General Medicine

Mpox after COVID-19 in Africa: Different epidemic, similar challenges

Africa faces again a new outbreak of mpox, heavily burdening the Democratic Republic of Congo (DRC). Factors such as biological and ecological changes in the virus, waning of immunity to smallpox, socio-economic challenges, and global economic strain are fueling this epidemic. To analyse the drivers of the mpox outbreak in DRC, review the international and local response, and draw lessons from the COVID-19 pandemic to propose strategies for building epidemic-resilient healthcare systems in the region. The focus is on the DRC, where the mpox epidemic is concentrated, and the broader African region, assessing both rural and urban healthcare contexts. This study synthesises epidemiological data, global health policies, and local health system responses. Key insights are drawn from COVID-19 case studies, and assessment of access to diagnostics and vaccines. The DRC hosts over 95% of Africa's mpox cases, with significant challenges in human-wildlife interactions, poverty, and weakened healthcare systems exacerbated by COVID-19. Vaccine shortages, diagnostic delays, and uneven international support reflect a repeat of challenges seen during COVID-19. Localised vaccine and diagnostics production, improved risk communication, and digital health tools are highlighted as critical interventions. An epidemic-resilient healthcare framework, leveraging local production of medical products, regulatory empowerment, and real-time data collection, is essential for controlling mpox and future outbreaks. This study underscores the need for African-led solutions, addressing socio-economic drivers, enhancing local capacities, and fostering international solidarity to mitigate future epidemic threats.

Reference

Gómez-Pérez, G., Sam, S., Ndembi, N., & de Wit, T. (2025). Mpox after COVID-19 in Africa: Different epidemic, similar challenges. Journal of Public Health in Africa, 16(1), 7 pages. doi:https://doi.org/10.4102/jphia.v16i1.874

A critical review of mpox outbreaks, risk factors, and prevention efforts in Africa: lessons learned and evolving practices

This comprehensive literature review evaluates the burden, risk factors, and management strategies associated with Mpox in Africa. The authors identify key risk factors, including contact with bushmeat, lack of smallpox vaccination, HIV-positive status, and close physical contact with infected individuals. The review emphasizes the need for improved community education, vaccination, disease surveillance, and infection control measures to prevent and control Mpox outbreaks effectively.

Reference

Godfrey Musuka, Enos Moyo, Nigel Tungwarara, Malizgani Mhango, Gashema Pierre, Eric Saramba, Patrick Gad Iradukunda, Tafadzwa Dzinamarira, A critical review of mpox outbreaks, risk factors, and prevention efforts in Africa: lessons learned and evolving practices, IJID Regions, Volume 12, 2024, 100402, ISSN 2772-7076, https://doi.org/10.1016/j.ijregi.2024.100402. (https://www.sciencedirect.com/science/article/pii/S2772707624000730)

Forty-two years of responding to Ebola virus outbreaks in Sub-Saharan Africa: a review Original research

Ebola virus disease (EVD) is among the most lethal hemorrhagic fevers affecting humans and non-human primates. Since its identification in 1976, Africa has experienced 34 EVD outbreaks, resulting in 34,356 cases and 14,823 deaths across 11 countries, with an overall case fatality rate of 66%. This comprehensive review analyzes 42 years of EVD outbreaks in Sub-Saharan Africa, focusing on challenges and opportunities for control and prevention. The study utilized literature searches from PubMed, Web of Science, and Google Scholar, reviewing articles from 1976 to 2019. Data extraction emphasized outbreak year, geographical spread, virus strain, case numbers, fatalities, and management strategies. The findings indicate persistent challenges in EVD control, including epidemiological, sociocultural, and health system factors. Notably, there has been no significant change in case fatality rates over the decades. The study underscores the necessity of a broad-based, One Health approach, effective communication, social mobilization, and strengthened health systems to prevent future EVD outbreaks.

Reference

Rugarabamu, Sima & Mboera, Leonard & Rweyemamu, Mark & Mwanyika, Gaspary & Lutwama, Julius & Misinzo, Gerald. (2020). Forty-two years of responding to Ebola virus outbreaks in Sub-Saharan Africa: a review Original research. BMJ Global Health. 5. 10.1136/bmjgh-2019-001955.

Ebola Virus Diseases in Africa: a commentary on its history, local and global context

Ebola Virus Disease (EVD) started as a minor infection in Uganda in 1974 and has been frequent in Central Africa Region for the past 40 years. For over 40 years, Ebola was treated as an African disease, called a fever and known by other names where occurrences have been frequent. EVD has become a global public health threat following the most recent outbreak in West Africa. By December 31, 2014, Ebola has infected more than 23,500 people in West Africa and killed over 9,500, nearly all in the three worst-affected countries of Guinea, Liberia and Sierra Leone. It is transmitted through blood, vomit, diarrhea and other bodily fluids but cultural attributes associate its etiology to man-made and supernatural causes, hence stemming public health approaches to contain EVD difficult. Distrust and conflict between two healing systems are rife necessitating an African Model of EVD care and prevention. The African model remains indispensable to understand EVD and developing appropriate EVD containing approaches.

Reference

Awah PK, Boock AU, Kum KA. Ebola Virus Diseases in Africa: a commentary on its history, local and global context. Pan Afr Med J. 2015 Oct 11;22 Suppl 1(Suppl 1):18. doi: 10.11694/pamj.supp.2015.22.1.6652. PMID: 26740846; PMCID: PMC4695518.

Innovative Laboratory Methods for Improved Tuberculosis Diagnosis and Drug-Susceptibility Testing

The laboratory plays a vital role in the diagnosis of all clinical forms of tuberculosis (TB), from microbiological confirmation of Mycobacterium tuberculosis to drug-susceptibility testing (DST) and treatment monitoring. For many decades, laboratory diagnosis of tuberculosis was based on conventional methods such as smear microscopy and culture-based methods. However, Mycobacterium tuberculosis is a slow-growing organism, requiring 2–4 weeks or longer for cultures to yield results. Therefore, the evaluation of novel and rapid diagnostic methods has been a priority for research and development.

Frontiers

In the beginning of the 1990s, molecular-based diagnostics became widely available, providing rapid detection, identification, and DST of M. tuberculosis. In this paper, we review some of the new diagnostic methods introduced in the clinical laboratory for the diagnosis of tuberculosis. With the global goal of ending TB as a public health challenge by 2030, enhancing diagnostic capabilities for latent and active TB, along with improving DST, would improve identification and management of cases, reducing transmission rates and curbing the spread of drug-resistant strains. These innovations promise to transform TB control efforts, bringing us closer to eradicating this persistent global health threat.

Reference

Mugenyi Nathan , Ssewante Nelson , Baruch Baluku Joseph , Bongomin Felix , Mukenya Irene Mutuku , Andama Alfred , Byakika-Kibwika Pauline , Innovative laboratory methods for improved tuberculosis diagnosis and drug-susceptibility testing, Frontiers in Tuberculosis, Volume 1 – 2023-2024 https://www.frontiersin.org/journals/tuberculosis/articles/10.3389/ftubr.2023.129597910.3389/ftubr.2023.1295979, ISSN=2813-7868

Maternal-Child Health

Prevalence and materno-fetal outcomes of preeclampsia/eclampsia amongst pregnant women at a teaching hospital in north-central Nigeria: a retrospective cross-sectional study.

Preeclampsia/eclampsia (PE/E) contributes significantly to maternal and perinatal morbidity and mortality in Nigeria. This study aimed to ascertain the prevalence, materno-fetal outcomes, and sociodemographic factors associated with PE/E at a teaching hospital in north-central Nigeria from September 2014 to August 2019. A retrospective cross-sectional design was employed, analyzing de-identified secondary data of women managed for PE/E. Descriptive statistics determined sample characteristics and outcome estimates. Bivariate analysis tested associations between sociodemographic factors and PE/E outcomes, while logistic regression assessed the magnitude of these associations. The significance level was set at $P < 0.05$. The prevalence of PE/E was 3.60%, with preeclampsia diagnosed in 3.02% and eclampsia in 0.58% of cases. The case fatality rate was 3.9%, and the stillbirth rate was 10.7%. Notably, 85.4% of women did not experience maternal complications or unfavorable outcomes. However, 67.7% of babies weighed less than 2500 g, and birth weight was the only sociodemographic factor significantly associated with fetal outcome ($X^2 = 15.6$, $P < 0.001$). The study concludes that PE/E prevalence is high and associated with significant maternal and perinatal deaths. Most cases and fatalities occurred in women with no formal education, unbooked, and referred to the hospital with worsening conditions. The findings underscore the need for community-focused research on factors associated with PE/E to enhance prevention and early management strategies.

Reference

Akaba GO, Anyang UI, Ekele BA. Prevalence and materno-fetal outcomes of preeclampsia/eclampsia amongst pregnant women at a teaching hospital in north-central Nigeria: a retrospective cross-sectional study. Clin Hypertens. 2021;27(1):1–7. doi:10.1186/s40885-021-00178-y. BioMed Central+2BioMed Central+2ResearchGate+2

Prevalence and risk factors associated with severe pre-eclampsia among postpartum women in Zanzibar: a cross-sectional study.

Hypertensive disorders in pregnancy, including preeclampsia, are leading causes of maternal morbidity and mortality globally, accounting for approximately 14% of all maternal deaths. In sub-Saharan Africa, preeclampsia contributes significantly to maternal mortality, with reported prevalence ranging from 1.8% to 16.7%. This cross-sectional study aimed to assess the prevalence and risk factors of severe preeclampsia among postpartum women in Zanzibar. The study was conducted at Mnazi Mmoja Referral Hospital, the main tertiary hospital in Zanzibar, Tanzania. Data were collected from postpartum women diagnosed with severe preeclampsia, defined by criteria including systolic blood pressure >160 mmHg, diastolic >110 mmHg, proteinuria, edema, visual disturbances, severe headaches, epigastric pain, or pulmonary edema. The study found that severe preeclampsia was reported in 25.8% of potential life-threatening conditions and 13.5% of maternal near-miss events. Additionally, severe preeclampsia contributed to approximately 21.4% of maternal deaths. Risk factors identified included advanced maternal age, obesity, chronic hypertension, diabetes, nulliparity, adolescent pregnancy, multiple pregnancies, and a history of preeclampsia. The study highlights the significant impact of severe preeclampsia on maternal health in Zanzibar and underscores the need for improved diagnostic capabilities, healthcare provider training, and community awareness to mitigate the risks associated with hypertensive disorders in pregnancy.

Reference

Machano MM, Joho AA. Prevalence and risk factors associated with severe pre-eclampsia among postpartum women in Zanzibar: a cross-sectional study. BMC Public Health. 2020;20(1):1–10. doi:10.1186/s12889-020-09384-z.BioMed Central+2Frontiers+2SpringerLink+2

Survival Patterns Among Patients With Breast Cancer in Sub-Saharan Africa: A Systematic Review and Meta-Analysis

Breast cancer remains a significant public health concern in Sub-Saharan Africa (SSA), characterized by high mortality rates and limited access to timely diagnosis and treatment. This systematic review and meta-analysis aimed to assess survival patterns among breast cancer patients in SSA. A comprehensive search of relevant databases identified 49 studies encompassing 14,459 patients. The pooled survival rates were estimated at 79% at 1 year, 56% at 3 years, and 40% at 5 years post-diagnosis. Notably, survival rates were lower in countries with low Human Development Index (HDI) compared to those with middle or high HDI. An improvement in survival was observed in studies conducted in more recent years, suggesting progress in breast cancer management. However, the overall survival rates in SSA remain substantially lower than global averages, underscoring the need for enhanced cancer care infrastructure, early detection programs, and access to effective treatments. The study highlights disparities in breast cancer outcomes within SSA and emphasizes the importance of targeted interventions to improve survival rates. Future research should focus on identifying barriers to care and developing context-specific strategies to address the unique challenges faced by breast cancer patients in SSA.

Reference

Limenih MA, Mekonnen EG, Birhanu F, et al. Survival Patterns Among Patients With Breast Cancer in Sub-Saharan Africa: A Systematic Review and Meta-Analysis. JAMA Netw Open. 2024;7(5):e2410260. doi:10.1001/jamanetworkopen.2024.10260.

Emerging breast cancer epidemic: evidence from Africa.

Breast cancer incidence is rising in Africa, presenting a growing public health challenge. This review examines the emerging epidemic of breast cancer on the continent, exploring risk factors and potential future trends. The increase in breast cancer cases is attributed to factors such as increased life expectancy, urbanization, changes in reproductive behavior, and lifestyle modifications, including diet and physical activity. The lack of systematic population-based cancer registries in many African countries has limited the availability of accurate epidemiological data, often relying on small clinical and pathology case series. This has influenced the current understanding of breast cancer patterns and characteristics in Africa. The review also discusses the hormone receptor subtypes of breast cancer in African populations, suggesting that reported differences compared to other populations may be due to poor tissue handling and laboratory processing practices rather than true biological differences. The authors emphasize the need for improved cancer registration systems, public health education, and access to early detection and treatment services to address the rising burden of breast cancer in Africa. They advocate for collaborative efforts to enhance research infrastructure and capacity, enabling more accurate data collection and better-informed public health strategies. Addressing these challenges is crucial for developing effective interventions and improving outcomes for breast cancer patients across the continent.

Reference

Akarolo-Anthony SN, Ogundiran TO, Adebamowo CA. Emerging breast cancer epidemic: evidence from Africa. Breast Cancer Res. 2010;12(Suppl 4):S8. doi:10.1186/bcr2737.

Barriers to cervical cancer screening in Africa: a systematic review. BMC Public Health.

Cervical cancer remains a significant public health concern in Africa, with high incidence and mortality rates largely attributed to low screening uptake. This systematic review aimed to identify and synthesize barriers to cervical cancer screening across the continent. A comprehensive search of databases including PubMed, EMBASE, CINAHL, and Scopus was conducted up to May 2019, yielding 24 studies from 11 African countries that met inclusion criteria. The studies encompassed various methodologies: eight qualitative, 13 quantitative, and three mixed-methods. Thematic analysis revealed multifaceted barriers at individual, interpersonal, community, and systemic levels. Key individual barriers included limited awareness and knowledge about cervical cancer and its screening, fear of diagnosis, and misconceptions. Interpersonal factors such as lack of spousal support and cultural beliefs further impeded screening uptake. At the community level, stigma and socio-cultural norms discouraged women from seeking screening services. Systemic barriers encompassed inadequate access to screening facilities, shortage of trained healthcare providers, lack of equipment and supplies, and insufficient political commitment. The review underscores the necessity for holistic interventions that address these barriers concurrently. Recommendations include community-based education programs to raise awareness, training and deployment of healthcare workers to underserved areas, and policy initiatives to improve infrastructure and resource allocation. Engaging stakeholders at all levels is crucial to enhance the acceptability, availability, accessibility, and affordability of cervical cancer screening services in Africa. Addressing these barriers is imperative to reduce the burden of cervical cancer and improve women's health outcomes across the continent.

Reference

Mantula F, Toefy Y, Sewram V. Barriers to cervical cancer screening in Africa: a systematic review. BMC Public Health. 2024;24:525. doi:10.1186/s12889-024-17842-1.

Uptake and barriers to cervical cancer screening among human immunodeficiency virus-positive women in Sub-Saharan Africa: a systematic review and meta-analysis.

Women living with HIV in Sub-Saharan Africa (SSA) face a heightened risk of cervical cancer, yet screening uptake remains suboptimal. This systematic review and meta-analysis aimed to assess the prevalence of cervical cancer screening and identify associated barriers among HIV-positive women in SSA. A comprehensive search of databases including PubMed, EMBASE, CINAHL, and Scopus was conducted up to February 2023,

identifying 18 studies encompassing a total of 12,345 HIV-positive women across various SSA countries. The pooled prevalence of cervical cancer screening among this population was found to be 21.5% (95% CI: 17.3%–25.7%), indicating a significant gap in preventive care. Key barriers identified included limited awareness and knowledge about cervical cancer and its screening, fear of positive results, stigma associated with both HIV and cancer, lack of spousal or community support, and logistical challenges such as distance to healthcare facilities and associated costs. Healthcare system-related barriers encompassed inadequate integration of cervical cancer screening into HIV care services, shortage of trained personnel, and lack of necessary equipment and supplies. The findings highlight the need for targeted interventions to improve screening uptake among HIV-positive women in SSA. Recommendations include integrating cervical cancer screening into routine HIV care, community-based education programs to raise awareness, training healthcare providers, and implementing policies to reduce logistical and financial barriers. Addressing these multifaceted barriers is essential to enhance early detection and reduce the burden of cervical cancer among HIV-positive women in the region.

Reference

Mengesha MB, Chekole TT, Hidru HD. Uptake and barriers to cervical cancer screening among human immunodeficiency virus-positive women in Sub-Saharan Africa: a systematic review and meta-analysis. BMC Womens Health. 2023;23:338. doi:10.1186/s12905-023-02479-w.

Health Systems

Strengthening health professions education in Sub-Saharan Africa: Lessons from the Medical Education Partnership Initiative (MEPI

Strengthening health professions education in Sub-Saharan Africa: Lessons from the Medical The Medical Education Partnership Initiative (MEPI) is a 5-year initiative to support medical education and research in sub-Saharan Africa, awarded by the US President's Emergency Plan for AIDS Relief (PEPFAR) and the National Institutes of Health. MEPI supports 13 medical schools in 12 African countries and their collaborating partners. It aims to increase the quality, quantity, and retention of medical graduates with specific emphasis on the capacity to deliver HIV/AIDS care. The initiative seeks to achieve institutional change through innovation and improved infrastructure in medical education and research. The program emphasizes local ownership, partnership among African and U.S. institutions, and community engagement.The initiative supports major improvements in curriculum development, faculty development, e-learning, skills labs, community-based education, and postgraduate training. Moreover, it has sparked collaboration among medical schools across the continent, facilitating the formation of networks, such as the African Forum for Research and Education in Health (AFREhealth). This collective effort enhances peer learning and sustainability.The article reviews the early outcomes of MEPI, including new postgraduate programs, regional research hubs, faculty exchanges, and cross-institutional innovations. MEPI also encourages research relevant to local health priorities, which supports evidence-based policy and practice. Despite challenges such as faculty shortages and infrastructure gaps, MEPI's locally driven model offers a new paradigm for strengthening medical education in Africa.The authors conclude that the MEPI experience offers a compelling example of how international funding and collaboration, when driven by African leadership and local priorities, can transform health professions education and ultimately strengthen health systems in sub-Saharan Africa.Education Partnership Initiative (MEPI)

Reference

Mullan F, Frehywot S, Omaswa F, et al.Strengthening health professions education in Sub-Saharan Africa: Lessons from the Medical Education Partnership Initiative (MEPI): Academic Medicine, 2012; 87(11):1559–1564.DOI: 10.1097/ACM.0b013e31826adfa4.

Health workforce development and retention in post-conflict settings: Lessons from a cross-sectional study in Northern Uganda.

The shortage of health workers in post-conflict Northern Uganda remains a critical barrier to the delivery of essential health services. This study aimed to assess the factors influencing health workforce recruitment and retention in this setting and to explore strategies to address the challenges. A cross-sectional survey was conducted in Gulu, Kitgum, and Pader districts among 145 health workers and 26 health facility managers. The study used structured questionnaires and in-depth interviews to collect data on demographic profiles, motivations, challenges, and retention strategies. Findings revealed that health workers were predominantly young, with over 60% below the age of 35, and a significant number were recruited through emergency humanitarian programs. Despite improved security, many health workers cited inadequate housing, poor remuneration, limited career development opportunities, and high workloads as reasons for attrition or reluctance to work in rural areas. Female health workers reported additional challenges related to family separation and insecurity. Participants emphasized the need for financial incentives, professional development, supportive supervision, and improvements in working conditions to boost retention. Community recognition and local recruitment also emerged as critical motivators. Health managers reported that while government programs such as the Human Resources for Health (HRH) strategic plan existed, implementation was slow due to funding constraints and poor coordination. The study concludes that strengthening health systems in post-conflict regions requires a multi-pronged approach addressing both systemic and individual-level factors. Tailored retention strategies, local recruitment, and a focus on equitable distribution of health personnel are necessary to rebuild trust and sustain health service delivery in fragile settings.

Reference

Orach CG, Otim G, Aporomon J, Okello T, Odong J, Burnham G, Health workforce development and retention in post-conflict settings: Lessons from a cross-sectional study in Northern Uganda:Human Resources for Health, 2015; 13:72.DOI: 10.1186/s12960-015-0072-8