the development of palliative care across Africa (www.africanpalliativecare.org).

The Center for Global Health Palliative Care at the CSI focuses on research and education with partners around the world to ensure that high-quality appropriate palliative care can be delivered to those who need it (www.kcl.ac.uk/cicelysaunders/global-health/about-us).

Data collected and confidentiality: Data are collected and stored following the U.K. General Data Protection Regulation. The data collected are anonymous. Only aggregated data that would not enable the identification of individuals will be shared in publications.

Data collected on this platform are collected and stored in the U.K. using encryption. Once the online survey will be closed, the data on this platform will be transferred to a secured encrypted server at King's College London and deleted from this platform.

If you chose to complete the survey using Word or during a phone call, the information you give will be stored at the APCA offices. An electronic version of the anonymized data will be shared with the team based at King's College London, where the data will be stored on a secured encrypted server.

If you have questions or concerns, please contact Eve Namisango at the APCA: eve.namisango@africanpalliativecare.org

*By clicking, you agree that you give your consent to the research team to use the data collected

Questionnaire

Date (DD/MM/YYYY):

About You and Your Service

* In which African country is your service in? [List of countries]

* Characteristics of your hospice/palliative care service (Tick all that applies):

- Approximate number of patients seen per year _____
- Type of hospice and/or service (Tick all that applies):
 - Private Nonprofit charity Government or public
 - Within a hospital Within community
 - Inpatient hospice Outpatient hospice Other, please specify _____
- Do you have beds: Yes No
 - If yes, number of beds: _____

What is your current role (Tick all that applies)

- Doctor or medical officer
- Nurse
- Psychosocial professional
- Manager or responsible of the hospice or palliative care service
- Other _____

Current COVID-19 Situation in Your Service

1. Did you have suspected or confirmed cases of COVID-19 in your service or in the hospital you are based in?
 Yes, confirmed cases Yes, probable cases Yes, suspect cases No (If no, go to Question 2)

If Yes:

- Who was positive (Tick all that applies)?
 - Patients Volunteers
 - Relatives Other staff (e.g., administrative or cleaning staff)
 - Physicians
 - Nurses Others (specify) _____
- Where were the cases identified? Your service or hospice Another service of the hospital you are based in
- How many cases did you have (specify numbers for suspected, probable, confirmed)? _____
- How were they identified (e.g., who informed you, which communication means [phone, electronic mail, etc.]?) _____
- What was done (e.g., reporting, referral, containment measures, protection of and communication with staff and users, etc.)? _____
- What were the consequences (e.g., for your service, yourself, your interaction with the community, etc.)? _____

Written Procedures (or Guidance)

2.1 Do you have a case definition for confirmed, probable, and suspected COVID-19 cases?

- Yes No Do not know/not sure

2.2 Do you have a written procedure for what to do if you have a confirmed, probable, and/or suspected COVID-19 case in your service among

	Procedure Specific to COVID-19			Procedure for Infectious Diseases in General or to Another Specific Highly Infectious Disease (e.g., Influenza, Ebola, Tuberculosis, etc.) Please Specify for Which Disease(s): _____		
Patients	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Do not know	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Do not know
Relatives and visitors	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Do not know	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Do not know
Health care professional staff member	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Do not know	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Do not know
Volunteers and medical staff	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Do not know	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Do not know
Staff and volunteers going in the community	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Do not know	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Do not know
Other please specify _____	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Do not know	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Do not know

2.3 Do you have a procedure to support health care providers to manage stress? Yes No Do not know

Please specify or comment: _____

(optional) Additional thoughts on policies and protocols? _____

Measures in Place (to Avoid Contagion)

3.1 Did you *modify* any of the following policies or procedures as a measure to avoid contagion?

1. Policy for visitors/relatives (number of visitors, hours etc.)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Not Sure	<input type="checkbox"/> N/A
2. Policy for operator protection (PPE)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Not sure	<input type="checkbox"/> N/A
3. Policy for patients' admission to the hospice	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Not sure	<input type="checkbox"/> N/A
4. Volunteer support policy	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Not sure	<input type="checkbox"/> N/A
5. Policy regarding care of the relatives after the patient's death	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Not sure	<input type="checkbox"/> N/A
6. Other policy modified, please specify _____				

N/A = not applicable; PPE, personal protective equipment.

If you answered yes to any of the aforementioned: Did you change the policies following the instructions from health management or regional authorities, or did your hospice take them spontaneously?

Following the instructions Spontaneously Both

Please share if you have additional comment: _____

3.2 Do you have in place any of the following measures to protect staff and patients:

1. Handwashing facility for all at points of entry (soap and running water or hand sanitizers with 60% alcohol):

Yes, we put additional ones We already had them in place before COVID-19 No, we do not have such facility

2. PPE for:

- Palliative care staff: Yes, we put additional ones Not more than usual No, we do not have PPE
- Cleaning staff: Yes, we put additional ones Not more than usual No, we do not have PPE

Please specify which PPE are available: _____

3. Isolation room identified in case of infectious conditions, like COVID-19: Yes No N/A (outpatient service only)

4. Recommendations if you or someone in your household becomes ill with COVID-19 symptoms

Yes, please specify _____ No Do not know

If you answered yes to any of the aforementioned: Did you put the measure in place following the instructions from health management or regional authorities, or did your hospice take them spontaneously?

Following the instructions Spontaneously Both

Please share if you have additional comment: _____

3.3 Have all health care providers been trained in handling highly infectious conditions such as COVID-19?

Yes, trained before COVID-19 pandemic Yes, trained because of COVID-19 pandemic Not trained

3.4 Do you know how to dispose of highly infectious waste?

- In the hospice or service Yes No N/A (outpatient service only)
- In the community Yes No N/A (inpatient/hospice service only)

3.5. Was the cleaning staff included in information sharing and training regarding managing COVID-19 (e.g., adapting practice in case of COVID-19 suspected)?

Yes No Do not know/not sure

(optional) Additional thoughts on measures in place to avoid contagion: _____

Communication and Coordination

4.1 How would you be informed if there is a confirmed or suspected case in the hospice or in the locality?

- Who or which institution will inform your hospice or service? _____
- Who will be informed in your hospice or service (position or job title)? _____
- Communication system(s) that will be used <Tick all that applies>
 - Mobile phone available 24/7
 - Telephone (in the service)
 - E-mail
 - WhatsApp/Viber group
 - Other _____

4.3 Is there a focal point person identified in the hospice or service responsible for collecting and sharing up-to-date information (about health recommendations, cases, and protocols to use):

- Yes No Not sure

Please specify (job title/position) _____

4.4 What communication means are in place to share COVID-19 or other urgent information with (Tick all that applies):

- The staff? Text message WhatsApp/Viber Phone call E-mail None Other, specify _____
- Patients? Text message WhatsApp/Viber Phone call E-mail None Other, specify _____
- Relatives, visitors? Text message WhatsApp/Viber Phone call E-mail None Other, specify _____

4.5 Do you have an up-to-date contact list of:

-
- | | |
|---|--|
| • All staff working in or for the hospice or service (medical, administrative, cleaning staff, etc.?) | <input type="checkbox"/> Yes, a paper-based registry <input type="checkbox"/> Yes, an electronic record <input type="checkbox"/> No <input type="checkbox"/> Other _____ |
| • All patients who attended or have attended the hospice or service | <input type="checkbox"/> Yes, a paper-based registry <input type="checkbox"/> Yes, an electronic record <input type="checkbox"/> No <input type="checkbox"/> Other _____ |
| • All relatives who visited or have visited the hospice or service | <input type="checkbox"/> Yes, a paper-based registry <input type="checkbox"/> Yes, an electronic record <input type="checkbox"/> No <input type="checkbox"/> Other _____ |
| • Patients visited in the community | <input type="checkbox"/> Yes, a paper-based registry <input type="checkbox"/> Yes, an electronic record <input type="checkbox"/> No <input type="checkbox"/> Other _____ |
-

4.6 Do you have a system collecting information about:

-
- | | |
|-------------------------------------|--|
| • Patients' symptoms | <input type="checkbox"/> Yes, a paper-based registry <input type="checkbox"/> Yes, an electronic record <input type="checkbox"/> No <input type="checkbox"/> Other _____ |
| • Patients' outcomes | <input type="checkbox"/> Yes, a paper-based registry <input type="checkbox"/> Yes, an electronic record <input type="checkbox"/> No <input type="checkbox"/> Other _____ |
| • Treatment given | <input type="checkbox"/> Yes, a paper-based registry <input type="checkbox"/> Yes, an electronic record <input type="checkbox"/> No <input type="checkbox"/> Other _____ |
| • Dates of patients' visits or stay | <input type="checkbox"/> Yes, a paper-based registry <input type="checkbox"/> Yes, an electronic record <input type="checkbox"/> No <input type="checkbox"/> Other _____ |
| • Dates of relatives' visits | <input type="checkbox"/> Yes, a paper-based registry <input type="checkbox"/> Yes, an electronic record <input type="checkbox"/> No <input type="checkbox"/> Other _____ |
-

(optional) Additional thoughts on communication and coordination? _____

5. Resources

5.1 Do you have concerns about access to

	In Your Hospice or Service?	In the Surrounding Community?
Running water	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Soap	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Hand sanitizers (with 60% alcohol)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Electricity	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Thermometers (contactless, thermoflash type)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Accessing disinfectant products to continue providing care safely	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Other, please specify _____	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No

5.2 Do you have adequate material and facilities to dispose of highly infectious waste?

- In the hospice Yes No Do not know/not sure
- In the community Yes No Do not know/not sure

5.3 Do you have an up-to-date inventory of:

- Protection material available for staff, patient, and visitors (hygiene and sanitation materials, protection material like masks, etc.) Yes No Not sure
- Medicines and other medical supplies available to care for the patients? Yes No Not sure

5.4 Do you have the capacity to use technology instead of face-to-face appointment to provide some care remotely? Yes No

If yes, please specify:

- Which technology? <Tick all that applies: Phone call Video call Other _____>
- Which service can be provided remotely (e.g., psychological support, spiritual care, grief and bereavement, managing the end-of-life phase, etc.):

If not, please specify:

- What are your limitations to use technology? _____
- What would facilitate your use of technology? _____

5.5 In case of emergency, lockdown, or quarantine, do you know how your hospice would access to (e.g., local/national authorities' stocks, private supplier, transportation, etc.):

- Food (for inpatient services only) Yes No
- Medicines and other medical supply Yes No
- Additional staff (e.g., if staff self-isolates or becomes ill) Yes No

Please specify _____

5.6 Do you have education material about COVID-19 available? Yes No

If Yes,

- Are there posters displayed where staff, patients, and visitors can see them? Yes No
- Are they also available for the surrounding community? Yes No

Please specify:

- Which education material do you have? _____
- How did you get the education material? _____

(optional) Additional thoughts on resources: _____

6. Effects on staff

6.1 Did you observe that some staff suddenly did not come to work without justification (i.e., more than usual)? Yes No Not sure

6.2 In your opinion, how anxious are your staff about the need to care for their children who may not be at school? From 1 to 10 (1—not at all anxious; 10—extremely anxious)

6.3 In your opinion, how anxious are your staff about the need to care for their own relatives? From 1 to 10 (1—not at all anxious; 10—extremely anxious)

6.4 In your opinion, how anxious are your staff about getting infected themselves? From 1 to 10 (1—not at all anxious; 10—extremely anxious)

6.5 How worried are you regarding potential issues for your interaction with the community if your hospice or service is known to manage a potential COVID-19 case? From 1 to 10 (1—not at all worried; 10—extremely worried)

(optional) Additional thoughts on other potential effects of the COVID-19 on you and your staff:

7. Perception of the Risk

In the coming week _____

7.1 How much do you think hospice/palliative care staff are at risk of being infected by COVID-19?

From 0 to 10 (0—no risk to 10—maximum risk you can imagine)

7.2 How much do you think the hospice/palliative care service is at risk of closing because of an infection in the hospice or service? From 0 to 10 (0—no risk to 10—maximum risk you can imagine)

7.3 Do you have any security concerns for yourself or your staff? Yes No

If Yes, please specify _____

(optional) Additional thoughts on other potential effects of the COVID-19 on your staff: _____

8. Preparing to offer support

8.1 Do you have palliative care protocols for symptom management and psychological support that could be shared with nonspecialist staff and/or COVID-19 response teams in other health care facilities: Yes No

Comment: _____

If yes, do you have the capacity to train nonspecialist in using these protocols: Yes No

Optional: What are your limitations to share your expertise? _____

Optional: What could facilitate the sharing of your expertise? _____

8.2 In case of outbreak of COVID-19 or another highly infectious disease, do you have plans to redeploy the following outside the inpatient settings?

Health care providers

Yes No Do not know N/A

Volunteers

Yes No Do not know N/A

Resources (material and supplies)

Yes No Do not know N/A

If Yes to any of the aforementioned, please specify in which settings they be redeployed (e.g., community settings, another service, etc.)? _____

8.3 Do you have plans to support other health care services in the triage of patients in case of COVID-19 outbreak? Yes No

Comment: _____

Additional Comments

Do you think there are relevant information we have omitted to ask you? _____!

What are your biggest worries or concerns? _____

Thank You Page

Thank you very much for your time and for taking part in the survey.

You can find information about COVID-19 and palliative care in the following resources:

- APCA: www.africanpalliativecare.org
- CSI, King's College London: www.kcl.ac.uk/cicelysaunders/resources/links
- Worldwide Hospice Palliative Care Alliance: www.thewhpc.org/covid-19
- European Association for Palliative Care: www.eapcnet.eu/publications/coronavirus-and-the-palliative-care-response

You can find information about COVID-19 in the following resources:

- WHO: www.who.int/emergencies/diseases/novel-coronavirus-2019
- WHO Africa: www.afro.who.int/news/who-coronavirus-disease-2019-covid-19-resources-and-information
- Africa Centers for Disease Control and Infection (country focal points and posters): africacdc.org/covid-19/covid-19-resources

If you have questions or concerns, please contact Eve Namisango at the APCA: eve.namisango@africanpalliativecare.org

Appendix II

Description of the COVID-19 Situation for Palliative Care Services Reporting Suspected, Probable, or Confirmed Cases
(N = 31)

	<i>n</i> (%)
Type of cases reported	
Confirmed	5 (16.13)
Probable	1 (3.23)
Suspected	20 (64.52)
Confirmed and suspected	4 (12.90)
Confirmed, suspected, and probable	1 (3.23)
Cases reported among ^a	
Patient ^b	10 (32.26)
Relative	3 (9.68)
Patient and relative	2 (6.45)
Physician ^c	3 (9.68)
Patient and physician	1 (3.23)
Patient and nurse	1 (3.23)
Physician and nurse	1 (3.23)
Patient, physician, and nurse	2 (6.45)
Missing	8 (25.81)
Location of the cases identified	
In the service	1 (3.23)
Another service of the hospital where the palliative care is located	4 (12.90)
Other location ^d	4 (12.90)
Missing (not specified)	22 (70.97)

COVID-19 = coronavirus disease 2019.

^aMultiple selection was allowed.

^bOne also reported additional cases as cleaners.

^cOne also reported an additional case of a nonmedical staff.

^dCommunity and emergency cases.