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Preparing the health workforce for future public health emergencies in Africa

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INTRODUCTION

Public health emergencies due to natural disasters, emerging and re-emerging infectious diseases remain a big challenge in the African Region. The health systems in the Region are weak and fragile—characterised by weak health governance, inadequate health infrastructure, essential medicines and technology; health workforce shortages; and limited financing capacity. The Region is recording an increasing frequency of infectious disease outbreaks. In 2016, 58 infectious disease outbreaks were recorded, while between 2017 and 2020, 415 were recorded (averaging more than 100 outbreaks per year).[1 2] Between 1970 and 2019, there have been at least 1910 reported incidents of disease outbreaks in the African Region.[3] Until the emergence of COVID-19, disease outbreaks in Africa were mostly cholera, measles, dengue fever, Ebola, Marburg haemorrhagic fevers, Crimean-Congo haemorrhagic fever, lassa fever, yellow fever, malaria, meningitis, monkeypox, pertussis, Rift Valley fever (RVF), measles and circulating vaccine-derived poliovirus type 2 (cVDPV2).[2 3] Although Africa registered fewer cases and deaths due to COVID-19, the real burden of the pandemic is likely to be under-reported due to limiting testing capacity and surveillance system.

The rise in the frequency and scale of infectious diseases outbreaks has been associated with the exponential increase in the population density, and the changes that have impacted the socioecological systems and climate, and the resultant changes in infectious disease transmission patterns.[4]

At the heart of public health emergency prevention, preparedness, response and recovery are health workers—people whose actions aim to promote, protect and improve health.[5] The Africa Region is inundated with health workforce challenges that constrain health systems' capacity with the disease burden faced by the region being 25% of the global burden of disease. The challenges include the chronic shortage of health workers which is projected to hit 6.1 million by 2030, and the weak capacity of health workforce departments in planning, coordination of partners and management.[6] Although most countries have health workforce policies and plans, there is poor implementation mainly due to inadequate funding and weak implementation capacity.[7] The shortages of health workers are compounded by inequitable distribution of existing ones by the level of care and geographically. There is a high concentration of health workers in the tertiary and secondary level of care which is mostly located in the urban areas, as against the primary-level facilities mostly located in the rural areas. There is also non-retention of

Summary box

⇒ The long-standing health workforce issues and challenges in Africa are contributing to the physical and mental impact of public health emergencies on health workers.
⇒ Planning for the health workforce in the context of public health emergency prevention, preparedness, response and recovery by government and other stakeholders is important, as health workers are critical in planning, service delivery, supervision, coordination and evaluation of public health emergencies.
⇒ The availability and acceptability of well-trained and skilled health workers are key to improving health outcomes during public health emergencies.
⇒ Ensuring multisector engagement of health workforce stakeholders in the development of public health emergency plans is critical to fostering the development and implementation of holistic interventions to increase health workforce performance.

health workers in rural, remote and underserved areas, poor working conditions and high migration of qualified health workers.[8] The suboptimal investment in the education and training of health workers in some countries is also a huge health workforce challenge. Most countries do not produce adequate numbers of health workers with the right skill-mix to match their health needs[9] and even those trained face challenges in finding appropriate jobs.

The level of functionality of health systems, as well as its resilience (ability to effectively prepare for, withstand the stress of and respond to the public health events), is dependent on health workers.[9 10] To ensure resilience, health workers should be of adequate number, competent (qualified and skilled), motivated, empowered and equitably distributed at all levels of care and geographically (rural and urban). Additionally, the individuals and communities whom the health workers serve need to accept them to ensure that appropriate and acceptable integrated people-centred health services are provided. These are imperative in Africa where many health systems are fragile[11 12] and evidence indicates that the availability and acceptability of well-trained and skilled health workers are key to improving health outcomes during public health emergencies.[11 13–15]

In this commentary, we discuss the impact of public health emergencies on health workers and the strategies necessary for preparing the health workforce for future public health emergencies. These strategies are pertinent considering that public health emergencies are frequent in the region and preparing health workers is critical in public health emergency prevention, preparedness, response and recovery.[16 17]

IMPACT OF PUBLIC HEALTH EMERGENCIES ON HEALTH WORKERS

Africa has experienced several public health emergencies in the last few years, which have adversely impacted the health workforce in different dimensions. The fragility of the health system contributed to the negative impact of public health emergencies on health workers physically and mentally in the course of performing their functions. For instance, shortage of health workers meant that those available were faced with prolonged work hours, high workload and fatigue that adversely affected their mental health and general well-being,[18] increasing the risk of burnout and development of non-communicable diseases among health workers.[19] Erratic supply of personal protective equipment (PPE), coupled with suboptimal knowledge and skills on infection prevention and control measures have resulted in high infection rates and death among health workers,[18 20 21] as well as disruption in essential health service delivery.[22] High infection rates and deaths, in turn, predispose the health workers and their families to stigma, discrimination, and violence leading to mental health issues. This is exacerbated by the absence or non-implementation of occupational health and safety policies, and employee assistance programmes for health workers, leaving health workers to battle occupational injuries and psychosocial trauma alone. Consequently, labour unrest due to poor working conditions is common,[23] especially during critical public health events like the COVID-19 pandemic, which has hampered efficient and sustained health service delivery.[18]

Furthermore, repurposing of health workers to respond to emergencies takes them away from their primary tasks, and this creates a vacuum that needs to be filled and exacerbates the prevalent shortage of health workers. Oftentimes, repurposed health workers are not replaced and this increases the workload on the existing health workers and adversely affects their physical and mental well-being. Furthermore, the continuity of essential health service provision and its quality are disrupted to large extents.[22]

The above-highlighted impact has been associated with poor preparedness,[24 25] therefore necessitating actions and investments to ensure that health workers are available, accessible, competent, motivated and protected during public health emergencies.

HOW CAN THE HEALTH WORKFORCE IN AFRICA BE PREPARED FOR FUTURE PUBLIC HEALTH EMERGENCIES?

Preparing the health workforce for future health emergencies requires a paradigm shift and we propose a multidimensional approach that should be mainstreamed by the government and other stakeholders rather than being ad hoc. These include the inclusion of health workforce policymakers and planners in planning for public health emergencies, conducting workload analysis and health workforce estimations, and guaranteeing the safety of health workers. Others are the provision of incentives, improving the knowledge and skills of health workers and strengthening multi-stakeholder engagement in the development, implementation and resourcing of public health emergency plans.

Health workers are critical in planning, service delivery, supervision, coordination and evaluation of public health emergencies. Thus, tailored public health interventions based on the health workforce thematic areas of governance, policy, education (preservice and in-service), management, coordination and partnership are critical as shown in table 1.

Evidence indicates that planning for the health workforce, and in the process of obtaining their perspectives, is critical in preparing them for public health emergencies.[26–28] Thus, an informed inclusion of all stakeholders, including health workforce policymakers and planners, is pertinent to ensure that needs and expectations of health workers are captured in plans, and their roles, responsibilities and entitlements are aptly communicated.[29] Conducting a workload analysis and health workforce estimation to ascertain needs and competencies for all pillars of the response at all levels is essential

Table 1 Health workforce interventions for public health emergencies

Health workforce thematic area	Interventions
Leadership and governance	▶ Inclusion of public health emergency planning in health workforce policies and plans to focus on safety and protection. ▶ Incorporate health workforce planning in public health emergency plans. ▶ Strengthen health workforce units to supervise, monitor and evaluate the impact of public health emergencies on health workers and work conditions. ▶ Facilitate periodic review of health workforce policies and plans based on public health risk assessments. ▶ Conduct workload analysis and estimation of needed health workforce. ▶ Policy dialogue and advocacy on investment in decent working conditions and protection of the health workforce.
Education	▶ Assess public health emergency training needs for relevant categories of health workers. ▶ Develop, implement and periodically update competency-based programmes based on risk assessment for public health emergencies in collaboration with professional regulatory bodies. ▶ Develop, implement and periodically update a framework for enhancing public health emergency prevention, preparedness, response and recovery competencies in preservice training institutions and for in-service training. ▶ Train health workers on public health emergency response strategies including case management, risk communication, infection, prevention and control, surveillance and epidemiology. ▶ Develop and implement a framework for enhancing the capacity of community health workers in health promotion and delivery of essential health services.
Financing	▶ Establish funding mechanisms for health workforce development in public health emergencies. ▶ Allocation of funds for health worker incentives and other remunerations. ▶ Development and implementation of financial risk protection and insurance frameworks for health workers responding to emergencies. ▶ Strengthen financial management mechanisms for public health emergencies including planning, education and management of health workers.
Data, information and evidence	▶ Improve health workforce information systems to capture up-to-date information qualifications, competencies, skill-mix and distribution of health workers. ▶ Develop and implement a framework for collecting, analysing and disseminating information on the effect of emergencies on the health workforce. ▶ Strengthen public health surveillance mechanisms to track health worker infections. ▶ Rapid assessment of health worker availability and competency for continuity of essential health services using various platforms including telemedicine. ▶ Conduct impact assessment on the effect of public health emergency on the health workforce.
Management	▶ Recruit and deploy additional staff and/or repurpose/redeploy existing staff to guarantee appropriate quantities and skill-mix. ▶ Risk assessment of the impact of public health emergencies on health workers and implement strategies to mitigate them. ▶ Assess the impact of public health emergency mitigation measures on health workers and health service delivery and employ strategies to mitigate them. ▶ Establish mechanisms to protect health workers including procurement and supply of PPEs, provision of incentives, etc. ▶ Develop guidelines for optimising the utilisation of existing health workers including task shifting and sharing, where applicable. ▶ Develop job descriptions for health workers recruited/repurposed to support public health emergencies and implement a performance management system. ▶ Establish mechanisms for emergency staff recruitment and deployment as well as the prompt implementation of remuneration and retention packages.
Coordination and partnership	▶ Ensure participation of health workforce stakeholders in multisector-driven development, implementation and resourcing of public health emergency plans. ▶ Expand health workforce information systems to track qualification and competencies of health workers in the private sector. ▶ Develop and implement a framework for engaging and tracking private health workforce support in public health emergencies. ▶ Enhance coordination of the health workforce to include the private sector. ▶ Apply a multisectoral approach in enhancing the working conditions of health workers in all sectors to improve productivity and reduce burn-out.

PPE, personal protective equipment.

and generates key inputs for planning and budgeting for equitable distribution and appropriate skill-mix.[27]

Based on workload analysis and health workforce estimations, actions should be taken to recruit and deploy new health workers or repurpose existing staff towards ensuring that adequate numbers of health workers with the right competencies and skill-mix are available to respond to the public health emergency and continue the provision of essential health services. Achieving this in the emergency context requires the shortening of administrative processes, development of job descriptions and implementation of performance management processes and remuneration packages.

Guaranteeing the safety of health workers is a key input in ensuring patient safety, resilient health systems and effective public health emergency response.[18 30] Periodic conduct of risk assessment on the impact of public health emergencies on health workers is also crucial with the findings used to develop and implement context-specific strategies to mitigate them. This often includes ensuring the routine availability of adequate numbers of PPE.[28]

Planning for the health workforce requires current information that should be readily available in a comprehensive and up-to-date health workforce information system and National Health Workforce Accounts. Investing in information systems is critical to having needed information on qualifications, competencies, skill-mix and distribution of health workers. Achieving this requires the development, implementation and sustenance of a context-specific framework for collecting, analysing and disseminating information. The availability of holistic health workforce information would facilitate rapid identification of health workers with needed qualifications and competencies, and their quick deployment,

decision-making on service utilisation trends based on the available workforce and workload analysis.

Similarly, incentives to motivate health workers should be incorporated into plans and implemented. Several forms of incentives have been applied in various contexts including insurance, addressing socioeconomic challenges of health workers by increasing salaries and stipends, providing edible items (food, etc), providing free transportation, providing tax rebates, and so on.[8 26] Beyond including these incentives, plans on how they will be communicated clearly to proposed recipients to boost trust and partnership should be implemented.[29]

To increase the number of competent and skilled health workers for public health emergencies, interventions targeted at improving their knowledge and skills are essential.[13 31 32] The training of health workers should be informed by the context-specific, evidence-based and contemporary competency-based preservice and in-service curriculum. Training should be informed by public health emergency risk assessment findings and the scope should include information on prevention, detection and management towards saving lives of the populace including health workers.[32] Targeting health workers with knowledge on the appropriate use of PPEs is essential in addressing the fear of contracting diseases.[28] In acute emergency response, novel context-specific strategies should be employed to ensure that all health workers are urgently reached with current evidence to enhance response in the public health and clinical contexts. Training should not only include frontline health workers responding to the emergency and only those in urban areas. Likewise, training strategies should ensure that health workers in rural areas are targeted to ensure equity.[28] Policymakers saddled with the responsibility of coordinating the response should also be targeted with appropriate information. Platforms for consistently disseminating new evidence, sharing best practices and promoting peer-to-peer learning should be created and sustained at various levels.[32]

Strengthening of multisector engagement in the development, implementation and resourcing of public health emergency plans is critical as it promotes the development of holistic interventions needed to improve health workforce availability, retention, incentivisation, and coordination. It also facilitates the involvement of the private sector in public health emergency prevention, preparedness, response and recovery.

Though implementing the interventions in table 1 may require huge investments, countries may need to consider implementing feasible and context-specific interventions. The subsequent interventions will require minimal investments and ensure public health emergency preparedness. Inclusion of public health emergency planning in health workforce policies and plans will enhance preparedness. Health workforce policy and planning should include safety and protection of health workers, and periodic assessment of risk thresholds (and use of findings to develop competency-based trainings for both preservice and in-service training). Strategies for improving of information systems to capture up-to-date health worker information for both the public and private sector should also be incorporated in policies and plans. Improving financing for the health workforce by establishing or allocating funds for improving the capacity and incentivising health workers during public health emergencies is also essential. This can be achieved through national budgets provisions, and pooling of resources from the public and private sectors as well as donors. These will go a long way in ensuring the availability of needed fiscal resources for developing and incentivising the health workforce during public health emergencies. Additionally, developing guidelines for optimising the utilisation of existing health workers, and emergency staff recruitment and deployment will ensure speedy response in emergencies. Achieving these requires a multisectoral approach to ensure that fit-for-purpose policies and plans are developed, and collaboration of all relevant sectors and stakeholders is in place for prompt response to emergencies.

CONCLUSION

The impact of public health emergencies on health workers and the strategies for preparing the health workforce in Africa for future public health emergencies are presented here. Ensuring multisector engagement of health workforce stakeholders in the development of public health emergency plans is critical to fostering the development and implementation of holistic interventions to increase health workforce availability, development, retention, acceptability, incentivisation and coordination. It also ensures optimised utilisation based on competencies, especially for the existing health workers.

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