

A Review of Quality Differential in Healthcare Delivery through PPP Model

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Abstract: Health affects economic growth and development directly through increase in labour productivity. It also affects the development indirectly through the increase in enrolment ratio and level of educational attainment. Healthcare manager provides leadership, management and direction to healthcare units for ensuring the utmost delivery of the available healthcare services. Healthcare management encompasses planning, directing, and coordinating nonclinical activities within health care systems, organizations, and networks. Public healthcare sector targets increase in welfare through public services whereas private sector strives to enhance the value of resources. Private healthcare sector has the potential to exploit the commercial potential of the government assets through PPPs. This research uncovers measures of quality of healthcare services, identifies research gaps and suggests developing a holistic healthcare index to better understand the quality differential in healthcare delivery through PPP models.

Keywords: Health, Healthcare delivery system, Public - Private Partnership, Quality Differential

1. Introduction

Health is the ability of the people enhance their productivity and potential throughout their lifetime and avoid illness. Health affects the economic growth and development directly through increase in labour productivity, decrease in illness and hence reduction in absenteeism. It also affects development indirectly through the increase in enrolment ratio and level of education. Various macroeconomic studies

have shown that health positively affects growth (Iverson, A. J., 2002). Healthcare management can be defined as monitoring the functions of healthcare organizations. Healthcare manager provides leadership, management and direction to healthcare units for ensuring utmost delivery of the available healthcare services. Healthcare management includes efforts regarding planning, directing and coordinating both clinical and non - clinical activities.

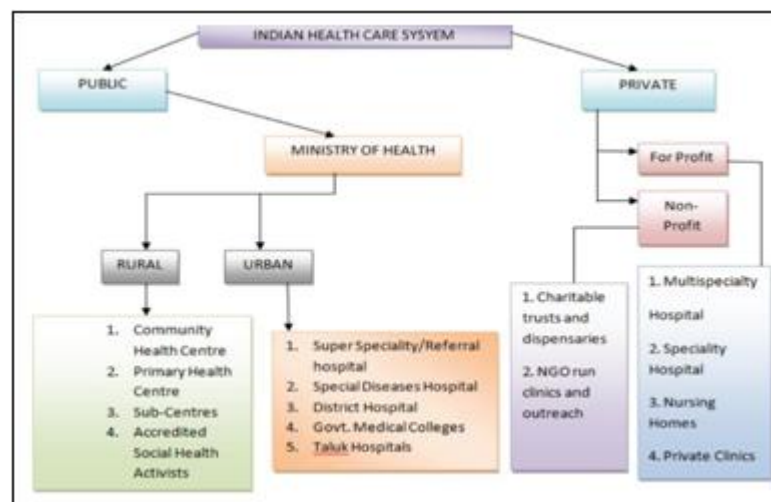


Figure 1: Flow Chart of Indian Healthcare System

Source: Author's Contribution

Public healthcare sector strives to increase welfare through public services, whereas private sector enhances the value of available resources. Private sector in healthcare has the potential to exploit the commercial potential of government assets through various types of Public - Private Partnerships (PPPs). Under PPP in healthcare, the private sector is responsible for the designing, building, maintaining and operating of hospitals whereas public sector takes care of

core medical services such as patient care, recruitment of doctors and nurses. (Ondategui - Parra, 2009). Government has experience and expertise in providing clinical services and ensuring that welfare of patients is well taken care of, while non - critical services are handled by the private sector. (Ondategui - Parra, 2009). There is not one but multiple definitions of PPP model. The PPP Knowledge Lab (WorldBank Group) defines PPP as "a long - term contract

between a private party and a government entity, for providing a public asset or service, in which the private party bears significant risk and management responsibility, and remuneration is linked to performance". (World Bank, 2022)

Health spending in India is at around 4.8% of GDP (Nundy, 2021) and is not considered at par with spending in Organisation for Economic Co-operation and Development (OECD) member countries. There might be visible success in physical infrastructure development including primary healthcare, but there remains a major gap in term of accessibility and coverage (especially in rural areas), ineffective management, compromised quality and availability of healthcare professionals. PPP models have been successful internationally in helping alleviate some of these challenges. (Nasrin Joudyian, 2021)

Features of PPP model in healthcare

Private sector is engaged for delivering services on behalf of Government through Public - Private Partnerships for achieving the following:

- Finance – financing or co-financing the project
- Design – design of the project, including design of the infrastructure and care delivery model
- Build – construction or renovation of facilities included in the project
- Maintain – maintenance of hard infrastructure (facilities as well as equipment as applicable)
- Operate – supply of applicable equipment, IT and management/delivery of nonclinical services
- Deliver – delivery and management of specified clinical and clinical support services

Based on these features, PPPs can be grouped into three models:

- 1) Infrastructure-based Model – to build or refurbish public healthcare infrastructure
- 2) Discrete Clinical Services Model – to add or expand service delivery capacity
- 3) Integrated PPP Model – to provide comprehensive package of infrastructure and service delivery

Type of Private Partner	Content of PPC	Process or Service	Time range of commitment	Contribution of private partner	Form of PPC	Level of Care	Area	Type of Public Partner
Profit Oriented	Infrastructure	Core process or Service	Long Term	Finances	(Partial) Privatization	Tertiary	Urban	National
	Service				Contracting Out			
Non Profit Oriented	Management	Support Process or Service	Short Term	Expertise and Finances	Outsourcing	Secondary	Rural	State
	Innovation	Management Process or Service			Procurement	Primary		
Idealistic or Altruistic				Expertise				Community

Figure 2: Types of Public and Private Partnerships and Collaboration in Healthcare

Source: Nikolic; Maikisch, 2006

India has systematically implemented PPP model for delivery of high priority and critical public services and has one of the largest PPP programs in the world. The World Bank has identified close to 2000 PPP projects in various stages of implementation in various sectors in India (World Bank, 2022). India is one of the leading countries in terms of readiness for PPPs. Public - Private Partnership is gaining importance globally and India is also trying to acquire its position. Despite engagements in multiple projects initiated by Government of India (GoI) through PPP models in various sectors, health sector has lagged behind (Forum, 2022). One of the projects undertaken by Department of Health and Family Welfare, Government of Himachal Pradesh in healthcare sector is for the maintenance of Hemodialysis Unit at Zonal Hospital, Dharamshala (Agreement, n. d.).

Jharkhand is also trying to implement PPP model in healthcare delivery and the pace has increased during the COVID - 19 crisis. (Ravichandran, 2021). Jharkhand being a

low - income state, faces a major issue regarding shortfall in health delivery and diagnostic services. Lack of quality forces people to either forgo the services or purchase them from private providers with inconsistent quality, while incurring catastrophic expenses and additional costs related to travel and over - testing. Government of Jharkhand sought support from the International Finance Corporation (IFC) to structure and run radiology and pathology centers as public - private partnership. International Finance Corporation assisted Jharkhand in developing radiology centers across the state in collaboration with HealthMap Diagnostics Private Limited (a joint - venture of a major Indian health player, Manipal Health, and Philips). It also financed Jharkhand's effort to establish and run pathology centers across the state in collaboration with Medall Healthcare Private Limited and SRL Limited. During the time of COVID - 19 pandemic, 500 beds were allocated at Sadar Hospital in Ranchi under the PPP mode. Even the sub - divisional hospitals were allocated 300 beds under the same

PPP mode and other buildings were constructed by state government (Telegraph, 2022).

2. Literature Review

Derakhshani, N., et. al. (2021) present classifies factors according to their nature and provide the basis for measuring course - correction needed to cover weaknesses in the healthcare delivery systems. Thadani, K. B. (2014) talks about implementation of PPP and its impact on the working of various health care schemes and policies undertaken by the government. Public and private sector have started to work together to enhance and balance their resources, skills and expertise. Pal, R., & Pal, S. (2009) explained the impact of PPP on PHC in various states of India. The study also mentioned that the drawbacks of public health system could be overcome through the reforms in health sector. One such reforms could be collaboration with private sector through PPP. Ramakrishnan, D. (2012) gave an overview of PPP as an instrument for improving the health of people. PPP has the ultimate motive to promote health as a goal for all the healthcare providers and create health sector as a national asset. Non - Profit Sectors are also equally accountable for healthcare development. Minjire, E. K. (2015) established that PPPH projects have contributed significantly in the improvement of healthcare sector in the country.

R Maslova, S. V., & Sokolov, M. Y. (2017) paper's key idea was to define the risks in PPP projects and establish their classification. Another aspect of this paper is to identify the risk inherent in healthcare. Etemadian, et al. (2013) introduced a new Iranian - Islamic model of PPP based on a combination of previously describes PPP classification. This model provided a framework to renovate and modernize the old hospitals. Raman, A. V., & Björkman, J. W. (2008), explained the importance for PPP in removing the deficiencies in Public Health System and uplifting those who are under economic stress and seek costlier and unregulated private health sector. Authors studied various states in India and have drawn experiences from other countries to analyse the challenges, opportunist and benefits of PPP. It also explored whether partnership with the private sector could be designed to deliver health care services to the poor as well as the consequences for beneficiaries. Vecchi, V., & Hellowell, M. (2018), explained PPP as a widespread model to develop infrastructure. This model has been important to cope with public budget and make public services more efficient and effective. However, suitable skills are required by the policymaker to understand the complexity of the model. Glasow, P. A. (2005) paper provided the meaning and various definitions of the survey research. It explained the sample size, survey methods use of statistical tools. It also provided information on the survey instrument development, measurement error. This paper provided guidance for the survey research.

Groves, R. M. et. al. (2011) explained the meaning of survey, survey methodology, various types of survey design suitable for different types of research, methodology to be used as per the research and various ethical issues in survey methodology. Avedian, A. (2014) Harvard Law School explained the purpose of the survey, types of surveys by study design and how to construct a valid questionnaire

along with the guidelines to ask the justified questions. It also explained the various methods of computerization to be used in healthcare. Groves, R. M. (2011) explained the various eras of development of survey methods adapted to the changes in the society and use of new technologies when proved valuable to the field. The survey method is both the strengths and deficit that are the reflections of the societies data collection including the privacy and ethics in survey research. It has also explained the sample errors and types of questions through suitable examples and pictures. Kaplan, R. M., Bush, J. W., & Berry, C. C. (1976) have discussed regarding the Health Index that will be comparatively easy to apply. They have tried to answer the question of validity by including all possible level of functions and a clear relation to the death state.

Arbuzova, A., & Pazdnikova, N. (2021) emphasize on the need for social partnership which fundamentally talks of the participation of various stakeholders including the government and other social actors who would together address socially significant problems of the society. The paper has highlighted the need for economic evaluation of the participatory processes which is either not duly undertaken or partially done owing to cost, complexity and resistance. Tadiri, C. P et al. (2021) emphasize the significance of relation between gender and various social determinants which throws light on the perceived health and unmet care. It shows the impact of social environment on overall health and also, gives a broader outlook of social determinants of health. (An overview of the importance of Critical Success Factors on the Public - Private Partnership) especially in developing countries in a sustainable way. It discusses various theories and models undertaken by various researchers to study the working of PPP. It also explains the selection and rejection of Critical Success Factors (CSFs) for PPP.

Glover, Sandra; et al. (2009) study Project EXPORT which targets to increase the health services research in vulnerable and undeserved communities, especially Afro - American, in Carolina through multidisciplinary research, education, training, and service. Silverman, Rachel, Julia Kaufman and Janeen Madan Keller (2021) focus on the District Health Center's (DHC) and Development of Finance Institute's (DFI) role to build regional manufacturing hubs for healthcare, provide R&D for biotechnology and support supply chain for the health adjacent services and delivery models. It addresses on the pandemic crisis in and importance of equitable access to healthcare products and innovation. Yinka, A. T et al. (2021) studies the importance of telemedicine in low medium income countries especially in Africa due to remoteness during the COVID - 19crisis and its effect on reducing poverty. It also mentions that telemedicine provides solution, could help in in improving the quality of life and ensure universal healthcare access. Glaeser, E., & Poterba, J. (2021) explain the role of economic analysis in the infrastructure investment. It mentions the importance of ex - ante project cost and benefit. Amos, A., et. al. (2021) explain the importance of Trans - Oriented Development as an urban strategy to provide a range of benefits to residents. It mentions that an adjacent coordination is required for different stakeholders. Public sector's planning and transport authorities need to

work closely with private sectors along with non - profit organizations.

Kim, S., & Kwa, K. X. (2019) review global trends, various definitions, types of enhanced team - based care of patients and improved population health outcomes. They develop an instrument for institutional assessment. Flaherty, K. T et al. (2021) assess the impact of COVID - 19 pandemic on major amendments in cancer trials and explains its aftermath as an opportunity to inculcate some changes in the future trials to make it more patient - centred. Dorsey, E. R. (2021) talks about the advances in technology like AI in health care system. It also explains the spread of telemedicine in the world especially during this COVID - 19 era. Da Silva, R. G. L., Chammas, R., & Novaes, H. M. D. (2021) presents critical thinking about technical and political infrastructure related to health which includes precision medicine for public health systems for bridging the gap between the knowledge and application in technologies for coordinating responses to the pandemic. Winberg, D. R., Lu, Y., Chen, Y., & Shi, L. (2021) talk about Health Technology Assessment as an opportunity to reduce the worldwide medicine gap and increase the access to life saving medicines by overcoming the barriers. It also explains how the use of Health Technology Assessment can bring the population over the poverty line by creating better health outcomes at affordable prices.

Lince - Deroche, N., Ruhago, G., Castillo, P. W., Williams, P., Muganyizi, P., & Bankole, A. (2021) talk about the reproductive health of Tanzanian women and Post Abortion Care services to meet women's needs and its affordability. Also, it explains the importance of the use of contraceptives. Tougher, S., Hanson, K., & Goodman, C. A. (2021) provide an insight about the subsidized distribution through both public and for - profit sectors. Also, private sector subsidies may have a role in enhancing the access to malaria treatments amongst the poor. Kavanagh, A., et. al. (2021) have presented the differences between health and healthcare experiences of people with or without disability in the early stages of COVID - 19 pandemic in the UK.

Kosycarz, E. A., Nowakowska, B. A., & Mikołajczyk, M. M. (2019) analyse Polish PPP projects and the factors contributing to the failure of the ventures. It explains the critical role played by the central and local government in the management of PPP and the uncertainty affecting investment and funding. Caballer - Tarazona, M., & Vivas - Consuelo, D. (2016) analyse one of the public - private partnership models within the focus of the Alzira model—the most common in Spain. They explain the public private partnership involving full - service provision where the private company delivers both the hospital services and primary care at the specific geographical locations. Gharaee, H., Tabrizi, J. S., Azami - Aghdash, S., Farahbakhsh, M., Karamouz, M., & Nosratnejad, S. (2019) evaluated implementation of the Health Evaluation Plan (HEP) in Iran and the implementation of PPP in the public healthcare centers in order to achieve universal healthcare provisioning. The HEP had significant differences with the country - wide model. This study indicated that the goal was to achieve UHC with increasing service packages and reduced catastrophic expenditure for the marginalised. Sadeghi, A.,

Barati, O., Bastani, P., Jafari, D. D., & Etemadian, M. (2016) study implementation of PPP model in hospitals. According to the study, the model was effective for the survival and for improving the quality of services of public hospitals.

Wang, Y., & Zhang, L. (2019) analysed the factors affecting willingness to pay attitudes and other socioeconomic factors in the cost sharing intentions. This study provided ample information for the policy makers to formulate health - related strategies through medical reforms in China. Riaz, B. K., et. al. (2020) explained how community clinics emerged as flagship program for Bangladesh, which aimed for providing the health services to the rural poor. It further explained that health education and counselling have created massive awareness regarding many health problems and the authentic service providers.

3. Research Gap

Literature review led to the identification of following research gaps:

- 1) No evaluation is done to measure the trend and budgetary allocation and actual spending on public healthcare facilities including PPP in India.
- 2) No quantitative analysis has been done to measure the quality differential in access and delivery of public and private health care facilities in India.
- 3) No evaluation is done to measure and assess the success or failure of PPP in healthcare delivery system.

4. Conclusion

PPPs can be used to strengthened the management of PHCs, establish health and wellness centres, and provide emergency services at the difficult - to - reach areas especially in rural areas. PPP in diagnostics at primary, secondary and tertiary level including clinical services in the field of dialysis can be continued and strengthened further. Even during the COVID - 19, PPPs in tele - medicines and digital health services also expanded considerably.

The secondary and tertiary public health services are in more demand than primary healthcare facilities. Public hospitals are unable to meet the growing demands due to either lack of infrastructure or inability to cope with the pressure from the patients.

The is constraints on the public expenditure on health which is comparatively is low; this enhances the importance of PPPs. PPPs can improve efficiency, quality, and capacity and fill the financial gap in both secondary and tertiary healthcare.

However, given the complexity of services rendered, in order to quantify the quality differential, a healthcare measure, such as an index, would be needed. Existing healthcare indices can be classified as one of the following:

- 1) Discriminative Index - Attempt to quantify the burden of illness across different communities.
- 2) Predictive Index - Screening or diagnostic instrument to identify which specific individuals have or will develop a target condition or outcome.

- 3) Evaluative Index - Quantifying the treatment benefits for measuring the quality adjusted life years in the cost utility analysis.

All three types of indices consider only one aspect of the situation, either demand side or the supply side. Therefore, none of the existing indices would serve the purpose of the proposed study. There is no holistic health - care index formulated in India. An index needs to be created that would incorporate both the demand and the supply side of the healthcare delivery system.

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The paper is my original contribution and has not been plagiarized from any source/individual. It does not infringe on any copyright, trademark, patent, statutory right, or propriety right of others and the paper does not contain any libelous or unlawful statements. All the references are duly acknowledged at the appropriate places and I sign for and accept the responsibility for releasing this material on behalf of my co - authors.

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