

Pandemic preparedness with 20/20 vision: Applying an intersectional equity lens to health workforce planning

Anuj Kapilashrami  | Roomi Aziz 

School of Health and Social Care, University of
Essex, Colchester, UK

Correspondence

Anuj Kapilashrami.

Email: a.kapilashrami@essex.ac.uk

Abstract

Human resource for health (HRH) is considered critical for achieving Universal Health Coverage, and the crisis surrounding HRH is now established as a global emergency. Their vital role has been central in the pandemic response. Yet, the discussions and deliberations on the recent pandemic treaty circumscribe HRH discussions to their capacities and protection, and address discrimination mainly in relation to gender. While this paper endorses the case for prioritisation of HRH in global pandemic preparedness planning, it re-frames the HRH crisis in relation to the institutional and structural factors driving HRH shortage, maldistribution and skills-needs misalignment. We critique the supply-and-demand framing of HRH crisis as one that obviates the systematic inequalities within health systems that underpin health workforce motivations, distribution, satisfaction and performance. We propose an intersectional equity lens to redefine the HRH challenges, understand their underlying drivers and accordingly integrate in the global pandemic preparedness plans.

KEYWORDS

health workforce, inequities, intersectionality, pandemic treaty

This is an open access article under the terms of the [Creative Commons Attribution-NonCommercial](https://creativecommons.org/licenses/by-nc/4.0/) License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited and is not used for commercial purposes.

© 2023 The Authors. The International Journal of Health Planning and Management published by John Wiley & Sons Ltd.

Highlights

- HRH crisis is primarily framed in terms of supply-demand, capacities and distribution/deployment.
- Little attention is given to the inequities that shape the HRH crisis and its influence on workers' experiences, motivations and performance.
- Despite HRH being the backbone of COVID-19 response, pandemic treaty discussions circumscribe HRH planning to training and sustaining a skilled health workforce
- An intersectional equity lens can help redefine HRH crisis within the pandemic preparedness efforts.

1 | INTRODUCTION

The COVID-19 pandemic revealed shortcomings of global health governance instruments and frameworks necessary for an appropriate response. The pandemic exerts several pressures on health system including exacting faster research and development for rapid testing and vaccines, local production capacities for masks and personal protective equipment (PPEs), more critical care unit beds and oxygen cylinders, resilient infrastructure, responsive systems and most importantly, better health workforce capacities.¹ Countries have had to adapt and respond to a surge in demands for health workforce as well as the need for specialised healthcare workers, overcoming challenges like staffing, capacities, geographical inequities, and skill mix.²

Health workers' role in strengthening of health systems has been recognized in most of the key pre-pandemic global strategic frameworks (Table 1), such as the International Health Regulations (IHR 2005)³ and the Global Strategy for Human Resource for Health (HRH).⁴ The pandemic re-establishes their exceptional position as central to a resilient health system,² and the backbone of the fight against the pandemic,⁵ while simultaneously revealing their vulnerability as bearers of a disproportionate burden of exposure and deaths. Their contributions were recognized by the World Health Assembly and its declaration of the year 2021 as the International Year of Health and Care Workers. Against this backdrop and the ongoing global governance reforms such as the global pandemic treaty (CA+), *this paper strengthens the case for prioritisation of HRH in pandemic preparedness planning while proposing an intersectional equity framework to reframe the HRH crisis in relation to the institutional and structural factors driving their shortage, maldistribution and skills mismatch. This focus is aligned with the Article 12 in the WHO zero draft for pandemic preparedness international instrument⁶, which stipulates strengthening and sustaining a skilled and competent health and care workforce in pandemic preparedness.*

2 | FRAMING OF HRH CRISIS WITHIN THE PANDEMIC TREATY DRAFT INSTRUMENTS

Despite being one of the six building blocks of health systems, HRH remains the "weakest link".⁷ The HRH crisis and the persisting challenges experienced by health workforce globally are well recognised.⁴ These include poor conditions of work and remuneration, gender disparities and discrimination, and deficiency in distribution and competencies; factors that cumulatively affect health workers' motivation and satisfaction, and hinder effective planning for a sustainable or resilient workforce.⁸

The traditional viewing of HRH as a 'hardware' issue results in consistently reductive framing of the related challenges as a (mis)alignment of supply and demand or staffing challenge.^{9,10} There is little attention to its interaction

TABLE 1 Framing of Human Resource for Health (HRH) within Global Strategic Frameworks before and during the COVID-19 pandemic.

HRH Central to International Health Regulations	Health workforce development was identified with the International Health Regulations Framework (IHR 2005) as one of the nineteen technical areas for strengthening as highlighted in the Joint External Evaluation (JEE) Tool. ³ This recommendation was also reiterated in a later evaluation of the national JEE reviews in the Eastern Mediterranean region.
Framing of HRH within the sustainable development goals (SDGs)	The WHO global strategy on human resources for health 2030 frames HRH as central and pivotal for achievement of universal health coverage and SDGs. ⁴ Furthermore, the united nation political declaration on universal health coverage views health workforce as critical for strong health systems.
Reflections from the pandemic	In its 2021 policy paper series, WHO compiled lessons learnt from COVID-19 management in over thirty countries in Europe and identified support and management of health workforce amongst the 20 futuristic strategies to assess resilience of national health systems.
Developing a WHO convention/treaty/instrument post-pandemic	At the December 2021 special session of the world health assembly the intergovernmental negotiating body (INB) was established and tasked with drafting the WHO convention/instrument amidst much international support, to address the global governance failures during the COVID-19 pandemic. Following this special session, member states' working group presented their recommendations for a new instrument as well as amendments within IHR 2005, including the need of continued investment in health workforce, building of public health capacities, and accelerated investment in health workforce skills, education and jobs.
Strengthening the global architecture for health emergency preparedness	Although less popularised but happening alongside nonetheless, the WHO's consultation on strengthening the global architecture for health emergency preparedness, response and resilience (HEPR) also proposes substantial investment in building a trained, interoperable and rapidly deployed workforce.

with other building blocks of the health system, or recognition of its 'software' component—the underlying relationships, interests, power, values and norms; and most notably, how these are impacted by the structural issues and inequalities within and outside the health system.

A rapid review of existing frameworks that examine HRH challenges and 'crisis', and the factors and forces driving these, reveals how attention to inequalities has been peripheral to the examination of workforce challenges. At best, issues of 'diversity' and discrimination are recognised in relation to (mal)distribution highlighting gender and geographically located (rural-urban) inequities and the paucity and need for retention of workforce in underserved regions. Frameworks acknowledging inequities¹¹ regard equity as an outcome (i.e., managing HRH performance to enhance equitable access of healthcare), not an input, determinant, or lens to examine health workers' recruitment, retention, performance and practices.

These gaps continued to reflect in most of the HRH studies conducted during COVID-19 and in the ensuing earlier drafts and discussions on the pandemic treaty. Few scattered studies called for better understanding of health workers' COVID-19 experiences, or the need for their protection.¹² While the WHO regional offices, academics and experts continued to stress the importance of HRH in pandemic response.¹³

With WHO recently concluding its public hearings, the importance of investing in health workforce is now established in the February 2023 zero-draft submitted by the member states' working group for the pandemic treaty.⁶ The draft emphasises accelerated investment in HRH education, skills, capacities and jobs, and establishment of

necessary training institutions. It calls for the adoption of a gender-transformative approach in HRH planning and addressing inequalities related to gender but continues to be silent on other social, political and commercial determinants of the HRH crisis as elaborated later in this paper, or the need for better workforce planning that considers their experiences.

3 | REVISITING HEALTH WORKFORCE CRISIS AND THE CASE FOR ADOPTING AN EQUITY LENS

Healthcare systems are complex, holding in most contexts implicit equity and social justice goals. Experts emphasise on the need to understand both the evolutionary and sociocultural processes at work, structural inequalities like poverty, to fully understand how healthcare systems change, respond and adapt to pandemics like COVID-19.¹⁴

There is little research around the extent of historical socioeconomic marginalisation underpinning the HRH crisis. There is evidence, albeit limited, to suggest that geographic and socio-economic inequities affect health workers' career choices, job opportunities, retention, skill-mix, urban-rural deployment/distribution, all collectively constituting the *global HRH crisis*. For example, we know that gender roles and gender power relations in society impact health workers' professional choices.¹⁵ There is also emergent data on ethnic and racial inequalities determining health workers' experiences and vulnerabilities during COVID-19 although limited to high income countries amidst calls for diversifying health workforce profiles, recruiting health workers from all communities and protecting them.¹⁶

Lotta et al highlight the additional risks and challenges that the pandemic brought for health workers in Brazil, including exposing the historical ingrained problems within the health system, such as unequal working conditions between grades and cadres; intersecting with socio-cultural inequalities (due to gender, race, ethnicity etc.) and affecting different health workers unequally.¹² This work specifically defines how pre-existing inequalities between different cadres, socio-economic and cultural groups within the workforce shaped their pandemic experiences differently. This work supports the argument that framing the HRH challenge as simply a supply and demand problem limits the scope for understanding the factors contributing to shortage, maldistribution and misalignment of needs and skills. Adopting an equity lens for health system and HRH planning enables seeing the drivers behind their unequal and unfair distribution, their experiences, physical and psychological health and safety, and eventual work decisions and practices.

Our proposition of an 'intersectionality lens' can not only improve health systems and health workforce understanding necessary for preparing for future pandemics but also expedite pathways to UHC.

We view an intersectional approach as drawing attention to the inequalities and power differences structuring society (and its constituent systems) and how such inequalities determine healthcare delivery norms, beliefs, practices, experiences, and outcomes.¹⁷ Applied to health systems, **intersectionality promotes an understanding that health is shaped by the interactions** between individual factors (such as biology, income, education), other structures of inequality (e.g. gender, race/ethnicity, sexuality) and broader political and economic forces such as economic globalisation, climate crisis and population displacement. Intersectionality challenges:

- The view that social disadvantages (and oppression) are experienced as "separate roads" adding up to a sum effort. Rather, they interactively shape human beings and their experiences. For example, the experiences of a female Philippine health worker delivering COVID-19 care in the UK cannot be understood as the sum of their gender and race identity. Her gendered experience of workplace is racialised, determined by her citizenship status, nationality, class, and broader policies (such as the right to work, lack of recourse to public funds) and institutional biases that may impact her role, development opportunities as well as her experiences with peers and patients.¹⁸
- The assumed homogeneity among populations identified as a single identity group or category such as "refugee or migrant," "Indigenous" or "ethnic minority", or 'BAME' (Black Asian Minority Ethnicity), women, men, or trans. A

key tenet is that human beings may belong to multiple social categories and experience privilege and oppression simultaneously.¹⁹ For instance, a Punjabi-speaking female community health worker in Punjab, Pakistan may be disadvantaged due to her gender and profession, but her ethnic affiliation and citizenship will place her at a privileged position over an Urdu-speaking migrant female community health worker in the same region.

4 | THE UTILITY OF APPLYING AN INTERSECTIONAL EQUITY LENS TO UNDERSTAND HRH CRISIS

The usefulness of an intersectionality approach in deepening our understanding of the HRH crisis can be illustrated in two priority areas identified in the 2030 WHO global strategy: the workforce shortfall and the provision of a safe working environment.⁴

i. Addressing the shortfall and equitable distribution of personnel

In examining recruitment-retention strategies, an intersectionality approach will highlight, for example, how gender interacts with other social inequalities structured around minoritised ethnicities and castes in predisposing women to cluster into certain professional categories, limiting employment and career progression opportunities and forcing their exit, thereby resulting in the wider mismatch between demand (need) and supply (resources) that are characteristic of healthcare systems globally.

Such mismatch is evident across all healthcare positions and health system domains, including leadership. Notably, women comprise 70% of health and social workforce globally,²⁰ yet have trivial representation in health leadership. In Pakistan, for example, women comprise more than 73% of the workforce nationally. They continue to be employed in critical, highly demanding community care roles that are unsupported, underpaid, or voluntary.²¹ Yet in 2020, only three of 154 districts had a woman district health officer. Absence of formal leadership development and mentoring opportunities alongside pervasive patriarchal norms prevent retention and substantive representation of women in decision-making forums.²²

An intersectionality approach will also enable planning for appropriate skills and resources' match while taking a 'whole of the health workforce approach' that is, utilising the full skill sets of health workers (across all care levels and in training and retirement pipeline) and acknowledging their distinctive challenges and contexts. For example, personnel deployed in rural, remote, and deprived regions encounter more complex and pressing needs. Here, patients present with multiple morbidities and social problems such as low income or unemployment, precariat work conditions and food insecurity. Evidence from the UK indicates that GP practices in areas of high deprivation require greater "continuity of care, supported teamwork, networking with community resources and intimate knowledge of family backgrounds".²³ Addressing these complex unmet needs requires additional capacities, more consultation time, and therefore increased funding relative to the less deprived areas. However, these disparities are often overlooked, if not reinforced, by policies such as the National Health Service (NHS) Quality and Outcomes Framework and ongoing cuts in community services. International evidence also points to high levels of demotivation among health personnel deployed in primary healthcare facilities in remote and geographically challenging rural locations.²⁴

Significant disparities also exist in the distribution of opportunities for skill-enhancement, training, and development. These disparities vary across countries and provinces and are influenced by both the organisation and the financing of health systems, the colonial legacy and social and economic development histories of countries. These health systems and social factors reify inequities in societies (along for example, gender, ethnic/race, class, disability, religion, and caste lines) that disadvantage and disempower select cadres while privileging others. Such disadvantage was illustrated in a few studies that examined risks and vulnerabilities of health workforce during Covid-19. Studies found these intersecting inequities impacted healthcare workers' exposure, access to protective gear, testing and furlough status.^{25,26} Some groups of healthcare workers who had less status, outside decision making and power

structures, were on precarious positions and contracts, or in marginalised geographical settings were most vulnerable and at greater risk of being left behind from protective measures.^{27–29}

ii. Safe working environment and protection of health workers from violence and vulnerabilities

While incidents of abuse are rising against all practitioners across healthcare contexts, experiences of discrimination and harassment are particularly widespread among women practitioners and those from minoritised ethnic, indigenous and other lower socio-economic backgrounds³⁰

In the UK National Health Service (NHS) for example, minority ethnic staff experience discrimination in training and recruitment, are less likely to secure a hospital job, are substantially under-represented in senior leadership than white doctors and more likely to be subjected to disciplinary procedures.³¹ A recent study on workplace risks and protection from COVID-19 in Health and Social Care in the UK reveals how minority ethnic workforce faced increased exposure to and less protection against infection and more responsibility for the clinical management of COVID-19. The study also provided evidence of systemic racial bias in the disproportionate redeployment of minority ethnic nursing staff to COVID-19 areas.²⁵ Certain occupational environments like long-term care sector and nursing homes also predispose staff to higher risks of infection, with most of these workers being female and less protected.³²

Among different cadres, nurses, midwives and community health workers bear a disproportionate burden of patient and workplace violence including bullying. Their precariat position defined by temporary contracts, long hours, lower status in a hierarchical system, and lack of trust in existing grievance redress systems prevents reporting of incidents and results in a higher turnover and workforce exit.³³ Despite these unfavourable workplace conditions they take on expanded roles in the healthcare system, helping build communities' trust in services.³⁴ Within a workforce hierarchy where localised community knowledge, albeit crucial to providing culturally appropriate and safe healthcare, is less remunerated and valued, these cadres are at greater risk of structural violence. For example, in India, belonging to a scheduled caste may lead to lower earnings and more unsafe workplace for nurses.³⁵

Here, an intersectionality lens can help substantiate the links between these individual experiences of oppression, the institutional pathways through which such discrimination is produced, and their underlying drivers. For instance, it would situate such abuse within wider structures of racism, casteism, xenophobia, inherent prejudices in the health systems towards patients and practitioners from marginalised groups.^{12,35,36} It simultaneously allows us to examine these practices in the wider context of economic 'austerity', cost-cutting in critical services that effect waiting times for patients and their families and lead to stressful situations at work, making staff more vulnerable to attack.

However, the absence of data disaggregated along these dimensions in global (e.g. WHO Global Health Observatory), national and subnational databases and across multiple levels of service provision/facilities including in communities and homecare prevent comprehensive understanding and redressal of factors shaping the distribution and uptake of opportunities and resources, and their vulnerabilities to structural violence. HRH planning thus demands intersectional assessments of power distribution in health systems and corrective and redistributive measures to target more vulnerable health workers. Adapting from earlier works of the author,³⁷ in Figure 1 below we propose the following actions/guidance when considering application of intersectional equity lens in workforce planning

1. Diversify data collection—collect diverse data on multiple social factors/positions, in diverse forms (qualitative, quantitative) and from diverse data sources through partnerships that help build and monitor HRH database and diverse HRH knowledge
2. Contextualise data—to understand historical, geo-political, socio-cultural and economic influences on HRH recruitment, incentives, motivations, performance, experiences.
3. Undertake Intersectional analysis of –
 - a) Power distribution in health systems
 - b) How power inequities and system-wide issues hinder HRH roles, performance and safety;
 - c) How existing HRH policies on retention, recruitment, remuneration, task shifting etc tackle or exacerbate inequities

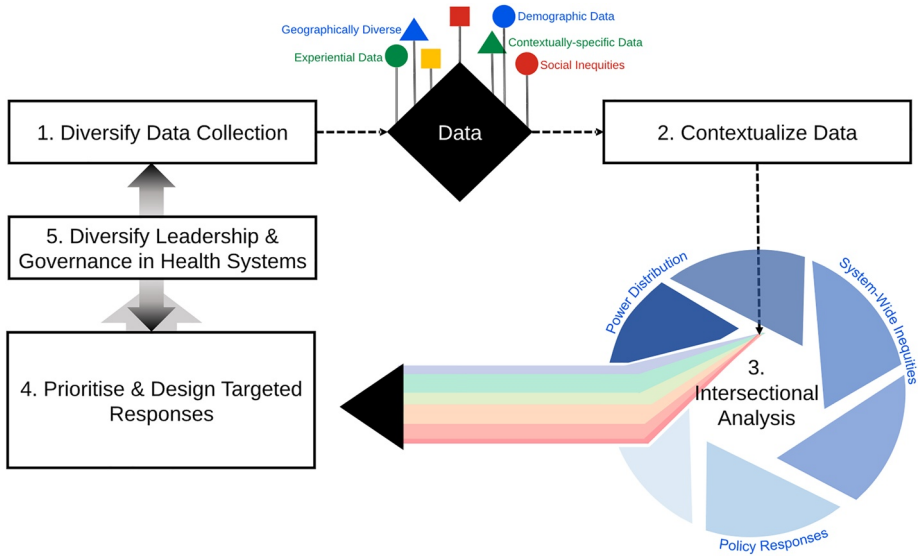


FIGURE 1 A visual guide for applying an intersectional equity lens for health workforce-planning.

4. Prioritise and design targeted responses—Go beyond generic commitments like ‘invest in sustainable HRH’ to target opportunities, rewards and policies to those most disempowered and burdened. Make health systems more inclusive and conducive to building/sustaining a diverse workforce. This also requires moving beyond a deficit model to recognise the resourcefulness, agency, everyday leadership exercised despite the multiple disadvantages experienced by HRH.
5. Diversify leadership—Value diverse expertise across disciplines and knowledge systems, take positive action to support underrepresented and minoritised groups in decision making structures.

5 | CONCLUSION

HRH, the backbone of any health system even in non-crisis time, played a critical role in countries' responses to COVID-19 outbreaks worldwide. Even though the draft pandemic response plans and treaty discussions to-date emphasise on substantial investments, this intent does not translate into commitments to tackling HRH crisis and fails to explicitly address health workforce needs and introduce the necessary radical measures/reforms as countries prepare for future pandemics. Not addressing the underpinning factors driving the HRH crisis in the pandemic response plans will be a missed opportunity with significant system-wide consequences.

While calling for the need to bring HRH to the centre of the discussions on pandemic treaty, we argue that planning for a sustainable health workforce must explicitly adopt an equity lens. Social inequalities have emerged as the lynchpin of the pandemic crisis, reflecting in challenges we are facing today, for example, vaccine inequality, power asymmetries in public health financing and leadership. This knowledge exacts the need to examine and address the systematic inequalities, making a case for use of the intersectionality lens, specifically in the context of health workforce and relevant HRH discussions. Intersectionality brings back attention to inequalities that shape differential vulnerabilities and privileges; aspects that remain neglected but are crucial in supporting the development of more inclusive policies for a thriving workforce. Application of an intersectional equity lens in redefining health workforce crisis and spotlighting health workforce development is critical as the Pandemic Treaty takes shape, setting in motion plans for a most reliant and robust healthcare system.

ACKNOWLEDGEMENTS

Not Applicable. This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

CONFLICT OF INTEREST STATEMENT

We declare no competing interests.

DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

ETHICS STATEMENT

Not Applicable.

ORCID

Anuj Kapilashrami  <https://orcid.org/0000-0002-6719-9216>

Roomi Aziz  <https://orcid.org/0000-0003-2073-4565>

REFERENCES

1. OECD. OECD Policy Responses to COVID19 - the Territorial Impact of COVID-19: Managing the Crisis and Recovery across Levels of Government; 2021.
2. Zapata T, Buchan J, Azzopardi-Muscat N. The health workforce: central to an effective response to the COVID-19 pandemic in the European Region. *Int J Health Plann Manag*. 2021;36(1):9-13. <https://doi.org/10.1002/hpm.3150>
3. WHO. International Health Regulations 2005; 2008.
4. WHO. *Global Strategy on Human Resources for Health: Workforce 2030*. Strategy Document; 2016.
5. Campbell J, Koca F. *Financing and Protection for the Health and Care Workforce*. Bulletin of the World Health Organization; 2021.
6. WHO. Zero Draft of the WHO CA+for the Consideration of the Intergovernmental Negotiating Body at its Fourth Meeting; 2023.
7. Nyoni J, Christmals CD, Asamani JA, et al. The process of developing health workforce strategic plans in Africa: a document analysis. *BMJ Glob Health*. 2022;7(Suppl 1):e008418. <https://doi.org/10.1136/bmjgh-2021-008418>
8. WHO. The World Health Report 2006: - Working Together for Health; 2006.
9. Kok MC, Broerse JEW, Theobald S, Ormel H, Dieleman M, Taegtmeier M. Performance of community health workers: situating their intermediary position within complex adaptive health systems. *Hum Resour Health*. 2017;15(1):59. <https://doi.org/10.1186/s12960-017-0234-z>
10. Borghi J, Brown G. *Taking Systems Thinking to the Global Level: Using the WHO Building Blocks to Describe and Appraise the Global Health System in Relation to COVID-19*. Global Policy; 2022.
11. Dal Poz MR, Quain EE, O'Neil M, Mccaffery J, Elzinga G, Martineau T. Addressing the health workforce crisis: towards a common approach. *Hum Resour Health*. 2006;4(1):21. <https://doi.org/10.1186/1478-4491-4-21>
12. Lotta G, Fernandez M, Correa M. The vulnerabilities of the Brazilian health workforce during health emergencies: analysing personal feelings, access to resources and work dynamics during the COVID-19 pandemic. *Int J Health Plann Manag*. 2021;36(S1):42-57. <https://doi.org/10.1002/hpm.3117>
13. Kuhlmann E, Dussault G, Correia T. Global health and health workforce development: what to learn from COVID-19 on health workforce preparedness and resilience. *Int J Health Plan Manag*. 2021;36(S1):5-8. <https://doi.org/10.1002/hpm.3160>
14. Abay RA, Kassaye D, Kleibl T. Overcoming the socioeconomic impacts of the Coronavirus Pandemic: social work perspectives and postcolonial reflections from Ethiopia. *Coronavirus Crisis Chall Soc Dev*. Springer; 2022:431-442.
15. Bourgeault IL, Maier CB, Dieleman M, et al. The COVID-19 pandemic presents an opportunity to develop more sustainable health workforces. *Hum Resour Health*. 2020;18(1):83. <https://doi.org/10.1186/s12960-020-00529-0>
16. Guillén E, Buissonnière M, Lee CT. From lionizing to protecting health care workers during and after COVID-19—systems solutions for human tragedies. *Int J Health Plan Manag*. 2021;36(S1):20-25. <https://doi.org/10.1002/hpm.3138>

17. Kapilashrami A, Hankivsky O. Intersectionality and why it matters to global health. *Lancet*. 2018;391(10140):P2589-P2591. [https://doi.org/10.1016/s0140-6736\(18\)31431-4](https://doi.org/10.1016/s0140-6736(18)31431-4)
18. Denis JL, Côté N, Fleury C, Currie G, Spyridonidis D. Global health and innovation: a panoramic view on health human resources in the COVID-19 pandemic context. *Int J Health Plan Manag*. 2021;36(S1):58-70. <https://doi.org/10.1002/hpm.3129>
19. Kapilashrami A, Hill S, Meer N. What can health inequalities researchers learn from an intersectionality perspective? Understanding social dynamics with an inter-categorical approach? *Soc Theor Health*. 2015;13(3-4):288-307. <https://doi.org/10.1057/sth.2015.16>
20. Boniol M, Mclsaac M, Xu L, Wuliji T, Dioallo K, Campbell J. Gender Equity in the Health Workforce: Analysis of 104 Countries; 2019.
21. Morgan R, Ayiasi RM, Barman D, et al. Gendered health systems: evidence from low- and middle-income countries. *Health Res Pol Syst*. 2018;16(1):58. <https://doi.org/10.1186/s12961-018-0338-5>
22. Zeinali Z, Muraya K, Govender V, Molyneux S, Morgan R. Intersectionality and global health leadership: parity is not enough. *Hum Resour Health*. 2019;17(1):29. <https://doi.org/10.1186/s12960-019-0367-3>
23. Watt G, Brown G. General Practitioners at the Deep End: the experience and views of general practitioners working in the most severely deprived areas of Scotland. *Occas Pap R Coll Gen Pract*. 2012;1:40.
24. Wurie HR, Samai M, Witter S. Retention of health workers in rural Sierra Leone: findings from life histories. *Hum Resour Health*. 2016;14(1):3. <https://doi.org/10.1186/s12960-016-0099-6>
25. Kapilashrami A, Otis M, Omodara D, et al. Ethnic disparities in health & social care workers' exposure, protection, and clinical management of the COVID-19 pandemic in the UK. *Crit Publ Health*. 2021;32:1-14. <https://doi.org/10.1080/09581596.2021.1959020>
26. Martin CA, Pan D, Melbourne C, et al. Risk factors associated with SARS-CoV-2 infection in a multiethnic cohort of United Kingdom healthcare workers (UK-REACH): a cross-sectional analysis. *PLoS Med*. 2022;19(5):e1004015. <https://doi.org/10.1371/journal.pmed.1004015>
27. Llop-Gironés A, Vračar A, Llop-Gironés G, et al. Employment and working conditions of nurses: where and how health inequalities have increased during the COVID-19 pandemic? *Hum Resour Health*. 2021;19(1):112. <https://doi.org/10.1186/s12960-021-00651-7>
28. Gallagher JE, Johnson I, Verbeek JH, Clarkson JE, Innes N. Relevance and paucity of evidence: a dental perspective on personal protective equipment during the COVID-19 pandemic. *Br Dent J*. 2020;229(2):121-124. <https://doi.org/10.1038/s41415-020-1843-9>
29. Anderson C, Pooley JA, Mills B, Anderson E, Smith EC. Do paramedics have a professional obligation to work during a pandemic? A qualitative exploration of community member expectations. *Disaster Med Public Health Prep*. 2020;14(3):406-412. <https://doi.org/10.1017/dmp.2020.212>
30. Kline R. Race discrimination, bullying and patient care. *Metric J*. 2018.
31. Priest N, Esmail A, Kline R, Rao M, Coghill Y, Williams DR. Promoting equality for ethnic minority NHS staff—what works? *BMJ*. 2015:h3297. <https://doi.org/10.1136/bmj.h3297>
32. Kuhlmann E, Brînzac M.-G, Burau V, Correia T, Ungureanu M.-I. Health workforce protection and preparedness during the COVID-19 pandemic: a tool for the rapid assessment of EU health systems. *Eur J Publ Health*. 2021;31(Suppl 4):iv14-iv20. <https://doi.org/10.1093/eurpub/ckab152>
33. Jafree SR. *Workplace Violence against Women Nurses Working in Two Public Sector Hospitals of Lahore, Pakistan*. Nursing Outlook; 2017:420-427.
34. Smith C. The structural vulnerability of healthcare workers during COVID-19: observations on the social context of risk and the equitable distribution of resources. *Soc Sci Med*. 2020;258:113119. <https://doi.org/10.1016/j.socscimed.2020.113119>
35. Seth K. Heterogeneity in the background and earnings of nurses in India: evidence from a cross-sectional study in Gujarat. *Health Pol Plann*. 2017;32(9):1285-1293. <https://doi.org/10.1093/heapol/czx086>
36. Kmietowicz Z, Ladher N, Rao M, Salway S, Abbasi K, Adebowale V. Ethnic minority staff and patients: a health service failure. *BMJ*. 2019:l2226. <https://doi.org/10.1136/bmj.l2226>
37. Hankivsky O, Kapilashrami A. Beyond Sex and Gender Analysis: An Intersectional View of the COVID-19 Pandemic Outbreak and Response; 2020.

AUTHOR BIOGRAPHIES

Anuj Kapilashrami is an interdisciplinary social scientist trained in Sociology and Public health working in the field of global health, with a particular focus on equity, rights and social participation. She is Professor in Global Health Policy and Equity in the School of Health & Social Care at University of Essex. She has published widely

on inequalities in global health policy and health systems, especially from a gender and intersectional perspective; with more recent work applying intersectionality lens to study the equity and rights implications of Covid-19 including risks and protection of health workforce, and migrants' health.

Roomi Aziz is a public health policy & research professional with over a decade of experience working in health systems and social sector development in Pakistan, with focus on health systems and policy research and analysis. She has worked extensively with development partners on various health systems and health workforce priority agendas. She is currently pursuing a PhD at the University of Essex, with her research focussing on human resources for health crisis in Pakistan and factors enabling and hindering the same.

How to cite this article: Kapilashrami A, Aziz R. Pandemic preparedness with 20/20 vision: applying an intersectional equity lens to health workforce planning. *Int J Health Plann Mgmt.* 2023;1-10. <https://doi.org/10.1002/hpm.3677>