



The Role of Doctors, Nurses, and Healthcare Workers in Strengthening Public Health

Sami Abdullaziz Alkhamis¹, Rakan Ali Alotruzi², Abdulrahman Saad Al Zeer³, Mohammed Saad Alsenaidi⁴, Faisal Abdulaziz Al Saeed⁵, Mohammed Aidh Al-Thagafi⁶, Nasser Fahad Ali Alsubaie⁷ And Muteb Rashed Almutib⁸

¹ Corresponding Author, Health service administration, Khamissa@mngha.med.sa, Ministry of National Guard-Health Affairs, SA

² Social worker, rknfahad@gmail.com, Ministry of National Guard-Health Affairs, SA

³ Psychologist, V.14@hotmail.com, Ministry of National Guard-Health Affairs, SA

⁴ Psychologist, Alsenaidimo@gmail.com, Ministry of National Guard-Health Affairs, SA

⁵ Psychologist, F.a.s.234@hotmail.com, Ministry of National Guard-Health Affairs, SA

⁶ General Practitioner, Mohammedaidh91@gmail.com, Ministry of National Guard-Health Affairs, SA

⁷ Technician-Emergency Medical Services, sale168168@gmail.com, Ministry of National Guard-Health Affairs, SA

⁸ Nursing health assistant, Almutebmut@mngha.med.sa, Ministry of National Guard-Health Affairs, SA

Abstract

Patients are diagnosed and treated by various health workers they meet in the health system. In their eyes, it is hard to differentiate nurses, laboratory technicians, and others from the practitioner doctor as they are not sure who is the practitioner. This is an obvious fact and it is good in a humanitarian point of view as patients think that all work hard to heal them. The problem is twofold: being unnoticed even how hard they work. As diagnostic and treatment processes are not carried out in the presence of the patient in this period, the sacrifice of nurses, laboratory and radiology technicians, many health officials, and non-health staff is really difficult and relentless but unseen if the system is still crude (Kuhlmann et al., 2021). Public health workers improve the quality of life of the individual through organized measures and efforts of society and protect the health of the society as a whole. Statistically, one doctor working in public health services which are of critical importance on days of crisis



would save the lives of 1000 individuals in a community with population of 100,000 – all the 100,000 in the World; this is being unnoticed.

If this was explained in any way with any material, maybe some people would think on this topic or realize much more effectively how hard they work, or true heroes unseen openly, primarily by their heart. Unlike ‘stay at home’ campaigns – its liveliness now reduced, and ‘understanding’ is not at its peak currently - these are the ones already fighting on the front line. It is not very complicated to treat a person who tested positive or has clear symptoms with the facilities of a mask, gloves, and apron taking into consideration the sensitivity in the field. But the main problem is ‘you don’t know who has it or doesn’t’. It means health workers face the risk for every patient, every person they come across because of the uncertainty of the situation (Lynn Bourgeault et al., 2020).

Keywords: primary healthcare, safe motherhood, newborn care, infant and young child feeding, public health and wellbeing, communicable diseases, non-communicable diseases, rehabilitation, mental health, safe water and sanitation, clean cooking fuel, emergencies and disasters, unprecedented changes, dangerous for all people, the role, community support, community networks, local administrations, doctors, the role of the doctors, the arrival, joint efforts, military doctors, the treatment, house to house monitoring, telemedicine, numbers of the patients, symptoms prevalent, treatment procedures, prevention of the diseases, own immunity, the meditations, the wearing, masks, social distance, quarantine

1. Introduction to Public Health

Public health training began in England in the early 1800s, whereas the first medical ethics course serving doctors was founded in the United States in 1872, and the first MD degree focusing on clinical training and medical ethics took 24 more years to start there. In England, the first professor of public health was appointed in 1870, and the Medical Officer of Health examinations began in 1890. In contrast, the first MPH program was inceptioned in the U.S. in 1916, about 100 years after public health training began in England. While one of the National Academies has been producing its reports since 1965, the equivalent body in England was established in 1660 for the advancement of experimental knowledge and to generate advice for the British government. In short, the bifurcation of medicine and public health is a historically entrenched occurrence that appears to mostly (if not exclusively) exist in the minds of Americans. This happened in spite of the fact that in medical texts as recent as the 2000’s, public health is defined as the control of infectious diseases at the level of the community (primarily by quarantining patients, controlling vectors, and enforcing epidemiological surveillance), the plain meaning thus encompassed by the definitions of the constituent terms. To a great extent, such a categorization has afflicted the perception of public health in the U.S. as no more than a list of 'nine functions', which are in turn interchangeable with healthcare. To briefly recap what has been gleaned from the previous



iteration, public health as it is understood in the United States is treated as a subset of healthcare, not even having a place of its own in the ten sectors of the critical infrastructure. This is in contrast to the formal expressions of public health, both globally and locally.

2. The Healthcare Workforce

In discussing medical policy, an effort to discuss the health workforce is appropriate. The health workforce is, of course, composed of doctors, nurses, and the many professionals who provide health care services in the community and hospitals. The responsive health workforce, for the purposes of this essay, will deal with those trainees in the medical and nursing professions who are destined to deal with patients rather than go into medical research or public health administration.

During the last 30 years, much has been said and written about the doctor-nurse relationship and the task delegation fund in the health care system. However, much more is needed in the way of policy studies in family medicine and primary care. The call for the development and expansion of community-oriented nurses and midwives has been emphasized in various health strategies.

In the advanced market economies, it is now the mid-level health care providers—those trained in various capacities—who fill more than half the supply of primary care clinicians. Most ministries of health throughout the world are unaware of the size and impact of this group and the goal of this global essay is to increase this awareness.

2.1. Composition of the Healthcare Team

Under certain circumstances, doctors, nurses, and other healthcare workers can also take on roles beyond their traditional remit of treating the ill. Moves to strengthen public health have been enshrined in the new public health outcomes framework (Sim et al., 2007), which sets out four strategic goals to help improve public health, reduce health inequalities, protect the population from public health hazards, and to provide assurance to MHs of the local contribution to public health.

The healthcare team comprises a large number of health workers and is not confined to simple treatment. It includes a large number of health workers, such as: medical doctors, surgeons, nurses, dentists and dental hygienists to keep the mouth clean, physical therapists, nutritionists, psychologists, rehabilitation technicians, and pharmacists. By having a chance visit to a local hospital and exchange of visits with its doctors and nursery schools, we learned that there were so many people in the hospital and they were doing different jobs, and all these jobs were necessary and needed to rely on that of others. We should appreciate whoever takes up the awareness and respect of responsibilities for profession in order to understand different roles that person can take up.



2.2. Roles and Responsibilities

Roles and responsibilities, as well as the relationships between actors within the health services, need to be understood, acknowledged, and fully supported. This article describes and analyses the roles of doctors, nurses, and other health care workers in the field activities and stresses the complexities of organisational and logistics systems both of the hierarchies and at the operational levels.

Before the role of the individual health care worker is discussed, the context is presented with a brief review of public health programs and activities with an emphasis on the roles of service providers in service delivery (Mwansa Nkowane et al., 2009). Toward the end of the article, lessons learned and recommendations are provided concerning areas which could be strengthened by further training and support in order to maximise the contribution of service providers' roles and professional groups.

All health care workers have roles to play in public health including those involved in service delivery such as the Hospital Matron responsible for the cleanliness of the hospital surroundings. The most visible and influential health care workers for the community and patients are those who deliver the health services, namely, the doctors and nurses, together with the lesser trained auxiliary staff and sometimes the part-time and rural based volunteers. To be effective, local interventions have to be considered and disseminated between health care providers in the service delivery system, and Managers of public health services need to understand the delivery system and how to work within it and promote change. A framework of actors within the structure of ministries of health as much as with international agencies is presented. Each national or local situation is different with its own influencing factors. Staff operating at peripheral or district level may have long-standing methodologies and constraints for their work.

3. Doctors in Public Health

The role of doctors in public health is the subject of much debate. Although the majority of senior public health specialists in the UK in the 1990s were medically qualified, this represented a minority of medical consultants overall. During the last decade, however, there has been a growing appreciation, respect, and increasing value placed on roles undertaken by public health specialists in England from a variety of other backgrounds. In parallel with that change in culture, there is an increasing recognition of the importance for health improvement of day-to-day activities carried out by other professions whose work can have a major impact on the health of a local population (Sim et al., 2007). The challenge regards how to maximise the skills of the whole of the NHS workforce in health improvement and reducing health inequalities.



To a large extent, the context and opportunities for training and development have not been proactively managed for a public health workforce that is large, and in relation to its composition, will expand further. In practice, opportunities for development and training have been highly variable among different cadres of the NHS workforce. The public health workforce is drawn from a wide variety of professional backgrounds including: doctors, nurses, professions allied to medicine - such as health visitors, environmental health officers and health service managers. Advances can be made through transforming the opportunities for professional development for those working in public health to better meet the diverse needs of a number of different categories of workforce in public health.

3.1. Clinical Care and Prevention

Healthcare providers across diverse healthcare disciplines must prioritize the promotion of health and the prevention of disease at every stage, including engaging people who are healthy, focusing on addressing and reducing risk factors, and treating individuals to reduce their disease and maintain or enhance a high quality of life. The adoption of preventive services has been associated with, on average, lower rates of illness and mortality. Preventive services are known to be highly effective in reducing illness and death and are very cost-effective, especially in the areas of cancer, chronic diseases, and immunizations (Unger et al., 2020). As a result, the health sector is undergoing a transformation to re-prioritize prevention in the organization of both population-based health care and health services given to individuals.

Preventive services have become highly valuable in the healthcare sector not only at the population level, which is outside the purview of medical practice, but also at the clinical and individual levels. By all accounts, the well being of individuals and populations will benefit from a strong commitment to preventive services. Doctors and a variety of other healthcare providers are in an influential position to contribute to the overall health of their patients and communities both through the services they provide and the actions they take. An array of widely respected medical and health organizations that represent diverse clinical health professions, all of which have a large number of members, have issued statements recognizing the importance of preventive care services (AbdulRaheem, 2023). Healthcare providers are besieged by numerous competing demands and often prioritize other aspects of care ahead of preventive services. Out of necessity, preventive activities are often postponed or skipped altogether. On the other hand, findable algorithmic care guidelines generally prioritize specific disease management guidelines ahead of preventive guidelines. This is so because clinical algorithms are often developed unilaterally by disease-specific specialty groups rather than collaboratively or in consultation with cross-specialty preventive groups.



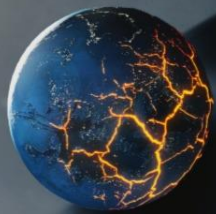
3.2. Public Health Advocacy

In addition to their work with individual patients, healthcare practitioners and workers play a huge role in promoting public health. They are master advocates and allies. As such, this section provides a short guide to some of the best methods for forming health care workers and practitioners more effective in supporting public health. Doctors, scientists, nurses, and other health professionals can be highly charismatic and reliable sources of recommendations on health problems. They can utilize their experience of patients and their awareness of how health problems are treated to deliver authoritative pleas. They often have the open and reliable audience of a patient base in which they can talk of public health problems (Wilson et al., 2023). This can be materially elevated by refining an understanding of the part that health professionals can do to enhance public health for their patients and for the broader public. Health professionals may simultaneously lobby on public health problems, in ways that are as beneficial as an individual approach to individual patients. Health authorities may also gain recognition from the large and respected position of their medical context in public discourse about health. This recognition can be carefully managed and designed to cover up the problem of collective interests in different models of medical authoritarianism. Is there a genuine concern of health practitioners about public health that can be secured by recognizing the opportunity for genuine communication among patient experts and policy-makers?

3.3. Research and Policy Development

The role of each stakeholder in the health system is very important. This research examines the role orientation of health workers in the eyes of their professions focused on the behaviour of health workers in strengthening public health policy. Participatory Observational research was conducted with the professions of general practitioners and clinical psychologists who work in a health institution in Yogyakarta City. The indicators used are based on the policy behaviour of health workers as comparative material. The findings show that the role orientation of family doctors, clinical psychologists, and doctors is divided into five major categories: Shame attitude, fulfilling functions, responding to satur of plurality rules, reluctant attitude, and interpretive actions. This research provides policy recommendations on the need for the emergence of the role of the health worker's association and the development of evaluation mechanisms by increasing the role of cross review on the implementation of better regulation in the health sector. This is in order to share duties, rights, and responsibilities in public health protection.

By focusing on the behaviour of health workers, it is important to do reflective studies. However, all studies related to behavioural policy are still very limited. Behaviour of health workers is a reflection of the role orientation of their profession. Generally, this behaviour is driven by the social structure that governs the institutions in which these health workers



work. In the health field, the institution generally takes a form of hospital, clinic, and other health facilities. However, the regulations are not just about hospital regulation, clinic, and other health facilities. However, there are at least five categories that regulate the social interactions of doctors, clinical psychologists, general practitioners, dentists. In the first category, the professional organizations of health workers take the form of corporations and associations. The second category regulates the practice of health workers that are compensated, while the third category regulates the practice of health workers on a free or pro bono basis. As for the fourth category, this regulates the health workers who have violated the decency of profession that have the potential to harm patients. Finally, the fifth category regulates the health workers who practice traditional and herbal medicine. All movements have various contradictions that arise in vulnerable and discriminatory patterns.

4. Nurses in Public Health

The COVID-19 pandemic has laid bare inadequate coordination across public health and health care systems, as well as lack of infrastructure suited to public health functions. The U.S. does not have a sufficiently sized workforce to manage crises and address issues that underlie COVID-19's disproportional effects on certain populations. Nurse leaders are well positioned to help address these inadequacies, leading responses that emphasize partnership and coordination across healthcare services and the public health system, as well as engaging in multi-sectoral efforts to address social determinants of health (Bekemeier et al., 2021).

Trained and specialized in matters of public health, nursing practice takes place across a wide array of community and clinical settings, with outcomes that include injury, disease prevention, health promotion, and coordination of care for individual patients. The COVID-19 pandemic has exposed these connections: nurse leaders are advocating for policy responses to improve health systems in order to ensure that individuals are able to meet public health recommendations. In other words, nurse leaders may manage interactions between public health workers and medical staff.

The COVID-19 pandemic has necessitated a reconsideration of what nurses contribute to public health; in doing so, it is important to distinguish these contributions from the outcomes of care provided in community settings. The pandemic has also made obvious historic tensions manifest between nursing and public health. While a significant amount of nursing practice is devoted to addressing the needs of populations, nursing itself is an individualized approach to health care. Public health is concerned with the health of communities, so nurse leaders may be more concerned with learning how public health agencies and organizations can offer direct patient care as opposed to supporting public health objectives.



4.1. Community Health Nursing

As a result of the recent declaration, a diagnosis was sought at the community clinic where the serves as the Director of the Public Health Department. Due to the withdrawal of funds for the community clinic, the office is now open only 5 days a week. It was one of the days when the clinic was closed. Thus, a nearby private hospital was selected, researched for a facility, and called in advance to arrange an investigation .

The hospital staff directed to an elderly and prestigious men's specialist. At the reception, health card, city health book, and national pension certificate were requested, but all three were not brought. The health card, which is required to claim medical expenses, was forgotten at home, and city health notes and national pension certificates could not be found when searched. It was noticed that he had entered the medical system off guard. After grading, waiting on a wooden bench in the lobby. An elderly woman was sitting next to him. She seemed to be shared that only this seat was empty among the visitors' wooden benches. It was written with thick vulgarities and the large wrinkles were very deep. He was immersed in such a thought that being healed of illness would be by luck.

4.2. Health Education and Promotion

The World Health Organization's Primary Health Care approach enunciated in Alma Ata in 1978 has recommended health promotion as a strategic intervention for the proper growth and development of each individual. A range of preventive measures were identified in the declaration by strengthening community health workers, which were intended to reduce morbidity and mortality rates as well. It was suggested that these preventive measures could be effectively implemented with the active participation of the affected community. In view of the growing load of diseases, particularly in the developing countries, such intervention has been considered to be an integral part of the healthcare delivery (Sandipana Pati et al., 2017).

Health education and health promotion are often used synonymously. There is a misunderstanding or, at best, considerable debate over the difference between disease prevention and health promotion (Farrell & of Lethbridge. Faculty of Education, 1996). The acute shortage of medical human resources is an important bottleneck to the overall development of public health intervention. Physicians, mainly skilled in curative service, are likely to find it difficult to make a significant contribution to the process of health promotion as long as the effect of those diseases does not appear as dramatic health-related quality of life. With a view to strengthening the public health intervention through health promotion, health care activities shall be extended beyond individual well-centred care facility to a population-based approach. Public health strategists or health promoters may attempt to intervene at the macro level to influence the 'millennium development goals' (MDGs). There



is a severe lack of adequate infrastructure in the sphere of public health, with a wide gap between available public health resources and the health needs of the population.

4.3. Emergency Response and Disaster Management

When serving to respond in emergency, it is essential to ensure all individuals, their family, and the general population have an equal chance of survival. Health care professionals also have the right to be protected from the legal risks of responding in an emergency. The simplest approach to emergency health care arrangements is to predict potential risk and organise a few key health care individuals. In practice, the responses from many individuals with diverse roles are required in many healthcare situations. For public health, this becomes complex when individual and community health care interventions are considered, as well as the 'owned' risk issues. Health care has emergent or incident situations ready from being a part of the natural disaster response or due to the predictable increase in medical treatment need at some planned time. The acts of destroying the health care services can also have component conditions to create more burden than one existing medical services. In threats of attacks, it is important to carefully develop a workable plan to increase health care intelligence, surveillance, detection and response operations (J. Reilly & Markenson, 2009). Health care and the emergency services can anticipate the greater need around the universal events and the likely incidents to difficult community situations. A comprehensive strategy to defence health services will enhance public safety and health services can also influence people's behaviour and state of health to reduce the impact of some planned actions. Individuals, groups, and organisations that respond to events, particularly emergency service workers and health care providers who will often be called to respond under difficult circumstances, have responsibilities to ensure that they are protected from legal risks. Emergency service workers, health care workers and medical teams may increasingly be called upon to respond to natural disasters, emergencies, acts of terrorism and pandemic health emergencies. They incur increased personal risks in responding compared to routine work. While the greater need for medical and public health response will exist, this increased risk also creates legal liability and professional risks of action or inaction (Mehmood et al., 2023).

5. Allied Health Professionals

The allied health workforce includes a wide range of professions (currently more than 53 in Australia), some of which are small (for example, dietetics, audiology and speech therapy) and may be significantly under-represented or not represented at all in the overall health workforce, but nevertheless have a critical role in complementing medical and nursing roles in health care delivery (Buchan & O'May, 2011). In relation to role definitions, there is already much good work underway in some countries to clarify and delineate roles with the broader AHP workforce. This is necessary work, but not in itself sufficient to get the AHP



workforce firmly on the policy agenda. Indeed there is the potential for policy makers to be distracted from an understanding of the value and contribution of AHPs. They need to be able to focus on the output of the work of AHPs and understand their contribution and potential. This risk of distraction stems from the fact that there is no universally definitive list of what constitutes an “allied health profession”, and therefore different countries have different definitions of which professions make up the allied health workforce. If there is a risk that policy makers could be “switched off” by the debate on definition of the professions, there is a bigger challenge in ensuring that the AHP workforce is fully recognised in national level health planning and policy making. If the debate focusses simply on which professions are right for the AHP workforce there is a real danger that there will be little progress in demonstrating the areas of unmet need where AHPs can make a valuable contribution. These challenges notwithstanding, the existing evidence on the AHP workforce already available in some countries is a powerful tool for policy development and advocacy. Related to this there is the development of a growing body of more recent work, largely based on labour force surveys or censuses, that comprehensively describes the size of the AHP workforce and which professions are included. But, in the main, most of this work tends to describe the wide range of the existing professions, rather than the contribution that these can make to health care and rehabilitation and better health system performance.

5.1. Role of Pharmacists

Pharmacists can impact public health

The system of public health includes three levels of control: macro, meso, and micro. Opportunities for health care officials to influence public health were defined by each tier, except for physicians who were confined to only micro-level activities. The majority of pharmacist activities are placed in the micro-level. Probable services of pharmacists comprise designing screening programs to identify immunization breaches; enacting in the performance of immunization endeavors along with other providers, like local health departments; and supplying technical support for infectious disease outbreaks in human populations via intercessions like antibiotic management. Also, pharmacists can stand for the government as local public health officials and be liable for the application of experiences in the performance of Essential Public Health Services.

Furthermore, reports demonstrating that the position of pharmacists in public health is steadily expanding. While the traditional role of the pharmacist as medication specialist remains comparably valuable, the most recent evolution includes a move from a product-centered role to a patient-centered contribution. Novel services addressed to the population, comprising but not restricted to vaccine management, medication therapy management, nicotine secession support, including novel tobacco products, are noticeably PH-centric. A



better match of services and an intention to fulfill population requital are evident in such a change.

Emergent chances for pharmacists to make a commitment in domains of international health beyond the customary extent of their function involve regional health expansion. Their area of proficiency can tackle parenchyma tier breaks in attention devoted to the public health system, supply and commerce, safety in medicines handling. Apart from the status of both income and health of a nation, the architecture of the healthcare system, the educational status of healthcare professionals, logistics, and pharmaceuticals management, most factors influence the patient, community health, and public health. Pharmacists are significant stakeholders in the complicated framework of these reasons, be it at the global stage or due to a centralized outcome at a particular healthcare facility involving a person who is their patient.

5.2. Impact of Social Workers

Social workers in the health care service field are frequently found serving as the liaison between patients, their families, doctors, and medical staff in hospitals and other health care settings (Agiri, 2019). In traditional medical model services, social workers are most likely to accomplish these tasks by focusing on identifying and facilitating clients' psychological, psychosocial problems, and resource needs. In these settings, social workers are primarily found working in specialized medical units, such as emergency/trauma, transplant, oncology, nephrology, and pediatrics. In addition to addressing direct patient needs, social workers often orient other treatment team members to the social and emotional aspects of a patient's illness, engaging in care conferences and case staffing. However, although these roles are vital to patient care, they are not specifically mentioned in most chronic care models. The care coordinator position in the specialty unit may be offset by an embedded case manager devoted to a broader client population and extensive length of employment. In the newer treatment programs, the focus of psychosocial treatment may be interpersonal therapy or group support, contracts out a social work agency to provide such services as family counseling, or may rely on a vocational program to find patients an appropriate job. Under the managed health care model, traditional social work intervention may be seen as behavioral health, with a primary focus on using modalities and techniques in traditional therapy. Social workers are by nature, able to view a person in the biopsychosocial aspect of treating the whole person in their biological, psychological, and social environment. Thus, social service plans are more likely to be put in place that includes actively engaging the patient in their care and encouraging the return to a play of daily activities. This collaborative case management approach can bridge the gap between the medical and non-medical resources available to the chronically ill. The reasoning behind getting a social worker involved the team is to work on an adherence contract that allows for a team approach to health care case management. On the one hand, the patient's case manager can follow up on



attending psychiatric appointments, but on the other hand, the social worker can work on addressing the social environment that may be hindering the patient's progress, such as stable housing.

5.3. Contributions of Therapists

Therapists: A cross section of practice areas were represented among therapists including occupational therapists, physical therapists, and speech pathologists. All therapists worked in a health care setting. A common theme presented was the role therapists have in patients regaining health and how this is connected to overall community health. When discussing the impact of SDGs on the role of therapists one participant said, "...if you work on some serious conditions you can make a big impact on community health..." during group dialog this was described as how caregivers help by improving patient health, "...thens they help the community...". Another discussion around engage community dialogue centered on how healthcare professionals engage with patients and then patients take that information back to their families and the community. The advantage of this approach was seen in that as patients move around information regarding health practices and services is spread throughout the community. There was a continued emphasis on prevention as well through practices that assisted in keeping well people well, "...everything we do is basically preventative, while we are also treating the patient...". It was expressed that every day therapists were educating patients about risk factors and prevention techniques. When there is poor health knowledge in a community this has the ability to impact policies and programs. Educational initiatives by therapists have the potential to shift the needle on knowledge. A formalized plan that sought out opportunities, created mentorship positions and provided continuing education was seen as helping maintain this emphasis on education, "we try to really educate our interns about assessment and different conditions because that is our best opportunity to have them for a full rotation.". Additionally, where therapists are lacking in knowledge they can connect patients they are educating to other experts, "...we are also talking about nutrition, which is not our expertise, but we are also referring them to a dietitian" and this knowledge can be further passed along as patients share their practice knowledge after seeking expert advice. The final theme around the role of therapists in community health that was discussed was advocacy.

6. Collaboration and Teamwork

Throughout the COVID-19 pandemic, healthcare workers (HCW) in hospitals have faced significant professional and personal stressors resulting in increased rates of disengagement with work (bureaucratic and moral) and feelings of chronic (untreatable) exhaustion, incompetence, and inadequacy as a worker. Moreover, as the workforce has aged, promoting retention and an enhanced quality of working lives for employees over 45 years is increasingly important. A nuanced understanding of harm in healthcare teams can inform the



implementation of targeted interventions to preserve workforce resource and organizational performance (E Anderson et al., 2019). Interprofessional collaboration is a known factor in patient safety and successful communication in hospital care settings. HCW commonly identify interdisciplinary teamwork as the primary source of harm prevention in healthcare systems. Greater understanding of healthcare workforce's capacity for mutual perception in response to personal harm, direct observation of interprofessional behavior in care settings, and consideration of how this capacity might be augmented or modified could inform the implementation of targeted interventions designed to prevent harm or to develop increased safety in care teams. Given the increasing scrutiny on preventable harm in healthcare systems, this knowledge could be used to better target resources and interventions to improve team working.

6.1. Interdisciplinary Approaches

Public health doctors, specialists and advisors sometimes seem to have two heads, each pointing in a different direction. Two essential characteristics of public health are that it is evidence-based, and it is concerned with changing systems rather than individuals; doctors, nurses and others engaged at face-to-face level with living, breathing, bleeding and anguished human beings are due a justifiable professional and human respect for the service they provide. Nevertheless those on the other side do wish that the very human face of nursing and clinical medicine did not possess so often smudged spectacles through which to view public health, and for their part are, when it comes to health care delivery, at least twice as likely on objective data to keep appointment times.

Sixty years ago the disciplines of public health were obdurately insular. Put crudely, the doctors did their own thing, the nurses did their own thing, the statisticians did theirs, and never mind the engineers, social scientists and lawyers. Such a portrayal omits the work of the ordinary multi-agency groups that have always kept the health ship afloat, but ordinary multi-agency groups are the workhorse of bureaucratic and professional life in all fields and at all times. Public health, however, is made up of more than ordinary multi-agency groups: it does things over and above. Its actions are felt and seen at population level. Public health as a profession exists because in theory and in practice it is deliberative: the process of special training inculcates a habit of understanding and then thinking, a habit which, once learned, cannot be unlearned, much as the individual may wish.

Public health has moved forward in its own way since it hit middle age, but its separation into special-"isms" remains a recognizing feature. It is an open question as to how far the more senior echelons of public health management can escape, or have to escape, such separation.



6.2. Communication Strategies

Introduction

Despite the complexity of health care, strong communication lies at the root of effective healthcare delivery. Activities such as patient consultation, health promotion and advocacy are built on quality exchanges of information, education and dialogue. Doctors, nurses and other health workers play a fundamental role in mediating this form of communication. Health workers are considered a bridge between patients and medical institutions, operating as gatekeepers, information providers, and emotional supporters. These roles are especially critical in low- and middle-income country health systems, where health workers play a greater role in shaping the extent and nature of patient contact with the health system.

However, the weakest area of health intervention in Guanxi, and many other parts of China, is in the early detection and treatment of common infectious diseases. Currently, most along the rural-urban axis suffer from inadequate access to a doctor and of those affected, very little treatment is provided. As such, forming multifaceted interventions to improve health intervention performance has become a popular approach in development, including increasing the knowledge and skills of health workers and the dissemination of evidence-based wider communication strategies (Haq & Hafeez, 2009). There is still much to be understood concerning the effectiveness of these interventions, however, such as which are the most cost-effectively beneficial, individually or in combination, and how their effectiveness varies by different kinds of health worker. It is in this context that the current study is set.

7. Challenges in Public Health

There are many challenges to be addressed in the establishment of a global public health knowledge base (Denis et al., 2020). Consideration of some of the universal challenges faced across Europe will help the process of creating an open global dialogue and thus a knowledge sharing process.

Considerable health and wealth gaps exist across Europe, within countries, and across different parts of the population, in large part due to systematic abuse of power and of the public trust. Public health encompasses a wide range of skills and capabilities addressing the multifactorial forces that shape the health of populations. Economists find it useful to distinguish individuals' ability to pay for services with their willingness to pay for them. To prevent market failures, health care should not be viewed as other commodities, as the social costs of sickness can be a large share of the cost of production. As the pandemic has shown, the absence of preparedness directs newly trained personnel towards clinical services. Unfortunately, a weakness of the data in public health works is that the applications tend to be too specific to certain types and subtypes of data. It would be thus important to couple



such specific pedagogical activities with systematic studies of the existing data and their potential and limitations for particular public health uses.

7.1. Workforce Shortages

The COVID-19 pandemic has underscored the critical role of doctors, nurses, and other health workers in strengthening national health systems, as well as the roles of other sectors in supporting and protecting such health workforce contributions. The political commitment and communication is both welcomed and necessary, while the global call for support and protection for health workers is appreciated. There have been many examples of non-health sectors supporting the health sector and health workers.

However, putting health workers at risk, despite being a ‘choice’ for many, cannot necessarily be considered ‘safe’ or ‘clear’, given a health workforce shortage. The health workforce adaptations required will – necessarily – be longer term than may have been first envisaged. There is a need for governments and health authorities to (further) expand pandemic preparedness plans, including the health workforce. Health workforce considerations need to be integrated across all aspects of pandemic response and management. This should include involvement and representation of health workers in preparedness and response decision-making, as well as the introduction and evaluation of health workforce support activities and strategies and measures to protect health workers – including through appropriate provision of personal protective equipment; development of infection prevention and control guidelines; rotation policies; and the provision of compensation in case of mortality and morbidity. Regular, transparent and honest communication is essential.

7.2. Burnout and Mental Health

Public health professionals across the globe have been contending with an extraordinary workload during the COVID-19 pandemic. In recent months, personal stress levels have increased more than in previous years. Job-related factors such as an overwhelming workload and an out of control pace may contribute to burnout in workers. Individual or organizational factors outside of the control of a worker may lead to a mismatch in demands and resources. Workers who are seeing clients may be increasingly exposed to the traumas of those they serve, a situation that may be further intensified during large events of mass trauma. Workers are beginning to count their time left in the field, notably in those working with profound needs. By increasing awareness of warning signs in colleagues, we can more easily spot a worker in distress regardless of their nation, agency affiliation, or job title. Counteracting the early signs of burnout in workers goes hand in hand with creating a sustainable workforce. Efforts to prevent and manage vicarious trauma and burnout should be directed toward all three tiers of the public health workforce: Tier 1, front line professionals and entry level staff;



Tier 2, program management and supervisory level; and Tier 3, senior management and executive level. At the start, efforts should be addressed toward Tier 3. An advocate in the workforce should identify champions within the organization who can review current policies, practices, and procedures to identify opportunities for improvement.

7.3. Access to Resources

Access to resources has already been aired as being an indicator of the quality of health services. Health is promoted and maintained through the satisfaction of many human needs, such as safe drinking water, sufficient food, and safe neighborhoods. These resources not only are important in providing a decent quality of life but are essential for the maintenance of physical, mental, and spiritual well-being. There is also the social inequality of being able to gain access to resources. It is clear that the access to the broad range of resources that maintain health is unequally distributed, and it is likely that the same group that has least access to resources would also have difficulties in obtaining health services.

As governments have to adopt fiscal constraints, it is likely that one of the first services to be contracted will be that of public health. Local planners of public health services are faced with severe problems of setting priorities and defining the appropriate mix of personnel to manage their public health services. At the international level, is concerned with unequal distribution of resources and has recently been advocating the training of mid-level personnel. Not only is there a difficulty in attracting and retaining individuals in the field of public health, but public health services in the United Kingdom are poorly integrated into local health services (H. Tulchinsky & A. Varavikova, 2014). Some feel that this is one of the reasons why local public health services were the first to be curtailed during earlier fiscal constraints.

According to a document on Health for All, the current level of health services is not only inappropriate in its organization and regulation but also in its overall output. At one end of the spectrum, there is both an insufficient number of scientific practitioners and inadequate care of many communities; especially of communities in need. The focus on public health is dismally lacking, with a high proportion of medics absorbed in the curative services, often at the specialist level. At the other end, there is a considerable amount of over treatment and over diagnosis with a high level of dental, optical, and surgical intervention. This is associated with a plethora of professionals and a neglect of research concerning the environmental factors which bring about ill-health.

8. Innovations in Healthcare Delivery

Innovative innovations in healthcare delivery—including telemedicine, advanced care at home, and population health programs—has always been essential to meeting the evolving healthcare needs of communities. In the context of the Covid-delta surge, there has been a



bolstering need to focus on some of the underlying barriers to innovation, and use these insights to develop a timely roadmap for reframing healthcare delivery. Healthcare systems are focusing on the sequence of implementation: 1. What obstacles may systems face in trying to redesign care?, and 2. What are the best approaches to address these intended obstacles?. This kind of inquiry is particularly germane as telemedicine and other transformative services have seen massive growth and adoption. Work systems have worked diligently to provide high-quality telemedicine care and keep visit volume steady through creative workflow adjustments, increased service offerings, and sustainable reimbursement policies. Similarly, recent delivery system innovation has reframed emergent light acute care needs: advanced care at home programs have skillfully brought the hospital to the home, built on long-sought experiences and best practices. Population health and social care programs have concurrently been scaled to address the immense challenges systemic ones (Bardach et al., 2022).

8.1. Telemedicine and Digital Health

Telemedicine entails medical consultation, remote patient monitoring, and distantly supervised treatment. The term generally refers to the use of communication technology facilitated services between a patient (within a remote location) and a physician of any specialty or any medical discipline, including mental health and surgery. The use of telephonic and wireless communication technology between the patient and healthcare professional has led to the development of the modern concept of “Remote Medical Care” (Das & Sharma, 2021). Telemedicine using digital communication technology permits healthcare professionals to evaluate, diagnose, and treat patients remotely. A host of clinical services such as medical consultations, scheduling of follow-up visits, guidance for self-management, rehabilitation, and medication management can be dispensed via secure video and audio connections.

The pandemic has brought a terminological confusion. Telemedicine refers to virtual or remote contact in a medical context involving a patient seeking a consultation and a medical professional delivering a healthcare service; the provider could be a nurse, pharmacist, therapist, or doctor (Khan et al., 2023). On the other hand, Doctors and nurses involved in managing the pandemic and treating COVID-19 patients are the “Frontline Medical Workforce”. This narrow group of healthcare providers performs a diagnostic or therapeutic medical function to heal, cure, or alleviate patient suffering. Hence, they perform a clinical function and are distinct from other healthcare workers undertaking a supporting or managerial role.



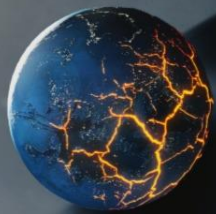
8.2. Mobile Health Initiatives

The front-line providers of healthcare services have a crucial role to play in strengthening public health within communities and societies. Their work, in providing preventive guidance, diagnosing health problems early, and dealing with the closely-involved details of personal health and hygiene, can be pivotal in preventing minor illnesses developing into major diseases. At the same time, the health-workers may act as the very agents through which serious diseases are unintentionally spread, and could potentially emerge as a highly high-risk group for certain diseases themselves. During the exposure and infection to disease and consequent handling of diseases, they might be more inclined to spread the disease to others or become the agent for its dissemination.

That is the case for the dead bodies of those who died of infectious diseases. Their burial may act as one of the mechanisms that spread the virus. But at the same time, because of being the nurse, the health worker, is also the agents of caring and healing the sick. They touched the body of the sick, treated the patient and made them feel assured and cared. This caring and life-saving act is their job, their norm and *raison d'être*. They might practice hand wash with soap and water, not with contaminated water or with ashes, to clean their hands before and after treatment. They are intended not to move a lot but firmly remain in the health facilities upon the detection of the first signs. These can impede them to immediately leave the area where the epidemic is out brooking. But doing so – abating the possibility to be vectors of the diseases and also to be affected by the epidemic – they might face reprisal from the population, angry because of their little departure from the site where lots of sick people are, and they forgot the health worker, the first social mediator of the diseases, sicknesses and the viruses. They also need personal protective equipment that is why health workers of the area claimed at the first days of the detection of the disease as the fever struck it should wait for the coming of the necessary equipment, not exposing their lives to the possible death. But doing so, they are repelled, denounced to abject from the population, and were accused of being the agent of spreading and increasing the epidemic influencing and on making speculation on the redundancy of their profession. Different authorities labelled them as indiscipline, scofflaws and unprofessional. And thus health workers, labelled by their profession to care, became stigmatized, turning their profession discredited.

9. Global Health Perspectives

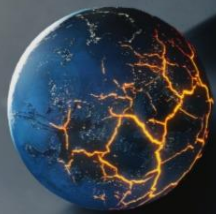
GC is facing an aging population, with associated multimorbidity and poor health outcomes, large pockets of poverty, and gender and other inequalities. Around 85% of the world's nurses work in richer countries, where they are in the spotlight during the pandemics. Nurses have a professional obligation to understand the world in its broader context. Working to achieve the Sustainable Development Goals, especially SDG 3, is a professional and common interest. In this new context of risk and uncertainty, the role of nurses becomes more



important. Well-educated and motivated nurses and midwives can improve health and welfare outcomes and care quality in multiple ways in the different entry points. It is in consultation on the local level that the health workforce has the biggest impact. It is important for the health workforce not only to engage with public health but also to listen and act accordingly. Nurses have a professional obligation to understand the world in its broader context and base decision-making on an expanded understanding of themselves, their patients, and circumstances. Healthcare workers can lead the way to a better global health in these trying circumstances. High-quality care cannot be given unless its providers are in a safe and secure environment. Healthcare workers have always been public health because of their critical connectivity between citizens and the population level health system. In collaboration, healthcare workers and public health striving to ensure better care for all can achieve resilience, the ability to weather current and future crises without compromising quality work and care standards. Workshop reports emphasize the importance of capacity-building and involvement of healthcare workers in education, outreach, care, and supportive and emancipatory engagement with the population. Such projects establish common long-term goals and create a shared sense of engagement and fate. Special attention is called to gender equality and equity to underpin a sound health-economical basis for a better-equipped healthcare system in GC, underscoring the country's preparedness to recover from previous crises. Women healthcare workers are particularly empowered to bring about change in the community, society, and education. Involvement of healthcare workers is paramount in a country with scarce resources, promoting skills that can be scaled across contexts (Salvage & White, 2020).

9.1. Role of Healthcare Workers in Global Health

The COVID-19 pandemic has brought unexpected and unusual challenges to health care workers around the world. The sudden and unexpectedness of the outbreak, the uniqueness of the novel coronavirus, and large-scale global transmission created disruptions in health care routines and practices in countries around the world. But as the incidence of COVID-19 cases started to decrease in countries like Bangladesh and health services were reactivated, another epidemic crisis was detected. Fear and panic related to the coronavirus had profoundly affected common practices of health care seeking behavior for 'non-COVID' health problems in hospitals and other health care facilities. Non-emergent health services were avoided due to fear of virus infection, and patients with chronic health problems skipped taking medications. Continuous stigma related to COVID-19, fear of being quarantined, lockdown effect, loss of jobs, non-availability of public transport, health care workers infected with the virus, and long travel distance to the health facility all contributed to discontinuity in health services and catastrophic consequences for some.



Patient presentations to health services collapsed, and rejections of patients for ‘non-COVID’ health conditions from out-patients departments of public facilities started to rise. Emergency admissions shrank and the mortality of newborn babies increased. Childhood vaccinations were interrupted and the incidence of Tuberculosis could rise. The analysis suggests a clearer look at the potential role of health care workers in the management and prevention of health care seeking behavior change from health facility-based findings. Unaddressed, non-COVID related health problems might pose an even greater threat to morbidity and mortality than COVID-19. For this, health policy and management guidelines must ensure that health care workers deal effectively with non-COVID patients in COVID-19 affected countries. Options include ensuring that infection control protocols in health facilities create a COVID safe environment to regain trust in receiving health services. Training to sensitize HCWs would be beneficial to better respect non-COVID patients and to understand and talk to patients to build patient trust. However, such programs require the ongoing financial and logistical support of health care management which should be implemented without complexity to avoid disruption once the threat of COVID-19 has diminished.

9.2. International Collaboration and Support

In recent years, domestic and workplace violence against health workers has drastically escalated. Health workers are increasingly exposed to violence, especially in the emergency and psychiatry fields. Inadequate security for health professionals poses severe implications, compromising the public’s health. In an attempt to address such challenges, an interdisciplinary team adopting a comparative political economy and health approach to identify non-traumatic intervention measures in developed and developing countries undertook this study. South Africa's ‘National Summit on Occupational Health and Safety in the Health Sector’ invited the team to present and expand on a prior collaboration with the health sector in this area. This report discusses the main findings and the follow-up on interventions during the next four years. The research agenda emphatically calls for more intervention research addressing the development of solutions in addition to problem awareness and analytical studies.

Emphasizing the social determination of health at all levels, a model of partnership of partners involving researchers and practitioners from high-income countries and low- and middle-income countries is adopted. The model focuses on: (1) training of individuals, including peer education, (2) fostering of collective trajectories centered on common sets of problems, (3) investments in strengthening infrastructure in the workplace, (4) improvements in policies and resource allocation from government, and (5) investments in a multi-scalar community of practice centered on strengthening a key institution that can sustainably work with a constellation of local partners. In health, the workplace has been relatively underemphasized in the social health literature. It has been difficult to protect health workers



even in the most highly standardized environments. In recent years, however, workplace conditions for health workers have been rapidly changing globally. Economic globalization is putting intense pressure on all healthcare resources. This intensifies all difficulties of high-income countries, while favoring the rich countries. A small set of developing countries then is trained to solicit developing country debt and open their economies to the international market in a certain unfettered way. This is then having an overwhelming effect and different ways on the industries within those countries, including the public sector.

10. Case Studies

List four actions that doctors, nurses, and other healthcare workers can take to carry out their role regarding public health, and respond to the four discussion questions for this lesson. (1) In designing and implementing public health strategies, it will be important for both doctors and other healthcare workers to collaborate with internal partners and external stakeholders, such as schools, business, local health departments, and community organizations. The active and collaborative involvement of schools and businesses techniques have been shown to keep employees well and to create a healthy work environment. Through both supervision and feedback, managers and informed employees are in a unique position to help keep coworkers healthy. (2) The health and safety of healthcare workers are integral to the care they provide to patients. In designing and implementing workplace health and safety programs, it will be important to attend to the organizational causes of work-related injuries and stress in the medical profession. Among the suggested strategies and approaches to preventing injuries are to implement organizational and administrative change; to provide mechanical lifting devices; to reduce household and construction trades specialties; and to tackle sources of stress early on, and on multiple levels. Because a healthy and safe place of work can also promote staff retention and patient overall trust and satisfaction, health administrators and supervisors must be prepared to make an investment of both time and resources to adequately address occupational health and safety issues. (3) To increase understanding and mitigate potential health consequences for medical staff, safety follow-up procedures should be clearly described to healthcare workers. In the prevention and control of hazardous situations, healthcare providers should participate actively in all aspects of preparedness and emergency response. In planning and response efforts to better ensure the protection of others, medical workers should be included in the development of policies and guidelines and be educated on the performance of all recommended procedures. (4) Healthcare workers in affected areas should closely monitor the health status of persons exposed or potentially exposed to hazardous agents. For the reporting of medical information to local and state public health agencies, personnel should be knowledgeable of the administrative requirements.



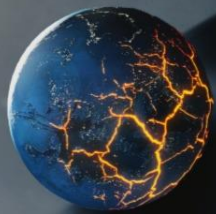
10.1. Successful Public Health Campaigns

The often slipshod training and development opportunities available to public health workers have to be radically transformed if we are to improve the public's health in a continuing way. Modernised, formalised training and development needs to be far more easily accessible and appropriate so that people from the myriad of different professions contributing to public health, at many levels of seniority, can see and put into effect how they can help to improve health (Sim et al., 2007). As the range and mix of those contributing to the public health function from outside the health service expands, so the need to recognise and develop the opportunity to do so grows, it is the work of transport planners, housing officers, environmental health officers, and more – all at the local, regional and national levels. There was an increasing awareness that potential health gains from the normal activities of people in other professions. This raises a wide variety of structures, occupational groups and grades (paraprofessional to senior manager) whose training and development needs are currently met in an often haphazard way, if at all. Special issues raised by each group will need to be complemented by more generic responses, if continuous improvement in public health is to be achieved.

10.2. Lessons from the COVID-19 Pandemic

The COVID-19 pandemic has triggered the strongest global health crisis in generations and has significantly disrupted healthcare systems worldwide. As the pandemic indicated, there has been substantial missed investment in public health, health systems, and healthcare workforce. The world has experienced the most extensive disruptions and pressure of the entire public health responses and healthcare systems in generations. At all levels of healthcare provision, professionals have made brave efforts in their daily practice to shield populations from the danger of the coronavirus. At the same time, COVID-19 brought to light many concerns in the existing system of healthcare supply (Kuhlmann et al., 2021). For the future, there are important lessons to be learned about the management and operation of health systems. Similarly, there are positive examples of progressive strategies and tactics that may have a direct effect on health workforce management in emergency cases, and there are also consistent examples of the tenacity of health employees.

It has become evident that the operation of healthcare delivery systems globally was inadequate and unready to cope with the severe burden of COVID-19. The untold impact of such outbreaks has resulted in far fewer substantial investment in public health and health system services, including the healthcare workforce. Health professionals globally preached unity and compassion in the fight against the coronavirus, a new and unexpected infection. Yet, it became evident quite soon that the healthcare systems were performing in 'professional silos' by promoting a piecemeal way of collaborating that was not up to the perilous speed of the spread of the pandemic. This was also the case in many developed



countries, pointing out that a larger economy with a greater capacity for financial expenditure does not automatically entail a more competent healthcare system.

11. Future Directions in Public Health

As we move further into the 21st century, countless disease challenges confront public health workers. Biodefense, prevention of potential bio-incidents, large-scale natural and other disease outbreaks now compete for resources that are already badly stretched by a changing society and changing needs. At a time when there is a worldwide urgent need for strengthening the numbers and quality of Public Health workers, the European Community-sponsored conference was a significant opportunity for identifying some key ways to progress action. These included: remarkable expansions in academic centres and in the fundamental courses offered; stepped-up resources in information and intelligence gathering and sharing for the public health community; development of tools and resources to assist countries in readiness preparation; improving the definition of target competences and occupational profiles to assist agencies in the recruitment, employment and specialist training of staff. Millions of people in Europe saw why efforts must be sustained to build public health workforce fully prepared to face the challenges of this century. Such efforts must meanwhile extend to a global scope in a world where infections and contaminants are barely halted by national borders (Bjegovic-Mikanovic et al., 2015). Paradoxically, there is a low but growing level of awareness of public health, as a profession and discipline, within the European Population. Public health, until the 19th century, concerned principally sanitation, hygiene and food, was then often confused and often mistakenly interchanged with primary medical disciplines (epidemiology and prevention of infectious diseases). In the light of these remarks, this paper examines the education, training and the qualification-based mobility of health professionals, who work in the public health domain. The aim was to explore the features and functions of the public health workforce in order to identify needs and opportunities for future workforce development and to offer recommendations for capacity building. Healthcare in the EU is not subject to a common policy, and is an area in which wide disparities exist between the Member States, disparities made apparent point of the consultations on the expansion of the European Union. This paper has shown that the important public health functions within healthcare are unevenly distributed within the EU, with important implications for the organization and quality of services delivered. Observations suggest that their relevance is not specific to the public health sector since comparably wide disparities are found in other areas of the healthcare. Decisions on funding healthcare are mainly a national responsibility, moderation on these grounds presumable the sector will remain exempt from Community interventions. However, it does have implications for various features of Community activity in particular, the action on health of which a rather broad notion is explicit in the Maastricht treaty. Broadly inspired, the horizontal aim to protect human health more effectively by ensuring in all Community



policies and activities, public health requirements a high level of protection are being have since other that provision of health care. There, however, the present observations allow a more detailed appreciation of the importance of public health considerations in discussions, and their potential imprint on EU health care policy. Prospective initiatives focus mainly on improving the information base on which decisions are taken, and the coordination of tasks for which the division of labor within the EU makes good sense. One of the concrete achievements of such initiatives would to be improve Member States the information on the professions addressed. Pollutants and diseases disregarding national borders, and regulated education and training a sectoral issue, a common set of competences of health professional is, however, a prerequisite for inter alia the mobility health workers within the community. Such moves would be reminiscent of series of action taken with regard with other regulated profession, such as legal and accountants in recent years. This point turns to analyze in some detail the regulatory framework, charts recent trends, and reflecting on the scope for European collaboration, suggest recommendation for future action.

11.1. Emerging Trends

Emerging public health trends should foster a culture of quality improvement (QI) and effectively utilize evidence-based practices as best practices on public health work. Nonprofit hospitals are required to conduct Community Health Needs Assessments at least every 3 years to identify health needs in their community. The Reporting of Community Benefit Expenditures on the new Internal Revenue Service Tax Form Schedule H also suggests compliance with the Joint Commission Standards of Conduct. Nurses represent the largest professional sector of healthcare workers and are the cornerstone of inpatient care. Approximately 500,000 patients a year in the United States lose their lives from preventable errors. A nurse can be the mediator between the patient and the doctors. It is crucial to have a great deal of support from the in-house nurses. On Monday the 22nd of January at approximately 14:00, a female with indirect statistics entered the Intensive Care Unit (ICU) with two unclear intentions. First, she deliberately declared that the image intensifier was too loud. This machine is fundamental for monitoring the patient's heart rhythms but cannot be silenced; it is just how the machine operates. Second, she requested the personal information of the patient lying behind the blue curtain. She lingered by the curtain with escalating persistence even when informed the reasoning behind her request. Understaffing of supportive workers is a common problem in the healthcare sector; however, implementation of a relatively small, feasible suggested intervention would grant the structure a beneficial and sustainable outcome in the long run as proven by immediate results on the same day of the incident.



11.2. Policy Recommendations

This commentary tackles the critically important role of health workers in their countries' more immediate responses to COVID-19 outbreaks. The focus is on provision of and care for health workers in times of crisis and more explicitly calls for policy. Policy recommendations set out in the were reviewed. The resilience of the health workforce systems of nations and regions is being tested like never before. While COVID-19 is an immediate crisis, it is also the context for what is to come, and central to the door we are opening to the "new normal" of managing infectious and non-communicable diseases in an interconnected world. Policy and decision-makers need to: integrate explicit health workforce requirements in pandemic response plans; ensure safe working conditions with personal protective equipment (PPE) for all deployed health workers; recognise the importance of protecting and promoting the psychological health and safety of all health professionals (Lynn Bourgeault et al., 2020). In times of crisis, health workers are pivotal and too often vulnerable, yet policy and resource focused attention on these crucial inputs to health is often too little, too late. The backdrop of crisis should be the scenario least likely of under-seen, "last in the queue" health worker planning and investment. Crisis demands urgency and focus. Complacent assumptions that Planning and PPD policy for health worker strengthening can sit well down the policy queue have given way to shock and an impetus to escape the cycle of Rehab Mania that inevitably follows, with its all too rapid fade of attention once immediate concerns ameliorate, often leaving the health workforce in a degraded state relative to where it was pre-crisis. In the whirligig of crisis it is all too easy to import quick fix PPD solutions that don't address the more enduring structural challenges of national and regional health workforce resilience, or that in the aftermath such moments of crisis, urgently needed health worker investment and policy shifts are quickly lost.

12. Conclusion

The first COVID-19 cases were identified at the end of 2019, and the WHO declared the pandemic on March 11th, 2020. Since then, it has caused the strongest disruptions in existing routines and everyday practice of health care workers in modern times. The COVID-19 pandemic clearly shows that working in 'professional silos' was not adequate to respond to a crisis of this amplitude. Inter-professional cooperation and the commitment of all health personnel are essential. It also revealed the limits of governance and policy-making based on national interests and throws light on the inequalities both within and between countries. Health systems have demonstrated an impressive capacity for flexibility and rapid learning. However, the COVID-19 pandemic also unexpectedly showed widespread signs of fragility and failure. While there are important lessons to learn about what went wrong with the organization and functioning of health systems, there are also many positive lessons from examples of innovation in the management of the health workforce. Three types of



contributions are presented: a systematic review, analyses of the situation in particular countries, and the initiatives taken by the World Health Organization Regional Office for Europe. At the global level there are still imbalances in the distribution of health professionals across high, middle and low-income countries (Kuhlmann et al., 2021).

For public decision-makers, there is increasing inter-sectoral competition for the health workforce in periods of severe health workforce shortages: ensuring infectious diseases care under conditions of isolation, the logistic of massive vaccination campaigns, health screening in situ or at entry points, or assistance with enforced quarantine, all require mobilization of the health workforce. For this rapidly evolving but still unpredictable situation, health workforce planning up to the year 2030 is of questionable interest. Herd immunity through general virulence without vaccination does not seem desirable and would lead to thousands of additional deaths; likewise, early return of seniors to retirement homes with no attention to infection control led to heavy loss of life in a number of countries. At least, this pandemic could inform on the importance of certain care sectors, including key professions such as intensive care and pulmonologist doctors.

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