

# Health System Strengthening: The Role of Public Health in Federal Nepal

Sujata Sapkota<sup>1</sup>, Sarita Panday<sup>2</sup>, Sharada P Wasti<sup>3</sup>, Andrew Lee<sup>4</sup>, Julie Balen<sup>1,4</sup>, Edwin van Teijlingen<sup>\*1,5</sup>, Simon Rushton<sup>1,4</sup>, Madhusudan Subedi<sup>6</sup>, Sujan Gautam<sup>1</sup>, Jiban Karki<sup>7,8</sup>, Pratik Adhikary<sup>7</sup>, Sujan Marahatta<sup>1</sup>, Padam Simkhada<sup>3</sup> for the Nepal Federal Health System Team

<sup>1</sup>Manmohan Memorial Institute of Health Sciences, Kathmandu, Nepal, <sup>2</sup>University of Essex, UK, <sup>3</sup>University of Huddersfield, Huddersfield, UK, <sup>4</sup>University of Sheffield, Sheffield, UK, <sup>5</sup>Bournemouth University, Bournemouth, UK, <sup>6</sup>School of Public Health, Patan Academy of Health Sciences, Nepal, <sup>7</sup>PHASE Nepal, Bhaktapur, Nepal, <sup>8</sup>Liverpool School of Tropical Medicine

\*Correspondence: Edwin van Teijlingen, Bournemouth University, Bournemouth Gateway Building (5th floor), St Paul's Lane, Bournemouth, BH8 8GP, United Kingdom, [evteijlingen@bournemouth.ac.uk](mailto:evteijlingen@bournemouth.ac.uk)

## ABSTRACT

This article addresses some of the key Public Health approaches around the ongoing federalisation of the state of Nepal and the associated decentralisation processes in its health system. We start by outlining the main roles of the discipline of Public Health and the contribution it can make to the reform process. Then the next section introduces our on-going study into the effects of the establishment of the Federal Republic of Nepal on the organisation and running of the country's health system. To capture the Public Health benefits of decentralisation, the process should not be only 'top-down', directed by policy elites. Although in theory Nepal's health system has undergone a process of decentralisation, in practice policy and planning is often still being led by the Federal government, despite the clear roles and responsibilities of the three tiers of government in health service delivery. To improve policy and planning in the newly decentralised health system structure, there needs to be meaningful incorporation of the views of stakeholders at all levels (even the very lowest levels). Our project aims to play a part in addressing this by capturing a wide variety of experiences of the decentralisation process.

## INTRODUCTION

"A health system consists of all organizations, people and actions whose primary intent is to promote, restore and maintain health"<sup>1</sup>.

Strong health systems are essential to achieving sustainable improvements in health outcomes<sup>2</sup>. In many Low- and Middle-Income Countries (LMICs), including Nepal, health outcomes remain poor overall, and particularly so among some sections of society due to the existence of deep inequities. Health systems are at the core of how a country responds both to existing health problems and to Emerging or Re-emerging Infectious Diseases (ERIDs) and other new health threats. This has been starkly highlighted by the COVID-19 pandemic which has

challenged the ability of health systems - in Nepal and elsewhere - to manage the consequences of the new virus without undermining their capacity to continue delivering routine health services for all. Failing to achieve both a strong pandemic response and ongoing continuity of operations and services could undermine the progress that Nepal has made in improving population-level health indicators in recent years. COVID-19 has also sorely exposed the resource constraints and long-term under-investments in essential primary and public health functions in most countries around the world<sup>3</sup>. This has placed an extra burden on vulnerable population groups such as children, pregnant and lactating mothers, as well as the elderly and people with chronic diseases, and has left health systems in critical need of strengthening.

**Reforming and strengthening health systems**

Many countries are continuously reforming their health systems and policies in response to socio-economic and demographic changes such as: growing healthcare costs, ageing and stagnating populations, increasing user-demands, the introduction of new medical technology and more expensive drugs<sup>4</sup>. Health system reforms neither guarantee the strengthening of the health system, nor improvements for all sub-groups in the population. According to the World Health Organization (WHO), Health System Strengthening (HSS) is defined as “the process of identifying and implementing the changes in policy and practice in a country’s health system, so that the country can respond better to its health and health system challenges”<sup>5</sup>. The international community has come to recognize the importance of strengthening health systems as a whole. This was partly driven by the need to meet the three health-related Millennium Development Goals (MDGs) by 2015, and the subsequent 17 Sustainable Development Goals (SDGs) by 2030<sup>6</sup>. An important part of efforts towards health system strengthening is the ‘systems thinking’ approach<sup>7</sup> - an understanding that health systems are not simple and linear, but rather complex and adaptive systems; and that the terms health system and health sector are not interchangeable. Broadly speaking, a health system comprises different health sectors, and these multiple “sectors” shape the health outcomes of a nation. Public Health is one key sector.

**The importance of the Public Health sector in health systems**

Core Public Health functions and the contributions of public health practices to any health system are central to that system’s effective performance. Public Health is widely recognised as truly interdisciplinary<sup>8</sup>; it “represents a whole complex of diverse activities calling upon many different disciplines and professions”<sup>9</sup>. Broadly speaking, the discipline of Public Health brings together “prevention and promotion with the population as the target group with a societal focus”<sup>10</sup>. This interdisciplinary nature of Public Health is important in countries’ attempts to achieve the 17 SDGs by 2030, since this requires policies that are cross-sectoral, e.g. the education sector, the health sector or the transport sector,

and synergetic<sup>11</sup>. By chance, in Nepal the commencement of the SDGs coincided with the dawn of federalization of the health system<sup>12</sup>. Just as Public Health is essential to the effective functioning of a health system, it is also fundamental to effective health system strengthening. Particularly pertinent in the context of Nepal is ensuring that vulnerable people- for example, those living in remote areas, impoverished populations and/or otherwise neglected communities<sup>13</sup>-have access to the health care that they need and that they are protected from health risks and associated risks (such as further impoverishment due to health-related out of pocket expenditure). Universal Health Coverage (UHC) and equity focused processes, therefore, are central to Nepal’s health system strengthening efforts. Equity- focused processes, such as, health insurance schemes, free basic health service packages, provisions for transparent and accountable health services and capacity building activities guided by the Nepal Health Sector Strategy and its implementation plan<sup>14,15</sup>, along with UHC Partnership efforts<sup>16</sup> have made some contributions towards this direction. However, UHC in Nepal, remains a goal that is far from being achieved<sup>17</sup>. The approach to health systems strengthening introduced by UNICEF, based on equity focused processes<sup>18</sup>, outlines seven steps to conducting a situational analysis and identifying priority actions for health systems strengthening within the country (see Figure 1). This approach that is aimed at identifying those who are left behind as well as understanding gaps to inform interventions can be valuable in bridging the equity-related gaps in Nepal. Public Health is indeed a key part of each of these steps.

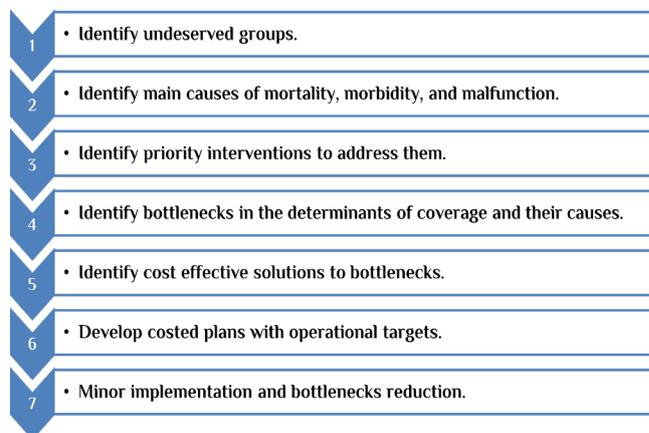


Figure 1. Seven step approach to health system strengthening, including conducting a situational analysis and identifying priority actions<sup>18</sup>

Nepal's current health system strengthening efforts are closely entwined with its ongoing process of federalisation, which includes decentralisation of the health system. These reforms are expected to help Nepal achieve UHC<sup>19</sup>, but it does not automatically follow that federalisation will lead to a stronger health system. The Public Health sector, therefore, has a crucial role to play in helping to guide Nepal's dual health system strengthening/federalisation processes. In principle, federalisation - through constitutional transfer of power, responsibilities and finance from central to subnational (provincial and local) levels of government - creates opportunities for the local level and the end users of health services to be more empowered and to also become more actively involved in decision making within the health system. While federalisation/ decentralisation can create challenges of political and financial complexity<sup>20</sup>, it does bring forth enabling circumstances and opportunities for the Public Health sector to contribute and make a difference - at all levels of governance, from the local up to the national. Indeed, Public Health is critical to decentralisation in at least three distinct ways. To start with, a key Public Health task is to provide data, evidence, information, and advice to assist policy makers and health managers in making the most appropriate decisions. In any health system, not just that of Nepal, Public Health supports those who take the decisions to ensure that the most appropriate care is provided with the resources available in a given population. When - as in Nepal - the health system is attempting to deal with a major pandemic during a period of large-scale organisational reform, that advice becomes even more essential. Secondly, Public Health is one of the service areas affected by the decentralisation process. This is the supply of, and demand for, public health care, including issues of distribution, accessibility, affordability and consumption of health care. This function may include public health officials, practitioners, and/or nurses delivering public health programmes, advice, information, and education, as well as managing epidemics and infectious disease outbreaks, and testing and contact tracing, as per the COVID-19 pandemic<sup>21,22</sup>. For effective public health services and for an effective Public Health

sector contribution, there is a need to clarify roles and responsibilities and strengthen the vertical and horizontal coordination and cooperation among public health professionals and other stakeholders in all three tiers of government. Thirdly, the Public Health perspective is broader than that of any clinical health discipline which often focuses on individual patients, not populations. Therefore, Public Health as a discipline addresses the bigger picture. It tries to elucidate the socio-economic, political, environmental and cultural causes of disease and illness. This wide view also allows Public Health practitioners to take a systemic approach towards the health system, focusing not only on service delivery to individual patients (although, of course, that is critically important), but also on the extent to which the system as a whole is effective in delivering improvements in population health. This system-wide approach is how and where our current research project is framed and situated.

### Outline of a health systems research project in Nepal

In April 2020, we launched an interdisciplinary collaborative research project examining the consequences for the health system of Nepal's move to a federal government structure<sup>22,23</sup>. Nepal's move to a federal system was a major constitutional and political change; it is also an on-going process which we are engaging with and studying in real-time. The 2015 Constitution heralded a complete restructuring of the country's political system, creating a Federal Republic with significant devolution of power and resources from the central government to seven newly created provinces and 753 local governments. Each province has its own legislature and capital, and all local governments have their own elected governing body.

During this transition from a highly centralised governance structure to the new federalised one, Nepal's health system is also undergoing substantial changes<sup>19,24,25</sup>. Many people in Nepal expect federalism to bring about positive changes to the health system, including greater involvement of local people, as well as better financing and evidence-based planning<sup>26</sup>. However, there has been limited research so far on the impact of

federalisation across Nepal's health system, hence our project with the official title: 'The impact of federalisation on Nepal's health system: a longitudinal analysis'. This three-year project explores, from the perspective of health system stakeholders at all levels, what is happening to the country's health systems as a consequence of the overall political devolution of power and responsibility. The project employs a mixed-method approach which involves: participatory policy analysis, key informant interviews and quantitative methods to explore Nepal's health sector reform over the project period. The project is funded by a research grant from the United Kingdom (UK) under the Health Systems Research Initiative (which is funded by the UK Medical Research Council (MRC), UK Economic and Social Research Council (ESRC), the Wellcome Trust and the UK Foreign, Commonwealth and Development Office). The project is led by the University of Sheffield in the UK, with partners and collaborators from across the UK, at the University of Huddersfield and Bournemouth University, and in Nepal, namely PHASE Nepal and Manmohan Memorial Institute of Health Sciences.

### **How do health system stakeholders see and experience federalisation and health?**

Many in Public Health have used sociological ideas around the 'social construction of reality': the idea that our reality is constructed through our interaction, and that such reality does not exist independently<sup>27</sup>. All of us are socialised into our community and society. This socialisation means that "we learn how to see, structure and organise the world"<sup>28</sup> from our social environment. This includes learning to see concepts such as federalisation, the health system, accessibility, etc. Apart from the very young adults, most people in Nepal will have grown up with, and been socialised into, a centralised political and health system. This will be especially the case for those who work within the health system, for whom the current reforms represent a major period of rupture in which they have had to learn to 'see' their new health system. From a research perspective this change might mean that people have thought a little more about the health system and therefore perhaps can offer greater insights to us.

For local stakeholders, decentralisation may offer the hope of more resources as well as greater control over these resources. In theory, federalisation creates democratic values at the local level to foster and broaden people's participation in planning, implementation and evaluation of development activities. However, the devolution of power to the local level has not been as seamless as some might have hoped<sup>29</sup>. There are opportunities and challenges here to ensure that resources are best used to meet the needs of the local population. Local public health programmes and interventions may have a greater chance of being successful than a one-size-fits-all national approach. Local control over services may also be more flexible and responsive to changes in local health needs and requirements. It may also help boost local engagement in health decision making. For example, a variety of benefits have been claimed for health system decentralisation including creating greater efficiency, strengthening accountability, encouraging public participation in decision making, and promoting good governance<sup>30</sup>. The reality however is that resources are finite, especially in low resource settings such as Nepal. Nepal's commitment to UHC and the subsequent healthcare demand will usually outstrip what can be provided<sup>31</sup>. Consequently, there will be a need for prioritisation of how resources are distributed and used. Prioritisation means some areas or services may gain at the expense of others. Such decisions need to be made based on evidence and aim to achieve the maximum health benefit for as many people in the population as possible. Decision makers will need to focus on getting value for money, but also on addressing the health inequalities that exist. For this to happen, a clear and detailed understanding of local needs, capacities and conditions are required. As we described above, Public Health operates at the 'population level' and can see the big picture and produce evidence about it. In particular, Public Health examines inequalities and focuses on vulnerable or disadvantaged population groups where health access and outcomes are usually poor. In LMICs, such as Nepal, inequalities in health are likely to be affected by the failure of health services to reach the poorest in society<sup>32</sup>. Hence, Orach (2009) suggests policy-makers have to prioritise health equity when allocating health

care resources<sup>33</sup>. Moreover, there is an urgent need for global collaboration among policy makers, researchers, and civil society to improve health equity and reduce health inequalities<sup>34</sup>. Changes in the political and administrative structure of the country, particularly federalization and health system decentralization, make new demands on local authorities. The structures and functions of the various tiers of government have to be negotiated, which offers a good opportunity to strengthen the health system whilst also increasing healthcare accessibility. In particular, federalisation has offered an opportunity to revisit the structures and functions of the health system at the federal, provincial and local levels.

The current transition phase allows for innovations at various levels to readjust, rearrange and redefine roles - including wider political commitment to policy reforms and health system strengthening<sup>2,31</sup>. However, many perceive that the present health structures and human resources are not sufficient to provide adequate health service delivery in the light of the changing burden of disease, growing advancement in health care technologies, and population growth<sup>31</sup>. Therefore, the Government of Nepal should move towards achieving the objective of guaranteeing equitable access to health for all including affordable and quality health care to the population. Along with the current structural changes and staff adjustment complexities, there remains a critical shortage as well as a mismatch of health workers' skills at local level, even though Nepal trains more nurses than it employs<sup>35</sup>. These barriers affect in particular the poorest, marginalized and/or populations in remote Nepal<sup>36</sup>. Devkota and colleagues (2018) highlighted that the status of basic physical infrastructure in health facilities is inadequate and poor<sup>37</sup>. Meanwhile, most private hospitals and clinics are concentrated in urban areas, and there is a need for collaboration in monitoring and regulating them. In the absence of a Public Health approach to guiding such processes, the distribution of resources risks being skewed towards those who shout loudest or have greater (political and/or financial) influence. There is also the risk that resources get consumed primarily by hospital facilities. Worldwide some 90% of health activity

takes place outside of hospitals, but hospitals consume 90% of health resources<sup>38</sup>. Thus, hospitals only see the tip of the iceberg of ill health, i.e. only patients who access them, whereas much more care is provided in the community through primary care. Hence the global emphasis is on prioritising health for all, and specifically primary care investment as outlined in the Declaration of Alma Ata<sup>39</sup>. Indeed, where there has been considerable investment in primary care, as in Cuba, health outcomes achieved have been comparable to that seen in higher-income countries at a fraction of the cost<sup>40</sup>. Through a Public Health approach, health resources can be optimally applied to improve population health.

### The way forward

Nepal is at an exciting point in its journey. The 2015 Constitution has envisioned the devolution of power to local governments, the closest unit to the grassroots. The study of the country's federalisation is crucial for its future health planning at local, regional and national level. Moreover, it will help address questions such as "Will decentralisation deliver on the promise of more locally led decisions on resource distribution that is better suited to local needs?" and "Will the teething challenges of establishing new health systems lead to inefficiencies, tensions and wastage?" Since the national health system is a blend of health systems at Federal, Provincial and Local Level, a harmonized approach in strengthening across different levels will be crucial.

### Conflict of Interest

This interdisciplinary study of the decentralisation of the Nepal health system has been awarded a research grant from the Health Systems Research Initiative in the UK [Grant ref. MR/T023554/1].

**The Nepal Federal Health System Team** comprises; S.R. Adhikari, P. Adhikary, J. Balen, B. Bajracharya, S. Bhandari, S. Bhattarai, S. Gautam, A. Karki, J.K. Karki, B. Koirala, A.C.K. Lee, S.B. Marahatta, R. Neupane, S. Panday, U. Paudel, G. Pohl, S. Rushton, S. Sapkota, P.P. Simkhada, M. Subedi, E. van Teijlingen, A. Vaidya, & S.P. Wasti.

## References

1. WHO. Everybody's business--strengthening health systems to improve health outcomes: WHO's framework for action Geneva: World Health Organization; 2007 [Available from: [https://apps.who.int/iris/bitstream/handle/10665/43918/9789241596077\\_eng.pdf](https://apps.who.int/iris/bitstream/handle/10665/43918/9789241596077_eng.pdf).
2. Samuels F, Amaya AB, Balabanova D. Drivers of health system strengthening: learning from implementation of maternal and child health programmes in Mozambique, Nepal and Rwanda. *Health Policy Plan* 2017;32(7):1015-31. doi: <https://doi.org/10.1093/heapol/czx037>
3. WHO. Universal health coverage day 2020: World Health Organization; 2020 [Available from: <https://www.who.int/campaigns/universal-health-coverage-day/universal-health-coverage-day-2020> accessed February 20 2022.
4. Polin K, Hjortland M, Maresso A, et al. Major health reforms in 31 high-income countries in 2018 and 2019; expert informed identification, clustering, and analyses over time of 'top-three' national reforms. *Health Policy* 2021 doi: <https://doi.org/10.1016/j.healthpol.2021.04.005>
5. WHO. Health systems strengthening glossary: World Health Organization; 2011 [Available from: [https://ugc.futurelearn.com/uploads/files/03/ab/03ab4cff-b962-4d29-87a4-41f1ff4ea81d/Health\\_Systems\\_Strengthening\\_-\\_Glossary.pdf](https://ugc.futurelearn.com/uploads/files/03/ab/03ab4cff-b962-4d29-87a4-41f1ff4ea81d/Health_Systems_Strengthening_-_Glossary.pdf) accessed February 2022.
6. United Nations General Assembly. Transforming our world: the 2030 agenda for sustainable development 2015 [Available from: <https://sdgs.un.org/2030agenda>.
7. Savigny D, Adam T. Systems thinking for health systems strengthening. Geneva: World Health Organization 2009.
8. van Teijlingen ER, Regmi PR, Adhikary P, et al. Interdisciplinary research in public health: Not quite straightforward. *Health Prospect: Journal of Public Health* 2019;18(1):4-7. <https://doi.org/10.3126/hprospect.v18i1.19337>.
9. Suchman E. Sociology and the field of public health. New York: Russell Sage Foundation 1963, P 26:26
10. George M. Public health-oriented healthcare systems: Need for a modified typology. *National Medical Journal of India* 2019;32(3)
11. Nilsson M, Griggs D, Visbeck M. Policy: map the interactions between Sustainable Development Goals. *Nature* 2016;534(7607):320-22.
12. KC A, Bhandari A. Lessons from the field: progress towards the sustainable development goals in Nepal in federal transition of the state. *Archives of Disease in Childhood* 2020;105(9):817-18. doi: <http://dx.doi.org/10.1136/archdischild-2019-318505>
13. MoFE. Vulnerability and risk assessment and identifying adaptation options: Summary for policy makers. Kathmandu, Nepal: Ministry of Forests and Environment, Government of Nepal, 2021.
14. MoHP. Nepal health sector strategy 2015-2020. Kathmandu, Nepal: Government of Nepal, Ministry of Health and Population, 2015.
15. MoHP. Nepal health sector strategy implementation plan 2016-2021 Kathmandu, Nepal: Ministry of Health and Population; 2017 [Available from: [http://climate.mohp.gov.np/downloads/Nepal\\_Health\\_Sector\\_Strategy\\_Implementation\\_Plan\\_2016-2021.pdf](http://climate.mohp.gov.np/downloads/Nepal_Health_Sector_Strategy_Implementation_Plan_2016-2021.pdf).
16. UHC-P. Nepal: Universal health coverage partnership 2022 [Available from: <https://www.uhcpartnership.net/country-profile/nepal/> accessed February 2022.
17. Ranabhat CL, Kim C-B, Singh A, et al. Challenges and opportunities towards the road of universal health coverage (UHC) in Nepal: a systematic review. *Archives of Public Health* 2019;77(1):1-10. doi: <https://doi.org/10.1186/s13690-019-0331-7>
18. UNICEF. The UNICEF health systems strengthening approach 2016 [Available from: <https://www.unicef.org/media/60296/file> accessed February 2022.
19. Thapa R, Bam K, Tiwari P, et al. Implementing federalism in the health system of Nepal: opportunities and challenges. *International Journal of Health Policy Management* 2019;8(4):195-98. doi: 10.15171/ijhpm.2018.121 [published Online First: 2019/05/06]
20. Bhusal T. Long read: Nepal's federalist ambiguities @ LSE blog, of the London School of Economics (Christopher Finnigan) 2019 [Available from: <https://blogs.lse.ac.uk/southasia/2019/03/13/long-read-nepals-federalist-ambiguities/> accessed February 2022.

21. Mooney G. "A menace to the public health"—Contact tracing and the limits of persuasion. *New England Journal of Medicine* 2020;383:1806-08.
22. Adhikary P, Balen J, Gautam S, et al. COVID-19 pandemic in Nepal: Emerging evidence on the effectiveness of action by, and cooperation between, different levels of government in a federal system. *Journal of Karnali Academy of Health Sciences* 2020;3(3):1-11.
23. Rushton S, Panday S, van Teijlingen E, et al. An investigation into the impact of decentralization on the health system of Nepal. *Journal of Manmohan Memorial Institute of Health Sciences* 2021;7(1):3-14.
24. Rushton S, Ghimire S, Marahatta SB. Nepal's bumpy transition to federalism: implications for the health system. *Journal of Manmohan Memorial Institute of Health Sciences* 2019;5(1):1-3.
25. Rushton S. Resilience policymaking in Nepal: Giving voice to communities. Workshop report, January 2019. Sheffield, United Kingdom: The University of Sheffield, 2019.
26. Vaidya A, Simkhada B, Simkhada P. The Impact of federalization on health sector in Nepal: New opportunities and challenges. *Journal of Nepal Health Research Council* 2020;17(4):558-59. doi: <https://doi.org/10.33314/jnhrc.v17i4.2217>
27. Berger PL, Luckmann T. The social construction of reality. New York: Doubleday 1967.
28. Jones K, Moon G. Health, disease and society: a critical medical geography. London: Routledge 1987, P 3.
29. Acharya KK, Zafarullah H. Institutionalising federalism in Nepal: operationalising obstacles, procrastinated progress. *Public Administration and Policy* 2020;23(2) doi: <https://doi.org/10.1108/PAP-03-2020-0013>
30. Muñoz DC, Merino Amador P, Monzon Llamas L, et al. Decentralization of health systems in low and middle income countries: a systematic review. *International Journal of Public Health* 2017;62:219-29. doi: <https://doi.org/10.1007/s00038-016-0872-2>
31. Sharma J, Aryal A, Thapa GK. Envisioning a high-quality health system in Nepal: if not now, when? *The Lancet Global Health* 2018;6(11):e1146-e48. doi: [https://doi.org/10.1016/S2214-109X\(18\)30322-X](https://doi.org/10.1016/S2214-109X(18)30322-X)
32. Wagstaff A, Van Doorslaer E, Van der Burg H, et al. Equity in the finance of health care: some further international comparisons. *Journal of Health Economics* 1999;18(3):263-90. doi: [https://doi.org/10.1016/S0167-6296\(98\)00044-7](https://doi.org/10.1016/S0167-6296(98)00044-7)
33. Orach D, Garimoi C. Health equity: challenges in low income countries. *African Health Sciences* 2009;9(s2):S49-S51.
34. Marmot M, Friel S, Bell R, et al. Closing the gap in a generation: health equity through action on the social determinants of health. *The Lancet* 2008;372(9650):1661-69. doi: [https://doi.org/10.1016/S0140-6736\(08\)61690-6](https://doi.org/10.1016/S0140-6736(08)61690-6)
35. Adhikari R. Vacant hospitals and under-employed nurses: a qualitative study of the nursing workforce management situation in Nepal. *Health Policy Plan* 2015;30(3):289-97. doi: <https://doi.org/10.1093/heapol/czu009>
36. Panday S, Bissell P, Teijlingen Ev, et al. Perceived barriers to accessing Female Community Health Volunteers'(FCHV) services among ethnic minority women in Nepal: A qualitative study. *PLoS One* 2019;14(6):e0217070. doi: <https://doi.org/10.1371/journal.pone.0217070>
37. Devkota HR, Murray E, Kett M, et al. Are maternal healthcare services accessible to vulnerable group? A study among women with disabilities in rural Nepal. *PLoS One* 2018;13(7):e0200370. doi: <https://doi.org/10.1371/journal.pone.0200370>
38. Stange KC, Ferrer RL. The paradox of primary care. *The Annals of Family Medicine* 2009;7(4):293-99. doi: <https://doi.org/10.1370/afm.1023>
39. Passmore R. The declaration of Alma-Ata and the future of primary care. *The Lancet* 1979;314(8150):1005-08. doi: [https://doi.org/10.1016/S0140-6736\(79\)92572-8](https://doi.org/10.1016/S0140-6736(79)92572-8)
40. Keck CW, Reed GA. The curious case of Cuba. *American Journal of Public Health* 2012;102(8):e13-e22.