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EpiC
Meeting Targets and
Maintaining Epidemic Control

Supporting the Health Workforce

January 2024

Overview

The COVID-19 pandemic highlighted the critical importance of a well-trained and resilient health care workforce ready to respond to global health crises, particularly at the primary health care (PHC) level. Strengthening health care systems and the health care workforce is essential for better preparedness and rapid response to future pandemics or health emergencies. These systems must be functionally optimal — not just technically available — to provide essential health care services for acute, chronic, and preventive care, managing the growing burden of noncommunicable diseases, and advancing maternal and child health, among other health priorities. By integrating services, optimizing strategic management of the health care workforce, and emphasizing PHC, nations can build a more vigorous and adaptable health care system that is well equipped for routine service delivery and agile enough to flex in response to a wide array of emergencies and play a critical role in early detection and containment efforts. Additionally, a strong PHC system can alleviate the burden on tertiary care facilities, ensuring that resources are available where they are most needed during pandemics. As simultaneous emergencies — including health emergencies, outbreaks, climate emergencies, natural disasters, and conflict — become more common, with shorter interim periods for recovery, the need for a truly resilient health care system that invests in health workers is increasingly urgent.

The Meeting Targets and Maintaining Epidemic Control (EpiC) project, led by FHI 360 with core partners Population Services International (PSI), Palladium, and Right to Care, and funded by the United States Agency for International Development (USAID), is dedicated to achieving and maintaining HIV epidemic control and preventing, preparing for, responding to, and bolstering health systems to address global health security threats, including COVID-19. The EpiC project has prioritized the health care workforce in its COVID-19 response efforts,

because when health workers have what they need and are truly supported with both direct and structural interventions, they will deliver the desired outcomes. With this approach, EpiC has implemented a range of activities with the commitment to sustainable, measurable, and meaningful support of the health workers tasked with delivering care. These activities have included strengthening infection prevention and control (IPC), providing mental health and psychosocial support for frontline workers, supporting strategic human resources management, and providing pre-service and in-service training and supporting accreditation of coursework for health care workers.



Health care workers attend a training session in Mozambique. Photo by Mbuto Machili for FHI 360



Infection Prevention and Control



IPC is the cornerstone of both infectious disease outbreak response and baseline best practices to prevent the spread of infectious diseases in both community and health facility settings. Effective IPC also protects the health and safety of the health care workforce and reduces the risk that health workers will contract the infectious diseases they are treating in their patients. In 2020, the World Health Organization (WHO) stated that, “while health workers represent...less than 2% of the population in almost all low- and middle-income countries, around 14% of COVID-19 cases reported to WHO are among health workers. In some countries, the proportion can be as high as 35%.”¹ This underscores not only the essential right for health care workers to have the knowledge, skills, and equipment they need to stay safe at work, but also the profound implications for the surge capacity of the health system if significant proportions of the workforce are incapacitated with illness or in quarantine. EpiC has placed emphasis on IPC in nearly every aspect of the COVID-19 portfolio, recognizing that a robust IPC strategy for an infectious disease pandemic requires a balanced combination of knowledge, behavior change, and equipment to prevent the spread of a respiratory viral pathogen. EpiC supported the development or updating of IPC policies and guidelines, and conducted rapid IPC assessments in facilities that informed the design of technical assistance (TA).

Building capacity for IPC in Tajikistan

EpiC-supported IPC activities in Tajikistan built upon previous TA that FHI 360 provided in 2021 through USAID’s Global Health Supply Chain Program-Procurement and Supply Chain Management (GHSC-PSM) project. This work included a rapid assessment of clinical TA needs in 10 health facilities across Tajikistan to prepare for the effective use of USAID-provided oxygen resources. Based on the gaps in health worker knowledge and IPC practice identified in the rapid assessment, FHI 360 developed and rolled out clinical trainings in three regions to improve knowledge, practice, and skills of health practitioners in the early diagnosis, management, and prevention of COVID-19; clinical management of hypoxemic patients; and IPC.



Health workers receive practical training on the use of personal protective equipment at Bokhtar Central City Hospital. Photo by EpiC Tajikistan



Carrying forward work from the GHSC-PSM project, EpiC collaborated with the Ministry of Health and Social Protection (MOHSPP) to develop an IPC training curriculum. They used the curriculum to conduct seven cascade trainings for 274 frontline health care workers, including doctors and nurses representing 51 medical facilities and institutions across five regions in Tajikistan. The interactive trainings included group work, discussion, and brainstorming, and covered risk of nosocomial infections, correct donning and doffing of personal protective equipment (PPE), and medical waste management. EpiC’s partnership with the MOHSPP, the project’s use of the rapid assessment results in developing the IPC training curriculum, and the interactive nature of the trainings were critical to trainings’ success. The EpiC project also collaborated with the specialization program and integrated IPC training materials into the curriculum of specialization training for medical professionals.

¹ World Health Organization (WHO). Keep health workers safe to keep patients safe: WHO [Internet]. Geneva: WHO news; 2020 Sep 17 [cited 2024 Feb 12]. Available from: <https://www.who.int/news/item/17-09-2020-keep-health-workers-safe-to-keep-patients-safe-who>

Promoting a culture of IPC at hospitals in Egypt



Since the start of the COVID-19 pandemic, EpiC has supported Egypt to mitigate the spread of infection and the risk of overwhelming the health care system. Through collaboration with civil society and the public and private health sectors, EpiC educated the community and health care workers in social behavior change and other public health measures to promote IPC. EpiC partnered with government entities, civil society, and faith-based organizations, including the Ministry of Health and Population, Supreme Council of University Hospitals, General Authority for Healthcare Regulation

and Accreditation, Caritas Egypt, Afaq Foundation for Training and Development, Gozour Foundation for Development, and Kasr El-Dobara Church's Freedom Program. EpiC Egypt assessed capacity needs in 56 public and 19 private hospitals across 26 governorates, trained 662 health workers on IPC, and procured supplies to protect health care workers during surges in COVID-19 cases.

Mental Health and Psychosocial Support for Frontline Workers

Since the start of the COVID-19 pandemic, the mental and psychological well-being of health workers has emerged as a critical occupational health and protection issue. Recognizing mental health as an essential aspect of occupational health and providing the necessary protections is not only a moral obligation but also a vital step toward fostering a resilient and sustainable health care system. As frontline health workers continued to deliver care despite the ever-evolving challenges of disease management and treatment, trauma, and structural issues in their workplace throughout the pandemic, EpiC took the initiative to safeguard both the workers and the quality of care they provide. Health care workers' mental well-being is complex, as it is comprised of individual, workplace, and community factors; therefore, interventions must be comprehensive, community-informed, strategic, and sustainable. EpiC established a robust portfolio of examples (activities were conducted in Nepal, Paraguay, Philippines, Sri Lanka, and Vietnam [achievements described below] of how health care workers' mental health can and should be supported).

Vietnam

In early 2022, health care workers in Vietnam were feeling the fatigue of a prolonged stressful work environment due to COVID-19. Many members of the workforce quit their jobs, and those remaining struggled to manage their workload. For some, daily exposure to potential infection, as well as severe illness and death among patients, negatively affected their health and well-being. Yet, little support was available for health care workers and awareness of the importance of mental health support was insufficient. USAID/Vietnam and the EpiC project recognized that any program designed to improve COVID-19 clinical care had to consider the needs of caregivers, focusing on mental health support as the backbone for providing quality health services to patients and families. In response, EpiC developed a mental health support package to complement clinical case management and IPC trainings.



EpiC partnered with the Ho Chi Minh City University of Medicine and Pharmacy because of their strong team of psychologists and social workers. EpiC focused on provinces around Ho Chi Minh City, the region that experienced the most severe COVID-19 burden and had the most reports of health care worker burnout. The mental health support package focused on (1) training on common mental health

challenges, (2) skill-building workshops, and (3) group and individual counseling. The project also held a webinar on mental health among health care workers that reached more than 5,000 people.

[After some time working in a mobile health clinic], I just started thinking 'What am I doing? Does my work mean anything?' The scariest moment was when I started to be afraid of picking up the phones or afraid when the phone rang. It felt like as soon as the phone rings, I had to respond immediately. There is no time to wait because there is an emergency on the other side of the phone."

– Du'ong Duy Khoa



Dr. Duong Duy Khoa spoke during an EpiC Vietnam-supported webinar about his own mental health challenges while working in the COVID-19 frontline response.



Strategic Human Resources Management

Strategic human resources management (SHRM) in health care, particularly in low- and middle-income countries (LMICs), involves the development and implementation of strategies to effectively manage the health care workforce to achieve the organization's goals and improve health care outcomes in resource-constrained settings. It is critical in LMICs due to limited resources, workforce shortages, and high disease burdens. It requires a multifaceted approach that considers both short-term needs and long-term sustainability. In the context of the COVID-19 pandemic, EpiC supported initiatives for SHRM for health systems to respond to surge needs as well as fortify baseline human resources to inform plans for workforce distribution, surge planning, task and skill shifting, and training needs.

Surge staffing vaccination campaigns in Uganda

During national vaccination campaigns, EpiC Uganda identified health workforce shortages at the district level. To address this, EpiC posted additional technical staff as surge staff. The surge teams were embedded within regional implementing partners to support coordination of vaccination activities and improve timely reporting to the Ministry of Health (MOH). EpiC also adopted a flexible management structure, in which consultants were hired to support districts with staffing gaps for short periods of time.

Updating the Integrated Human Resource Information System in Botswana



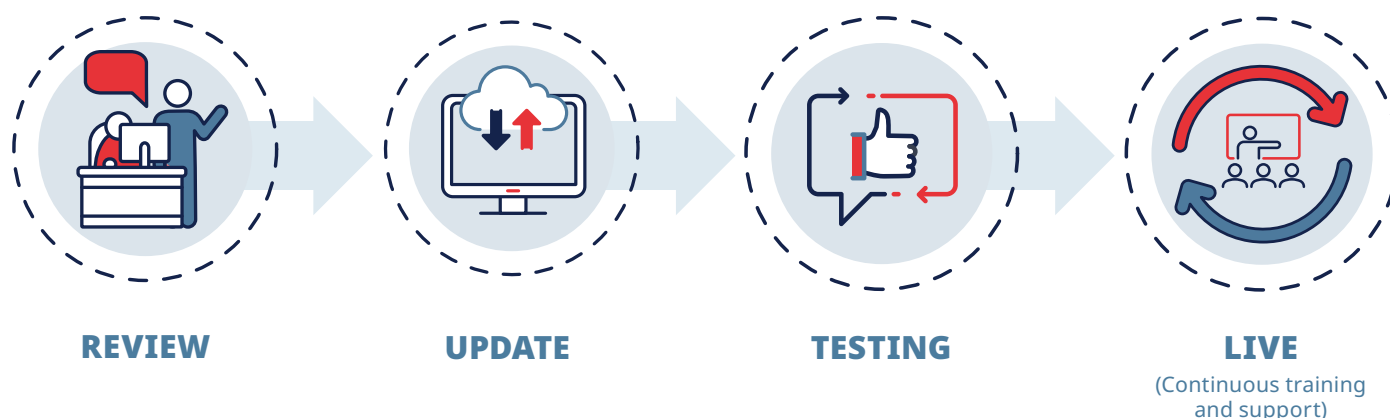
The Integrated Human Resource Information System (iHRIS) suite is an open-source set of tools designed to support the creation, management, analysis, and use of health workforce data to make informed decisions about how to manage and strengthen the existing

workforce. The comprehensive iHRIS, already implemented in over 20 countries, enables health care leaders to quickly answer key policy and management questions affecting health care service delivery by keeping accurate and complete information on demographics of the health care workforce that can be used to identify gaps as

well as assets in scenarios that create rapidly evolving demands on a health system. It also has the potential to support health care workers by standardizing capacities and scopes of practice and offering a platform to demonstrate need.

The Botswana MOH had not updated its iHRIS database, which contained only data on the nursing cadre since 2015. As a result, the MOH was experiencing challenges tracking and deploying its health workforce. In 2022, EpiC supported efforts to update Botswana's iHRIS and expand its use to include the country's entire health workforce to address these longstanding issues while simultaneously strengthening the country's response to COVID-19. The updates included modifying fields, adding new modules, conducting staff training, and integrating iHRIS with other systems.

EpiC conducted a desk review and designed and conducted an assessment to understand gaps between the current iHRIS system functionalities and stakeholder needs. Based on assessment results and priorities of the MOH, EpiC updated user access management and the server operating system, and migrated data from the Nursing and Midwifery Council of Botswana (NMCB), Botswana Health Professions Council (BHPC), and Private Practice Licensing into iHRIS. EpiC conducted user acceptance testing to pilot the system and provide feedback before launch and provided continuous training and support after the system went live.



Training rapid response teams in Nepal

Rapid response teams (RRTs) are crucial to the management of outbreaks and epidemics. In Nepal, EpiC supported the Epidemiology and Disease Control Division (EDCD) to organize a three-day training program for RRTs in three provinces: Gandaki, Karnali, and Sudurpaschim. The training was facilitated by EDCD, WHO, provincial research teams, and academics working in the epidemic preparedness and response field. Participants were invited through coordination with provincial health directorates and included doctors, medical officers, laboratory personnel, paramedics, public health personnel, and other relevant professionals from district hospitals and local health institutions.

During the training, participants learned about the fundamental concepts of RRTs and their responsibilities during outbreak investigations, and engaged in skill drills where they assumed the role of an RRT member and actively participated in the step-by-step process of conducting an outbreak investigation. This program was designed to ensure consistency across all governmental levels in the RRT training curriculum, improve the ability of frontline providers to respond to public health emergencies, and present recently published national RRT guidelines.

Pre-service and In-service Training and Accreditation of Coursework

In the wake of the COVID-19 pandemic, the integration of principles of COVID-19 care into pre-service training and medical and nursing curricula is of paramount importance. As health care professionals continue to face new challenges and rapidly evolving health care landscapes, their ability to adapt and respond effectively is directly linked to the quality of education they receive. Engaging with professional associations and educational institutions to incorporate COVID-19 care principles into curricula is a proactive approach that can empower future medical and nursing professionals with the knowledge, skills, and resilience necessary to confront not only the current pandemic but also potential future health crises. By aligning education with real-world experiences and cutting-edge practices, this collaborative effort ensures that health care practitioners are well-prepared to deliver competent and compassionate care, safeguarding both their well-being and the health of the communities they serve.

Developing accredited pre- and in-service certificate programs on medical oxygen therapy in Bolivia

Developing accredited courses for health workers in LMICs offers several benefits, both for the health workforce and the health care systems within these countries. Pursuing accreditation, while demanding a more involved process for collaborating with local academic and regulatory entities, creates concrete incentives for health workers to engage in training initiatives. It also creates sustainable pathways for knowledge transfer and skill development for future cohorts of health care workers rather than relying on isolated trainings. EpiC Bolivia developed a unique certificate course (“diplomado”) for registered nurses and nursing students on key skills and principles of medical oxygen therapy administration.

Relying on a long history of collaboration with local universities as well as the regulatory and credentialing entities for nursing education and licensure in Bolivia, EpiC was able to expertly meet the criteria to pursue accreditation of their proposed coursework. The content of the course was developed by adapting global technical resources as well as relying on local expertise and was offered as a recognized certificate program that nurses and nursing students could complete for continuing education credits and evidence of accredited professional development. This approach is an example of leveraging healthy institutional partnerships to deliver sustainable capacity strengthening for EpiC’s current project beneficiaries, as well as to support recognized professional development opportunities for the future of Bolivia’s bedside nurses.



Building a legacy of safety and maintenance with asynchronous self-paced virtual trainings for oxygen equipment technicians in Paraguay



In 2022, EpiC Paraguay provided in-person training to a cohort of biomedical engineers, technicians, and hospital maintenance personnel as part of a comprehensive package of interventions to strengthen the oxygen ecosystem. The in-person training sessions were the first of their kind for technicians and maintenance personnel who were suddenly tasked with operating over 30 oxygen-generating pressure swing adsorption (PSA) plants in a country that, before the COVID-19 pandemic, had only two. In response to a request of the MOH, EpiC Paraguay transformed the in-person training into an asynchronous, self-paced virtual certificate course using the online platform Moodle, which the MOH currently uses for staff training and onboarding courses. EpiC designed the course to review principles of oxygen production, as well

as preventive and responsive maintenance of infrastructure, with a strong emphasis on occupational health and safety for maintenance personnel. It is now part of required onboarding and refresher training for MOH staff, representing an investment in sustainable capacity building for the nonclinical teams responsible for the functional availability of essential medical services, like oxygen production.

Reaching over 8,000 health care workers in Vietnam with credentialed virtual trainings

In 2021, EpiC Vietnam developed and implemented a robust training program covering a range of relevant topics including clinical case management for COVID-19, IPC, community-based COVID-19 care, and mental health for health care workers. EpiC first identified knowledge gaps and training needs through multiple discussions with the MOH, international partners including PATH and CHAI, national health leaders, and provincial focal points. EpiC then partnered with Hanoi Medical University Hospital (HMHU) and the Ho Chi Minh City University of Medicine and Pharmacy (UMP) to create and deliver a series of live virtual training courses via Zoom. All sessions were recorded on partner virtual training platforms and posted on EpiC's open learning portal <https://edu.skconnect.org/danh-sach-khoa-hoc/covid-19/>, providing access for additional health care workers. Several courses offered continuing medical education (CME) credits to individuals who met attendance and post-test thresholds established by the institution providing the training. Over 8,000 health care workers and hospital staff completed one or more courses. Courses were supplemented by a clinical case management community of practice with over 1,000 members, 10 weeklong mentoring visits focused on clinical case management, group and individual counseling, and an IPC hotline for health staff.



COVID-19 Case Management
Care of mild and high-risk cases

6 videos 6 Resources

Developed in partnership with



BỆNH VIỆN ĐẠI HỌC Y HÀ NỘI
HANOI MEDICAL UNIVERSITY HOSPITAL



Access the course here ▲

EpiC Vietnam offered online training courses for nurses and physicians working in hospitals, primary health care facilities, and community settings.

Lessons Learned and Recommendations

The pandemic revealed not only the impact of the chronic global health care worker shortage, but also the consequences of having too few workers with the right skills in the right places to respond to public health emergencies. Public health emergencies require rapid innovation, quick uptake of novel therapies, and complex surge staffing requirements. Staff surges in one area should not lead to the collapse of another part of the health system. COVID-19 also demonstrated how high performing health care teams can deliver Herculean results when protected, equipped, and supported with the tools, space, and support systems needed to render patient care before emergencies occur. A well-prepared and resilient health care workforce is essential to effectively respond to pandemics and other public health emergencies, and strategic investment in health care workforce development can prepare nations for future pandemics while also improving health outcomes before, during, and after crisis scenarios.

The following components represent the key lessons learned for strategic investment in health workforce development for strong health systems:



Investments can and should be made in **specialized training programs for health care workers**, such as infectious disease prevention and control, epidemiology, and crisis management. Approaches that emphasize critical thinking, cross-training, communication, and shared problem solving imbue local knowledge and resilience. This ensures that health care professionals are well-equipped with knowledge, effective teamwork, and critical thinking skills to manage pandemics.

Pre-service and in-service training and continuing education programs can be designed to include **pandemic preparedness and rapid response** components. Training programs should be asynchronous and accredited so that health workers can attend at their convenience while earning professional development incentives. Functional collaboration with academic institutions and professional and technical associations can lead to better access to the latest evidence and can help with the development and adaption of necessary training materials based on needs and as evidence arises.



Providing continuous refresher trainings and mentorship on infection prevention and control can prepare health workers for future outbreaks and support retention of the current health workforce during outbreaks and emergencies. Multimodal strategies should be applied to promote a culture of IPC.

Strategic investment in surge capacity can ensure sufficient health care workers, including doctors, nurses, and support staff, are available to be mobilized during a pandemic. This includes having a pool of trained health care personnel reserved for rapid response. Universities, the private sector, and professional organizations should be engaged in planning surge workforce capacity and mapping the quantity and type of support that can be provided by these entities during emergencies.



Develop and support adaptive management and leadership development programs that can prepare health care leaders to make informed and agile decisions for their teams during rapidly evolving situations, such as pandemics and other health emergencies.

Workforce development should emphasize effective **coordination and communication** among health care facilities, within health care teams, and with other public health agencies. This is crucial for a unified and coordinated response, particularly during public health emergencies.



Health emergencies can be mentally and emotionally challenging for health care workers. **Investments in mental health and resilience support programs** can help them cope with the stress and trauma associated with pandemic response, reducing burnout and turnover, and improving efficacy and outcomes before, during, and after crisis scenarios.

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