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As a library, NLM provides access to scientific literature. Inclusion in an NLM database does not imply endorsement of, or agreement with, the contents by NLM or the National Institutes of Health. Learn more: PMC Disclaimer | PMC Copyright Notice Advanced life support (ALS) short training courses are in demand across Africa, though overwhelmingly designed and priced for non-African contexts. The continental expansion of emergency care is driving wider penetration of these courses, but their relevance and accessibility is not known. We surveyed clinicians within emergency settings to describe ALS courses' prevalence and perceived value in Africa.We conducted a cross-sectional quantitative analysis of 235 clinicians' responses to the African Federation for Emergency Medicine's online needs assessment for an open-access ALS course in Africa. Participants responded to multiple-choice and open answer questions assessing demographics, ALS course certification and availability, perceptions of ALS courses, and barriers and facilitators to undertaking such courses.235 clinicians working in 23 African nations responded. Most clinicians reported ALS course completion within the past three years (73%) and in-country access to ALS courses (76%). Most believed the content adequately met their region's needs (60%). Price and course availability were the most common barriers to taking an ALS course. The most common courses were cardiac and paediatric-focused, and the most common reasons to take a course included general career development, personal interest, and departmental requirements.One-quarter of emergency care clinicians lack access to ALS courses in twenty-three African nations. Most clinicians believe that ALS courses have value in their clinical settings and meet the needs of their region. Our findings illustrate the need for an affordable, widely available ALS course tailored to lower-resource African settings that could reach rural and peri-urban clinicians.Keywords: Advanced life support, Resuscitation, Training, EducationThere is an increasing demand for ALS short course training as emergency care expands throughout Africa.These courses are designed and priced for high-resource settings despite weak evidence to support their use in low-to-middle-income countries, yet may be regarded as a core criterion for employment or clinician privileging.The accessibility, utility and value of ALS courses in Africa are unknown, as are clinicians' perceptions of such courses.Advanced life support (ALS) short courses have become regarded as an essential component of resuscitation education [[1], [2], [3], [4]]. Current accreditation in topics such as advanced paediatric, cardiac and trauma life support courses is often regarded as a core criterion for employment or clinician privileging despite opposition from professional societies [5]. Clinicians in low resource settings (LRS) continue to certify - and re-certify - in ALS courses designed (and priced) for high-resource settings with limited evidence of improved outcomes, skills or knowledge to support this practice in low-resource settings [[6], [7], [8]]. For example, to date, over one million clinicians in 80 countries have received Advanced Trauma Life Support (ATLS) course trainings [9]. Based on models of care from high-income countries, standard ALS courses have not been adapted to low-resource clinical settings (with few exceptions) [6,[10], [11], [12], [13], [14]].The prevalence of ALS training and certification in Africa is unknown. The limited data that exist mainly come from South Africa, where the Colleges of Medicine require current ALS certification for fellowship in certain specialties, and most specialist trainees have completed ATLS (69%) or Advanced Paediatric Life Support (APLS) (or equivalent) courses (58%) [15]. There are no reliable data from low income countries. A survey of thirteen Intensive Care Units in LRS, mostly in Africa, found that the majority had one or more staff member with Advanced Cardiac Life Support (ACLS) or equivalent course certification, suggesting a higher prevalence in critical care settings [16]. In contrast, a study of seventeen Nigerian referral hospitals with ICUs found that the majority of hospital staff were not trained in basic life support or ACLS and that hospitals did not require certification in either course [17].As emergency care expands throughout Africa, there is an increasing demand for ALS short course training. While diverse in content and object, ALS courses are united in teaching advanced clinical skills and reasoning beyond those of basic life support courses to enhance the care of critically ill or injured patients. However, the accessibility, utility and value of ALS courses in Africa are unknown, as are emergency care clinicians' perceptions of such courses.The African Federation for Emergency Medicine (AFEM) is a regional society made up of organizations and individuals working to support the development of emergency care in Africa. AFEM's individual members are both non-clinical and clinical and are mostly directly involved in emergency care in Africa. Each year, AFEM conducts a survey on a topic of interest to its membership, and this year surveyed members regarding the prevalence, utility and value of ALS courses in Africa. Given their diversity in subject and objective, ALS courses were defined as any course that provides the skills and knowledge to follow locally or internationally accepted advanced resuscitation guidelines.We created an anonymous, web-based survey composed of multiple-choice and free-response questions about ALS in Africa using Google Forms (Google LLC, used with permission) and distributed it via a web-based mailing service (MailChimp, . Responses were automatically compiled onto an access controlled, central Google Sheets document (Google LLC, used with permission) and accepted from the 12th of April until the 4th of November 2019. The Human Research Ethics Committee at the University of Cape Town (REF: 428/2019) and the Executive Committee of the African Federation for Emergency Medicine (AFEM) granted approval for this study.We used list-serve and snowball methods to collect survey responses. All individuals in the AFEM membership database (n=838) received an email invitation to participate in the study with a link to the survey in addition to two reminder emails to complete the survey. The AFEM membership database is stored on a password protected AFEM server with access limited to the AFEM executive committee. A snowball method was used to capture an additional network of Sudanese residents and physicians (n=328) wherein one Sudanese respondent requested permission from AFEM to distribute the survey to emergency medicine colleagues. The survey and all communication were available in English and French with direct translation by a native French speaker fluent in English.All respondents self-reported direct provision of clinical care primarily based within an low-to middle-income country (LMIC) (according to World Bank Classification 2019) and were therefore eligible for inclusion. Non-clinical AFEM members who did not directly provide patient care were instructed to self-exclude from the survey. Respondents who indicated a primarily non-LMIC setting such as the United Kingdom, United States and Australia were excluded.The questionnaire included 46 multiple-choice and free-response questions assessing clinician demographics, qualifications, certification in ALS courses, availability of ALS in the clinicians' region, and general perceptions of ALS. A ten-point Likert scale was used to assess self-reported confidence and competency in ALS.We used a mixed methods approach to analyse qualitative and quantitative questions. Data from free-response questions were analysed for recurring themes through a thematic content analysis using the qualitative software Atlas.ti.8 (Scientific Software Development GmbH; Berlin, Germany). Quantitative data were analysed for descriptive statistics, including median scores and proportions of respondents, using STATA (StataCorp. 2013. Stata Statistical Software: Release 13. College Station, TX: StataCorp LP).We invited 1166 AFEM members to participate and received 276 responses for a 24% response rate. 235 clinicians from LMICs were included and 41 participants from non-LMICs were excluded. Demographics are reported in Table 1. Participants were primarily male (73%), doctors (66%) and urban practitioners (89%) with a median age of 36 (Table 1). Over one-third of clinicians reported specialist training (34%). The most well-represented countries were Sudan (21%), South Africa (16%), Uganda (9%), and Tanzania (8%).Sample characteristics of respondents (235).Socio-demographic characteristicN%Age20294017.0303911850.240495623.85059125.1606973.0Unknown20.9GenderFemale6527.7Male17072.3RoleDoctor15465.5Mid-level clinician41.7Nurse4418.7Prehospital clinician3314.0SettingRural2510.6Urban21089.3Specialist trainingYes10534.5No4920.8No answer8134.3CountryAngola10.4Botswana73.0Cameroon10.4DRC73.0Egypt73.0Ethiopia93.8Ghana166.8Kenya156.4Lesotho20.9Libya20.9Madagascar31.3Malawi10.4Mali20.9Namibia31.3Nigeria135.5Rwanda41.7Somalia52.1South Africa3715.7Sudan5021.3Tanzania198.1Uganda229.4Zambia52.1Zanzibar10.4Zimbabwe31.3Most respondents (73%) had completed an ALS course in the last three years and reported attending to critically unwell or injured patients requiring ALS on a daily basis (67%) when asked how frequently they saw such patients. The most frequently completed courses were ACLS (60%), PALS/APLS (40%) and ATLS (32%) found in Fig. 1 with additional courses not listed in the survey reported in Fig. 2. ALS courses were most often required for all clinicians (29%) and ICU/ED staff (18%). Frequency of ALS courses completed, by type. Frequency of other courses taken by respondents.We examined the relationship between AFEM geographical regions and ALS availability using a chi-square test of independence. Sub-group analyses by AFEM Regions, including North, East, West and Southern Africa, revealed significant differences in ALS course availability (X2 (3, N=235)=25.41, p