Reorienting health systems towards Primary Health Care in South Asia

Susie Perera,[a] Sudha Ramani,[b,c,*] Taufique Joarder,[d] Rajendra S. Shukla,[e] Shehla Zaidi,[f] Nalinda Wellappuli,[g] Syed Masud Ahmed,[h] Dinesh Neupane,[e] Shankar Prinja,[i] Archana Amatya,[j] and Krishna D. Rao[e]

[a]Ministry of Health, Sri Lanka
[b]India Primary Health Care Support Initiative, Johns Hopkins India Pvt Ltd, India
[c]Independent Consultant, Health Policy and Systems Research, India
[d]SingHealth Duke-NUS Global Health Institute, Singapore
[e]Johns Hopkins University Bloomberg School of Public Health, USA
[f]Global Business School for Health, University College London, London
[g]Centre for Health Economics and Policy Innovation, Imperial College Business School, London, United Kingdom
[h]BRAC James P Grant School of Public Health, BRAC University, Bangladesh
[i]Postgraduate Institute of Medical Education and Research Chandigarh, India
[j]Nick Simons Institute, Nepal

The Lancet Regional Health - Southeast Asia 2024;28: 100466

Published Online 20 August 2024
https://doi.org/10.1016/j.lansea.2024.100466

Summary

This series, "Primary health care in South Asia", is an effort to provide region-specific, evidence-based insights for reorienting health systems towards PHC. Led by regional thinkers, this series draws lessons from five countries in South Asia: Bangladesh, India, Nepal, Pakistan, and Sri Lanka. This is the last paper in the series that outlines points for future action. We call for action in three areas. First, the changing context in the region, with respect to epidemiological shifts, urbanisation, and privatisation, presents an important opportunity to appraise existing policies on PHC and reformulate them to meet the evolving needs of communities. Second, reorienting health systems towards PHC requires concrete efforts on three pillars-integrated services, multi-sectoral collaboration, and community empowerment. This paper collates nine action points that cut across these three pillars. These action points encompass contextualising policies on PHC, scaling up innovations, allocating adequate financial resources, strengthening the governance function of health ministries, establishing meaningful public-private engagements, using digital health tools, reorganising service delivery, enabling effective change–management processes, and encouraging practice-oriented research. Finally, we call for more research-policy-practice networks on PHC in South Asia that can generate evidence, bolster advocacy, and provide spaces for cross-learning.

Funding WHO SEARO funded this paper. This source did not play any role in the design, analysis or preparation of the manuscript.

Keywords: Primary Health Care; South Asia; Health systems; Health policy; Way forward; Call to action; Urban; Chronic diseases; Private sector; Alma Ata; Astana; Comprehensive primary health care; Community health workers; India; Bangladesh; Sri Lanka; Pakistan; Nepal

Introduction

South Asia is vibrant and stands in the midst of many transformations. In many ways this region's role in the new global economic order will be determined by its ability to improve population health, lessen health inequities, and be crisis resilient. Health systems that are oriented towards Primary Health Care (PHC) are essential for these achievements.[1,2] Evidence suggests that interventions at the primary levels of care can contribute to reducing the top causes of mortality in Low and Middle Income countries and are essential to combating the multifaceted disease burden in South Asia.[3–5] Health systems oriented towards PHC, that integrate Essential Public Health Functions, are better positioned to detect, respond to, and recover from crises.[6,7] In doing all this, PHC-oriented health systems support the Universal Health Coverage (UHC) movement, and advance the wider agenda of sustainable development in the region.[8,9]

DOIs of original articles: https://doi.org/10.1016/j.lansea.2024.100454, https://doi.org/10.1016/j.lansea.2024.100463
*Corresponding author.
E-mail addresses: sudha_ramani@yahoo.com, sudha921@gmail.com (S. Ramani).

This series "Primary health care in South Asia" provides evidence-based reflections from five South Asian countries—Bangladesh, India, Nepal, Pakistan, and Sri Lanka. This series, positioned at the threshold of several demographic and epidemiological changes in South Asia, have been led primarily by regional thinkers, researchers, and policymakers, and supported by international experts in this field.

This is the final paper of the series and a call to action. The paper summarizes the learnings from the previous papers in the series and also makes cross-cutting recommendations for shaping the future of PHC-oriented health systems in the South Asian region. In this paper, we draw from the definition of PHC, first articulated in the Alma Ata in 1978 and re-iterated at Astana in 2018, as an approach that rests on the three pillars of integrated services, multi-sectoral collaboration, and community empowerment.[10,11] We also use the term 'PHC services' specifically, to refer to services pillar comprising primary care and essential public health functions. PHC services includes range of preventive, promotive, curative and rehabilitative services at individual and population level provided at primary levels of care.

The methodology we followed for summarising the learnings in this paper is briefly described below. We drafted an initial concept note for this paper in November 2022. Following this note, between November 2022 and March 2023, the author group of this paper discussed drafts of the series papers and put forth a set of tentative action points. These action points were further whetted through online consultations and one face-to-face deliberation with series authors. Finally, we had an expert group consultation comprising global experts on PHC and experts from South Asia, who commented on these action points. Figure 1 in the annex details out the process we followed for arriving at the action points recommended in this paper.

Where are we now?

In South Asia, the core principles of PHC, such as concern for equity, community participation, intersectoral coordination, appropriate technology and health promotion, have historically been an integral part of policy intent.[1,10] All five countries were signatories to the Alma Ata Declaration in 1978.[12–15] Much progress has been made in these countries since the early days of commitment to PHC. In all five countries, the foundation of a hierarchical health delivery structure in the public sector, with a broad base for PHC service delivery, has been established, though the structure varies in specifics.[16] All five countries have established Community Health Worker (CHW) programs.[17] Overall gains in the region with regard to prevention and control of infectious diseases, and improved maternal and child health outcomes have been noted[16] (See annex Figure 2 for improvement in specific indicators). Moreover, some places, such as Sri Lanka and the states of Kerala and Tamil Nadu in India, have been acclaimed as models of public sector financing of "good health at low costs".[18] In some contexts, particularly in Bangladesh, NGO-led programmes have also complemented national efforts and contributed to dramatic improvements in specific areas like maternal and child health.[19]

The development of robust PHC-oriented health systems, however, has met with variable success.[9] Most countries in the region have low levels of public investment in developing PHC-oriented health systems. There is a predominance of disease-specific healthcare delivery strategies, and a focus on the provision of selective rather than comprehensive services. Across the region, a thriving private sector exists, which presents both challenges and opportunities for the future.[19] This sector plays an important role in the provision of health care, particularly curative care, and accessing this sector often involves out-of-pocket (OOP) payments. The share of OOP expenditures as a percentage of total health expenditures is large across South Asia, ranging from 44 to 73% in the five countries, with Sri Lanka having the lowest at 44%; but even in Sri Lanka, rising OOP among lower-income groups has been of policy concern .[15,16] Additionally, the overall gains in health conceal persistent inequities pertaining to gender, caste, religion, and geography in subpockets of the region.[20–22]

Adding to this are the 'new age' health concerns in South Asia. The health needs in the region are changing due to changing demographics, ageing, and rapid urbanisation.[1,5] The burden of Non Communicable Diseases (NCDs) and injuries in the region is rising, even while infectious diseases—long-standing and recently emerging ones—pose a threat.[23,24] The rapid pace of urbanisation has led to several health risks, such as road-traffic injuries, pollution-related health conditions and poor living conditions among the urban poor.[25,26] Health outcomes among the urban poor are further compromised due to a lack of access to quality health care, despite geographical proximity to health services.[27] Additionally, there is increasing evidence that certain populations — such as those disadvantaged due to gender, caste, and economic status — are more vulnerable to the negative impacts of these 'new-age' issues.[20,28] It is clear that certain segments of the population in the region have benefited from the region's growing digitization 'boom', but much more work needs to be done before these benefits can attain wider reach.[29] These issues have been highlighted in the papers in the series and summarised in Panel 1.

Shocks such as the COVID-19 pandemic as well as other climate change related-catastrophes, have also added another layer of complexity to reorienting health systems towards PHC in the region. In the aftermath of

Panel 1: Where are we now? A situation summary of PHC in South Asia

- All five countries in the region have adopted PHC as an integral strategy in their health systems.
- All countries have made progress with respect to infectious diseases, and maternal and child health, but the progress has been uneven across countries. The burden of non-communicable diseases is increasing while communicable diseases continue to pose a threat.
- PHC services are delivered through a pluralistic (allopathic and alternative medicine), and mixed health system (public and private) in the region.
- Public expenditure on PHC services is not commensurate with the aspirational commitments expressed in policy documents. Out-of-pocket expenditures for ambulatory care contribute to a large share of health expenditures resulting in financial hardship to many, particularly the economically vulnerable.
- All five countries have taken steps to increase the availability of trained health workers, but are yet to achieve the World Health Organisation's density threshold of 44.5 health workers for 10,000 people. The low quality of pre-service education remains an issue. Further, the maldistribution of health workers, lack of mentoring and professional support, workforce coordination issues, and the need for clear career progression pathways have been concerns across countries.
- All countries have community engagement processes such as statutory health committees and other platforms for advocacy, social mobilization and improved accountability, with varying levels of success.
- Multi-sectoral action for health has been a part of policy intent in all five countries. But its potential has not been fully realised, despite scattered examples of success.

The increasing burden of NCDs in South Asia

- The region has a high burden of NCDs, high levels of modifiable risk factors, and high mortality (66%–83%) due to NCDs.
- Impact of NCDs is disproportionately high among disadvantaged and marginalised populations.
- Numerous directives, guidelines, and plans for combating NCDs have been developed across the region.
- Despite policy-level awareness, the preparedness of health systems for tackling chronic conditions is weak.
- Several innovative, small-scale schemes to tackle NCDs exist in the region that can be scaled up.

Rapid urbanization in South Asia

- South Asia is rapidly urbanizing; the by 2050, the urban population will nearly double and the majority in many countries will be urban residents.
- Rapid urbanization in South Asian cities strains infrastructure, housing, and exacerbates pollution, disproportionately affecting migrants and the urban poor.
- Important achievements have been made in urban health and service coverage outcomes, especially in Sri Lanka; however, NCDs are increasing in South Asian cities.
- South Asian cities are characterised by sharp socio-economic inequalities in health and access to health care. Inadequate housing, lack of sanitation and water, and unfavourable working conditions compromises health outcomes in the urban poor.

The increasing footprint of private healthcare in the delivery of PHC services

- High utilization of the private sector for curative care.
- An unregulated private sector including informal providers, provides curative outpatient care to many underserved communities (particularly in India and rural Bangladesh).
- Informal collaborations with Non Governmental Organizations (NGOs) and private providers exist in the region, such as for routine immunization in Sri Lanka, Bangladesh, India and Pakistan.[30] There are also formal discrete public-private arrangements for general primary health care services.
- The COVID-19 pandemic has provided a stimulus to Public Private Partnerships on diagnostics and hospitalisation care in South Asia. However a lack of stewardship and a failure to ensure continuity beyond the pandemic response can limit the long-term partnership impact.[31]

Source: Series papers.

these shocks, countries face the challenge of sustaining government spending on public health despite additional fiscal pressures.[32] At the same time, the COVID-19 pandemic has also served as an 'eye-opener' and brought to light the existence of critical shortfalls in the national health systems of the region.[33–36] The pandemic has highlighted the significance of many foundational elements of the PHC approach, such as the need for collaborative action using a whole-of-society approach for prevention and early detection of diseases, and the importance of community engagement processes during crises.[16,25] It has also opened the door for more experimentation with digital technologies. Despite inflicting a heavy cost on countries and communities, the pandemic has presented a window of opportunity for focused political advocacy and action on PHC in the region.

The way forward: key takeaways from the series

Within policy circles, there has been recognition of the multiple changes happening in South Asia, in terms of population ageing, urbanisation, and epidemiological shifts. The papers in this series note the existence of many policies pertaining to PHC that acknowledge these transitions. But history has shown that countries in the region have not always been able to put into action, in full measure, the powerful ideas advocated by policies on PHC. This is also, in part, because transformational, 'macro-level' changes in these policies have been fewer in the region in the recent years. In the absence of support from such 'macro-level' changes, the 'micro' or 'meso' level interventions in health systems become less effective.[37] Panel 2 emphasises this point with lessons from countries in other parts of the world.

Under the usual modus operandi, generating political leverage for such macro-level transformations is seen as a mammoth task. But internal and external crises—particularly epochal events like the pandemic—often open a window of opportunity to establish collaborative networks across stakeholders, garner political leverage, and usher in deeper, more meaningful reforms.[45] The time is ripe in South Asia for such reforms.

In Panel 3, we have summarised action points directly from the three thematic papers in this series for strengthening systems and policies pertaining to PHC. In addition, we present nine cross-cutting action points from the entire series below.

Panel 2: Lessons from beyond our region on reorienting health systems towards PHC

Lessons from countries that have reoriented their health systems towards PHC or made rapid advances in this direction, such as Brazil, Costa Rica, or Ethiopia, suggest that sweeping, multi-faceted changes have enabled this.[38–40] These countries, in the past, have used an existing 'window of opportunity' to garner political will; and have worked with different system 'levers,' such as stronger investments, innovative financial mechanisms, improved PHC service delivery designs, deeper provider and community engagement processes, and incentives-to bring about broader and deeper changes in health systems as a whole.[38,39,41] Experiences from these countries suggests that historical decisions and colonial legacies are difficult to unravel without shaking the existing system considerably. However, there is often an unwillingness to disturb the status quo with respect to PHC. This is partially because the effects of doing so may not be tangible within short political cycles, and thus not get considered as politically meaningful.[42] Also, deeper systemic reforms can feel less tangible to policymakers than the more short-term, so-called 'game-changers'. And yet, without adequate political leverage, it has been seen time and again that systemic reforms on PHC lack teeth.[43,44] The countries in the region need to use the present global attention to PHC opportunistically to counter the ills of inherited policy and system structures, and incorporate meaningful changes in health systems.

Panel 3: Summary action points from the thematic papers of the series

1.Integrate action on NCDs with PHC	2. Develop contextualized urban models for PHC	3. Adapt existing CHW programmes
Reform and resource PHC services to deliver care for NCDs in an integrated manner.	Increase financial resources and optimal use of resources for urban PHC service delivery.	Pay CHWs adequately and as professional health workers.
Ensure sustained political and financial commitment for NCDs at high levels of policy and practice.	State/provincial governments have stewardship over urban municipal bodies for health, and provide them with adequate financial resources, and technical support.	Provide adequate and consistent funding in national/ sub-national budgets for CHWs.
Develop the capacity of the workforce to deliver care for NCDs; CHWs to focus on early detention and health promotion on NCDs.	Urban local bodies and citizen groups need to be involved in urban planning.	Develop policies that support career pathways that foster the professional and personal development of CHWs.
Effective stewardship by the public sector to coordinate policies, strategies, and multisectoral plans on NCDs.	Better multisectoral collaboration addressing urban planning, zoning, and environmental pollution.	Create effective mechanisms for the professional training and support to improve motivation and the range of their functions.
Multi-sectoral action to include commercial determinants of health, alcohol and tobacco policies.	Develop context-specific care models for the delivery of urban PHC services.	Provide greater clarity of roles and responsibilities of CHWs and institute compassionate and supportive supervision.
Shift focus to regionally relevant risk factors and diseases, and on palliative care.	Ensure quality services and financial protection to economically vulnerable populations through expansion of public sector services and strategic engagement with private providers, particularly those serving poor populations.	CHW programs in urban areas need to be context specific and not replicas of rural models.
Improve the supply of World Health Organization-recommended essential NCD medicines and technologies.	Health should be a consideration in all urban policies.	Explore ways in which CHWs capabilities can be enhanced using digital health tools.
Community engagement should be central to NCD management strategy; this includes community screening, and home-based care.		CHWs should be the foundation of PHC teams and need to be better integrated into these teams.

Source: Series papers.

Action point 1: Align policies on PHC with national and sub-national needs and capacities

As evident from this series, policies on PHC in the South Asia region, typically reflect national priorities, and to varying degrees, donor agendas and international commitments that countries have made. One of the drawbacks of policies aligned heavily with international priorities is that countries or sub-national entities do not always have the health system capacities to implement them.[46] For instance, human resource endowments can vary substantially within countries necessitating locally feasible adaptations of policy strategies that recognise such constraints. One of the main issues that Ahmed et al. (2024) point out is that national health systems (and partners) are ill-prepared to implement the comprehensive NCD frameworks that are in vogue.[24] This misalignment of policies, derived from national or international framings, with those of local capacities, is not just a problem of the South Asian region alone. Juma et al. (2018) point out that NCD policies in the African region need to become more 'domesticated'.[47] One way to address these issues is for governments to support and require bottom-up planning in health policies, so as to incorporate the voices of local level health

Panel 4: **Policies on PHC must account for a comprehensive range of region-specfic health concerns**

In South Asia, old, new, re-emerging, and newly recognised health conditions co-exist with one another; and the interactions between these have created a formidable 'modernised' disease burden in the region at present[5] While we acknowledge the urgent need to bolster action on NCDs, this move must not take attention away from other equally important issues in the region. Even though maternal and child health, as well as outcomes related to infectious diseases, have significantly improved in the region, the battles in these directions are far from over. In addition, region-specific concerns, such as snakebites, malnutrition, heat-related mortality, and regional tropical diseases (such as Visceral Leishmaniasis and Kyasanur Forest Disease), also need policy attention. Thus, renewed policies on PHC must ensure that they account for a broad range of region-specific concerns.

system managers and citizens. Revised policies on PHC must account for country-specific heterogeneity in health issues (see Panel 4). Further, these policies must also support the framing of these issues as larger societal challenges that need cross-sectoral collaboration.[48,49] There is a need to establish multi-sectoral platforms for formulating unified policies on PHC with commonly defined goals.

Action point 2: Encourage innovations and their scaling up

The papers in our series are replete with examples of locally appropriate solutions to strengthen PHC. For example, Prinja et al. (2024) refer to many innovations in the region including governance initiatives such as the Friends of Health Service Committee initiative (Sri Lanka) and the One School, One Health Worker policy (Nepal); and financial initiatives such as capitation-based contracting in general practitioners under the UHC pilot (Pakistan).[16] Innovations in urban health related to governance of urban local bodies, and improving health services in urban slums have been documented by Rao and others (2024).[25] Beyond our series, there is evidence that COVID-19 has spurred the increased use of innovative digital technologies to support PHC (teleconsultation mechanisms, e-diagnosis, health education of communities through digital means, digital monitoring, and surveillance).[50]

Innovations are important for health systems to adapt to changing environments and needs. Increased public funding for health is critical to encourage innovations that are locally relevant and have the public good in mind. These innovations can be in the health sector, as well as in the non-health sectors but which have implications for PHC and population health broadly.

The papers in our series highlight that innovations need to find their way more extensively into formal policies. One way of doing this could be by incorporating formal publicly supported policy–feedback processes that encourage documentation of innovations and thereby strengthen the capacity of governments to codify lessons from both, best practices and failed innovations. Besides documentation, there is also a need to support the wide dissemination of new ideas for meaningful inclusion and scaling-up of localised pilots. This can be done through supporting policy 'entrepreneurs' with financial resources and enabling them form coalitions and multistakeholder networks that can advocate for new ideas in policy agendas. New ways of disseminating and rewarding ideas using digital platforms can also be tried out. For example, in Kerala (India), the Green Kerala Express is a television 'game show' competition where innovative rural sustainability efforts pertaining to multiple development issues (agriculture, health, education and more) are showcased. The game-show includes a financial incentive for the winners.[51]

Action point 3: Increase public financing for PHC services and improve efficiency of resource use for better financial protection

Public spending on health services as a proportion of national income has historically been low in South Asia, and this is particularly true for PHC services. Estimating expenditures on PHC services is challenging due to definitional, informational, and methodological issues. One study estimated that per capita total (government) current health expenditure on PHC services is $24 ($3) in low-income countries, and $52 ($16) in lower and middle-income countries, and $169 ($73) in upper middle income countries.[52] In South Asia, total (government) per capita expenditure on PHC services in 2018 was estimated at: Sri Lanka $60 ($13), Bhutan $47 ($37), Nepal $38 ($10), India $32 ($11), and Pakistan $24 ($7).[52] This highlights the fact that the majority of outpatient services are financed via out-of-pocket payments. High levels of out-of-pocket spending creates financial barriers to care-seeking and contributes to financial hardship and impoverishment, particularly for economically vulnerable groups. Low public spending on PHC services in South Asia is partly driven by the limited fiscal space in government budgets and the economic difficulties faced by several countries in the region. Prioritizing health in government budgets is also an issue–the share of health in government expenditures was 3.8% in Bangladesh, 3.3% in India, 4% in Nepal, and atleast twice as much in Sri Lanka (7%) and Bhutan (10%). Potential strategies for increasing and securing public financing have been summarized in Panel 5.

Improving the efficiency of public spending is equally important. This could be achieved by spending on cost-effective interventions, investing in health

Panel 5: **Strategies for increasing and securing public financing for PHC services**

The use of earmarked taxes–taxes for which revenue can only be spent on specific activities like health—can be potentially explored to protect funding for health. India for example, has earmarked income-taxes for health in the form of "health and education cess" and a "Swachh Bharat Cess" for improving sanitation facilities. "Health taxes" are another source for earmarked health funds; these are taxes imposed on products that have a negative public health impact, such as tobacco, alcohol, or sugar-sweetened beverages. They offer the dual advantage of reducing consumption of harmful substances while generating additional revenues. The potential of health taxes for supporting universal health coverage policies, as demonstrated in countries like the Philippines and other countries, has not been exploited in South Asia.[53] Other innovative mechanisms to increase tax revenues that have been attempted in other countries include taxes on mobile phone use or airline tickets.[54] Governments in the region can also establish a regional partnership to jointly raise funds for common health concerns through funding commitments linked to market mechanisms, and negotiate better prices for drugs and medical supplies from manufacturers through long-term purchase commitments of bulk purchases.

promotion and disease prevention and using generic drugs rather than patented ones. It could also be done by changing how health workers are paid. Most cadres of public sector health workers in South Asia are usually paid fixed salaries, which provides few incentives to increase productivity, coverage, or patient responsiveness. Changing the way providers are paid, for example, to shift to capitation or blended payments involving capitation, can change their behaviour to further health outcomes such as increased attention to preventive services, increased coverage, and better quality of care.[52] However, there is mixed evidence on blended payments and pay for performance models for health workers.[55] Another way to ensure efficient use of public funding allocated at primary levels of care is to strengthen community oversight of health facilities. For example, each level of the PHC service network in Bangladesh has community representative committees to encourage community engagement in decision-making.[56] Committees to encourage community engagement in decision-making.

Providing financial protection for health is a key challenge in South Asia, though there are models that offer a way forward. Increased public financing for PHC services, and stronger public sector provisioning of PHC services needs to be the cornerstone of financial protection strategies in the region. The large presence of private providers (both for-profit and not-for-profit) in markets in the region, may necessitate strategic purchasing engagements with private providers as part of financial protection strategies. Several notable attempts have been made in this regard. For example, in Bangladesh, limited healthcare capacity of local urban bodies has been supplemented through contracting PHC services from private providers.[57] In India, hospital services are purchased through a publicly funded national health insurance scheme (PM-JAY) for economically vulnerable populations, which offers a model for extending to outpatient services too.[58]

Action point 4: Strengthen governance capacities of ministries of health (MoHs)

The papers in our series highlight the need to strengthen the governance capacity of MoHs to provide stewardship and direction to reorient health systems towards PHC, and support this strategic vision with more funding and resources. MoHs must take responsibility to track progress on PHC using region-appropriate metrics.

In addition to formal governance roles, we call for strengthening the evolving governance roles of MoHs described by Sriram et al., 2020.[59] These include improving the capacity of MoHs to anticipate, prepare for, and respond to contextual changes, including political, epidemiological, demographic, pollution, and climate-related changes.[59] In the urban context, strong and active local urban bodies are critical for effective urban PHC services and health; MoH's need to actively support local urban bodies through adequate financing, capacity building, and stewardship.[25,60]

Another emerging expectation is that MoHs explore modes of governance that enable closer collaboration with other portfolios, and support integrative action on social determinants of health. However, MoHs often lack power to fund or demand action beyond their portfolio boundaries. PHC, as a strategy and philosophy, emphasises multi-sectoral, whole-of-government, and whole-of-society approaches. Inclusive governance for PHC calls for leveraging structures and mechanisms that support collaboration across sectors, as well as promote civil society inclusion.[61,62] Though the inclusion of such collaborative and participatory approaches has long been aspired to in health policies in South Asia, it has translated into action only in limited ways.[63] One important barrier to cross-sectoral action lies in the way issues are presented in policy circles. For instance, tackling undernutrition or obesity usually gets framed solely through the lens of health benefits, rather than as a societal challenge, limiting buy-in from other sectors. The identification of evidence-led interventions for other sectors to tackle what is perceived to be a 'health sector' issue is also weak, as seen in the case of NCDs.[24] Further, MoHs may lack the power and authority to convene other ministries for health, as seen in the case of pandemics and disaster shocks.[64] All this calls for networked governance-building coalitions of support across sectors, and for coordination platforms

housed in common planning and development structures to support synergistic action.

Finally, it is increasingly being realised that a top-down, rigid and hierarchical approach to governance is not likely to succeed in addressing the complex PHC governance challenges in the 21st century. We believe that building a governance eco-system based on trust, transparency, and accountability, making room for a broad range of voices including community voices, can deepen the foundations of participatory and collaborative governance.

Action point 5: Strengthen the health workforce and service delivery

The papers in this series point to several limitations in the capacity of health systems in the South Asia region to deliver PHC services due to infrastructural deficits, limited availability of drugs, and shortages and maldistribution in health workers. Further, the series papers also point to challenges pertaining to health worker capacities-including technical capacity, leadership skills, motivation, responsiveness, and community orientation. Top-down regulatory measures -such as fingerprint scanners to reduce absenteeism among health workers- are inadequate solutions to these issues.[65] Similarly, typical in-class style training programs are likely to have limited impact. Institutionalized mentoring over longer periods of time that provide skill building along with both professional and personal support can improve the performance of health workers.[66,67] Other approaches such as the encouragement of reflective practice or the use of tools for Participatory Learning and Action show promise in both, motivating health workers and stimulating further learning.[68]

For PHC services to be delivered in a comprehensive and integrated manner, several levels of reforms are necessary. First, policies need to emphasize service delivery approaches that integrate promotive, preventive, curative and rehabilitative services, and essential public health functions.[9] Second, the verticalization of the health system, particularly at the district/provincial level and below needs to be reduced so that the focus shifts to providing a comprehensive range of services. Third, team-based approaches to the delivery of care, which require community and facility-based health workers to work as integrated "PHC teams", are critical. "PHC teams" need to be better integrated with specialist care.[69] Finally, facilities that provide PHC services within a district/province can be linked with each other and with the district/provincial level hospital as a "network of care". In "networks of care", linked institutions collaborate as partners for sharing of information, resources, health workers, and this has been shown to improve comprehensiveness, integration and quality of care.[70]

Engaging communities is an essential element of efforts to re-organize PHC service delivery. Countries with effective community engagement models, such as in Costa Rica and Brazil, have undertaken empanelment processes whereby catchment communities are linked with a particular 'PHC team' and health facility.[40,70] Empanelment enables clarity on who PHC teams are responsible towards, as well as who people in the community should look for when they need health services.[71] Moreover, empanelment processes such as routine home visits, collecting information on community health strengthen linkages between PHC teams and help target services to households in-need. Another way of engaging communities in service delivery is by supporting community platforms that promote community-led monitoring of service provision and quality. In Chhattisgarh in India, community-led monitoring, planning, and action has been shown to contribute to identification of gaps in health services, and to reduction in child malnutrition rates and mortality rates.[72] We also advocate for CHWs to expand their customary roles to act activists on behalf of the community.[17] As exemplified from a study in Bangladesh, CHWs can inform communities about their health rights and entitlements.[73]

Panel 6 describes efforts in Sri Lanka to reorganise service delivery, an important strategy for this country.

Action point 6: Align private sector partnerships towards national policies on PHC

Private sector providers are a major source of ambulatory care services in many South Asian countries.[75] The private sector is heterogenous, comprising both qualified private providers in the for-profit and not-for-profit

Panel 6: Service delivery reorganisation: The Sri Lanka experience

The public health system in Sri Lanka has a proven track record of health achievements and is acknowledged globally as an effective, low-cost model. The comprehensive system for primary level care that was established in the 1920s in the country, with a strong emphasis on maternity and child health as well as the prevention and treatment of infectious illnesses, is at least partially responsible for Sri Lanka's health advancements (Life expectancy 67.5–74.9 (year 2020), Infant Mortality Rate 6.4 and Maternal Mortality Ratio 36 (year 2018).[15] The government's present concern is about sustaining the country's health achievements, given the changing context of ageing, the increasing burden of NCDs, and growing out-of-pocket expenditures in the country. To address this concern, efforts are being made to reorganise service delivery. This includes linking peripheral health centres to referral institutions to form a 'care cluster' that shares resources, including medicines, diagnostics, and healthcare workers, and having a defined catchment area that the cluster is accountable for.[74] A unique ID for patients, digital recording systems, and more investment in human resources and drugs have also been envisioned to strengthen service delivery.

sector.[76] Government partnerships with the not-for-profit sector for health have historically existed across the region. More recently, larger, for-profit public-private partnerships (PPPs) have shown promise in some contexts to supplement government coverage of PHC services. But for these partnerships to be successful in improving population service coverage and health outcomes, there needs to be strong government stewardship and alignment with national and sub-national policy goals for PHC.

In India, Nepal and Bangladesh, there also exists a market of licensed practitioners from non-allopathic medical streams such as Ayurveda, Yoga, Unani, Siddha and Homeopathy.[77–79] Further, there are a number of informal providers such as drug retail shop owners, traditional birth attendants and other practitioners, who lack formal medical training and operate outside of government oversight.[80] In many geographies, these informal providers are the first-contact providers for rural and urban poor populations.[81,82] There is a need to strategically engage with all these types of private providers, particularly in geographies where they have a dominant presence, to improve PHC service coverage. More loosely structured partnerships with this sector are important, to counter issues of fragmentation and improve capacities of the informal health workforce.[83]

Within the context of a public primary level health facilities and its catchment community, engagement with local private providers can involve convening regular meetings to discuss local health issues, providing guidance on referrals, accreditation, and providing trainings. Such networks of health care providers led by the local primary level health facilities can result in better information about local health problems, leading to better quality of services for the local population. Such networks have been tried previously, particularly in relation to tuberculosis care in many countries, but can be extended to other disease conditions as well.[84]

Action point 7: Exploit the potential of digital health

Digital health interventions pertaining to PHC, ranging from simple to complex, are becoming increasingly prevalent in South Asia. Some examples of such interventions include applications that enable rural residents to access routine health screenings at home, telemedicine services that help connect patients to specialists, electronic patient records linked to unique health identifiers, mLearning programs for CHWs, maternal mobile messaging programs, mHealth audio messaging, and improving health education, communication and data accuracy.[85–87] There is also possibility of artificial intelligence expanding the potentialities and prevalence of digital health interventions in the future.[88]

Digital health interventions can contribute to strengthening service delivery, multi-sectoral action and community engagement, especially for underserved communities. Integrating digital technologies such as telemedicine, and decision-support systems for improving quality of clinical care can support task-sharing and address physician deficiencies in underserved areas.[88] Text messaging reminders to patients and health workers can increase the coverage of preventive services and treatment adherence. Electronic record keeping can reduce the data reporting burden of health workers freeing up time for other important activities. Blockchain-based supply chain management and health management information systems may have the potential to augment program management on PHC.[89] Digital technologies can strengthen multi-sectoral collaboration by creating platforms that enable engagement of managers across health and non-health sectors. Further, digital platforms such as websites and social media can be used to facilitate participatory problem-solving with communities, and obtain anonymous feedback from communities to health sector stakeholders.[90]

While we recognise that the potential of the above-mentioned interventions must be leveraged by policies on PHC, we also underscore the need to adopt technology in context-appropriate ways, in conjunction with rigorous studies on effectiveness and safety. Safeguarding the interests of vulnerable population groups, who are at the risk of being deprived or discriminated against, is of crucial importance in a rapidly evolving digital health ecosystem.[91]

Action point 8: Put in place purposeful 'change management' processes in health systems

For new policies to be successful, they must be accepted and embedded in national and sub-national institutional contexts. However, achieving this is not easy. From a lens of systems thinking it has been acknowledged that health systems have the propensity to return to a 'status quo' mode of functioning by either actively opposing policy change or by passively accepting it in very superficial ways.[92] This tendency to revert to the 'status quo' explains, in part, why many new initiatives on PHC don't take root and fail to stick. For example, Ahmed et al., 2024 outline numerous challenges associated with attempts to "integrate" NCDs into PHC service delivery. Attempts to 'integrate' NCDs are likely to encounter resistance in health systems that have only been trained to operate (for many years) in highly disease-specific and fragmented ways. This is because verticalised ways of doing and being, over the years, have become an integral part of the institutional fabric in health systems, particularly at primary levels of care, and are hence not easy to change.[93] Integrating NCDs will therefore require *"a change in mindset and practices in programming for health"*, in addition to resources and guidelines.[93]

Bringing about deeper change in the way health systems function, and enabling true reorientation of health systems towards PHC, is challenging. The

Panel 7: **Cross cutting action points for re-orienting health systems towards PHC in the region**

	Primary care and essential public health functions (PHC services)	Multi- sectoral action and policy	Empowered and engaged communities
1. Align policies on PHC with national and sub-national needs and capacities	Policies on PHC should be responsive to local health issues -current, emerging and future. They should be adapted to suit the level of human and financial resources available.	Multisectoral platforms for formulating unified policies with commonly defined goals must be established.	Policies must include citizen voices in the formulation and planning process, through civil society as well as other community platforms such as health committees.
2. Encourage innovations and their scaling up	More public funding for innovations in PHC needed. Policy 'entrepreneurs' must be supported with financial resources.	Innovations that work on multiple social determinants of health must be encouraged.	Community-accessible platforms (example- 'game show' competitions) can be used to showcase and disseminate new ideas.
3. Increase public financing for PHC services and efficiency of resource use for better financial protection	More public financing for PHC services, and stronger public sector provisioning of PHC services needs to be the cornerstone of financial protection strategies.	Explore use of earmarked taxes for health.	Strengthen community oversight of health facilities to improve the efficiency of resource use.
4. Strengthen governance capacities of Ministries of Health	Strengthen health ministry capacities for effective stewardship and responsiveness. Support urban local bodies.	House cross-sector work in common planning platforms. Support the generation of multi-sectoral evidence for health.	Make room within governance structures for a broader range of voices- including community voices- to be incorporated.
5. Strengthen the health workforce and service delivery	Revisit capacities of health workers to deliver PHC services. Build capacity and motivation of health workers through mentoring and supportive supervision interventions. Employ team-based approaches to deliver PHC services. Strengthen the integration of primary levels of care with secondary and tertiary care through district/provincial level facility partnership networks.	Support better collaboration and convergence among health and non-health workers at the district and community level. Engage with traditional systems of medicine.	Support community-led monitoring of service provision and quality through health committees. Engage communities through empanelment processes. Expand the roles of community health workers as activists.
6: Align private sector partnerships towards national policies on PHC	Partnerships with the private sector should be context-specific. They must counter profiterring motives and uneven quality seen in the private sector with accountability and regulation. There is need to engage with the informal private sector.		Community and civil society inclusion is required for private sector engagements to ensure accountability and community responsiveness. Community or private contribution (such as land) can complement public contribution.
7. Explore the potential of digital health	Invest in strengthening telemedicine, decision-support systems and electronic record keeping in context-appropriate ways.	District managers can use digital platforms to coordinate between sectors.	Social media and participatory websites can be used to obtain feedback, enable problem solving, and increase accountability of health systems to communities
8. Put in place purposeful 'change management' processes in health systems	The deeper systemic transformations recommended in this series necessitate conscious and sustained change management efforts. This entails engaging with diverse stakeholders, enabling them to comprehend the vision of PHC, and handholding them through the experience of change.		
9. Strengthen research to policy action on PHC	Stable government funding for research on PHC is needed. Networks of policymakers, practitioners, civil society and researchers are needed to promote collaborative research that focusses on regional and domestic issues.		

fundamental changes in institutional culture that are needed for this reorientation recommended in our series-such as adopting "multi-sectoral ways" of working, switching to a team-based organisation, or repositioning CHWs in the health system-are particularly difficult to bring about. These changes cannot be brought about overnight by merely putting in place revised policy frameworks or updating guidelines, though these can be the starting points for ushering in changes. Neither can such changes occur spontaneously through 'top-down' strategies. The deeper systemic transformations which are recommended by the papers in this series necessitate conscious and sustained change management efforts at all levels of the system.[94,95] This can entail engaging with diverse stakeholders, enabling them to comprehend the meanings and vision of PHC, and handholding people through the multiple changes they are experiencing. New behaviours in health systems can only emerge through intensive and repeated stakeholder engagement. Otherwise, the 'old' behaviours of stakeholders will guide action on the ground despite the existence of 'new' policies and guidelines on PHC.

Action point 9: Strengthen research to policy action on PHC

Research and evaluation play an important role in guiding policy action.[96,97] In the recent years, there have been many efforts in the region to strengthen research and evaluation by setting up institutes that work closely

with the government such as the National Health System Resource Centre in India, the Health Services Academy in Pakistan, and the recently established centre for health systems policy & innovation, at the University of Colombo in Sri Lanka. Despite these efforts, the potential of research evidence to inform program implementation and policy in the region is underutilized.[98] Investments in research and evaluation have often not achieved intended gains due to the low demand of evidence; the lack of timely and relevant evidence available for policy makers; the misalignment of goals between funders, researchers and policy makers; and difficulties in obtaining information on health system performance and population health outcomes.[96,97,99] For strengthening research to policy action on PHC, we propose the following. One, stable and ring-fenced government funding for research on PHC is needed. Such funding will promote research that is focussed on domestic issues of importance and closely aligned with the interests of local stakeholders. Second, we need to strengthen evidence-to-policy interfaces in the region. Networks of policymakers, practitioners and researchers can be set up to produce relevant evidence as well as serve as spaces for policy advocacy. The WHO-SEARO has launched one such network in Bangkok, Thailand, in November 2022. Additionally, these networks can foster a collaborative mindset, allowing universities across the region to work together rather than compete against each other for large-scale research grants.

In Panel 7, we have summarized the key ideas from the action points 1–9. The nine cross-cutting action points in the panel align with the three pillars of PHC-integrated services, multisectoral action and empowered communities.

Conclusions

The wide canvas of PHC necessitates prioritizing issues for action. The action points that we have arrived at in this paper have been chosen through careful deliberations within the author-group, as well as in consultation with other global and regional experts in PHC. However, we do acknowledge that there is a diversity of opinion and evidence on how best to reorient health systems towards PHC. We do not intend the action points we have proposed in this paper to be one-size-fits-all solutions, but we call for countries to engage with these action points and adapt them to country-specific needs.

We end this series with a call to action. First, the time is ripe for action on reorienting health systems towards PHC in South Asia. Existing policies on PHC must be re-evaluated, given the region's evolving epidemiological and demographic landscape, urbanization, privatization, and digitization. Policies need to be reframed and strengthened in ways that match the evolving priorities of communities. Second, the recommendations from the thematic papers in the series and the nine cross-cutting action points in this paper offer a pathway for moving forward. Finally, we would like to emphasize the need for more research-practice networks in the South Asian region. These networks can enable cross country learning on PHC, generate the evidence needed for improving the practice of PHC, bridge the gap between policymakers, researchers, activists, and other stakeholders in the region, and serve as a space for policy advocacy. This series has also served as a platform for reflecting jointly on the way forward. We call for enabling and sustaining more such practice-oriented collaborations to support PHC in the region.

Declaration of interests

We declare no conflict of interest.

Acknowledgements

We thank Austin Schmidt for her help in formatting the references in this paper. We also thank all the experts who helped to strengthen the recommendations made in this paper.

Appendix A. Supplementary data

Supplementary data related to this article can be found at https://doi.org/10.1016/j.lansea.2024.100466.

References

1 World Health Organization. Regional office for south-east Asia. South-East Asia regional strategy for primary health care: 2022-2030. 40 p. https://www.who.int/publications/i/item/9789290229094.
2 Van Weel C, Kassai R, Qidwai W. Primary healthcare policy implementation in South Asia. *BMJ Glob Health*. 2016;1:57.
3 Black RE, Levin C, Walker N, Chou D, Liu L, Temmerman M. Reproductive, maternal, newborn, and child health: key messages from disease control priorities 3rd edition. *Lancet*. 2016;388(10061):2811–2824.
4 Prabhakaran D, Anand S, Watkins D, et al. Cardiovascular, respiratory, and related disorders: key messages from disease control priorities, 3rd edition. *Lancet*. 2018;391(10126):1224–1236.
5 Vicziany M. The modernisation of South Asia's disease burden: 1950 to 2021. *S Asia*. 2021;44(6):1114–1130.
6 Squires N, Garfield R, Mohamed-Ahmed O, et al. Essential public health functions: the key to resilient health systems. *BMJ Glob Health*. 2023;8(7):e013136.
7 Salmaso S, Lal A, Cheong J, Mo C, Lugten E. From fragility to resilience: a systems approach to strengthen primary health care. *Front Public Health*. 2023;10:1073617.
8 Hsieh VCR, Wu JCL, Wu TN, Chiang TL. Universal coverage for primary health care is a wise investment: evidence from 102 low- and middle-income countries. *Asia Pac J Public Health*. 2015;27(2):NP877–NP886.
9 Hone T, Macinko J, Millett C. Revisiting Alma-Ata: what is the role of primary health care in achieving the sustainable development goals? *Lancet*. 2018;392(10156):1461–1472. Available from: https://doi.org/10.1016/S0140-6736(18)31829-4.
10 World Health Organization. *Primary health care: report of the international conference on primary health care Alma-Ata*. USSR; 1978 [cited 2023 Aug 2]. Available from: https://www.who.int/teams/social-determinants-of-health/declaration-of-alma-ata#:~:text=The%20Alma%2DAta%20Declaration%20of,goal%20of%20Health%20for%20All.
11 World Health Organization. *Global conference on primary health care: towards health for all*; 2018 [cited 2023 Aug 2]. Available from: http://www.who.int/mediacentre/events/2018/global-conference-phc/en/. http://www.who.int/mediacentre/events/2018/global-conference-phc/en/.
12 Evans J, Grant JP, Pharm AB. Comprehensive case study from Bangladesh primary health care systems (PRIMASYS). Available from: http://apps.who.int/bookorders; 2017.
13 Government of Nepal. *National health policy Nepal* 2019.
14 Government of India. *National health policy India 1983*. 1983.
15 Rajapaksa L, De Silva P, Abeykoon A, Somatunga L, Sathasivam S, Perera S. *Sri Lanka health system review*. New Delhi; 2021. https://iris.who.int/handle/10665/342323.

16 Prinja S, Purohit N, Kaur N, et al. The state of primary health care in South Asia. *Lancet Global Health*. 2024. https://doi.org/10.1016/S2214-109X(24)00119-0.
17 Shrestha P, Afsana K, Weerasinghe M. The future of community health workers in strengthening primary health care systems in South Asia: a rapid review. *Lancet South East Asia*. 2024. https://doi.org/10.1016/j.lansea.2024.100463.
18 Balabanova D, Mills A, Conteh L, et al. Good health at low cost 25 years on: lessons for the future of health systems strengthening. *Lancet*. 2013;381(9883):2118–2133.
19 Shroff ZC, Ismail A, Afsana K, Weerasinghe M, Rao KD. Engaging the private sector towards PHC in South Asia. *Lancet South East Asia*. 2024. https://www.thelancet.com/journals/lansea/article/PIIS2772-3682(24)00104-5/fulltext.
20 Thresia CU, Srinivas PN, Mohindra KS, Jagadeesan CK. The health of indigenous populations in South Asia: a critical review in a critical time. *Int J Health Serv*. 2022;52(1):61–72.
21 World Health Organization. *Centre for health development, United nations human settlements programme. Hidden cities: unmasking and overcoming health inequities in urban settings*. Word Health Organization, Centre for Health Development; 2010:126. https://www.who.int/publications/i/item/9789241548038.
22 *Who is being left behind? Inequities in health in the South-east Asia region*; 2010. Available from: https://www.ghsindex.org/.
23 Laxminarayan R, Kakkar M, Horby P, Malavige GN, Basnyat B. Emerging and re-emerging infectious disease threats in South Asia: status, vulnerability, preparedness, and outlook. *BMJ*. 2017;11:j1447.
24 Ahmed SM, Krishnan A, Obaida K, et al. Delivering Non-communicable Disease (NCD) services through PHC in South Asia: are health systems prepared? *Lancet Global Health*. 2024. https://doi.org/10.1016/S2214-109X(24)00118-9.
25 Rao KD, Bairwa M, Mehta A, et al. Improving urban health through primary health care in South Asia. *Lancet Global Health*. 2024. https://doi.org/10.1016/S2214-109X(24)00121-9.
26 Adams AM, Nambiar D, Siddiqi S, Alam BB, Reddy S. Advancing universal health coverage in South Asian cities: a framework. *BMJ*. 2018;29:k4905.
27 de Siqueira Filha NT, Li J, Phillips-Howard PA, et al. The economics of healthcare access: a scoping review on the economic impact of healthcare access for vulnerable urban populations in low- and middle-income countries. *Int J Equity Health*. 2022;21:191.
28 Gill R, Stewart DE. Relevance of gender-sensitive policies and general health indicators to compare the status of South Asian women's health. *Wom Health Issues*. 2011;21(1):12–18.
29 Singh PK, Landry M. Harnessing the potential of digital health in the WHO South-East Asia Region: sustaining what works, accelerating scale-up and innovating frontier technologies. *WHO South East Asia J Public Health*. 2019;8:67–70.
30 Wait S, Kell E, Hamid S, et al. Hepatitis B and hepatitis C in southeast and southern Asia: challenges for governments. *Lancet Gastroenterol Hepatol*. 2016;1(3):248–255.
31 Gadsden T, Ford B, Angell B, Sumarac B, de Oliveira Cruz V, Wang H, et al. Health financing policy responses to the COVID-19 pandemic: a review of the first stages in the WHO South-East Asia Region. *Health Policy Plan*. 2022;37(10):1317–1327.
32 World Health Organization. *Global spending on health rising to the pandemic's challenges*; 2022. https://www.who.int/publications/i/item/9789240064911.
33 Malik MA. Fragility and challenges of health systems in pandemic: lessons from India's second wave of coronavirus disease 2019 (COVID-19). *Glob Health J*. 2022;6:44–49.
34 Shoib S, Chandradasa M, Rathnayake L, Usmani S, Saeed F. Children, adolescent, and youth mental health in Sri Lanka in the context of recent violence, COVID-19, and economic crisis: a call for action. *Lancet Reg Health Southeast Asia*. 2022;2:100021.
35 World Health Organization. *Regional Office for South-East Asia. Learning from the COVID-19 response to strengthen health security and health systems resilience in the WHO South-East Asia Region*; 2022. https://iris.who.int/handle/10665/363473.
36 Syed SZ, Hussain S. *Pakistan: a primary health care case study in the context of the COVID-19 pandemic*. Geneva: World Health Organization; 2022. https://iris.who.int/bitstream/handle/10665/366306/9789240058736-eng.pdf?sequence=1.
37 Kruk ME, Gage AD, Arsenault C, et al. High-quality health systems in the Sustainable Development Goals era: time for a revolution. *Lancet Glob Health*. 2018;6(11):e1196–e1252.
38 Macinko J, Harris MJ. Brazil's family health strategy — delivering community-based primary care in a universal health system. *N Engl J Med*. 2015;372(23):2177–2181.
39 Croke K. The origins of Ethiopia's primary health care expansion: the politics of state building and health system strengthening. *Health Policy Plan*. 2021;35(10):1318–1327.
40 Spigel L, Pesec M, Villegas del Carpio O, et al. Implementing sustainable primary healthcare reforms: strategies from Costa Rica. *BMJ Glob Health*. 2020;5(8):e002674.
41 Assefa Y, Hill PS, Gilks CF, Admassu M, Tesfaye D, Van Damme W. Primary health care contributions to universal health coverage, Ethiopia. *Bull World Health Organ*. 2020;98(12):894–905A.
42 Baum F, Townsend B, Fisher M, et al. Creating political will for action on health equity: practical lessons for public health policy actors. *Int J Health Policy Manag*. 2022;11(7):947–960.
43 Ottersen OP, Dasgupta J, Blouin C, et al. The political origins of health inequity: prospects for change. *Lancet*. 2014;383(9917):630–667.
44 *Discussions and debates around primary health care, reaching the unreached, and financial protection during the 6th global symposia on health systems research*; 2021. https://healthsystemsglobal.org/wp-content/uploads/2021/09/Discussions-and-debates-around-primary-health-care-reaching-the-unreached-and-financial-protection-during-the-6th-Global-Symposia-on-Health-Systems-Research-2020.pdf.
45 Bali AS, He AJ, Ramesh M. Health policy and COVID-19: path dependency and trajectory. *Policy Soc*. 2022;41(1):83–95.
46 Jailobaeva K, Falconer J, Loffreda G, Arakelyan S, Witter S, Ager A. An analysis of policy and funding priorities of global actors regarding noncommunicable disease in low- and middle-income countries. *Global Health*. 2021;17(1):68.
47 Juma PA, Mohamed SF, Matanje Mwagomba BL, et al. Non-communicable disease prevention policy process in five African countries authors. *BMC Public Health*. 2018;18(S1):961.
48 Tan MMJ, Han E, Shrestha P, et al. Framing global discourses on non-communicable diseases: a scoping review. *BMC Health Serv Res*. 2021;21(1):20. Available from: https://doi.org/10.1186/s12913-020-05958-0.
49 Allen L, Feigl A. Reframing non-communicable diseases as socially transmitted conditions. *Lancet Glob Health*. 2017;5:e644–e646.
50 Ndayishimiye C, Lopes H, Middleton J. A systematic scoping review of digital health technologies during COVID-19: a new normal in primary health care delivery. *Health Technol*. 2023;13(2):273–284.
51 Green Kerala express: a game show for the sustainable set. https://www.fastcompany.com/1547660/green-kerala-express-game-show-sustainable-set.
52 Hanson K, Brikci N, Erlangga D, et al. The lancet global health commission on financing primary health care: putting people at the centre. *Lancet Glob Health*. 2022;10(5):e715–e772.
53 Onagan F, Ho B, Chua K. Development of a sweetened beverage tax, Philippines. *Bull World Health Organ*. 2019;97:154–159.
54 Atun R, Silva S, Knaul FM. Innovative financing instruments for global health 2002–15: a systematic analysis. *Lancet Glob Health*. 2017;5(7):e720–e726.
55 Paul E, Albert L, Bisala BN, et al. Performance-based financing in low-income and middle-income countries: isn't it time for a rethink? *BMJ Glob Health*. 2018;3(1):e000664.
56 Saxon A, Ford JV. "Now, I am empowered. Now, I am a woman with spirit": evaluating CARE's public health work through a community-organizing framework in Sri Lanka and Bangladesh. *Int Q Community Health Educ*. 2021;41(3):241–258.
57 Albis MLF, Bhadra SK, Chin B. Impact evaluation of contracting primary health care services in urban Bangladesh. *BMC Health Serv Res*. 2019;19(1):854.
58 National Health Authority. About pradhan mantri jan arogya yojana (PM-JAY) [cited 2024 Mar 15]. Available from: https://nha.gov.in/PM-JAY.
59 Sriram V, Sheikh K, Soucat A. *Addressing governance challenges and capacities in ministries of health. Health systems governance collaborative and alliance for health policy and systems research*. World Health Organization; 2020.
60 Joarder T, Osman FA. Bangladesh's health improvement strategy as an example of the alma-ata declaration in action. In: Schleiff M, Bishai D, eds. *Achieving health for all: primary health care in action*. Baltimore: Johns Hopkins University Press; 2020:153–179. Available from: https://doi.org/10.1353/book.77991 [cited 2024 Mar 15].
61 Rajan D, Brocard E, Poulussen C, et al. Beyond consultations and surveys: enhancging participatory governance in health systems. *Eurohealth*. 2022;28(1). https://iris.who.int/bitstream/handle/10665/351077/Eurohealth-28-1-9-13-eng.pdf?sequence=1&isAllowed=y.

62 World Health Organization. *Governance for health in the 21st century*. Geneva; 2021. https://iris.who.int/bitstream/handle/10665/326429/9789289002745-eng.pdf.
63 Rasanathan K, Atkins V, Mwansambo C, Soucat A, Bennett S. Governing multisectoral action for health in low-income and middle-income countries: an agenda for the way forward. *BMJ Glob Health*. 2018;3(Suppl 4):e000890.
64 Gooding K, Bertone MP, Loffreda G, Witter S. How can we strengthen partnership and coordination for health system emergency preparedness and response? Findings from a synthesis of experience across countries facing shocks. *BMC Health Serv Res*. 2022;22(1):1441.
65 Islam MR, Angell B, Naher N, et al. Who is absent and why? Factors affecting doctor absenteeism in Bangladesh. *PLOS Glob Public Health*. 2024;4(4):e0003040.
66 Vasan A, Mabey DC, Chaudhri S, Brown Epstein HA, Lawn SD. Support and performance improvement for primary health care workers in low- and middle-income countries: a scoping review of intervention design and methods. *Health Policy Plan*. 2017;32(3):437–452.
67 Manzi A, Hirschhorn LR, Sherr K, et al. Mentorship and coaching to support strengthening healthcare systems: lessons learned across the five population health implementation and training partnership projects in sub-Saharan Africa. *BMC Health Serv Res*. 2017;17(3):831.
68 Ramani S, Parashar R, Roy N, et al. How to work with intangible software in public health systems: some experiences from India. *Health Res Policy Syst*. 2022;20(1):52.
69 Horton R. Offline: primary healthcare is not enough. *Lancet*. 2023;402(10404):760.
70 Agyekum EO, Kalaris K, Maliqi B, Moran AC, Ayim A, Roder-DeWan S. Networks of care to strengthen primary healthcare in resource constrained settings. *BMJ*. 2023;380:e071833.
71 Bearden T, Ratcliffe HL, Sugarman JR, et al. Empanelment: a foundational component of primary health care [version 1; peer review: 2 approved]. *Gates Open Res*. 2019;3(1654).
72 Garg S. Chhattisgarh Swasth panchayat yojana: convergent community action for health and its determinants in rural India. In: Nambiar D, Muralidharan A, eds. *The social determinants of health in India: concepts, processes, and indicators*. Singapore: Springer Singapore; 2017:153–169. Available from: https://doi.org/10.1007/978-981-10-5999-5_10.
73 Joarder T, Islam A, Uddin A. Developing a comprehensive primary health care model for Bangladesh. In: Labonté R, Sanders D, Packer C, Schaay N, eds. *Revitalizing health for all: case studies of the struggle for comprehensive primary health care*. University of Toronto Press; 2017:158–178. Available from: http://www.jstor.org/stable/10.3138/j.ctv1n35b1m.
74 Perera S, Nieveras O, de Silva P, Wijesundara C, Pendse R. Accelerating reforms of primary health care towards universal health coverage in Sri Lanka. *WHO South East Asia J Public Health*. 2019;8(1):21.
75 Guo S, Carvajal-Aguirre L, Victora CG, et al. Equitable coverage? The roles of the private and public sectors in providing maternal, newborn and child health interventions in South Asia. *BMJ Glob Health*. 2019;4(4):e001495.
76 Rao K, Schmidt A. Human resources for health in South-east Asia: challenges and strategies. *WHO South East Asia J Public Health*. 2023;12:1.
77 Sharma V, Ortiz MR. A holistic approach to redefining Nepal's health-care system. *Lancet Glob Health*. 2019;7(3):e305.
78 Selvaraj S, Bhan N, Mahal A. *India health system review health systems in transition*. 2022;11. Available from: http://apps.who.int/iris/.
79 Bangladesh health system review. *Health systems in transition, 5 (3)*. WHO Regional Office for the Western Pacific; 2015. https://iris.who.int/handle/10665/208214.
80 Sudhinaraset M, Ingram M, Lofthouse HK, Montagu D. What is the role of informal healthcare providers in developing countries? A systematic review. *PLoS One*. 2013;8(2):e54978.
81 Rao KD, Mehta A, Noonan C, Peters MA, Perry H. Voting with their feet: primary care provider choice and its implications for public sector primary care services in India. *Soc Sci Med*. 2024;340:116414. Available from: https://www.sciencedirect.com/science/article/pii/S0277953623007712.
82 Priya R, Singh R, Das S. Health implications of diverse visions of urban spaces: bridging the formal-informal divide. *Front Public Health*. 2019;7. Available from: https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2019.00239.
83 Shah NM, Brieger WR, Peters DH. Can interventions improve health services from informal private providers in low and middle-income countries?: a comprehensive review of the literature. *Health Policy Plan*. 2011;26(4):275–287.
84 Thapa P, Jayasuriya R, Hall JJ, et al. Role of informal healthcare providers in tuberculosis care in low- and middle-income countries: a systematic scoping review. *PLoS One*. 2021;16(9):e0256795.
85 Xiong S, Lu H, Peoples N, et al. Digital health interventions for non-communicable disease management in primary health care in low-and middle-income countries. *NPJ Digit Med*. 2023;6(1):12. Available from: https://doi.org/10.1038/s41746-023-00764-4.
86 Sood S, Bhatia J. Development of telemedicine technology in India: "Sanjeevani"-An integrated telemedicine application. *J Postgrad Med*. 2005;51:308–311.
87 Parajuli R, Bohara D, Kc M, Shanmuganathan S, Mistry SK, Yadav UN. Challenges and opportunities for implementing digital health interventions in Nepal: a rapid review. *Front Digit Health*. 2022;4:861019.
88 Dodd R, Palagyi A, Jan S, et al. Organisation of primary health care systems in low- and middle-income countries: review of evidence on what works and why in the Asia-Pacific region. *BMJ Glob Health*. 2019;4(Suppl 8):e001487.
89 Manzoor R, Sahay BS, Singh SK. Blockchain technology in supply chain management: an organizational theoretic overview and research agenda. *Ann Oper Res*. 2022:1–48. Available from: https://doi.org/10.1007/s10479-022-05069-5.
90 Endalamaw A, Erku D, Khatri RB, et al. Successes, weaknesses, and recommendations to strengthen primary health care: a scoping review. *Arch Public Health*. 2023;81(1):100.
91 Labrique A, Agarwal S, Tamrat T, Mehl G. WHO Digital Health Guidelines: a milestone for global health. *NPJ Digit Med*. 2020;3(1):120.
92 de Savigny D, Adam T. *Systems thinking for health system strengthening*. Geneva. 2009.
93 Robinson HM, Hort K. Non-communicable diseases and health systems reform in low-and-middle-income countries. *Pac Health Dialog*. 2012;18(1):179–190.
94 Kwamie A, van Dijk H, Agyepong IA. Advancing the application of systems thinking in health: realist evaluation of the leadership development programme for district manager decision-making in Ghana. *Health Res Policy Syst*. 2014;12(1):29.
95 Ludwick T, Endrias M, Morgan A, Kane S, Kelaher M, McPake B. Challenges in implementing community-based healthcare teams in a low-income country context: lessons from Ethiopia's family health teams. *Int J Health Policy Manag*. 2022;11(8):1459–1471.
96 Edelman A, Marten R, Montenegro H, et al. Modified scoping review of the enablers and barriers to implementing primary health care in the COVID-19 context. *Health Policy Plan*. 2021;36(7):1163–1186.
97 Nuyens Y. *No development without research: a challenge for capacity strengthening*; 2005 [cited 2024 Mar 15]. Available from: https://www.files.ethz.ch/isn/128224/2005-ResearchReport-NoDevelopment.pdf.
98 Mathur M, Gurung A, Selvaraj S, Reddy KS. Health policy and systems research: an inconsistent priority in South East Asia. *Public Health Res Pract*. 2021;31(4):3142118.
99 Green A, Bennett S, Walt G, et al. *Sound choices: enhancing capacity for evidence-informed health policy*; 2007 [cited 2024 Mar 15]. Available from: https://iris.who.int/bitstream/handle/10665/43744/9789241595902_eng.pdf?sequence=1.