

Nepal and India Health Economics Evidence Base: Systematic Literature Review of Health Financing, Out-of-Pocket Payment, Financial Protection, Health Insurance, and Economic Evaluation

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Abstract

Background: The field of health economics is associated with effective allocation of resources aimed at maximizing health gains, healthcare access, and financial protection. Despite the presence of many similar features between Nepal and India in terms of geography, population, economy, and other issues, the health financing systems of these countries significantly differ from each other. Both Nepal and India are characterized by high rates of OOP payments, health inequities, emergence of NCDs, and UHC achievement.

Objectives: The goal of the current study is a systematic comparison of the health economics evidence base in Nepal and India concerning health spending, OOP expenditure, catastrophic health expenditure, health insurance, financial protection, health technology assessment, and economic evaluation.

Methods: The literature search was performed in the scientific databases such as PubMed and PubMed Central, and also other reliable health sector sources. Priority was given to the research papers published in the period from 2021 till 2026 and having DOI. The articles associated with health financing, household expenditures, insurance, economic evaluation, health technology assessment, and UHC were included into the research. The results are presented in a narrative manner because of the diversity of methodologies, populations, outcomes, and measurement approach used in the literature.

Results: It was found out that OOP expenditure is still one of the main health economic problems in Nepal and India. In general, the country that has more developed evidence base in relation to economic evaluation and health technology assessment is India due to the presence of specialized institutions and health insurance systems. Nepal has achieved certain progress in terms of implementing the national health insurance and social protection schemes; however,

they are characterized by such problems as risk pooling fragmentation, coverage issues, etc. Moreover, the burden of hospitalization caused by chronic diseases exists in both countries.

Conclusion: Both Nepal and India have achieved certain progress in the direction of UHC; however, the issue of financial protection remains unresolved. India has much potential in relation to conducting health technology assessment and economic evaluation due to the presence of appropriate institutions. Nepal should develop its evidence base, implement strategic purchasing, and conduct economic evaluations.

Novelties: The review covers the evidence bases in Nepal and India and makes comparisons in terms of health economic challenges and opportunities.

Keywords: health economics, health financing, health insurance, India, Nepal, OOP expenses

Introduction

Health economics is an area of knowledge that deals with distribution of health resources in a way that improves health results. The availability of health resources is limited but the demand for health services is higher than the quantity of available resources. Thus, governments have to make decisions about what health services will be funded by the government, how much money will be allocated to particular health services, how the reimbursement for health care institutions will be made, and what can be done in order to prevent people from bearing costs of health care services.

One of the primary areas of health economics is health financing. This concept involves resource generation, risk pooling, and procurement of health services. An efficient health financing mechanism must guarantee proper financing for health services provision and avoid burdening the population with financial issues. There are two fundamental economic elements of universal health coverage (UHC). Firstly, people have to receive proper health services, and secondly, they must not face any financial hardship in receiving them.

Nepal and India are important countries from the standpoint of health economics in South Asia since they share borders and possess similar features related to the population, country development level, diseases, and healthcare system problems. At the same time, health systems of Nepal and India have differences with respect to size, institutionalization, financing of services, health insurances, and HTA.

The economic burden of healthcare is important due to direct household payments and impact on healthcare utilization and well-being of the households. Expensive healthcare results in delayed treatment, less healthcare utilization, borrowing money, selling assets, and lower spending on food, education, and other needs. Such problems are estimated using OOP, CHE, and impoverishment.

For instance, the problem of financial risk protection of the households in Nepal has been examined based on the analysis of the national representative household data carried out by Sapkota et al. (2023). It has been shown that disparities in financial protection exist depending on occupation and geography.

At the same time, there are numerous papers dedicated to the issue of healthcare expenditure in India. In particular, Kamath et al. ([2025](#)) performed systematic review of 36 studies analyzing determinants of OOP in India. Themes covered by this review include disease type, healthcare facility used, economic status, place of residence, age, gender, education, coping strategies, and health insurance.

However, recent Indian evidence on health expenditure shows that even though there was a long-term decrease in the proportion of OOP in total health expenditure, it still remains high. In particular, according to the calculation of the National Health Accounts for 2021-22 made by Indian health sector, the proportion of OOP in total health expenditure equals 47.1%.

Similar concerns can be stated about Nepal. As it was shown in a systematic review of health systems financing in Nepal, the problem of OOP spending persists in Nepal, and there is still limited financial protection. Fragmentation of risk pooling and sustainability problems connected with the National Health Insurance Program (NHIP) have also been stated.

It becomes obvious that the topic of health insurance is relevant when discussing health economics. Nepal developed the NHIP during the process of the country's transition to UHC. However, there are some problems with enrollment and renewals, with the delivery of services, payments, and sustainability of the program. Khanal et al. ([2023](#)) assessed the implementation of Nepal's NHIP and found many discrepancies between the objectives of the policy and its implementation.

India has a greater variety of publicly funded health insurance programs, including state-level programs and Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (PM-JAY) on the national level. Systematic reviews suggest that publicly financed insurance programs may lead to increased utilization of healthcare. At the same time, evidence on the impact of such programs on financial risks is inconsistent.

Another sphere of health economics is economic evaluation. The cost-effectiveness analysis, cost-utility analysis, budget impact analysis, and health technology assessment conducted through economic evaluation help the government to estimate the value of drug, diagnostics tests, medical devices, service, or interventions from the viewpoint of the cost. India has quite robust infrastructure of health technology assessment (HTA). The methodological guidance for budget impact analysis has been developed by the Indian government. Besides, the national HTA agency, called Health Technology Assessment India (HTAIn), has been established.

There is no evidence and institutions on this issue in Nepal. A systematic scoping review of HTA evidence in Nepal that was recently published revealed the policy gap and recommended the establishment of the national HTA agency.

Therefore, the comparison between Nepal and India is justified by the presence of similarities in the economic challenges in the healthcare sector of both nations, however, there are differences in the institutional approach to tackle the problem. In actuality, India has more established evidence base and HTA structures than Nepal, which is still struggling to develop its system of health financing and economic evaluation.

The present literature review will compare the information from the literature related to the health economics in Nepal and India. The following five factors will be examined: health

financing, out-of-pocket healthcare expenditures and financial protection, health insurance, economic evaluation and HTA and equity and efficiency.

Research Objectives

The major goal of this literature review is to compare the health economics literature in Nepal and India.

The specific objectives are:

- To examine the health financing models in Nepal and India.
- To compare the out-of-pocket healthcare expenditures and catastrophic health expenditures.
- To examine the function of health insurance as a way of achieving financial security.
- To compare the development of health technology assessment and economic evaluation in both countries.
- To establish significant economic barriers to universal health coverage.
- To identify research gaps and possibilities in enhancing health economics research in Nepal and India.

Review Questions

This review paper was framed by the following questions:

- What are some of the major economic health problems in Nepal and India?
- What does the research literature suggest on out-of-pocket expenditure and financial strain?
- How do health insurance and government-sponsored health coverage schemes help reduce the financial risk?
- How advanced is economic appraisal in both countries?
- What are the similarities and differences between the two countries?
- What areas of policy and research require further attention?

Methods

Review Design

The present systematic literature review follows the narrative synthesis methodology of systematic literature review. The selection of narrative synthesis method has been made due to large variations in the selected studies in regard to study design, sample population, data sources, economic variables, and outcome measurements. Meta-analysis was not feasible for the comparison of these studies.

The review has been conducted using the PRISMA approach for carrying out systematic literature reviews as the guiding framework. The purpose of this systematic literature review has been to analyze the existing body of literature on Nepal and India and their economics of health care.

Search Strategy

The literature for this review has been searched in PubMed, PubMed Central and other health sector databases using search terms including:

- “Nepal” AND “health economics”
- “India” AND “health economics”
- “Nepal” AND “health financing”
- “India” AND “health financing”
- “Nepal” AND “out-of-pocket expenditure”
- “India” AND “out-of-pocket expenditure”
- “Nepal” AND “catastrophic health expenditure”
- “India” AND “catastrophic health expenditure”
- “Nepal” AND “health insurance”
- “India” AND “health insurance”
- “Nepal” AND “health technology assessment”
- “India” AND “health technology assessment”
- “Nepal” AND “cost effectiveness”
- “India” AND “cost effectiveness”
- “Nepal” AND “universal health coverage”
- “India” AND “universal health

WHO Global Health Expenditure Database was considered to check whether it provides health expenditure data on an international level. According to the WHO Global Health Expenditure Database, health expenditure data for each country is provided. Also, according to WHO, the latest update of the database included health expenditure data for 2023.

Inclusion Criteria

Selection criteria for the articles were:

1. examined Nepal or India;
2. Addressing any health economics issue;
3. Being peer-reviewed journals or influential health sector publications;
4. provided identifiable bibliographic information;
5. Availability of DOI.
6. The following topics were considered: health financing, out-of-pocket payments, catastrophic health expenditure, health insurance, economic analysis, HTA, cost of healthcare service delivery, and UHC.

Preference was given to studies published between 2021 and 2026. Nevertheless, older papers with background literature were taken into account.

Exclusion Criteria

The following studies were excluded:

- had not addressed health economics and financing properly.
- did not address any country other than Nepal or India without making comparisons;
- were opinion pieces which had no relevant evidence at all;
- did not have any proper bibliographic information about their sources;
- made use of redundant evidence which could be seen elsewhere.

Data Extraction

The data were collected under the following headings:

- author and publication year;
- country;
- research design;
- study population/data source;
- economic issue examined;
- major findings;
- relevance to UHC;
- DOI/Source Information.

Data Synthesis

The findings were categorized into six groups:

health expenditure and financing;
OOP expenditure;
catastrophic health spending and poverty;
health insurance and financial protection;
economic evaluation and HTA;
equity, efficiency and UHC.

As there was variability in terms of the metrics and information employed within the articles, analysis of findings was conducted through the narrative method without statistical synthesis.

Results

Features of the Literature

From the literature, it appears that there are disparities in relation to the number and maturity of health economics literature between India and Nepal in relation to topics like healthcare expenditure, insurance, economic analysis, HTA, payments to providers, costs of individual diseases, and financial protection. It seems that Nepal has experienced growth in its literature in relation to issues like health insurance, out-of-pocket expenditures, financial protection, and UHC, but studies on economic analysis have been few.

In the case of the recent literature, studies from both countries have tended to be more focused on financial protection and UHC issues. In comparison, it appears that there has been greater focus on HTA and economic analysis in health literature in India compared to Nepal.

In addition, it is evident that health economics encompasses not only healthcare expenditure issues, but also issues related to efficiency, access, insurance, provider payment, cost-effectiveness, household welfare, and resource allocation.

Health Financing in Nepal

There have been some health financing mechanisms that have been instituted in Nepal with the aim of ensuring increased access and financial protection. These include publicly financed healthcare services, free healthcare services for selected groups of individuals, social health protection schemes, and the National Health Insurance Program.

However, there appears to be fragmentation in its financing mechanisms, as illustrated by a recent review of the literature and policies up to the year 2024. This review pointed out the

existence of numerous social health protection schemes in Nepal, fragmentation of risk pooling, financing efficiency concerns, high out-of-pocket expenditures and coverage, and financial sustainability of NHIP.

The process of federalization has not left health financing untouched either. The subnational governments now have an important role to play in providing health services. This means that there is scope for decisions being made at the local level but there also emerges the question of varying financial abilities of subnational governments.

The study carried out in Nepal found some big differences in health expenditure in provinces. As per the study of health financing in federalism, there is great variation in per capita and percentage of health expenditure in provinces.

This variation becomes significant from the viewpoint of health economics because the same amount of financing does not mean that there will be equal access to health care. Remote areas might have higher transportation costs, fewer health workers, and poor infrastructure. Hence, the allocation of health resources should consider factors such as need of population, disease prevalence, geographic challenges, poverty, and accessibility of health care services.

Health Financing in India

India has a very complex health financing system involving central government, state governments, private players, households, employers, insurance companies, and public insurance programs.

The important source of information in analyzing this health care financing system is Indian National Health Accounts. India maintains National Health Accounts for several years including 2021-22 and 2022-23.

From the recent empirical studies, government spending on health increased over the period. Nevertheless, OOP spending remained to finance health care. The systematic review carried out in 2025 found that OOP spending made up 47.1% of the total health care spending in 2019-20 and illustrated the continuing financial burden on households.

The Indian economy is quite complex due to the large share of the private healthcare sector in the country. There are private hospitals, clinics, diagnostic centres, pharmacies and other players in the market involved in healthcare provision. This structure can be useful for making consumer choices larger, but it may put households at risk of paying directly.

Therefore, the available literature demonstrates that not only increased public spending affected household health spending. Other determinants include the purchase system design, provider payment systems, health insurance, regulation, drug prices and quality assurance.

Comparison of Health Financing

Nevertheless, both states have one common trait: they managed to achieve certain level of development towards UHC with considerable reliance on household spending.

Table 1. *Comparison of main health-economical features (Summary)*

Dimension	Nepal	India
Main financing challenge	High OOP and fragmented risk pooling	High OOP and large private sector

Dimension	Nepal	India
Health insurance	National Health Insurance Program	Multiple public and state schemes including PM-JAY
Public financing	Increasing but constrained by fiscal capacity	Larger absolute public financing system
Risk pooling	Developing and fragmented	More extensive but fragmented across schemes
Economic evaluation	Limited institutional development	More developed HTA infrastructure
OOP burden	High	High, although declining as a share of total expenditure
Geographic inequality	Important, especially between provinces and remote areas	Important across states and rural/urban areas
HTA capacity	Emerging	More established
Research evidence	Growing	Larger and more diverse

The purpose of the comparison is not to suggest that there is a hierarchical relation. The two countries are distinguished by the population size, structure of the federation, healthcare market and institutions. In such situation, the indicators should be interpreted in the context.

Out-of-Pocket Expenditure in Nepal

Out-of-pocket payments are often mentioned in the health-economic literature as the issue of Nepal.

Gupta & Chowdhury (2014) investigated the correlates of out-of-pocket payments in Nepal and stressed the influence of the household and health care utilization factors on financial burden. Although the study is dated, it is very useful for the illustration of recently collected data interpretation.

The recently obtained data suggests inequality in financial protection according to occupation and geographical location. Sapkota et al. (2023) made their research based on the nationally representative sample and calculated the prevalence of catastrophic health expenses using different cut-offs. Their findings point at the great variation in both occupations and geographics.

The finding has its own economic implication. National average of out-of-pocket payments may hide the inequality between the households. While a household with regular sources of income can cope with some medical expenses, it becomes a burden for poor households.

The matter gets even more complicated in relation to chronic diseases. There is an epidemiological transition happening in Nepal because of the growing role of NCDs. Chronic diseases require consultations, diagnostic tests, medicines, and long-term treatment, which means that the expenses on treatment will be spread over the years as opposed to occurring all at once.

The latest evidence about chronic kidney disease illustrates this problem. The 2025 study regarding the OOP cost of people who have to do haemodialysis in Kathmandu proves this. This is due to the presence of high levels of OOP cost, where the hospitalization and medicines serve as the factors of direct cost, while other costs relate to caregiving and migration.

This evidence proves the necessity to take into account not just direct, but indirect costs as well in case of health economics. Health care costs not just the money indicated on the bill. One can incur loss of income, travel expenses, migration, as well as the cost of employing a caregiver, whether paid or unpaid.

Out-of-Pocket Expenditure in India

In India, there is a much larger literature on OOP expenditure.

There is a systematic review by Kamath et al. ([2025](#)) of Indian literature, which includes 36 studies and eleven major categories of research, which are the following: health care source, disease, residence, economic status, age, gender, coping strategies, education, maternal care, and insurance.

From the analysis of the review, it has become evident that private healthcare entails more out-of-pocket expenses than public healthcare. Another significant aspect of household expenses is medications.

According to the literature devoted to particular diseases, this statement is true. For example, Yadav et al. ([2021](#)) examined out-of-pocket expenditure, CHE, and impoverishment due to illnesses in India using national health surveys. Economic burden caused by morbidity and health spending has been proven to exist.

One can see an illustrative example in cancer. A systematic review and meta-analysis of cancer-related economic burden in India have explored such aspects as out-of-pocket expenditure, catastrophic expenditure, and distress funding. Thus, it has been demonstrated that cancer represents a considerable economic burden on families.

Another disease-specific issue to be discussed is breast cancer. The prospective study of out-of-pocket payments and financial protection of breast cancer patients in India has been performed by Wadasadawala et al. ([2024](#)).

This literature provides information about a range of determinants of economic burden in India, namely disease, provider, medications, hospitalization, insurance, and household income.

Catastrophic Health Expenditure

It happens when healthcare costs form a significant proportion of the household expenditure and thereby affect the ability to maintain a reasonable standard of living.

Different approaches have been applied in setting CHE threshold depending on each study. Expenditure higher than 10% of household total expenditure or 40% of the household capacity to pay may be used. The differences in CHE thresholds and definition require caution in making any comparisons among the various studies.

In Nepal, Sapkota et al. ([2023](#)) defined CHE based on budget share and capacity to pay approaches and revealed that there were differences in terms of financial protection among occupational and geographical groups.

Similarly, in India, the studies conducted on specific diseases have reported CHE and impoverishment. For instance, Yadav et al. ([2021](#)) performed a study with morbidity classification.

The results obtained in these two countries show that CHE does not only need to be addressed in terms of health but also poverty and development. Health costs can prevent the household from earning income to buy food, pay for education, shelter, and other investment needs.

Hence, the need for financial security should be considered as one of the economic impacts of the health system.

Health Insurance in Nepal

National Health Insurance Scheme is among the most crucial policies implemented in Nepal to reduce direct payment for health care services.

The idea of social health insurance is among the approaches adopted in Nepal to ensure UHC. According to Pokharel & Silwal ([2018](#)), social health insurance is a great approach towards UHC.

However, according to various studies, it is noted that there exist numerous challenges when it comes to insuring people and renewing insurance schemes. The study that was done in Kailali showed that the economic status of households affected their participation in government health insurance scheme.

This raises a great economic question because the very idea of insurance scheme is to provide people with protection from any costs.

Challenges relating to implementation have also been identified in NHIP of Nepal by Khanal et al. ([2023](#)).

Poor enrolment rates, poor renewal rates, and sustainability have been other problems that have been highlighted in the latest literature.

Therefore, enrolment alone is not the solution; health insurance should ensure that the individual has access to care services, adequate benefit coverage, and sustainable procurement options.

Health Insurance in India

Health insurance programs have been more common in India as compared to Nepal.

This literature is made up of the evaluation of such programs as Rashtriya Swasthya Bima Yojana and PM-JAY.

The authors, Prinja et al. ([2017](#)), conducted a systematic review of public health insurance programs and revealed evidence of increased utilization and OOP spending, financial protection and health effects in some programs.

Another systematic review conducted later also suggested that publicly financed health insurance programs led to higher healthcare utilization though no convincing evidence of reduced financial risks was revealed.

This is a crucial result in health economics. Health insurance programs may enhance healthcare utilization but may fail to lower household spending since patients may spend money on medicines, diagnostics, transportations and other uncovered services.

More recently, more research studies were conducted concerning the PM-JAY program in which case-control studies among the participants and non-participants of the program were carried out as for OOP expenditure and CHE.

In conclusion, the Indian case suggests that the design of health insurance programs is essential. The statistics of household spending cannot provide evidence of financial risk protection. The research should evaluate the spending of households after their enrollment into health insurance programs.

Economic Evaluation in India

India has progressed considerably in the domain of health economics.

One of the major achievements is the creation of HTA. The HTA In and the guidance for economic evaluation and budget impact analysis have been created in India.

The methodology for budget impact analysis in India has been created by Prinja et al. ([2021](#)). The creation of such a methodology is crucial since it helps to answer the questions that cannot be answered by cost-effectiveness analysis. While cost-effectiveness measures whether the intervention was worth the investment into it, budget impact measures whether the intervention could be afforded with the given budget of the health system.

The creation of HTA and its influence on the UHC goal have been evaluated by Lahariya et al. ([2023](#)).

Moreover, there have been conducted multiple economic evaluations of interventions in India. Kaur et al. ([2022](#)) have conducted an economic modeling of population-based screening of diabetes and hypertension.

Similarly, Joshi et al. (2023) have done an evaluation of the cost-effectiveness and budget impact of using tranexamic acid in treating postpartum haemorrhage in the public health sector of India.

A single paper has been published on the cost of hospital services in order to set up payment by providers and perform HTA.

Thus, the above-mentioned papers illustrate that health economics in India is advancing from simple measurement of expenses to resource allocation and cost-benefit analysis.

Economic Evaluation in Nepal

Sources on economic evaluation in Nepal are much less common than those in India.

The scoping review of HTA evidence related to the screening of hypertension and diabetes demonstrated that there is some evidence in Nepal regarding the cost and effectiveness, but there is no institution responsible for HTA in the country.

This is important because of the difficult decisions related to resource allocation that have to be made by Nepal. This involves how resources will be allocated for the purchase of medicines, diagnostics, screening, chronic disease management, hospitalization, and public health interventions.

Without economic analysis, these decisions may become influenced by past budgets, politics, providers, and even program preferences rather than comparative efficiency.

Indeed, a recent assessment of the purchasing system of Nepal revealed that there is virtually no HTA/CER taken into consideration when deciding on the benefit packages.

Therefore, HTA is a very important area of health economics research in Nepal in the future.

Health Technology Assessment: Nepal and India

With HTA, resource allocation becomes evidence-based, taking into account such factors as clinical effectiveness, safety, cost, cost-effectiveness, budget impact, and many more.

Institutional HTA of India has become more advanced in the development process. Methodological guidelines, institution, economic analysis capabilities, and research networks exist in India.

The situation is not very advanced in the case of Nepal. Literature available on the topic indicates the requirement of institutions for HTA and economic evidence.

This gap in development status does not indicate that Nepal should emulate the example of India. It is because the characteristics of the population, healthcare sector, budget, government system, and healthcare market in Nepal are different from India. Yet, Nepal can learn something from the Indian experience regarding methodological guidelines, evidence production, costing, budget impact assessment, and institutional coordination.

Cost of Healthcare Services

Healthcare cost is yet another significant area in the field of health economics.

Costing for estimating the healthcare cost has been undertaken extensively in India. In India, Chauhan et al. ([2022](#)) have undertaken multi-center studies related to provider payment rate and HTA.

Costing data is very crucial in the insurance scheme. In the absence of costing data, certain incentives will be created for providers, but the health insurance buyer will be paying more than required.

There is relatively less availability of systematic provider cost data in Nepal, which can be researched further.

There is a lot to study regarding the costs of outpatient, inpatient care, cost of medicines, cost of diagnostics, cost of surgeries, cost of chronic diseases, and cost of emergencies for NHIP in Nepal.

Non-Communicable Diseases and Health Economics

India and Nepal are increasingly being affected economically by the NCDs.

Diabetes, hypertension, cardiovascular diseases, cancer, chronic kidney diseases, and other diseases that need prolonged care incur the economic burden of costs of medicines and indirect costs.

Economic evaluation of NCD intervention strategies is rather good in India. For instance, Kaur et al. ([2022](#)) describe the part played by economic modeling in the case of diabetes and hypertension screening.

As for Nepal, the body of knowledge is smaller; however, economic evaluation of screening and prevention is still needed. The assessment of evidence for HTA of hypertension and diabetes demonstrates the necessity to evaluate economically screening and prevention.

From an economic perspective, prevention can be proven more efficient than treatment of the complicated disease; however, it is not always like this. Prevention campaigns have to be evaluated economically.

Equity in Health Financing

The efficiency of the healthcare is not the only purpose of health economics. There is equity. A health care system can use its resources effectively; however, it may lead to inequality in access if there are additional obstacles faced by poor, rural, women, elderly or remote population groups.

Moreover, the geographic disparities are important in the case of Nepal since in the case of hilly and isolated regions, the cost of transport and opportunity may be high.

There are also large-state and rural-urban disparities in India. In the systematic review carried out in 2025 in respect of the OOP expenditure in India, factors such as the place of residence and economic conditions played an important role in the household health expenditures.

Thus, the principle of equity in economics entails both what and who pay.

For instance, payment of NPR 5,000 or INR 5,000 could mean totally different things for different households. Hence, health economics must consider expenditure as it relates to household capabilities.

Efficiency of Public and Private Healthcare

Both countries have mixed health care systems.

There is a disproportionately high number of private hospitals in India. While this can mean availability of resources and choice, studies have found that the association of private care with households leads to higher expenses.

The private healthcare sector is growing in Nepal, particularly in urban settings.

In terms of health economics, the distinction between the public and private sectors does not lie solely on ideological grounds. The important factors are:

- What does each cost?
- What kind of treatment do they provide?
- How easy is access to this service?
- Who pays?
- What outcomes are achieved?
- How can we fund the service delivery?
- What incentives are created?

This is something that needs to be addressed with facts.

Strategic Purchasing

Strategic purchasing has been defined as “the purposeful deployment of health care resources obtained through pooling to achieve better health outcomes, efficiency, and equity in health care systems.”

New findings from Nepal show that procurement systems continue to face challenges like line item budgeting and program-based financing, as well as overlapping institutional mandates.

Indian experience with public insurance and HTA is another source of facts on strategic purchasing, provider payments, and benefit packages.

Still, in both situations, there is the same basic problem: procurement needs to be tied to accurate data about the population's needs, costs of providers, health outcomes, and protection from financial risks.

Financial Protection and Universal Health Coverage

Apart from having health insurance cards or improved healthcare infrastructure, UHC requires something else.

Protection from financial risks implies that a person can receive healthcare without any financial burden for himself.

A comparative study of the five South Asian countries revealed that protection from financial risks was poorly developed both in Nepal and India.

This opinion is corroborated by contemporary literature.

In Nepal, the literature on health financing underscores the issue of persistent OOP expenditure and lack of insurance coverage.

In India, the literature on health financing underscores the issue of persisting OOP expenditure despite an increased public finance for insurance.

Hence, health insurance should be assessed based on the following criteria:

- reduction in OOP expenditure;
- reduction in CHE;
- reduction in impoverishment;
- increased appropriate healthcare use;
- improved continuity of care;
- improved quality;
- equity across income groups.

COVID-19 and Health Economics

The emergence of the COVID-19 crisis has shed light on the challenges of health care financing.

Research conducted in India concentrated on household expenditure during the pandemic period as well as the effect of financial protection measures. Garg et al. ([2022](#)) have analyzed non-COVID hospitalization costs during the pandemic period and its effect on financial protection measures.

Research conducted in South India has also shown CHE due to COVID-19.

The coronavirus has highlighted the significance of spending on public health, readiness, logistics, hospitals, and risk pooling.

In the case of Nepal, the outbreak occurred at a time of reform in Nepal towards federalism. Research conducted in relation to Nepal's health financing during the period of federalism and the pandemic has identified fiscal space, OOP payments, and fragmentation of social protection programs as challenges.

Hence, there is a valuable lesson from the pandemic for both countries.

Major Similarities Between Nepal and India

Some commonalities have been identified from the literature.

Large financial burden to the household

Both countries have high spending on health services in their respective households.

Unequal financial protection

The households that have poor and vulnerable experiences more financial burden in case of any disease.

Importance of chronic illnesses

There has been an increase in the contributions of NCDs to health care spending and long-term costs in the household.

Insurance alone is not enough

Insurance programs could boost utilization while still allowing some OOP payments.

Public-private interaction

Both involve the use of both public and private health care provision.

Economic information is important

Information on cost, impact, payment for providers, and value-for-money is needed in both countries.

Major Differences Between Nepal and India

Also, differences have been identified in the literature.

Scale

The population of India is much larger compared to that of Nepal and so is the healthcare market; hence, India has published much more health economics literature.

HTA institutionalisation

India has already set up its HTA institutions, guidelines, and capacity for doing research, whereas the HTA framework of Nepal is still being developed.

Health insurance structure

India has many insurance programs that are supported by the national and state governments. Nepal also has national insurance program; however, there are also other social security programs in the country.

Research capacity

India has more health economists, research institutions, cost studies, economic modeling, and HTA studies.

Geographic challenges

The nature of the mountainous geography of Nepal determines particular transport and delivery costs. The same can be said about India, where there are disparities across regions; however, the problem is different.

Discussion

As it can be seen from the literature analysis above, there are some similar health economic problems facing Nepal and India, including the situation when the demand for health care services exceeds the ability of the families and society as a whole to pay for them without difficulties.

Both countries have achieved certain results as far as government programs, insurance, health financing, and the UHC policy are concerned. However, some gaps remain in the sphere of financial protection.

Above all, the out-of-pocket payments still play the key role in health economics of both Nepal and India. As it is stated from the systematic data provided about India, the proportion of out-of-pocket payments has been high despite the decreasing share of them in the overall costs of health care.

There is some evidence regarding Nepal that suggests that the OOP payment is a significant problem in the area of health financing in Nepal.

That means that the effectiveness of health system reforms can't be measured in terms of health spending and insurance coverage only. The final question remains – what level of exposure to financial risks of the household will remain after all the changes.

The second important finding is the issue of insurance. It was one of the priorities in both states. But just like possession of the health insurance card doesn't imply lack of out-of-pocket payments.

There are certain problems of insurance in Nepal. The sustainability and coverage of NHIP are among the most crucial ones.

That means that the policy design should be conducted taking into consideration the whole process of providing the care. There is always a chance to have insured hospitalization, pay for medicines and get diagnosed separately.

Finally, there is the economic evaluation part. India has made great progress in terms of HTA and economic evaluation. Its techniques, procedures and evidence can serve as a proper foundation for evidence-based resource allocation.

As for Nepal, there is certain evidence that emerges; however, its support needs to be strengthened.

Building HTA for Nepal does not imply the establishment of a large organization at the very start of the process. The initial actions could involve establishing national methodology guidelines, technical team, training in health economics, cost standardization, and piloting evaluations of costly interventions.

Fourthly, there is the problem of equity. The national average does not show inequality between various population groups. The evidence from Nepal demonstrates inequality in financial protection in terms of occupation and geography. The evidence from India identifies income and residential differences as the causes of OOP expenditures.

Therefore, health economics should include both aspects – efficiency and equity.

Implications for Nepal

There are several important areas that require improvement in terms of health economics in Nepal according to the literature.

To begin with, more information is needed in Nepal regarding expenditures and health accounts.

Secondly, NHIP should be assessed not just on the basis of enrollment but also in terms of financial protection, service quality, utilization, renewal, and experience of patients.

Thirdly, Nepal needs more information regarding costs of the providers. This will allow for setting appropriate prices.

Fourthly, economic evaluation should be included on a regular basis in the process of making decisions about expensive drugs, diagnostics, medical equipment, screening procedures, and insurance benefit plans.

Fifthly, the development of the HTA system should take place in Nepal by cooperation of the universities, Ministry of Health and Population, Health Insurance Board, Nepal Health Research Council, and others.

Sixth, studies must take into consideration indirect cost also. Income forgone, transportation cost, accommodation cost, care services and production forgone carry economic importance though not part of healthcare cost study.

Seventh, Nepal must consider financial protection issue in the context of provincial and local levels owing to the federalization process where large disparities were observed.

Implications for India

From Indian literature, one may conclude that India has achieved substantial success in developing research in health economics though a number of problems exist.

First, out-of-pocket expenditure remains high and must be continuously monitored.

Secondly, publicly-financed insurance schemes must be studied for providing financial protection instead of enrollment.

Thirdly, the problem of medicine expenditures requires deeper investigation because medicines comprise one of the largest parts of OOP spending for households.

Fourthly, HTA should become more and more practiced in the course of purchasing and reimbursement procedures.

Fifthly, the discrepancy between states should be considered because the health care system is dramatically different from state to state.

Sixthly, more research is needed in order to evaluate the influence of insurance on household wellbeing.

Research Gaps

A number of research gaps have been identified.

Shortage of health economics analysis in Nepal

Nepal has a relatively lesser number of cost-effectiveness and budget impact analysis compared to India.

Limited comparative research

There are fewer studies that compare both countries on similar health economic metrics.

Inconsistent definitions

There are different definitions of CHE which makes it difficult to compare the two.

Limited longitudinal evidence

The research done is mostly cross-sectional. There should be longitudinal analysis to assess the impact of health insurance.

Less research regarding provider cost in Nepal

Research is needed in many other sectors, such as hospitals, primary health services, medicines, tests, and chronic disease.

Less information on indirect costs

There should be more research in productivity, informal care, transportation, accommodations, and lost income.

Limited research on quality

Healthcare quality needs to be considered together with financial protection. Cost savings without taking into account quality might not bring any improvement in welfare of patients.

Limitations of the Review

The following flaws can be identified in this review:

First, every study used its own design, sample, definitions, and outcomes. It would be wrong to conduct a quantitative analysis of the results.

Second, the main source of information for this review was indexed peer-reviewed publications and publications of the health care sector. The local studies may not be indexed in international databases.

Third, more studies have been conducted in India than in Nepal. Thus, the comparison cannot be regarded as proof that the health care system of one country is better than that of another country.

Fourth, some government statistics on health care spending can be presented for various time periods. Moreover, data and estimates in national health accounts can be calculated in different ways.

Fifth, conclusions made in health economics are contextual. Results obtained in one state of India or one province of Nepal cannot be generalized over the entire nation.

Conclusion

Health economics is becoming more and more significant for Nepal and India because both countries need to find solutions to cope with growing needs in healthcare and their budget constraints.

The literature indicates that the issues of OOP payments and financial protection remain relevant for both Nepal and India. Chronic illnesses, hospitalizations, medication, and other requirements for healthcare represent an economic burden for people.

India has created a more developed community of researchers working in the field of health economics. Such institutions as national health accounts, health technology assessment institutions, economic evaluation guidelines and literature on health insurance, OOP expenditure and cost effectiveness have already been created. Nevertheless, there is a lot of work left to do about high household expenses.

Despite the country's numerous achievements in health financing reforms and National Health Insurance Program, there appear certain issues regarding OOP expenditures, fragmentation of risk pools, insurance coverage and renewability, financial sustainability, and economic evidence-based purchasing.

To conclude, the most important lesson learned by Nepal and India is that the financing of healthcare systems should be assessed on the basis of three key indicators: access, quality and

financial protection of the population. It does not necessarily follow from expenditures and insurance coverage.

Capacity building in health economics is one of the highest priorities for Nepal. Implementation of health technology assessment, national costing guidelines, provider payment studies, and economic evaluation training will provide Nepal with an opportunity to allocate its limited resources more efficiently. India should continue its efforts in connecting HTA evidence to purchasing and reimbursement decisions.

Health economics evidence will give an opportunity to make transparent decisions on the allocation of scarce health care resources for both Nepal and India. In addition, such decisions will serve the overall purpose of attaining UHC.

Novelty of the Review

The uniqueness of this review is reflected in the comparative analysis of Nepal and India from a health economics perspective, and not only on the issue of expenditure in healthcare.

The review highlights an important institutional component: although India is ahead of Nepal with respect to economic assessment and the development of HTA infrastructure, Nepal is developing this area of health economics right now. At the same time, the two states share common problems concerning financial protection and household expenses.

This methodology provides an effective means for assessing the possibility for countries with similar locations to develop their own institutions in health economics.

Author Contribution

Topic definition, research question formulation, literature search and synthesis, manuscript preparation and final version approval – all the above-mentioned stages of the review were done by the author himself.

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Other major sources of data used to establish context

- Government of India, Ministry of Health & Family Welfare/National Health Systems Resource Centre. *National Health Accounts*. Official source provides National Health Accounts that cover years 2021-22 and 2022-23.
- World Health Organization. *Global Health Expenditure Database*. WHO has a database that covers international comparisons of health expenditures and the latest update of the database is up to 2023.

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