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(REVIEW ARTICLE)

An analysis of Nepal's federal health system in the context of the COVID-19 pandemic and the Sustainable Development Goals

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# Abstract

Nepal's public health slogan was 'Health for All' with integrated community health services in 1991. The female community health volunteer network was created. District Public health offices (DPHO) managed these programs in their districts. After 2008 federalism, 2017 brought federal, provincial, and local governments. The federal health system substituted the administrative District Public / Health Offices in districts.

The local governments or health institutions now oversee the Sustainable Development Goals (SDGs). The federal and provincial authorities should have employed qualified professionals to oversee public health at local health facilities. Healthcare efficacy and goal attainment are concerns today.

This study did a microscopic investigation using health system studies. The researcher conducted field observations and stakeholder interviews and participated in public discussions. Data from Nepal's federal health system's community status was compared using SWOT analysis.

The study delved into specific research gaps thoroughly. According to previous research, health infrastructure could be more effective with financial expenditures. A hypothesis was formed after comparing further information to domestic and international situations.

The researcher emphasizes the need for good governance and suggests allocating 6% of national GDP to health spending, in line with WHO recommendations. To fulfil the needs of the healthcare sector, deliver quality medical services, and attain SDGs, it is imperative to ensure the presence of adequately trained health professionals at the local government level. The head of the local health institution must conduct administrative work connected to public health. Hence, public health-trained health staff are needed there.

**Keywords:** Health system; Federal Nepal; Local government; COVID-19 pandemic; SDGs; Challenges.

# 1 Introduction

Nepal changed its health system in 1991 by creating Village Health Committees (VHCs) and District Health Offices (DHOs) to give primary healthcare to people in their communities. The Ministry of Health Nepal wanted to make healthcare services accessible and fair for everyone [1]. The changes had some excellent effects, like fewer mothers dying [2] and more children getting vaccines [3]. However, some problems still existed, like the difference between rural and urban areas and the lack of resources that needed more attention [4].

According to the Constitution of Nepal [5], federally Nepal formed local and provincial governments. Local governments took over the responsibilities of health facilities like health posts, primary health care centres and district hospitals. The

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new District Health Offices (DHOs) lack the necessary power and resources to be as effective as the previous District/Public Health Offices [6]. Some people are concerned that DHOs must pay more attention to local health services, which could make health services efficient [7].

Health workers now work for the local government and answer to them not DHOs. Therefore, more research is needed to see how well this decentralization process works and how it affects public health in Nepal.

Concerns arise over inefficient healthcare facilities. The government appoints health workers to important positions without formal education or professional experience. The tendency started following enacting the Health Services Act 1997 [8]. Additional training is necessary to enhance the quality of service and improve patient outcomes, as research studies indicate [9].

Local health institutions with ineffective human resources may hinder the attainment of specific Sustainable Development Goals, such as SDG 3 on Health and Well-being, as it requires competent nurses for healthcare provision and qualified public health officers for planning and administration [10]. Possible solutions include doing training programs to make sure people have the right man in the right place.

Nepal has landscapes of the Himalayas, hills, and Terai. It has rich cultures and significant gaps between rich and poor people. It faces many challenges in keeping its people healthy. This analysis looks at Nepal's current public health situation. It finds out what is needed and essential, and compares different ways to solve the problems.

Nepal's public health system has many problems. Diseases that can spread quickly, like tuberculosis and malaria, are still prevalent. But diseases that are not contagious, like heart problems and diabetes, are also becoming more common [11]. Malnutrition is a big problem, especially for children and women [12]. Also, the rugged terrain, poor healthcare facilities, and lack of healthcare workers make it hard to provide good healthcare services, especially in the countryside [13].

The research on Nepal's Health system has highlighted the critical needs and requirements of the healthcare system in Nepal.

(i) **Improvement of the ability and strength of healthcare facilities**. It is essential to make primary healthcare facilities more available, especially in rural areas [13]. That means giving more resources to basic equipment, medicines, and trained staff.

(ii) **Adequate trained healthcare workers**. Nepal needs more healthcare workers, especially experts [3]. Giving more resources to training programs, improving working conditions, and offering benefits for working in rural areas are very important.

(iii) **New emerging Non-communicable diseases**. The current need is to deal with both infectious and non-infectious diseases. It is essential to do effective disease monitoring, prevention activities, and available treatment options [3]. Public education campaigns and behavior change strategies are significant.

(iv) **Reducing MMR, CMR and NMR**. Improving the health of mothers and children is urgent. It is essential to lower the number of mothers who die, make sure they get prenatal care and support child vaccination [12]. Specific actions are needed to fight malnutrition and promote breastfeeding.

(v) **Accessible and affordable services.** It is essential to ensure everyone can get healthcare, no matter how rich or poor or where they live [13]. That means fixing the current high cost of treatment and making the community more involved.

Studies suggested ways to solve the problems or to achieve these goals; a complete plan in different ways is needed, and they are as follows.

(i) **Increase government spending.** More public money for healthcare is significant for improving facilities, training workers, and doing effective programs [11].

(ii) **Cooperation between the public and private sectors.** Working together between the government, businesses, and NGOs can use resources and expert knowledge to help communities with enough services [13].

(iii) **Community involvement**. It is significant for making communities more active in making decisions, doing health actions, and supporting healthy habits [12].

(iv) **Technology.** Technological innovations such as telemedicine, mobile health technologies, and data analytics can make healthcare more available and efficient [11].

(v) **Research and innovation.** They are significant for solving local health problems and making solutions that fit the specific situation [13].



Figure 1 Evaluation of the evolving public health system in Nepal

The reviewer made a flow diagram based on the research on the health system in Nepal. It shows how to look at the public health system and it's changing needs. There are four major segments in the health system. They are Public Health Policies and Programmes, Public-Private Partnerships, Health Infrastructure, and Health Goals.

The part on Public Health Policies and Programmes covers different things. They are the public's want for public health, the specific groups of people who need public health services, and the goals of the public health system. The Public-Private Partnership part examines how public-private partnerships help achieve public health goals. The Health Infrastructure part covers things like the availability of physical things and workers. The Health Goals part includes the Sustainable Development Goals (SDGs) and other health goals.

The flow diagram also has arrows to show the links between these different parts. The "Public's want for public health" is linked to "Public Health Goals, Policies and Programmes." It means the public's interest in public health should lead to the making of public health policies and programs. The arrow linking "Health Infrastructure" to "Health Goals" means that the availability of health resources is critical in reaching health goals.

The diagram summarizes the essential things that must be considered when viewing the public health system and its changing needs in Nepal.

The current situation of the country is changing in nature. Meeting the wants and needs of public health in Nepal requires a complete and lasting effort. Nepal needs to solve the problems, make effective plans, and support cooperation between the people involved. Only then can Nepal make a fairer and healthier future for its people.

This article tries to prove this on-site study and experience-based narration. The review study attempted to study the country's experience in the COVID-19 pandemic and the national achievement in the health sector in the Sustainable Development Goals. The study also compared it at the international level. Also, the article suggests what special care should be given to make the health system effective and to achieve the Sustainable Development Goals.

# 2 Literature Review

The researcher has delved into the literature and narrowed down their focus to two key areas: the impact of the COVID-19 epidemic in Nepal and the current status of its Sustainable Development Goals. The COVID-19 pandemic began in December 2019, inflicted considerable human losses globally, and had a severe impact on Nepal. Initially appearing in Wuhan, China, success in prevention and control was achieved within about two months. Countries like China and South Korea showcased exemplary efforts in preventing and controlling infections [14].

However, Nepal faced challenges due to its weak health system and unstable political situation. Pandemic combating strategies and protocols for infection prevention and control proved ineffective in implementation and results, especially during the emergence of the second wave [14]. Weak resources and corruption at governmental levels worsened the situation, leading to public frustration with governance shortcomings [15].

The infection primarily spread in two waves, prompting the government to impose prohibitory orders in Kathmandu Valley after the second wave surged [14].

Unfortunately, encounters with healthcare professionals characterized by prejudice and stigma deterred individuals from seeking necessary medical care, hindering public health efforts. A study highlighted the importance of trust and respectful communication in public health interventions like contact tracing [16]. Unpleasant encounters with authorities further deterred participation in critical activities [17]. Consequently, managing the pandemic posed significant challenges, emphasizing the need for a comprehensive action plan [18].

Comparative analysis with countries like China, Bhutan, and South Korea underscored the importance of effective strategies in combating COVID-19. Insights from successful approaches these nations adopt could serve as models for Nepal.

# 2.1 Why did the second wave of COVID-19 result in a higher fatality rate in Nepal?

Several factors contributed to the severity of the second wave and the increased loss of life:

i. Introducing more transmissible variants, notably the Delta variant. It led to a surge in cases, overwhelming healthcare facilities [19].

ii. The healthcare system faced challenges in coping with the surge. It resulted from shortages of medical supplies, hospital beds, and healthcare professionals [ibid].

iii. Limited vaccine coverage during the second wave. It left much of the population vulnerable to the virus [ibid].

iv. Decreased adherence to public health guidelines and preventive measures. It possibly contributed to increased transmission during the second wave [ibid].

This study aims to evaluate the responses to the pandemic and communicate identified gaps to leaders and planners in Nepal, focusing on financial policies and successful strategies employed by neighboring countries. In exploring the response to the COVID-19 pandemic, this article seeks to shed light on the gaps identified, aiming to deliver a message to leaders and planners in Nepal.

### 2.2 IPO Framework

To manage healthcare systems effectively we can compare Nepal with countries. Countries like India, Bhutan, South Korea, and China are included in the IPO framework. This analysis provides insights into the system. We observe the allocation of resources, delivery of healthcare services, and health outcomes. Such comparisons can inform strategies for enhancing healthcare management in Nepal.

Demographic and Public Health Indicators of the COVID-19 Pandemic in Nepal, India, Bhutan, China, and South Korea (as of December 24, 2023) are outlined below:

The table shows COVID-19 data for several countries, including population size, documented cases, deaths, the percentage of fully vaccinated people, and the data sources. Here are breaks down:

Nepal has 30.44 million people, with 1,149,444 proven cases and 18,849 deaths. About 62.4% of the people in the country have all of their shots.

In India, 1,380 million people are living, and 44,680,144 proven cases. Several 532,437 deaths have been reported. About 78.5% of the people in the country have been entirely shot.

In Bhutan, where there are 0.8 million people, there have been 52,334 proven cases and 323 deaths. About 72.4% of the people in the country have been fully protected.

Country	Populations (Millions)	COVID-19 Confirmed Cases	Deaths	Fully Vaccinated (%)	Source of Information
Nepal	30.4	1,149,444	18,849	62.4	[21] [22] [23]
India	1,380	44,680,144	532,437	78.5	[21] [22] [23]
Bhutan	0.8	52,334	323	72.4	[21] [22] [23]
China	1,440	238,264	5,226	88.5	[21] [22] [23]
South Korea	51.3	3,045,446	30,904	86.7	[21] [22] [23]

**Table 1** Total Population, Infected Population, Death Numbers, and Fully Vaccinated

In China, where there are 1.440 million people, there have been 238,264 proven cases and 5,226 deaths. About 88.5% of the people in the country have been entirely shot.

South Korea has a population of 51.3 million people and has reported 3,045,446 proven cases and 30,904 deaths. About 86.7% of the people in the country have been fully protected.

Healthcare is essential to any country because it dramatically affects people's health and output. Looking at how much money a country spends on healthcare shows its goals and commitment to protecting its citizens' health. This study compares how healthcare budgets have been spent over the past five years in Nepal, India, Bhutan, China, and South Korea. It can be used as a starting point for more research.

Nepal promised to follow through on all 17 Sustainable Development Goals (SDGs) for 2030 to achieve long-term growth by that date. SDG 3 (Good Health and Well-Being) stands out as one that will improve people's lives in Nepal. Nepal's SDG 3 has the following main goals and objectives:

- Getting the Maternal Mortality Rate 70/100.000 live births (right now 116/100,000) [32].
- Reducing under 5 Child Mortality 20/1000 live births (right now 27 per 1,000 live births) [ibid].
- Fight illnesses that spread quickly, like HIV, TB, and malaria [ibid].
- Addressing noncommunicable diseases (NCDs) such as diabetes and heart disease [ibid].
- Improving care for mental health and supporting health projects in general [ibid].

### 2.2.1 Achievements

- The maternal death rate has decreased by 43% since 2000 [24].
- Rates of child deaths have also gone down [25].
- The National Planning Commission 2016 says more people can now get essential healthcare services [26].
- Programmes to fight HIV/AIDS and malaria have worked [27].

### 2.2.2 Strengths

- Strong political commitment to SDGs: Nepal's government has shown it wants to reach the SDGs [32].
- Involved development partners and civil society: Working with NGOs and foreign groups can help you get more resources and knowledge [33].
- Better collection and processing of data: Better data leads to decisions based on local evidence [34].

### 2.2.3 Weakness

- Limited financial resources: Nepal needs to make significant investments in health care to fill in the gaps [35].
- Problems with federalization: The federal, state, and local governments must work together well [11].

• Social and cultural barriers: For equal access to health care, it is essential to deal with problems like gender inequality and old views [13].

### 2.2.4 Opportunities

- Local government is there with power and resources [32].
- Decentralization, planning and management of programs at the local level [32].
- Political commitment to social inclusion and development [32].

### 2.2.5 Challenges

- Healthcare access is still unequal, especially in rural places and among disadvantaged groups and unaffordable [28].
- NCDs are a growing burden, and we need better ways to avoid and treat them [29].
- Mental health services are still insufficient [30].
- The lack of health workers and facilities slows down progress [31].

### 2.3 Research Gap

Many researchers have studied Nepal's healthcare system. The findings help us understand the country's health situation. It also gives insights to find ways to improve it. There is, however, a significant gap in research works to compare Nepal's investment with neighboring countries. Lacking the budget for the health system affects results when we look at Nepal's neighboring and Asian countries.

Previous studies reported a need for more health workers. The issue of skilled health workers was pointed out but not specified for community health workers. The government made rules and regulations for the promotion of health workers but did not provide the required training for all [8]. No research is done about the issue.

Now, health workers look after public health programs in the local government's health institutions based on their working experience [8]. The government deputed health workers to the responsible posts but never made them trained academically nor recruited competent human resources for the posts. Studies have raised the issue of the quality of services in public health institutions. No research papers pointed out the issue of the updating qualification of primary healthcare workers.

It is time to evaluate the gap in the health system in light of adequate budgeting, good governance with the right man in the right place policy mainly in community-level institutions.

### 2.4 Rationale

Studies have highlighted the inadequacy of infrastructure and personnel in Nepal's healthcare organizations [35]. The hypothesis necessitates evidence on investment and outcomes in Nepal, as well as in other countries. The study must assess the public budget allocation towards healthcare in various countries. We have included neighboring countries, including South Korea, for this purpose. This study will provide recommendations based on the correlation between budget allocations to healthcare and their impact on epidemic control and achieving SDG Goals.

Many studies emphasize the necessity for additional human resources in healthcare facilities. They stressed the need for healthcare personnel to be competent in providing services to the residents in the Palikas. Nepal's local governments are responsible for achieving the Sustainable Development Goals [32]. Public health personnel are needed for the positions. What is empirical data about human resources responsible for accomplishing Sustainable Development Goals (SDG) like Maternal Mortality Rate (MMR), Child Mortality Rate (CMR), and Neonatal Mortality Rate (NMR) is increasingly difficult.

An immediate evaluation of human resources in healthcare institutions is necessary to determine their ability to carry out duties such as planning, implementing, and reviewing public health programs [9]. The government of Nepal oversees public healthcare throughout the country. Every citizen has the right to get high-quality healthcare services from skilled healthcare professionals at Primary healthcare institutions. It is necessary to reassess government recruitment policies to improve public health human resources and their services and meet targets [ibid].

This review study focussed on the issue of community health workers in Primary Healthcare centres (PHCC) and health Posts (HP). The PHCC and HPs are now autonomously tasked with organizing and overseeing their public health initiatives. It necessitates human resources education in public health [ibid].

Empirical data indicates that health workers who need formal expertise in public health are currently managing public health efforts in Palikas [8]. The local government is now tasked with achieving the Sustainable Development Goals (SDGs) [32]. Local government cannot receive technical assistance from local health institutions due to the health staff's lack of need for more public health education. Managerial authority for health institutions at the local level falls under the jurisdiction of the Palika in the federal system. How are they deficient? What impediments exist in delivering quality healthcare and in achieving the Sustainable Development Goals? The review paper will examine concepts derived from data.

This fact has been utilized as a hypothesis to compare the country's situation during the COVID-19 pandemic. Palikas's public health management issue is essential for providing high-quality healthcare and meeting the Sustainable Development Goals (SDGs). Based on the facts, numbers, and analysis, an immediate evaluation of Nepal's federal public health system is warranted. The review will offer assistance for the advancement of public health in Nepal.

This critical assessment provides beneficial insights for the government, management, students, and readers.

# 2.5 Objectives

The review will analyze and address the obstacles present at Palikas Health institutions. The focus will be on financial and human resources for high-quality healthcare services from primary healthcare institutions.

# 3 Methods

This approach integrates SWOT analysis with established narrative analysis and synthesis techniques. The researcher employed the official program data, relevant surveys, and health statistics to examine coverage, utilization, and health outcomes quantitative and qualitatively. Qualitative Analysis entails examining data derived from various sources such as social media, research results, media reports, and interviews with key individuals such as beneficiaries, providers, and policymakers to get insights into their experiences and perspectives.

The comparative analysis assesses the costs and benefits of a program to determine its value and Nepal's standing among Asian countries. The Public Health Programme of Nepal is evaluated regarding the country's infrastructure, encompassing proficient healthcare personnel. Secondary data and empirical evidence will form the basis of the research's conclusion.

The evaluation additionally safeguards data privacy, confidentiality, and publishing by ethical norms.

# 4 Result and Discussion

# 4.1 Comparative Analysis of Financial Input Trend

Comparing healthcare budget allocations across countries can be insightful but requires considering different healthcare system structures and economic contexts. Here is an overview of the annual budget proportions and five-year trends.

Nepal allocated 5.3% of its budget to health in 2023 [36]. It was 4.8% in 2018 [37]. The trend of health budget proportion has fluctuated ranging from 5.1% in 2018 to 5.5% in 2021 [35]. This increase aligns with Nepal's commitment to achieving Universal Health Coverage by 2030 [38].

India allocated 5.1% of its national budget to health in 2023-24 [39]. Its health budget has gradually increased but remains one of the lowest among major economies. It stood at 1.2% of GDP in 2018-19 and has risen to 2.1% in 2023-24 [ibid]. The budget allocation of health budget fluctuated between 1.5% and 2.5% over the past five years [ibid]. India aims for a 3% GDP for health budget allocation to achieve the target. However it remains challenging due to competing priorities and fiscal constraints [40].

Bhutan allocated 10.4% of its total budget to health by 2023 [41]. Its health budget proportion ranges from 9.8% in 2018 to 10.4% in 2023 [ibid]. It has allocated 12% of its public budget to health over the last five years [ibid]. This investment reflects Bhutan's commitment to providing universal healthcare to all citizens. The country has achieved most of the Millennium Development Goals and created the right conditions for achieving the Sustainable Development Goals and future goals [42].

China allocated 12.2% of its budget range to health in 2022 [43]. Its health budget has step by step multiplied in current years, from 7.1% in 2018 to 12.2% in 2022 [ibid]. It onstantly allocated around 12% of its country-wide budget to health between 2018 and 2023 [ibid]. This substantial investment reflects China's attention to enhancing healthcare infrastructure and get quality health services, especially in rural areas [44].

South Korea allotted 9.7% of its country's budget to health in 2022 [45]. Its health budget has proven a mild upward fashion in recent years, growing from 7.9% of GDP in 2018 to 8.2% in 2022 [45]. The country has allocated around 8% of its GDP to health yearly for the past five years [45]. This regular investment allows South Korea to adequately set up National Health Insurance, which offers exact coverage to its residents [46].

The assessment explored sizable variations in health budget allocation in the five international locations. China, Bhutan and South Korea commit ideal budgets to public health, while India and Nepal allocate the least.

The five-yr traits moreover offer insights. Nepal and China exhibit upward developments, indicating a growing dedication to healthcare. India's fluctuations highlight the worrying scenario of prioritizing health inside restrained financial surroundings. Bhutan and South Korea preserve consistent allocations, demonstrating their commitment to established healthcare structures.

Evidence supports the Hypothesis that inadequate health budget allocation in Nepal is one of the barriers to quality health care, coverage, unaffordability, and unattainable Goals.

The hypothesis that Nepal's public health demanding situations, which include COVID-19 pandemic management, stem from insufficient price range allocation holds merit and finds guide in numerous traces of proof:

**i. Low Health Budget Allocation:** Nepal's health finances allocation is drastically lower than the WHO-preferred 6% of GDP. Nepal presently allocates around 2.4% of its GDP to health [37]. It needs to meet the recommended benchmark. Nepal has a few international locations with low spending as a percentage of GDP [35].

**ii. Maternal Mortality Rate:** Nepal's measures of MMR related to the SDGs are poorer than those of its neighbours. WHO estimates for 2020 show that Nepal has 174 maternal deaths per 100,000 live births, India has 117, Bhutan has 117, China has 23, and South Korea has 8 [55].

**iii. Correlation with Public Health Outcomes:** The examination's findings endorse that public health investment is more cost-benefit than private health expenditure [47]. It enhances health access by developing favorable results. Thus, governments must allocate enough financial resources to improve public health.

**iv. Challenges in response to COVID-19:** During the COVID-19 pandemic, Nepal faced several challenges, including inadequate healthcare facilities, a shortage of medical personnel, and research and drug supplies to protect them without ceasing. These difficulties are partly due to the nation's limited healthcare budget [49].

A study highlighted Nepal's limited healthcare workforce and fragile health system as significant impediments to effective pandemic response [38]. The study further emphasized increased investment in health infrastructure and personnel to strengthen Nepal's preparedness for future health crises.

Additional Points to Consider: While budget allocation is crucial, it is essential to acknowledge that other aspects like governance, resource management, and healthcare system efficiency also play a role in public health outcomes.

Attributing Nepal's public health challenges solely to budget constraints requires further research and nuanced analysis of various contributing factors.

Evidence suggests a strong correlation between Nepal's low health budget allocation and COVID-19 management and backlogs and public health services. Increasing health expenditure could improve public health outcomes and strengthen Nepal's preparedness for future health challenges.

Although budgetary distribution is not the handiest component affecting public health outcomes, this proof suggests a robust link between Nepal's low health spending and public health challenges. Increased healthcare spending can improve Nepal's healthcare system and address public health problems, including the COVID-19 response.

Nepal's healthcare gadget faces demanding situations, which include funding and priority concerns. According to the Ministry of Health and Population [36], the main contributor to the negative health reputation of the country is the shortage of finance. The need for more crucial assets, medical devices, certified health professionals, and adequate offerings is due to the underfunding of the health sector [50].

Furthermore, the study indicated that government policies did not always prioritize health, resulting in insufficient funding and attention within the health sector [ibid]. The study highlighted the need for sound political decision-making to address systemic problems affecting Nepal's healthcare system.

World Health Organization [52] file emphasizes the vital position of proper governance in attaining health systems targets. It discusses how effective manipulation strengthens health structures via health services, transparency, responsiveness, and equity. The report highlights the importance of clear policy frameworks, efficient resource allocation, and robust regulatory mechanisms in ensuring a well-functioning and developed health system.

A WHO Report (2019) emphasized the multifaceted relationship between governance and health system performance [50]. It argues that good governance improves health outcomes by fostering efficient resource allocation, reducing corruption, and promoting responsiveness to population needs. The article presents evidence from various countries to illustrate how governance initiatives can improve health system efficacy and service delivery.

In essence, Nepal's response to the COVID-19 crisis has been impacted by its vulnerable healthcare system, limited resources, and volatile political landscape.

Achieving all SDG targets by 2030 poses a significant challenge for Nepal, despite some progress, many significant hurdles remain. Sustained investments in healthcare infrastructure, workforce development, and the resolution of disparities are paramount. Enhancing gathering and analyzing data is crucial for making decisions based on solid evidence. Effective mobilization of resources and implementation of interventions need collaboration among government, civil society, and private sector parties.

Nepal's determination to the Sustainable Development Goals (SDGs) has produced favorable results in healthcare. Nevertheless, there are still brilliant boundaries that want to be overcome, specially in terms of tackling nearby and social inequalities. It is vital to maintain ongoing efforts, allocate more financial sources, and use novel techniques to conquer modern boundaries and attain the remaining Sustainable Development Goal (SDG) goals.

Nepal has come a long way towards meeting the SDG 3 goals, but significant problems remain. Fixing money problems, strengthening healthcare facilities, and ensuring everyone has equal access are all very important. It will be hard to meet all of the goals by 2030, but Nepal can become healthy with continued dedication, the pooling of resources, and creative solutions.

Increasing health spending is important to deal with these demanding situations, reinforce the healthcare budget, and enhance public health consequences. On the other hand, healthcare resource efficiency, aid management, and appropriate governance are simply as vital as allocating money range. Nepal can improve the general well-being of its population and higher put it together for future health emergencies using tackling these issues and placing a better priority on health.

WHO documents stress the importance of good governance and allocating budgets to get better health results. It shows how important transparency, accountability, participation, and fairness are for improving health results [53]. Countries could make their health systems greater truthful and long-lasting with the aid of focusing on those crucial areas. It is important to recollect that proper governance is an extended-time period procedure that desires dedication from all events, along with governments, civil society, and the private region. We can, however, make the world a place for everyone who can reach their full health potential if we all work together [54].

# Abbreviations and Acronyms

- AIDS = Acquired Immuno-Deficiency Virus
- COVID = COronaVIrus Disease of 2019
- DHO = District HealthOffice
- DPHO = District Public Health Office
- GDP = Gross Domestic product
- HIV = Human Immuno-Deficiency Virus

- HP = Health Post
- MDG = Millenium Development Goal
- MMR = Maternal Mortality Rate
- MOHP = Ministry of Health and Population
- NCD = Non-Communicable Disease

# 5 Conclusion

The paper highlights Nepal's traumatic conditions in dealing with the COVID-19 pandemic and compares its method to that of different Asian international locations which include India, Bhutan, China, and South Korea. It emphasizes the importance of financial resource allocation to public health and its impact on results. Nepal's vulnerable healthcare system and dynamic political surroundings have hindered the powerful implementation of COVID-19 prevention and management techniques.

The country generally allocates a decreased share of its health budget than its neighbors, resulting in poor public health indicators and restricted healthcare infrastructure and sources. The COVID-19 epidemic has made these troubles worse and highlighted the need for multiplied health spending to enhance public health results and give a boost to the country's preparedness for future health crises.

Nepal needs to deal with its public health-demanding situations and efficaciously manipulate destiny health crises via increasing health spending with good governance. Nepal's low health budget range allocation of 2.4% of GDP, which falls appreciably below the recommended benchmark of 6% of GDP set by way of the World Health Organization. It has contributed to the country's inadequate healthcare infrastructure, constrained assets, and body of workers' constraints. By increasing health spending, Nepal can allocate more resources to strengthen its healthcare programs, including making an investment in healthcare infrastructure, acquiring the necessary scientific system, and recruiting and preserving qualified healthcare experts.

However, they consider recognising that budget allocation is not always the sole element influencing public health consequences. Other factors, such as good governance and healthcare system efficiency, also play a significant role. Therefore, Nepal needs to address these underlying issues alongside increased health spending. Firm political resolve is required to prioritize health and effectively utilize allocated resources. It includes transparent policy frameworks, efficient resource allocation, and robust regulatory mechanisms for a well-functioning healthcare system.

The Nepal Government has enhanced the responsibilities of health professionals in local health institutions, requiring the government to provide necessary academic education and training. To fulfil their duties successfully and guarantee the provision of high-quality healthcare, the government must offer crucial professional training to healthcare personnel. The local government should recruit qualified personnel to appropriate positions to efficiently deliver high-quality healthcare services and support sustainable development goals.

# **Compliance with ethical standards**

*Disclosure of conflict of interest* 

No conflict of interest is to be disclosed.

# References

- [1] The Government of Nepal. Ministry of Health Nepal: Health Sector Development Program IV. 2022.
- [2] WHO. World Health Organization Nepal: Country Cooperation Strategy 2020-2025; 2019.
- [3] Acharya et al. Reaching the unreached: Mobile health clinics in improving access to primary healthcare services in Nepal. BMC Health Serv Res. 2020. 20(1):814.
- [4] Yonzon et al. The evolution of primary health care in Nepal: Challenges and achievements. Glob Health. 2007. 3(1):e15.
- [5] The Government of Nepal. Constitution of Nepal. Kathmandu: Government of Nepal. 2015.
- [6] Ministry of Health Nepal: Health Sector Development Program IV (HSDP-IV), 2022.

- [7] Bhattarai A, Khanal S, Kc S, Karki R, & Sharma BR. Public health challenges in Nepal: Priorities and future directions. Journal of Global Health, 2022; 12(2), e22185
- [8] The Government of Nepal. Nepal Health Services Act. Kathmandu: Government of Nepal. 1997
- [9] Mills et al. Education and public health workforce: A global review. World Health Organization, 2020; 98(3): 189-198).
- [10] Chowdhury et al. Impact of nurse education on patient outcomes. Journal of Nursing Scholarship, 2013. 45(4): 321-334.
- [11] Acharya B, Thapa S, Mishra S, Pandey M, & Adhikari R. Reaching the unreached: Mobile health clinics in improving access to primary healthcare services in Nepal. BMC Health Services Research, 2020; 20 (1), 814.
- [12] WHO. Nepal health profile. World Health Organization. 2020.
- [13] Sharma S, Bhandari M, Khatri S, & Sharma L. Challenges and opportunities for improving public health in Nepal. Journal of Global Health, 2019. 9 (1), 1-7.
- [14] Neupane et al. (eds.). Bivinna Mulukma COVID-19 Mahamariko Avastha Byavasthapanko Anubhav Ra Sikaiharu [Experiences and Lessons Learned in Managing the Situation of the COVID-19 pandemic in Different Countries. Kathmandu, Policy Research Institute. 2022.
- [15] 'Corrupt' CIAA tasked with probing Covid corruption [Internet]. Kathmandu, The Record. 2020 Dec 18 [cited 2023 Dec 15] Features Available from <u>https://www.recordnepal.com/corrupt-ciaa-tasked-with-probing-covid-corruption</u>
- [16] Bagcchi S. Stigma during the COVID-19 pandemic. The Lancet. Infectious diseases, 2020; 20 (7), 782.
- [17] Olufadewa I, Adesina MA, Oladokun B, Baru A, Oladele RI, Iyanda TO & Abudu F. *I was scared I might die alone*: A qualitative study. International Journal of Travel Medicine and Global Health, 2020; 8(2), 51-57.
- [18] Abdalla SM, Koya SF, Jamieson M, Verma M, Haldane V, Jung A et al. Investing in trust. BMJ. 2021; 375:e067487.
- [19] Dhar MS, Marwal R, Ponnusamy K, Jolly B, Bhoyar RC et al. Genomic characterization. Science, 2021; 374 (6570), 995-999.
- [20] WHO. Weekly epidemiological update on COVID-19 14. 2021 [Internet]. World Health Organization. Updated 2023 Mar 23 [cited 2023 Dec 16] The content available from https://www.who.int/emergencies/diseases/novel-coronavirus-2019/.
- [21] Worldometer. Current World Population [Internet]. Worldometers info. 2023, Dec 24 [cited 2023 Dec 16] Population available from <u>https://www.worldometers.info/world-population/</u>
- [22] WHO. Coronavirus disease (COVID-19)[Internet]. World Health Organization Dashboard. Updated 2023 Dec 24 [cited 2023 Dec 20] Available from https://covid19.who.int/
- [23] OurWorldinData. COVID-19 Vaccinations [Internet]. Our World in Data. Updated 2023 Dec 2024 [cited 2023 Dec 22] Available from <a href="https://ourworldindata.org/covid-vaccinations">https://ourworldindata.org/covid-vaccinations</a>
- [24] UNFPA. Nepal 2021 [Internet]. United Nations Fund for Population Activities. [cited 2023 Feb 16]. Available from: https://nepal.unfpa.org/
- [25] Bhattarai A, Khanal S, Kc S, Karki R, & Sharma BR. Public health challenges in Nepal: Priorities and future directions. Journal of Global Health, 2022. 12(2), e22185.
- [26] National Planning Commission. The Fifteenth Plan. Kathmandu. Updated 2020 [cited 2024 Jan 1] Available from https://npc.gov.np/images/category/15th\_plan\_English\_Version.pdf
- [27] Koirala S, Bhattarai HR, Pandey BD, Kc RB, Adhikari B, Karki R, et al. Effectiveness of HIV/AIDS and malaria control programs in Nepal: a success story and lessons learned. BMC Public Health. 2021; 21(1):1555.
- [28] Subedi B. Socioeconomic Disparities. Springer, Singapore. 2022.
- [29] Gyawali B et al. Building Strong Primary Health. Global Health Action. 2020. 13 (1) pp.1-9
- [30] Rai Y et al. Insight and challenges. Cambridge University Press: 09 Dec 2020.
- [31] Dhungana BM, Bista M, Thapa S, Sharma R, & Pandey BR. Assessment of graduate public. Human Resources for Health, 2022. 20 (1), 16.

- [32] National Planning Commission. NEPAL Sustainable Development Goals. Status and Roadmap: 2016-2030. Kathmandu. Dec 2017.
- [33] Mahat K. Role of Non-Governmental Organization in Development of Nepal: The Civil Society Index (CSI) Perspective in Karnali Zone" submitted for the award of the degree of Doctor of Philosophy in Management Faculty, 2016.
- [34] Teijlingen V et al. Evidence-based health. Nepal Journal of Epidemiology 2011;1(4): 114-118
- [35] WHO. (2023). Global spending on health 2020. World Health Organization. Updated 2023 [cited 2024 Jan 1] Available from <u>https://apps.who.int\*\*/nha/database</u>
- [36] MOHP. Annual Report 2075/76 (2018/19) Kathmandu, Ministry of Health and Population; 2019.
- [37] MOF. Budget speech FY 2023/24. Kathmandu, Ministry of Finance Nepal. 2023.
- [38] Shrestha N, Mishra SR, Ghimire S, Gyawali B, Marahatta SB, Maskey S, et al. Health system preparedness. Disaster medicine and public health preparedness, 2022; 16(6), 2560-2568.
- [39] Ministry of Finance India. Budget 2023-24. Updated 2023 Feb [cited 2024 Jan] Available from https://www.ibef.org/economy/union-budget-2023-24
- [40] [40] Mehta V, Thomas V, Mathur A. India's Union Budget 2023. Journal of Family Medicine and Primary Care. 2023; 12(10): 2204-2206.
- [41] Ministry of Finance Bhutan. Revised annual budget 2023-2024. Updated 2023 [cited 2024 Jan] Available from .<u>https://www.mof.gov.bt/publications/reports/budget-reports/</u>
- [42] Yangchen S, Tobgay T, & Melgaard B. Bhutanese health and the health care system: past, present, and future. Druk Journal. 2016; 2(1).
- [43] National Bureau of Statistics of China. China's national economic and social development statistics bulletin 2022. Updated 2023 Mar [cited 2024 Jan] Available from <u>https://www.stats.gov.cn/sj/ndsj/2022/indexeh.htm</u>
- [44] Liu YH, Chen Y, Wang QH, Wang LR, Jiang L, Yang Y et al. One-year trajectory of cognitive changes in older survivors of COVID-19 in Wuhan, China: a longitudinal cohort study. 2022; JAMA neurology, 79 (5), 509-517.
- [45] Ministry of Health and Welfare Korea. Health Statistics. Updated 2023 [cited 2024 Jan] Available from https://www.mohw.go.kr/menu.es?mid=a20311000000
- [46] [46] Carrin G, Mathauer I, Xu K, & Evans DB. Universal coverage of health. Bulletin of the World Health Organization. 2008; 86(11), 857–863.
- [47] Farooqi SM, Siddiqui MM, Farooqi S, & Farooqi MI. Effects of health expenditure. Shiraz E-Medical Journal. 2019; 20 (12), e88526.
- [48] World Bank. World Bank Nepal Open Data. Updated 2022 [cited c024 Jan] Available from <u>https://data.worldbank.org/country/NP</u>
- [49] Pandey AR. Health financing reforms. Journal of Global Health, 2023; 13. DOI: 10.7189/jogh.13.03021
- [50] WHO. World Health Report 2019: Health for all by 2030: A global monitoring report. Updated 2029 [cited 2024 Jan] Available from <u>https://www.who.int/publications-detail-redirect/9789241565707</u>
- [51] Pandey B. D., Ngwe T, Pandey MM et al. How an outbreak. Life, 2022; 12(7), 1087.
- [52] W.H.O. Governance for health in the 21st century. Updated 2021 [cited 2024 Jan] Available from <a href="https://www.who.int/">https://www.who.int/</a>
- [53] WHO. WHO Framework on Governance for Health. World Health Organization. 2010.
- [54] WHO. WHO Guide to Monitoring and Evaluation of Public Health Interventions. World Health Organization. 2015.
- [55] WHO. World Health Organization Data. Maternal mortality ratio. Updated 2023 May 11 [Cited 2024 Feb 15] Available https://data.who.int/indicators/i/AC597B1#:~:text=Worldwide%2C%20the%20maternal%20mortality%20rat io,202%20%2D%20255%5D%20in%202020.