*REDVET - Revista electrónica de Veterinaria* - ISSN 1695-7504
Vol 25, No. 1 (2024)
http://www.veterinaria.org
Article Received: 17/12/2023 Revised: 02/01/2024 Accepted: 25/01/2024

# An Analysis Of The Availability And Quality Of Healthcare Services In Haryana In The Context Of Universal Health Coverage

**Sandeep[1*], Devinder Singh[2]**

[1*]Research Scholar (Ph.D), Dept. of Economics, Indira Gandhi University, Meerpur, Rewari.
[2]Devinder Singh Assistant Professor, Dept. of Economics, Indira Gandhi University, Meerpur, Rewari

**Abstract**
This paper analyses the status, availability and quality of healthcare services in the state of Haryana, with a focus on universal health coverage (UHC). It aims to ensure that all individuals and communities have access to essential healthcare services without experiencing financial hardship (WHO, 2010). In terms of available healthcare infrastructure, Haryana has a network of district hospitals, sub-divisional hospital, community health centers (CHCs), primary healthcare centers (PHCs), and sub-centers. The availability of healthcare professionals such as doctors, nurses and paramedical staff is another crucial aspect of healthcare services. While there is a reasonable number of healthcare professionals but the distribution of these professionals is uneven, with urban areas having better access compared to rural areas. This imbalance poses a challenge in achieving universal health coverage, as equitable access to healthcare services is essential. This study examines the status, availability and quality of healthcare services in the state of Haryana. It utilizes secondary data from NRHS, NFHS (1-5 rounds), and statistical abstract of Haryana. The health status indicators obtain to compare health status of Haryana to India. The availability and quality of healthcare service infrastructure measure in terms of healthcare institution to population ratio at district level to capture variation at grassroots level. There are only few districts covered by population, according to prescribed norms by Indian public health standards. There is a need for further investment in healthcare infrastructure to cater to the growing population and ensure equitable access to healthcare services, particularly in rural areas.

**Key words**: Healthcare services, Universal healthcare, Access to healthcare, Availability and Quality of healthcare services

## Introduction

Universal health coverage (UHC) is a global goal that aims to ensure that all individuals and communities have access to essential healthcare services without suffering financial hardship. In the context of India, the state of Haryana is actively working towards achieving UHC by improving the status and availability of healthcare services for its population (Sriram, 2018). The state faces several healthcare challenges, including a growing population, disparities in healthcare access between urban and rural areas, and inadequate healthcare infrastructure in certain regions (Palas et al., 2017). This analysis focuses on assessing the status and availability of healthcare services in Haryana with regard to universal health coverage. It examines key aspects such as healthcare infrastructure, availability of hospital bed, and the implementation of health-related various schemes to make available healthcare facilities in the state. By understanding the current status of healthcare services in Haryana, we can identify areas of progress, as well as areas that require further attention and investment. This analysis takes into account the efforts made by the Haryana government in expanding healthcare infrastructure, enhancing the distribution of healthcare professionals, and implementing health related various schemes (Balarajan et al., 2011). It also highlights any existing gaps or challenges that need to be addressed to ensure equitable access to healthcare services for all residents of Haryana. By examining the status and availability of healthcare services in Haryana within the context of universal health coverage, this analysis aims to provide insights and recommendations for policymakers, healthcare providers, and stakeholders to strengthen the healthcare system and work towards achieving UHC in the state. Haryana is a state in northern India and has been taking steps to improve healthcare services and move towards universal health coverage. The state government has implemented various initiatives and programs to enhance healthcare services accessibility and affordability for its residents. Haryana has a network of government-run healthcare facilities, including primary health centers (PHCs), community health centers (CHCs), district hospitals, and medical colleges. These facilities aim to provide primary, secondary, and tertiary healthcare services to the population. The state government has launched health insurance schemes like the Mukhyamantri Chikitsa Sahayta Kosh (MCSK) and the Ayushman Bharat - Pradhan Mantri Jan Arogya Yojana (PMJAY). These schemes aim to provide financial protection and ensure access to quality healthcare services to eligible beneficiaries. Haryana has also encouraged public-private partnership models to enhance healthcare services. The government collaborates with private hospitals and clinics to expand the reach of healthcare facilities and improve service delivery. The state government has implemented various programs to improve maternal and child healthcare. This includes initiatives like Janani Shishu Suraksha Karyakram (JSSK) that provide free maternity services and financial assistance to pregnant women and infants. The availability of skilled healthcare professionals, including doctors, nurses, and paramedical staff, plays a crucial role in delivering quality healthcare services. Efforts are being made to ensure an adequate healthcare workforce in the state.

*REDVET - Revista electrónica de Veterinaria* - ISSN 1695-7504
Vol 25, No. 1 (2024)
http://www.veterinaria.org
Article Received: 17/12/2023 Revised: 02/01/2024 Accepted: 25/01/2024

**Literature Review**

It is important to note that the status, availability and quality of healthcare services can change over time. Research can aim to determine the extent to which healthcare services are accessible to all residents of Haryana, including marginalized and underserved populations. This includes analyzing geographical, financial, cultural, and social barriers that hinder access to healthcare and identifying areas where accessibility needs improvement. The inter-linkage of availability and quality of healthcare services affect proportionally status of individual's health. Kumar, A (2023) in his article find out some important challenges that Indian healthcare system faces these days. It included lack of proper infrastructure, shortage of healthcare personnel, urban and rural gap in access to healthcare services, low public spending on healthcare, financial constraint and issue with health insurance etc. Singh et al., (2021) studied available quality of healthcare service at district level hospital in Haryana and found out that quality of available treatment facility affect patient satisfaction more comprehensively than other factors. Narottam et al., (2020) conducted a study in Haryana to examine under nutrition level among the one to five years old children in the rural Haryana. The study found that 21.5 percentage children underweight, 30.2 percentage children stunted and 8.9 percentages wasted in terms of World Health Organization standard framework. The stumpy availability of quality healthcare services cited one of the main reasons for malnutrition among child in the rural area. The accesses to healthcare services through public healthcare system not only help reduce malnutrition but also to reduce child mortality in the rural area**.** Prinja et al., (2018) in another research study studied immunization coverage and its social determinants at district level in Haryana in the context of universal health coverage. There is an inter-district variations reflect in the immunization coverage in the state. The differences also notice in the full immunization, partially and no immunization among the 12 month to 24 month old children. The overall coverage reflect one fourth of the children still do not get full immunization coverage in the state. It shows that state has mile to go achieve universal health coverage (Prinja, 2018). The available healthcare infrastructure is not sufficient and quality need to upgrade to prescribe standard to achieve better results. Another aspect of available healthcare infrastructure is related to unbalance growth. Narayan (2015) in his research related to health disparities conducted in the state of Haryana at district level compares health status at district level. It measure disparities in health status covering health infrastructure, health outcome and use of healthcare services in the states. It found that there were huge variations in the health infrastructure across the district. The quality of health infrastructure plays crucial role in the use of the public healthcare services in the state. The district scoring high on the availability of health facility performs poorly on the health outcome**.** This indicates merely availability of healthcare services not helps in the use of the healthcare services but quality of the healthcare facility. The access to available healthcare facility depends on multiple factors. Hooda, S.K. (2016) find out that one of such factors is decentralization of available healthcare services. To decentralize healthcare services at grassroots level participation from community and local governance is needed. On the whole, availability and quality of healthcare services affects health status positively.

**Objectives of the study**

This paper tries to assess the health status in the context of Universal Healthcare in the Haryana state. Further, it attempts to analysis the availability and quality of public healthcare services in the state using basic health indicator such as healthcare institution to population ratio, bed to population ratio in terms of Indian public health standards. Further the study attempts to district level analysis to assess the deprivation in terms of availability and quality of healthcare services in the state.

**Research methodology**

To assess the status and availability of healthcare services in Haryana in the context of universal health coverage, relevant data was collected from various sources, including national rural health survey, Statistical abstract of Haryana, government reports, census (2011), and healthcare surveys. Data sources included the Haryana government's official websites, health department reports, national family household surveys and reputable research publications. Information regarding the healthcare infrastructure in Haryana was gathered, including the number and distribution of primary healthcare centers (PHCs), community health centers (CHCs), and district hospitals. The availability of specialized healthcare facilities, such as tertiary hospitals and hospital bed has been considered simultaneously. The data related to the availability and distribution of healthcare professionals including hospital bed has been examined. This included assessing the density of healthcare professionals per population, bed per population particularly in rural and urban areas. Identified gaps and challenges in the healthcare system of Haryana were analyzed. This involved assessing disparities in healthcare access between different regions, identifying areas with inadequate healthcare infrastructure, and evaluating issues related to the availability and distribution of healthcare professionals. Analyze quantitative data to assess the status of healthcare services in Haryana. This involves calculating healthcare infrastructure indicators such as the number of healthcare facilities per population, facility to population ratios, and hospital bed to population ratios.

**Results and Interpretations**

*REDVET - Revista electrónica de Veterinaria* - ISSN 1695-7504
Vol 25, No. 1 (2024)
http://www.veterinaria.org
Article Received: 17/12/2023 Revised: 02/01/2024 Accepted: 25/01/2024

In the state, the availability and quality of the public health services is limited, due to costly expenses or cultural obstacles, a large number of individuals avoid formal treatment. Consequently, they delay seeking care until they are gravely ill, resulting in higher expenditures, high morbidity, as well as death that could potentially been avoided if treatment had been obtained previously in the development of illness. This paper makes an analysis of inter-linkage relationship between health status, availability and quality of healthcare services in achieving universal health coverage (UHC) in Haryana. It highlights key inputs that the state will require for successful expansion of primary and secondary care coverage and estimates the cost of these inputs in addition to any additional government-mandated increases. In evaluating UHC, the situation in the field will add to the knowledge base of what is effective in expanding care, enhancing its quality, and decreasing out-of-pocket costs associated with pursuing healthcare services. The study describes the current status and reforms necessary to enhance cross-cutting components of the health system, including the fundamental package of care, health financing, governance, and information systems and shifting health behaviors. In addition, it describes the overall financing arrangements and critical strategies for achieving universal health coverage. The linkage between Universal healthcare care and health status has been study all over the world. The health status gives idea about health-related indicators of the particular state. The below table brings a true picture of demographic and socio-economic indicators of Haryana state comparative to India. These indicators include population, sex ratio, crude birth rate, crude death rate, fertility rate, mother-child mortality rate, life expectancy and percentages of schedule cast etc.

**Table 1: Comparative Health Status in Haryana**

| **Demographic, Socio-Economic Profile of Haryana State as Compared to India** | | | |
|---|---|---|---|
| Sr. No. | **Indicators** | Haryana | India |
| 1. | Population (Census 2011) | 25.35 (million) | 1210.56 (million) |
| 2. | Urban Population Proportion of Total population (Census 2011) | 34.9 | 31.2 |
| 3. | Sex Ratio 2020(As per CRS) | 916 | 933 |
| 4. | Decadal Growth of Population Census 2011 (%) | 19.9 | 17.7 |
| 5. | Crude Birth Rate (2019) | 20.1 | 19.7 |
| 6. | Crude Death Rate (2019) | 5.9 | 6.0 |
| 7. | Infant Mortality Rate (RHS, 2019) | 27 | 30 |
| 8. | Maternal Mortality Rate (NHP, 2016- 2018) | 91 | 113 |
| 9. | Total Fertility Rate (SRS 2019) | 2.1 | 2.3 |
| 10. | Life Expectancy of Male (NHP, 2016-2020) | 68.4 | 68.4 |
| 11. | Life Expectancy of Female (NHP, 2016-2020) | 73.1 | 71.5 |
| 12. | Percentage of Schedule Cast (census 2011) | 20.2 | 16.6 |

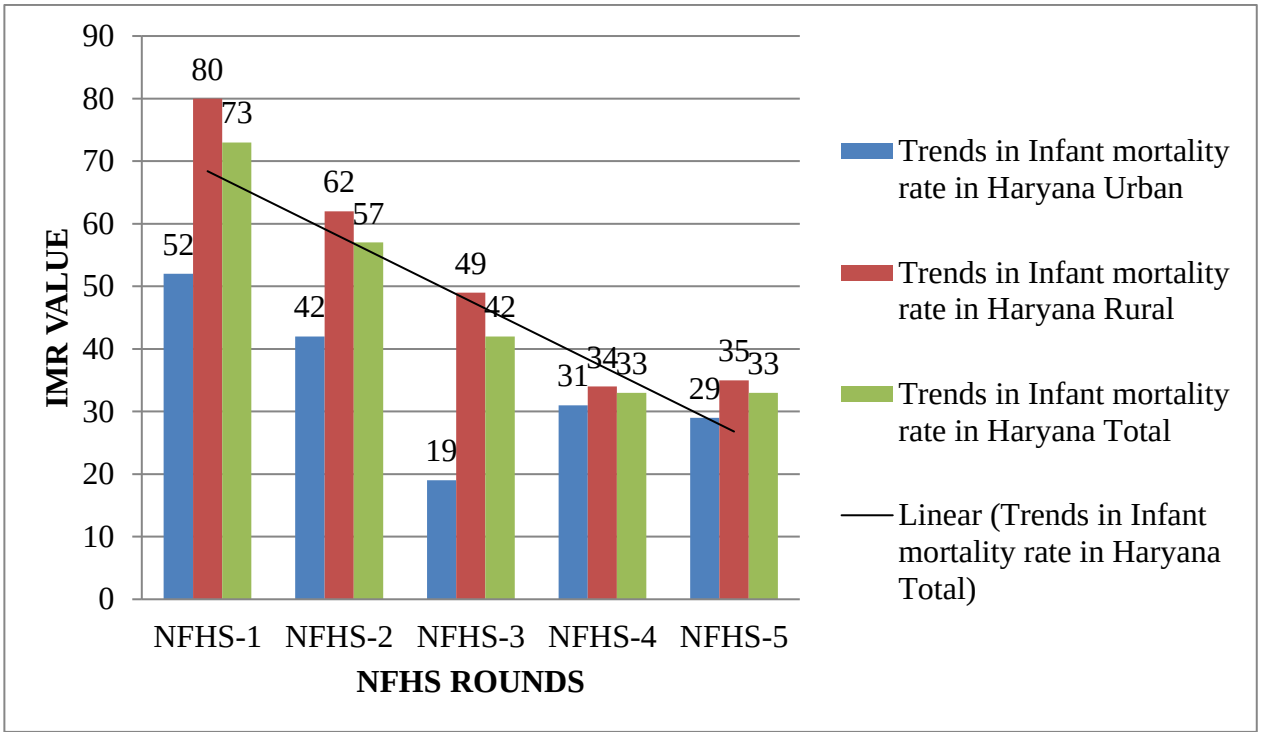
Sources: Census, CRS, RHS, NHP, SRS

The health status indicators of Haryana stand somewhere identical to national average. The state has made significant improvement in all indicators but somewhat the pace of the progress depends on the state policies. The state has worse sex ratio in India in 2011census. The decadal growth rate in population was also on higher side. The CDR[1] in the state is slightly higher than national average. The health is a state subjects in the Indian constitution. The health of the state mainly depends on the state policy initiative and provision of healthcare services in the state. The policy direction or healthcare services should be lies in the main agenda of the govt. to improve health status of the people of the states. The health status is the signal of state healthcare policy initiative through time period to improve health of the people.

**Figure 1: Infant Mortality Trends in Haryana**

[1]Crude death rate refers to measure number of death happen during a year per 1000 population. It is estimated at mid-year population of that year.

*REDVET - Revista electrónica de Veterinaria* - ISSN 1695-7504
Vol 25, No. 1 (2024)
http://www.veterinaria.org
Article Received: 17/12/2023 Revised: 02/01/2024 Accepted: 25/01/2024



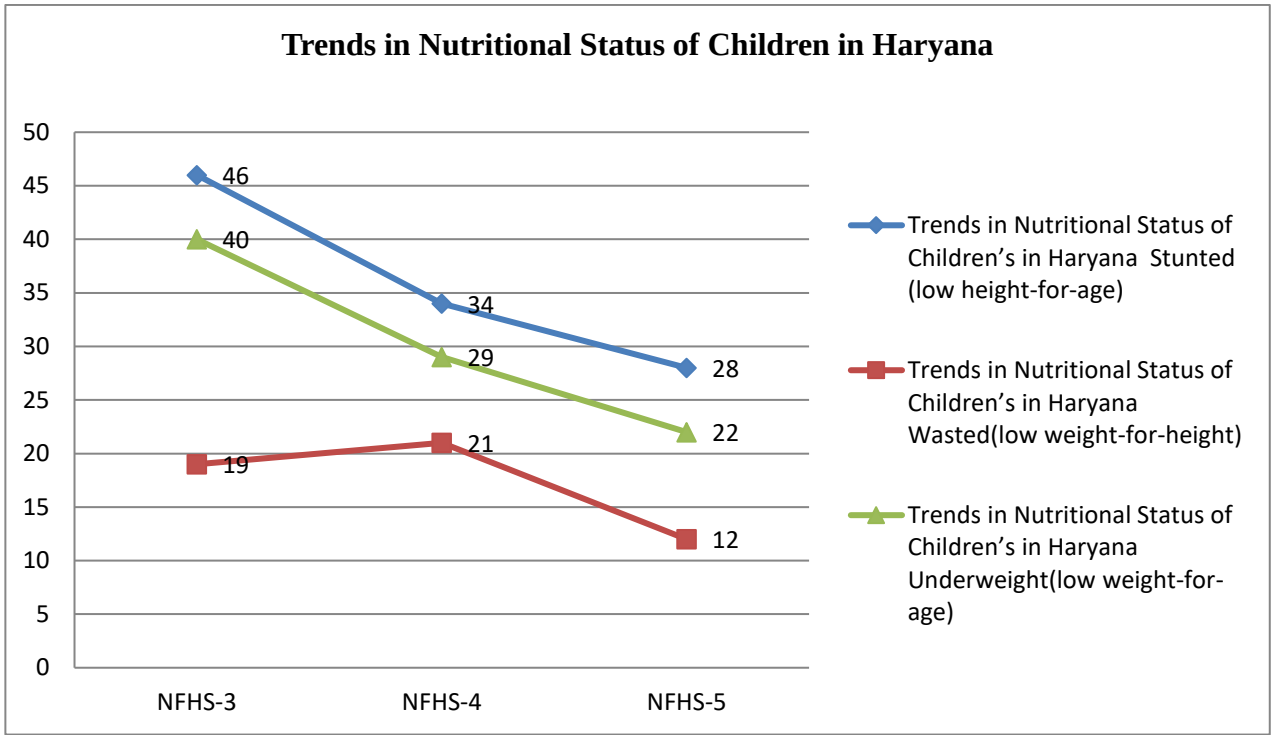

Source: NFHS-1 to NFHS-5 (1992-93 to 2019-20)

The infant and child mortality among five years old children take into account of neonatal, post neonatal, and infant child mortality rates. It is considered crucial indicators which evaluate child healthcare status of a population in particular region. In the neonatal mortality which is one month after birth, boy child has high mortality than girl child, while in post neonatal mortality girls have higher mortality than boy. Infant mortality rate is the wildly use indicator to measure status of child health and related care. A healthy child born is indicating status of family planning in particular region. The figure above captures trends in the child mortality rate over a period of time in the Haryana state with help of different NFHS rounds. By region trends in infant mortality rate[2] is clearly showing an increase in urban and rural from NFHS 4 to NFHS 5. There is improvement in the infant mortality rate from NFHS-1 to NFHS-5 (1992-93 to 2019-20) both in rural and urban region of the state. We can see by linear trend line which is going down from NFHS-1 to NFHS-5. The high infant mortality rate in rural Haryana is indicating child health status in the rural area is in poor condition. There are many factors contributing to it but, access to quality healthcare service one of the main contributing factors. Although, the progress has been made in improving overall child health status in recent times but still we have to go miles to achieve millennium development goals target. The state has made progress in reduction overall child mortality rate from 73 in NFHS-1 to 33 in NFHS-5. But, in the last five years child mortality in the state has mildly increase from 32.8 to 33.3 from NFHS-4 to NFHS-5. But the neighboring states reduced infant mortality rate (Punjab, Rajasthan, and Delhi) in the last five years. The urban mortality also starts moving upward from third to fifth round onwards. The infant mortality in the state is on rise from previous round. The infant mortality rate is one of the crucial indicators of health status. The low performance in the infant mortality in the recent times put question on the provision of the various child healthcare services in the state. The next section deals in nutrition level among the children in the state.

**Figure 2: Child Malnutrition in Haryana**

[2] Infant mortality rate is the probability of a child born in a specific year or period before reaching age of one year, if subject to age-specific mortality rates of that period. Infant mortality rate is not rate but probability of death derived from life table and expressed as rate per 1000 live birth.

*REDVET - Revista electrónica de Veterinaria* - ISSN 1695-7504
Vol 25, No. 1 (2024)
http://www.veterinaria.org
Article Received: 17/12/2023 Revised: 02/01/2024 Accepted: 25/01/2024




Sources: NFHS-3 to NFHS-5 (2005-06 to 2019-20).

The World Health Organization recommended these indicators to measure nutrition level in the 0-5 year's old child. The detail district wise analysis reveals by and large nutrition status in the states. It not only captures district wise nutrition level but also variation in the nutritional status in the entire states. The comparison among district helps to better identify severely performed district in the nutrition level in the state. The above figure showed trends in malnutrition level in the Haryana state. The indicators of malnutrition such as stunted (low height-for-weight), wasted (low weight-for-height) and severely wasted of fewer than five age children studied comprehensively. The comparison of NFHS-3 and NFHS-5 round has been use to see the percentage change in the malnutrition level in all district during this time period. All the three indicators made slow progress in the improvement during this time period.

**Inter-District Variation in Availability and Quality of Healthcare Services in Haryana**

The delivery of healthcare services in the state is through the network of public and private healthcare facilities. In the public healthcare provisioning, the state presently has a network of 60 hospital, 124 community health centres,500 primary health centres and 2630 sub centres trough which health care services being provided in the state (Economic survey of Haryana 2019-20). But, access to the delivery of services is not uniform across the regions and districts. Not only there are inter district-disparities in access to the availability healthcare service delivery system, but also there are disparities in the health outcomes.There are large gap in the distribution of healthcare infrastructure in the states. The cities mostly have better healthcare services availability than to block and blocks have better services coverage than to the villages. There are almost 60 percentages sub center lies within village territory and almost 95 percentages within 10 kilometers trajectories. There are 22.7 percentages primary health centre lies within village. There are 12.7 primary health centres outside 10 kilometers purview of village. There are 6.4 CHCs, 4.4 govt. hospitals, 19.5 govt. dispensaries, 47.3 private clinics within village. Haryana spends approximately 1.5 percent of state GDP on healthcare services even after 14$^{th}$ Finance Commission made increases states pools in central taxes from 32 percent to 42 percent though there is not much increase in states healthcare spending. A significant part of health spending in Haryana is direct OOP[3] payments made to the private healthcare service providers which is nearly 72 percent of total healthcare spending of the state. This is due to private healthcare services provider giving healthcare services at door step level and government sponsored scheme do not provide adequate financial protection for the services that are most needed(Haryana state health accounts, 2014-15). In Haryana, public healthcare institutions comprise of three tier system. The divisions of public healthcare institutions are based on primary level care, secondary level care and tertiary level care institutions. The primary level of care institutions includes sub-center and primary healthcare center at village level. The secondary level care institutions include community health center, sub-divisional hospital and district hospital at sub-district and district level respectively. Tertiary level of healthcare includes medical college at certain districts in the state. The division is purely based on types of healthcare services covered by these institutions. The sub centers provide access to basic healthcare services and first

[3] OOP refers to the out-of-pocket expenditure made for the use of healthcare services from consumers' own pocket

*REDVET - Revista electrónica de Veterinaria* - ISSN 1695-7504
Vol 25, No. 1 (2024)
http://www.veterinaria.org
Article Received: 17/12/2023 Revised: 02/01/2024 Accepted: 25/01/2024

contact point to the community at village level. The first level of care included access to many preventive and promotive healthcare services. This included delivery of maternal and child healthcare, diarrhea control, immunization, nutrition's, family welfare, communicable disease control and prevention program through sub-center and preventive and incorporated curative healthcare services through primary health centers (RHS, 2020). The secondary level healthcare provided through community health centers or sub-divisional hospital at block level and district hospital at district level. It includes 4 medical specialists (Physician, surgeon, pediatrician and gynecologist) at community health center level (IPHS, 2012) and extended range of specialist at sub-divisional hospital and district hospital. The district hospitals refer critical patients to medical college which deliver tertiary level of healthcare services. Although, the public healthcare institutions in Haryana established as per population norms yet the district wise variation in public healthcare services reflected in Haryana.

**Table 2:Inter-District Variation in Public Healthcare Service to Population Ratio, 2020**

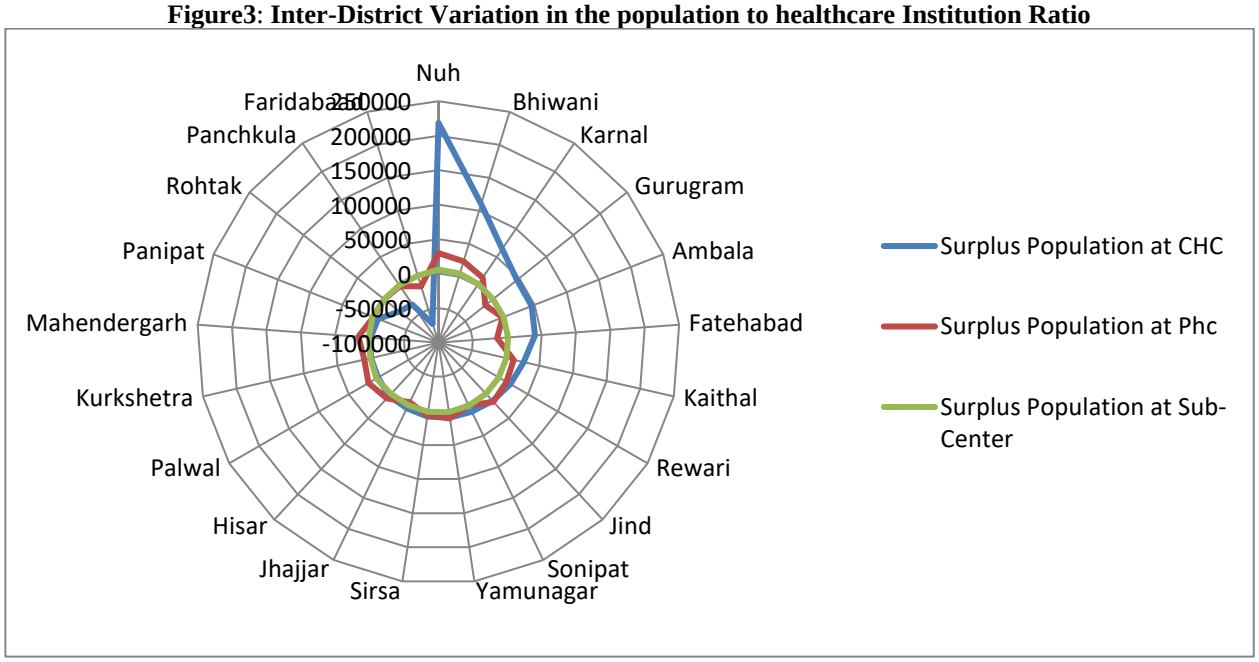
| | **Population** | | **Public Healthcare Service to Population Ratio in Haryana** | | | | |
|---|---|---|---|---|---|---|---|
| **District** | **TRP 2020** | **Mid 2020 Total Pop.** | **HOS/TPR** | **SDH/TPR** | **CHC/TRPR** | **PHC/TRPR** | **SHC/TRPR** |
| Jind | 1082437 | 1537370 | 1/1537370 | 1/1537370 | 1/135305 | 1/47062 | 1/6600 |
| Hisar | 1252788 | 2009567 | 1/2009567 | 1/1004784 | 1/125279 | 1/40413 | 1/6327 |
| Fatehabad | 802352 | 1085498 | 1/1085498 | 1/1085498 | 1/160470 | 1/36471 | 1/6125 |
| Bhiwani | 1381893 | 1883404 | 1/1883404 | 1/627801 | 1/230315 | 1/53150 | 1/9942 |
| Ambala | 660444 | 1300221 | 1/1300221 | 1/650111 | 1/165111 | 1/30020 | 1/6231 |
| Kurukshetra | 721328 | 1111591 | 1/1111591 | # | 1/120221 | 1/40074 | 1/6165 |
| Sonipat | 1048833 | 1670865 | 1/1670865 | 1/1670865 | 1/131104 | 1/30848 | 1/6395 |
| Karnal | 1105532 | 1734615 | 1/1734615 | 1/1734615 | 1/184255 | 1/44221 | 1/7521 |
| Panchkula | 261057 | 646789 | 1/646789 | # | 1/87019 | 1/29006 | 1/5675 |
| Rohtak | 647252 | 1222847 | 1/1222847 | # | 1/92465 | 1/30822 | 1/5580 |
| Gurugram | 496910 | 1745110 | 1/1745110 | 1/872555 | 1/165637 | 1/17135 | 1/6211 |
| Nuh | 1015705 | 1255180 | 1/1255180 | # | 1/338568 | 1/59747 | 1/10805 |
| Kaithal | 882197 | 1237942 | 1/1237942 | # | 1/147033 | 1/42009 | 1/6126 |
| Sirsa | 1027054 | 1492472 | 1/1492472 | 1/1492472 | 1/128382 | 1/36681 | 1/6584 |
| Jhajjar | 752517 | 1104389 | 1/1104389 | 1/552195 | 1/125419 | 1/25949 | 1/5616 |
| Palwal | 848385 | 1201534 | 1/1201534 | # | 1/121198 | 1/47133 | 1/8930 |
| Rewari | 701830 | 1037471 | 1/1037471 | 1/1037471 | 1/140366 | 1/43864 | 1/6211 |
| Faridabad | 390303 | 2085392 | 1/2085392 | 1/1042696 | 1/48788 | 1/15612 | 1/6398 |
| Yamuna Nagar | 780204 | 1399153 | 1/1399153 | 1/1399153 | 1/130034 | 1/41063 | 1/6904 |
| Panipat | 684412 | 1389049 | 1/1389049 | # | 1/114069 | 1/31110 | 1/7690 |
| Mahendragarh | 830567 | 1062541 | 1/1062541 | 1/1062541 | 1/118652 | 1/46143 | 1/6152 |
| Haryana | 17374000 | 29213000 | 1/1327864 | 1/1391095 | 1/132626 | 1/35823 | 1/6639 |

Source: Author's Calculation Based on RHS, 2019-20.

Note - # Data for particular variable not available in the data set.
Note: TPR-Total Population Ratio, TRPR- Total Rural Population Ratio, Hos-Hospital, SDH-Sub-divisional Hospital
The ratio of healthcare facility to population across the district showed up population cover by per healthcare facility in the states. There is one hospital at each district. Therefore, each hospital covers entire population of each district. There are few sub-divisional hospitals operates at district level in the entire states therefore entire population of district also covered by it. There are only few districts covered by population according to prescribed norms. At, CHCs there is population norms of 80000 to 120000 but only five districts (Mahendragarh, Panipat, Faridabad, Panchkula,Rohtak) out of 22districtsefficient under these norms. At PHC level there is norms of 20000 to 30000 per facility but only 3 district (Panchkula, Gurugram, and Faridabad) covered population under prescribed norms. These districts functional under norms because proportionate rural population very low in these districts. There is no single sub-center in the state function according to prescribed norms. There is reverse trend in functioning of facility under norms from tertiary level of healthcare to primary level of healthcare services across the state.
There is district wise variation explores the number of public healthcare institutions in the below figure which reflected true picture of it. The actual measures of variations in public healthcare institutions assess through ratio of district-wise public healthcare services to district wise population. This ratio compare with Indian Public Health Standards norms reveals quality in public healthcare infrastructure across the states. If there is higher load of population per healthcare facility than shortage of public healthcare facility showed up in that area. On the other side if population cover by facility is less than prescribed norms than it showed up surplus facility in that area. The ratio of rural healthcare facility is calculated on the basis of rural population of Haryana.

*REDVET - Revista electrónica de Veterinaria* - ISSN 1695-7504
Vol 25, No. 1 (2024)
http://www.veterinaria.org
Article Received: 17/12/2023 Revised: 02/01/2024 Accepted: 25/01/2024

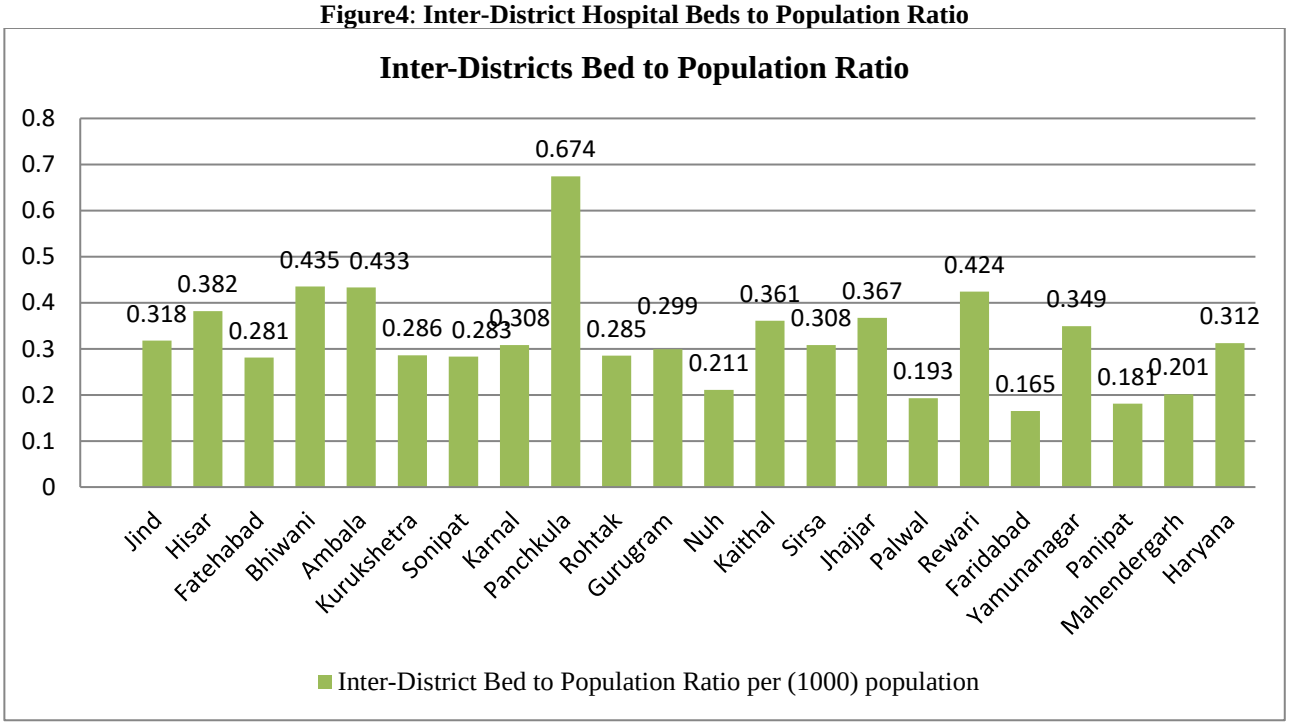
**Figure3**: **Inter-District Variation in the population to healthcare Institution Ratio**




Sources: Based on Authors Calculation RHS, 2019-20.

The population coverage norms per PHC showed that, there is surplus population at some district in Haryana. However, there are variations in the surplus population coverage per primary healthcare center. There are few districts which covered population according to standards norms. The district Nuh and Bhiwani showed- up more than double surplus population per primary healthcare center. The main determinants of this are shortage of primary health center in these districts. This shortage leads to put extra load on the existing available healthcare infrastructure. Which further affect other variable such as access and use of public healthcare services in the rural area, out of pocket expenditure on healthcare services, especially health outcomes of the people etc. The more surplus population per healthcare facility expresses low availability and quality of healthcare public healthcare service.

**Figure4**: **Inter-District Hospital Beds to Population Ratio**




Source: Calculation using statistical Abstract of Haryana, (2010-2020) Various Issue.

In the above figured Inter-District comparison reveals availability of Hospital bed to population ratio in the state. The highest value 0.712 hospital bed per 1000 population recorded in the Panchkula whereas 0.152 lowest values recorded in the Palwal district. There are district below state level average (Jind, Sonipat, Karnal, Gurugram, Nuh, Sirsa, Palwal, Faridabad Panipat etc.) and above state level average (Hisar, Fatehabad, Bhiwani, Ambala, Kurukshetra, Rohtak, Jhajjar, Rewari, Mahendragarh etc.). The very low value of this ratio indicates vary low hospital bed in comparison to population in the state. This leads to access to the delivery of services not uniformly across the regions and districts. Not only there are inter-district disparities in access to the healthcare service delivery system, but also there are disparities in health outcomes. There is large gap in the distribution of healthcare infrastructure in the states.

**Conclusion**

The status of health in the Haryana states in terms of sex ratio, crude birth rate and crude death rate shows miserable condition. There is instability in the trends of child mortality rate in urban area from NFHS round-1 to round-5. The child mortality rate reduces slowly in rural area during this time period. There is decline in infant child mortality through various rounds of NFHS but, in the fifth round, it is showing rising trends in rural child mortality rate. The child nutritional status in the states also looks very grim. The availability and quality of healthcare services looks dim in Haryana. Infrastructure and resource gaps, including shortages of healthcare facilities and skilled personnel, pose hurdles in delivering adequate healthcare services. Financial barriers, such as out-of-pocket expenses, still burden individuals and families. Disparities in access persist, particularly in rural areas and among socio-economic groups. Additionally, the high burden of communicable and non-communicable diseases requires comprehensive approaches to prevention, detection, and treatment. With regards to universal health coverage, the state requires efforts to improve access and quality of healthcare services. The implementation of health insurance schemes, upgrading healthcare infrastructure, focusing on maternal and child healthcare, and leveraging technology through telemedicine and digital health require more investment and attention of state govt. The challenges should be overcome by stringent policy initiative and consistent balance with central government. To further advancement of universal health coverage in Haryana, continued investments in healthcare infrastructure, recruitment and training of healthcare professionals and addressing financial barriers are necessary. Efforts to reduce disparities in access, particularly in underserved areas, should be prioritized. Furthermore, promoting preventive healthcare and early detection of diseases will contribute to improved health outcomes. It is crucial for policymakers, healthcare providers, and stakeholders to collaborate and monitor the progress of healthcare services in Haryana. Regular assessment and evaluation of the initiatives implemented will help identify areas for improvement and ensure the effective implementation of universal health coverage for all residents of Haryana.

**References**

1. Dubey, Shweta, Deshpande, Swasti and Krishna, Lokesh, (2023). Evolution of government funded health insurance for universal health coverage in India. *The lancet regional south-east asia*, 13.doi.org /10.1016 /j.lansea.2023.100180
2. Kumar, A. (2023). The transformation of Indian healthcare system. *Cureus,15*(5). DOI: 10.7759/cureus.39079
3. Sangar, S., Dutt, V., and Thakur, R. (2022). Burden of out-of-pocket health expenditure and its impoverishment impact in India: evidence from National Sample Survey. *Journal of Asian Public Policy, 15*(1), 60-77. DOI:10.1080/17516234.2019.1601065
4. Venkateswaran, S. (2022). Health status in India: challenges and opportunities. *Center for social and economic progress, working paper (25).*
5. Singh, Dalbir and Aggarwal, R.K. (2021). Service quality components and inpatients satisfaction at district hospitals in Haryana: an empirical analysis. *The journal health management research,23(4).* doi.org /10.1177/09720634211050471
6. International Institute for Population Sciences (IIPS) and ICF. (2021). National Family Health Survey (NFHS-5). India.*Vol-1*.https://dhsprogram.com/pubs/pdf/FR375/FR375.pdf.
7. Narottam, S., Virk, Amrit, Saini, P., and Prabhakar, V. (2020). Nutritional status of one- to five-year-old children in rural Haryana: A community based study.*Journal of clinical and diagnostic research,14*(9), 26-30. DOI:10.7860/JCDR/2020/45635.14045
8. Sriram, S. (2018).Critical Evaluation of the two approaches to achieve universal health coverage in India.*International journal of community medicine and public health,5*(8), 3159-3163. DOI: https ://doi.org /10.18203/2394-6040.ijcmph20183044
9. Prinja, S., Monga, D., Rana, SK., Sharma, A., Dalpath, S., Bahuguna, P., et al. (2018). District level analysis of routine immunization in Haryana state: Implication for mission indradhanush under universal immunization programme.*Indian Journal of community Medicine,43*(3), 209-14.DOI: 10.4103/ijcm.IJCM30617
10. Wang H. (2018). Financial protection analysis in eight countries in the WHO South-East Asia Region. *Buttetin of the World Health Orgnisation*, *96*(9), 610-20. DOI: 10.2471/BLT.18.209858
11. Palas, M.J.U., Ashraf, M., Ray, Pardeep Kumar (2017).Financing Universal Health Coverage: A systematic review.*The international Technology Management Review,6* (4), 133-148.

12. Singh, Shweta and Kalaskar, Shrikant (2017). Health care seeking behavior and utilization pattern in an urban slum of Mumbai: A cross sectional study.*International journal of current research,9*(4), 49342-49345.
13. Hooda, Shailender Kumar (2016).Effectiveness of Local Government and community participation in health service delivery in rural Haryana.*International journal of rural management, Sage publication,12*(1), 1-24.DOI:https://doi.org/10.1177/0973005216633957
14. Narayan, Laxmi, 2015.Health disparities in Haryana-A District level Analysis.*mpra paper 64478*, University library of Munich, Germany. URl: https://mpra.ub.uni-muenchen.de/id/eprint/64478
15. Balarajan, Y., Selvaraj, S., Subramanian, SV.(2011). Health care and equity in India.*Lancet paper series-377*(9764), 505-15. DOI: 10.1016/S0140-6736(10)61894-6
16. Andersen, R.M. and Newman, J.F. (2005).Societal and individual determinants of medical care utilization in the United States. *Milbank Memorial Fund Quarterly– Health and Society,83*(4), 95-124. DOI: 10.1111/j.1468-0009.2005.00428.x
17. Mahal, Ajay,Yazbeck, Abdo S. Peters, David H. Ramana, G.N.V. (2001). The poor and healthservices use in India(English).*HNP discussion paper series, Washington, DC: World Bank*.
18. Andersen, RM. (1995). Revisiting the behavioral model and access to medical care: does it matter?.*Journal of health and social behaviour,36*,1-10. DOI: 10.1016/j.outlook.2005.06.007.
19. Aday, LA., Andersen, RM. (1974).A framework for the study of access to medical care.*Health Service Research, V-9*(3), 208- 20.PMID: 4436074