



STATUS OF PUBLIC HEALTH SERVICES IN HIMACHAL PRADESH: A CASE STUDY

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ABSTRACT

The state of Himachal Pradesh enjoys a better public health care infrastructure and better health status than many other Indian states. The department of health in Himachal has played an important role in this success through such activities as improving government health facilities and implementing targeted disease reduction campaigns. In addition, while other states have witnessed a strong rise in the share of health care services that are delivered by private doctors, trained or untrained, in Himachal Pradesh the share of health care provided by the government has been growing. There is good evidence then, that some things related to health in Himachal Pradesh are going quite well. Infant mortality in Himachal Pradesh has decreased over time but not as dramatically as in other states. Anemia among children has fallen in Himachal Pradesh, while it has risen in other states; however, anemia among pregnant women has grown. The paper presents major health and demographic indicators and comprises on health status and some suggestion in Himachal Pradesh and some analysis of related policy challenges. This study discusses health status in Himachal Pradesh, with statistics and figures on infant mortality, child nutritional status, vaccination rates and anemia on the basis of secondary sources. Study also focuses on public health including population-based interventions and preventive care and how the department should consider prioritizing health interventions in this area, with special focus on the government's role in providing childhood immunizations.

Introduction

The state of Himachal Pradesh enjoys a better public health care infrastructure and better health status than many other Indian states. For example, infant mortality in Himachal Pradesh is less than two-thirds the all India average. The people of Himachal Pradesh also appear to find higher value in the care provided by government facilities than do many Indians in other states. The Department of Health has played an important role in this success through such activities as improving government health facilities and implementing targeted disease reduction campaigns. In addition, while other states have witnessed a strong rise in the share of health care services that are delivered by private doctors – trained or untrained - in Himachal Pradesh the share of health care provided by the government has been growing. There is good evidence, then, that some things related to health in Himachal Pradesh are going quite well. Although Himachal Pradesh's climate and topography serve to protect the state against tropical diseases that sanitation measures are likely to control, the significance of public health remains undiminished for the above reasons. While the state appears to be doing well on some measures of public health provision, as described below it is performing worse on others, such as immunization coverage. Government intervention is necessary to ensure the provision of pure public goods as the private sector will not provide these. In a free market, public health goods like immunization and vector control would be undersupplied by private providers as the true marginal costs of production will not be recouped by providers (Hemenway 1994) due to the existence of positive externalities: prevention of infection in one individual lowers the chance that he will infect others, reducing overall morbidity and mortality levels in a community. In addition, even families fully aware of the benefits of immunization may have insufficient incentive to ensure that their children are vaccinated because, while the benefits of immunizing their child are shared by others in the community, the family still has to bear the costs of non-immunization of a child in another family. Government involvement is thus necessary to strengthen household demand and to correct market failures. Public health interventions improve the efficiency of the health system. Investments in the right public health measures reduce exposure to risk of disease, dramatically improving efficiency and hence the impact of curative health care services. Strong public health systems, by preventing illness, debility, and death, protect communities against the large economic costs associated with controlling disease outbreaks (Gupta and Rani 2004). An absent doctor cannot cure a sick child, but an effective sanitation system protects kids on an ongoing basis (Muralidharan et al. 2006). An investment in public health is an investment in the

poor. Poor people suffer more from infectious diseases compared to the rich. These diseases can be prevented most effectively through public health interventions such as immunization programs (Chaudhury, Hammer and Pokharel 2008). Thus allocation of resources away from these diseases hurts the poor. Furthermore, because “a healthy body is the primary productive asset for the poor” (Mahal et al. 2001), protecting their health directly improves the productivity of large groups of people. Public health measures facilitate increased earning by the poor and protect against the risk of falling deeper into poverty. Public health investments can thus improve the equity of the health system. Strong surveillance and monitoring should be the foundation of public health efforts. The purpose of disease surveillance is two-fold: first, to monitor the progress of current interventions, such as childhood immunization programs; and second, for early detection of outbreaks to initiate investigations and control measures (Jacob, Rajappan and Arjunan 2004). Consequently, the absence of such a system, along with inadequate attention to the use of data and information, hinders the ability of the Department to recognize the early signs of disease outbreaks. There are many political and practical challenges to instituting high-quality public health efforts in HP. One important step towards increased investment must be raising the public awareness and building social participation (Gupta and Rani2004). Because those for whom disease is prevented may be a less visible constituency than those who are already ill and seeking a cure, population-based public health interventions are too often not undertaken even though they fix market failures, are pro-poor, and are often relatively easy to implement (Hammer, Aiyar and Samji 2007).

Objectives of the Study

- To study the government health facilities and some analysis of related policy challenges in India as well as Himachal Pradesh.
- To study the need and demand for health care in Himachal Pradesh
- To study the curative health care services and examines the factors influencing demand for health care in the public and private sectors in Himachal Pradesh.
- To study the information on privately-delivered health care and how the government may wish to respond.

Methodology

Data was collected through secondary sources and analysis of National Family Health Surveys is done. Some analysis of Government health facilities and related policy challenges in

India as well as Himachal Pradesh is done. Analysis draws on National Family Health Surveys and other data sources: three rounds of the National Family Health Survey (NFHS) - NFHS-1 (1992-93), NFHS-2 (1998-99), NFHS-3 (2005-06) and census data of 2011.

Major Health and Demographic Indicators of Himachal Pradesh

India has 16% of the world's population but only 2.4 % of its landmass, resulting in great pressures for resources. It is a country where 70% of the population resides in a rural area and males significantly outnumber female, an imbalance that has increased over time. The typical female advantage in life expectancy is not seen in India and this suggests there are systematic problems in women's health care. Indian women have high mortality rates, particularly during childhood and in their reproductive years. India's maternal mortality rates in rural areas are highest in the world. From a global perspective, India accounts for 19 % of all live births and 27 % of all maternal deaths. The health of Indian women is intrinsically linked to their status in society, especially for those living in a rural area. Research into women's status in society has found that the contributions Indian women make to families are often overlooked. Instead they are often regarded as economic burdens and this view is common in rural areas of the northern belt. These factors have a negative impact on the health status of Indian women. Poor health has repercussions not only for women, but also their families. Women in poor health are more likely to give birth to low weight infants. They are less likely to be able to provide food and adequate care for their children. Finally, a woman's health affects the household's economic wellbeing because a woman in poor health will be less productive in the labor force (Saha and Saha, 2010, Sandeep Sharma 2017). In rural areas where women are less educated and economically deprived, their health condition is worse. World Health Organization (WHO (1946) has defined the term health as 'a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity'.

Table - 1

S.No	Particulars	Required	In position
1	Sub-centre	2055	2066
2	Primary Health Centre	308	485
3	Community Health Centre	77	78
4	Health worker (Female)/ANM at Sub Centres & PHCs	2537	2213
5	Health Worker (Male) at Sub Centres	2065	2008
6	Health Assistant (Female)/LHV at PHCs	473	61
7	Health Assistant (Male) at PHCs	473	22

8	Doctor at PHCs	473	436
9	Obstetricians & Gynecologists at CHCs	76	0
10	Pediatricians at CHCs	76	2
11	Total specialists at CHCs	304	5
12	Radiographers at CHCs	76	72
13	Pharmacist at PHCs & CHCs	548	871
14	Laboratory Technicians at PHCs & CHCs	548	195
15	Nursing Staff at PHCs & CHCs	1004	376

(Source: RHS Bulletin, March 2012, M/O Health & F.W., GOI)

Table- 1 shows that in Himachal Pradesh, the number of hospitals increased from 73 in 2001 to 83 in 2012-13. The number of P.H.C's and Allopathic dispensaries increased from 459 to 485 and the CHC'S increased from 65 to 78 during the same period. In Himachal Pradesh during 2012-13 number of doctors and number of nurses (in position) in Allopathic was 53 per one lakh of population. The total Strength of doctors is 1597, Staff nurses 2435, dental surgeons 297, female health Workers 2213, male health workers 2008 and 871 pharmacists. Couple protection rate in Himachal Pradesh was 40.30% in 2012. Number of disabled persons was 155950 in 2001. The per thousand birth rate was 16.5, death rate 6.7 and infant mortality rate 38 in the year 2011. Number of family welfare centers functioning in H.P. was 89 during 2012. During 2006-10 life expectancy in Himachal Pradesh among males and females was 67.7 and 72.4 and in all India is 64.6 and 67.7. Birth rate and death rate in Himachal Pradesh both are 16.5 and 6.7 at the lower side as compared to all India 21.8 and 7.1 in 2011. To provide better health services to at present the state has two Medical Colleges i.e. Indira Gandhi Medical College, Shimla and Dr. Rajendra Prasad Medical College, Tanda and one Govt. Dental College, Shimla are functioning. Besides this, four Dental colleges in private sector at Sundernagar, Solan, Nalagarh and Paonta Sahib and three Himachal Pradesh councils i.e. H.P. Medical Council, H.P.Nursing Council and H.P. Para Medical Council are also functioning. A fresh batch of GNM Training with the intake capacity of 1,240 Students have been admitted in 33 GNM Schools (Five Govt. and 28 Private) and B.Sc. Nursing Degree course with annual intake of 580 students have been admitted in 13 B.Sc. Nursing Colleges (1 Govt. & 12 Private). 2 Regional Ayurvedic Hospitals, 2 Circle Ayurvedic Hospitals, 3 Tribal Hospitals, 9 District Ayurvedic hospitals, one Nature care hospital, 1,108 Ayurvedic health centers, 14 ten/twenty bedded Ayurvedic hospitals, 3 Unani health centers, 14 homoeopathic health centers and 4 Amchi clinics (out of which one is functional).The department has inbuilt system of production of medicines through 3 Ayurvedic

Pharmacies, at Jogindernagar (District Mandi), Majra (District Sirmaur) and Paprola (District Kangra). These pharmacies catering to the need of the Ayurvedic health institutions of the department and also give boost to the employment to local people. Rajeev Gandhi Government P.G. Ayurvedic College Paprola with an intake capacity of 50 students for B.A.M.S. degree is functioning at Paprola in Kangra district. Besides this the PG Classes in Kayachikitsa, Shalakyata Tantra, ShalyaTantra, PrasutiTantra, Samhita and Sidhant, Dravya Guna, RogNidan, SwasthVritta, Panchkarm and Balrog are also there. The department has started the B-Pharmacy course (Ay.) at Jogindernagar with intake capacity of 29 students.

Table-2

Major Health and Demographic Indicators of Himachal Pradesh and India in 2011

S.No	Indicators	2011	
		Himachal Pradesh	India
1	Total population	0.68(in crore)	121.01
2	Decadal Growth	12.81	17.64
3	Crude Birth Rate	16.5(SRS 2011)	21.8
4	Crude Death Rate	6.7(SRS 2011)	7.1
5	Total Fertility Rate	1.8(SRS 2011)	2.4
6	Infant Mortality Rate	38(SRS 2011)	44
7	Maternal Mortality Ratio	NA	212
8	Sex Ratio	974	940
9	Female Literacy Rate	76.60	65.46

(Source: RHS Bulletin, March 2012, M/O Health & F.W., GOI)

Table -2 shows the distribution of major health and demographic indicators of Himachal Pradesh and India i.e. total population, decadal growth, crude birth rate, crude death rate, infant mortality rate, maternal mortality ratio and female literacy rate etc. The population of India in 2011 was 121.01 crores and in the state of Himachal Pradesh it was 0.68 crores. Table also indicates that the decadal population growth in Himachal Pradesh was less than India (i.e.12.81% and 17.64% respectively) in 2011 (i.e.17.54% and 21.54% respectively). Birth and death rate, total fertility rate and infant mortality rate are important indicators that influence the size and growth of population. Crude birth rate in Himachal Pradesh was 16.5 in 2011 and was less than India (21.8). Crude death rate was also less in 2011in Himachal Pradesh (6.7) as compared to India (7.1). The Total Fertility Rate of the state was 1.8 in (SRS 2011), infant

mortality rate was 38 in (SRS 2011) in Himachal Pradesh. The sex ratio in the state is 970 (as compared to 933 of the country) in 2001 and is 974 (as compared to 940 of the country) in 2011.

Table-3

Comparative Infant Mortality Rates, Birth and Death Rate of H P and India

Indicators	Year	HP	India
Infant Mortality Rate	2011	38	44
Infant Mortality Rate	2013	35	40
Birth Rate	2011	16.5	21.8
Birth Rate	2013	16	21.4
Death Rate	2011	6.7	7.1
Death Rate	2013	6.7	7

Source –Health& Family Welfare Department, H.P.

Table -3 shows the distribution of infant mortality rate of Himachal Pradesh and India. Infant mortality rate is important indicator that influences the size and growth of population. The infant mortality rate was 38 in Himachal Pradesh and was 44 in India in the year 2011. As we compared both the figures of Himachal Pradesh and India we can observed that the figures of Himachal Pradesh are always less than India in years. Table 3 shows the distribution of crude birth rate and crude death rate of Himachal Pradesh. Birth and death rate are important indicators that influence the size and growth of population. Crude birth rate in Himachal Pradesh was 16.5 in 2011 and was less as compared to India (21.8). Crude death rate was 6.7 in 2011 in Himachal Pradesh and it was (7.1) as compared to India. Birth rate and death rate in both in Himachal Pradesh are at the lower side as compared to all India in different years.

Figure-1

Infant mortality in Himachal Pradesh & India

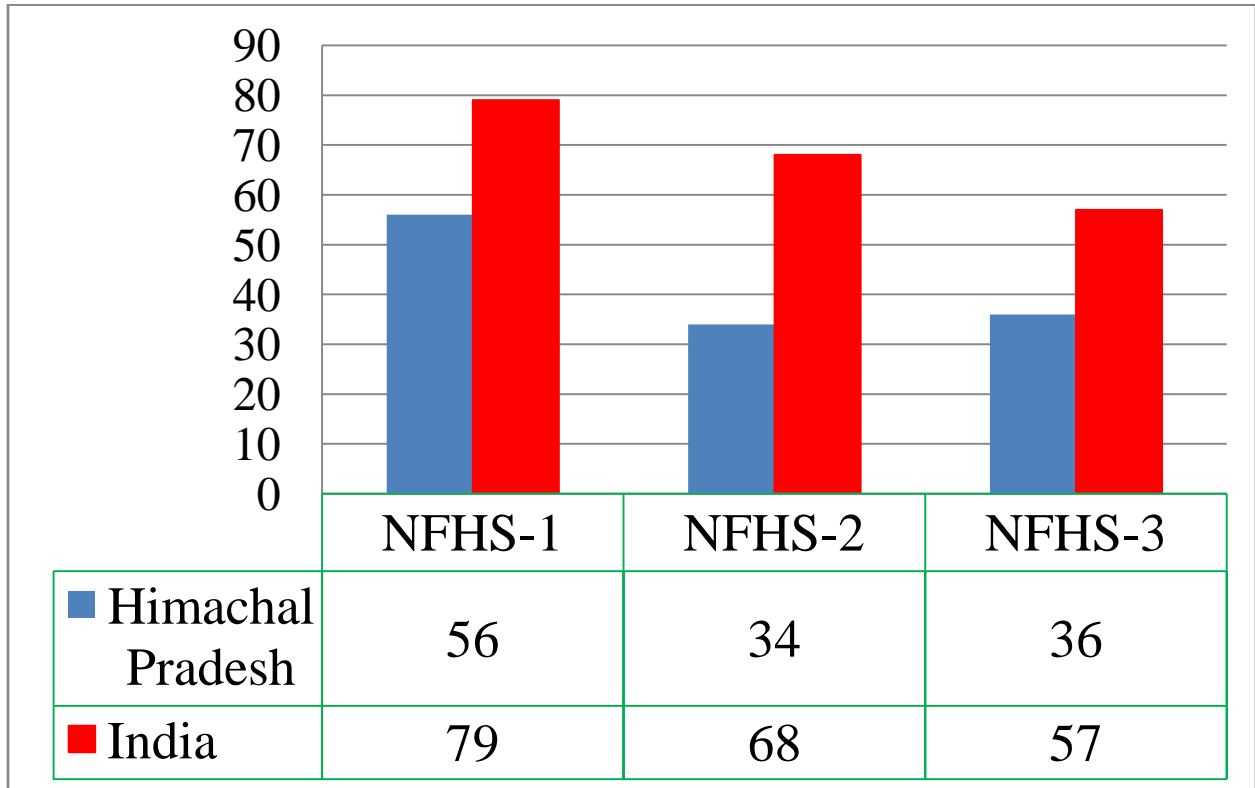


Figure- 1 shows that infant mortality in Himachal Pradesh has decreased over time but not as dramatically as in other states. Although the infant mortality rate (IMR) in Himachal Pradesh fell between 1992 and 1999 – from 56 per 1000 live births (NFHS-1) to 34 per 1000 live births (NFHS-2) – this decline leveled off subsequently. In 2006, the IMR was 36 per 1000 live births (NFHS-3). At the same time, India has significantly higher rate with 57 per 1000 live births (NFHS-3).

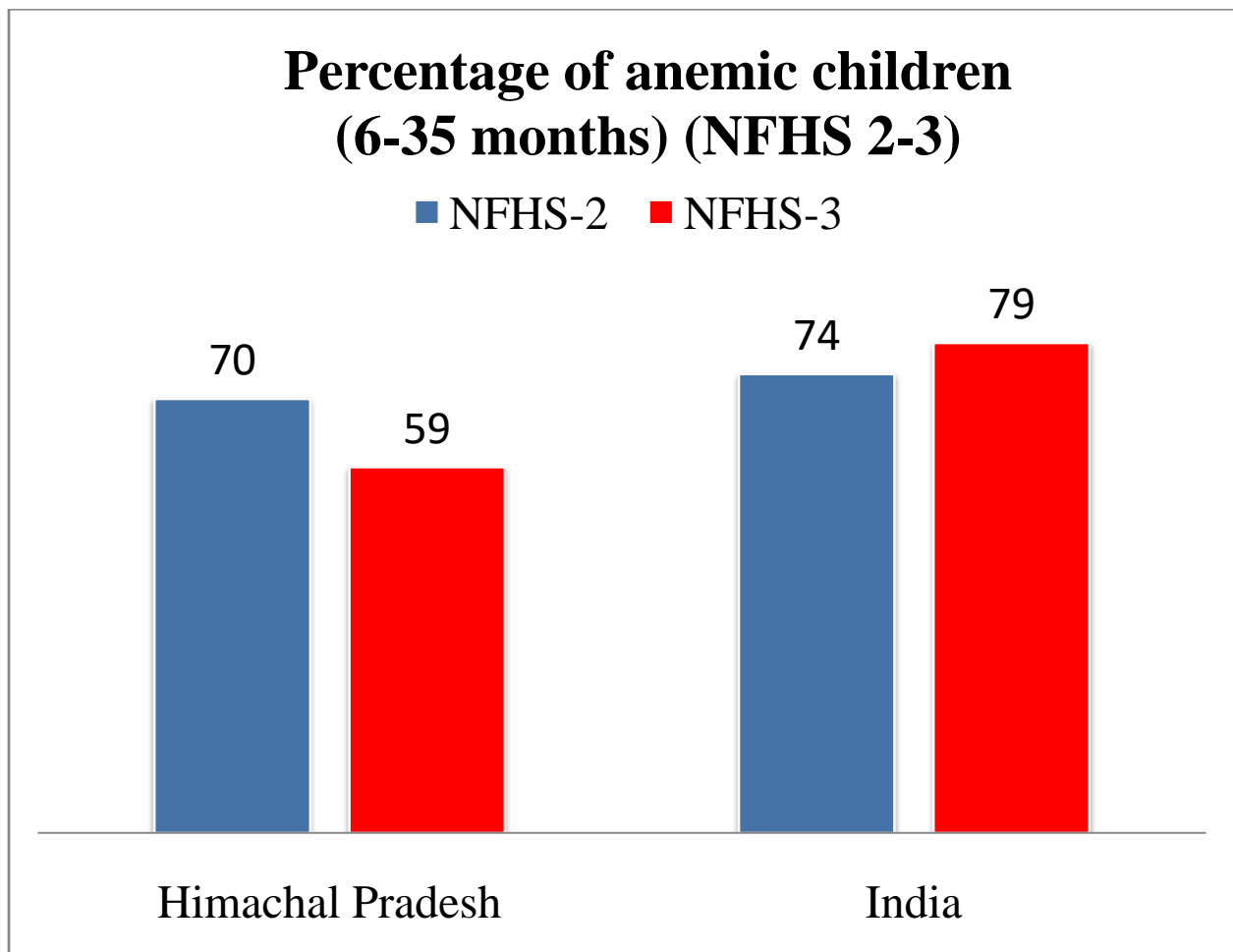


Figure- 2

Figure-2 shows that anemia among children has fallen in Himachal Pradesh, while it has risen in other states; however, anemia among pregnant women has grown. While anemia levels among children grew in most states between 1999 and 2006, Himachal Pradesh achieved important reductions (from 70 percent to 59 percent Himachal Pradesh). However, anemia among pregnant women has been growing (from 32percent in 1999 to 37 percent in 2006).

Public Health in Himachal Pradesh

Although HP's climate and topography serve to protect the state against tropical diseases that sanitation measures are likely to control, the significance of public health remains undiminished for the above reasons. While the state appears to be doing well on some measures of public health provision, as described below it is performing worse on others, such as immunization coverage. Declines in diarrhea, cough and fever incidence among children since 1999 have followed a more general all- India trend. Himachal Pradesh achieved significant

reductions in diarrhea, cough, and fever incidence among children between 1999 and 2006; these reductions follow a downward trend in Himachal Pradesh (8 percent) in 2006.

Table 5

Percentage of children (under 3 years) with diarrhea in last 2 weeks who received ORT (NFHS 1-3)

Survey	Himachal Pradesh	India
NFHS-1	31	17.8
NFHS-2	45.6	26.9
NFHS-3	52.5	26.2

Oral Rehydration Therapy (ORT) is among the cheapest life-saving interventions for reducing child mortality (Victoria et al. 2000). Table 5 shows that use of ORT in HP has increased in recent years and continues to be high relative to India as a whole. 70% of children under age 5 with diarrhea in the two weeks before the survey (NFHS-3) received some kind of oral rehydration therapy (ORT).

Children's nutritional status:

Himachal Pradesh lags behind other states in children's nutritional status. Himachal Pradesh has been slow to reduce the percentage of underweight children in the state (44 percent in 1992, 36 percent in 2006). In addition, while Himachal Pradesh achieved a dramatic reduction in the percentage of stunted children between 1999 and 2006 (from 41 percent to 27 percent).

Immunization rates:

Immunization rates have declined recently, more steeply in Himachal Pradesh than in other states. Between 1999 and 2006, Himachal Pradesh experienced a significant decline in the percentage of fully immunized children, despite the state's excellent progress between 1992 and 1999. Immunization coverage fell from 83 percent of children being fully immunized in 1999 to 74 percent in 2006. At the same time, the all-India average increased slightly, from 42 percent to 44 percent. Birth order has a statistically significant effect. Later children, both in Himachal Pradesh and the rest of India, exhibit lower probabilities of full immunization than children born earlier by the same mother. This result is in line with the finding that children of mothers whose first birth occurs at an earlier age are more likely to be fully immunized than those with mothers who first gave birth at an older age. Girls are just as likely to be fully immunized as boys in Himachal Pradesh. This differs from the trend in India as a whole, with girls being less likely to be fully immunized than boys.

Vaccination Coverage:

Vaccine-preventable childhood diseases such as measles, polio, and tuberculosis continue to account for a considerable proportion of child deaths and morbidity in many states in India. While routine immunization rates in Himachal Pradesh are higher than in other parts of the country, vaccination coverage in Himachal Pradesh has dropped from 83 percent to 74 percent in recent years, and the decline has been steeper in Himachal Pradesh than in some other states . The all-India average increased slightly within the same period, moving from 42 percent to 44percent. Thus the goal of universal immunization is not being reached, raising serious public health concerns. While higher levels of mothers' education increase the probability of a child being fully immunized for India as a whole, this effect does not hold for Himachal Pradesh. A plausible explanation is that mothers in Himachal Pradesh, regardless of their level of education, may be more aware of the benefits of immunization than mothers in the rest of India because of other factors, such as better information campaigns and child health education. Surprisingly, the probability of full immunization is 10 percentage points higher among children from scheduled castes, tribes, or other backward classes than among those of higher social classes. In the rest of India, the reverse is true. In addition, there is no statistically significant difference in the likelihood of immunization between different religious groups in the state. The same is not true in India as a whole, where Hindu children are more likely to be fully immunized than children from households of other religions. While the reasons for this difference were not identified, it is commendable that there appears to be less discrimination among different social and religious groups in Himachal Pradesh in terms of children's immunization status.

Nutritional Status:

Under nutrition (especially in children) is a sensitive indicator of community health and correlates highly with mortality (Rao et al. 2005, Sandeep, 2016, 2017). Malnutrition and diarrheal disease are intricately intertwined and since malnutrition in early life can lead to permanent impairment, improving nutrition among children can generate major health, educational, and economic benefits (Behrman 2008). While Himachal Pradesh's children enjoy better nutritional status than Indian children in general, there is still much work to be done. The Government of India's Integrated Child Development Scheme has proved to be an insufficient tool for curbing malnutrition among children. UNICEF has proposed improvements to the program that include training sessions to improve the skills of anganwadi workers, increased

attention to the health status of infants, improved community investment through community-level involvement in child health, and an increase in the number of home visits (UNICEF,2006). Educating parents about child growth might also be beneficial. Decentralization of health services in Himachal Pradesh may facilitate community engagement in these activities and in combating hunger, both through increased local efforts and improved surveillance opportunities.

Public health and health sector reforms:

While immunization coverage in Himachal Pradesh is better than in the rest of India, it has shown alarming declines in recent years necessitating larger and more sustained efforts to strengthen routine and follow-up immunization programs. Given that most people access immunization services through public facilities, the Department should bear this in mind when planning health sector reform, particularly in the allocation of resources across the various levels of the health system that might result from decentralization of the lowest tier of the system. In addition, the Department must ensure adequate support for the roles and responsibilities of the village health workers in providing public goods.

Himachal Pradesh's financial indicators are troublesome and the state's fiscal and revenue deficits as a percentage of the state's domestic product are among the highest in India (Sanan 2004, Sandeep Sharma 2017). The budget considerations of delivering public health services are significant, as states have limited budgets and must prioritize. Central grants to states for public health and disease control programs have been reduced in recent years, limiting the ability of state governments to increase expenditures on health care (Purohit, 2001). This challenge is compounded by the approval of the 6th Pay Commission Report, which will strap state budgets even tighter. The impact on health and education, which are very labor-intensive, are expected to be especially significant. The Department must consider new ways to meet the needs of its citizens through strategic spending. While reducing government subsidies for curative care services for the nonpoor is not ideal, it may be a necessary evil. Tough budgeting decisions loom for the state, and though corners must be cut, a commitment to public health is as important as ever.

Challenges to delivering public health services originate from the fact that such services are often invisible to the public. For this reason, while public health can only be provided by the government sector, commitment by politicians can prove challenging. This political problem emerges largely because constituencies may not notice the outcomes of effective public health interventions, i.e., the absence of disease (Hammer, Aiyar and Samji 2006). Political roadblocks

can adversely impact equity in provision: poor people maybe especially unable to observe politicians' contributions to their welfare, and domination of political behavior along ethnic, linguistic, and religious lines can hamper distribution of services to the poor (Keefer and Khemany 2005). Political awareness can help ensure public health services are provided despite challenges.

Mother's education plays a strong protective role:

The protective effects of mothers' education have been documented extensively in the literature (Case, Lubotsky, and Paxton 2002; Cutler, Deaton, and Lleras-Muney 2006). More educated women are more likely to follow practices that improve children's health and likelihood of survival, such as providing good nutrition and care, seeking medical attention when the child is ill, and so forth. The NFHS data show that increasing a mother's education by 4 years from 5.8 years to 9.8 years would reduce the likelihood of a child dying by approximately one-fifth, from 4.2 percent to 3.4 percent. The IHDS analysis shows that raising mother's education from 7.6 years (the current average for mothers under 35 in Himachal Pradesh) to 10.2 years (the current average for mothers under 35 in Kerala) would reduce the probability of death by half (from 15.9 percent to 8 percent). Given the significant impact of mother's education on child mortality, recent trends in education among women in Himachal Pradesh should be explored. In Himachal Pradesh there is clearly an upward trend in mothers' years of education from older to younger mothers. The trend falls off by the youngest age cohort, as many of these women are still in school. When they complete their schooling, they will likely have higher educational attainment than the age cohort immediately before them. The average years of mothers' education in Himachal Pradesh exceeds the averages of all-India. Nonetheless, further improvement is possible, as mothers' educational attainment in Kerala remains substantially above Himachal Pradesh levels across all age cohorts. Moreover, in Himachal Pradesh average years of education among mothers aged 20 to 24 have declined by half a year compared to the cohort immediately before them, mothers aged 25 to 29. Unless many of these women aged 20 to 24 are still in school, this decline represents an actual drop in the average years of education among younger women in Himachal Pradesh. In India, there is strong capacity for dealing with disease outbreaks when they occur, but, too often, health officials are unable to prevent them from occurring in the first place (Gupta 2005). Due to its relative wealth, however, Himachal Pradesh is well positioned to make significant improvements in this area through improved use of data and technology. High-tech options include increased use of global information system

(GIS) technology and/or the installation of internet kiosks-perhaps at the Gram Panchayat level-for improved data communication and increased public health surveillance.

Suggestions:

1. Encourage schools to develop executive training programmes in healthcare, which will effectively reduce the talent gap for leadership in this area.
2. Revise the curriculum in medical, nursing, pharmacy and other schools that train healthcare professionals, so that they too are trained in the new paradigm.
3. The government should appoint a commission which makes recommendations for the healthcare system and monitors its performance.
4. Develop and implement national standards for examination by which doctors, nurses and pharmacists are able to practice and get employment.

Concluding Remarks

Continued investments in public health provision will thus be necessary to improve the equity of the health system in the state. Himachal Pradesh already fares better on many measures of health and health care delivery than most other Indian states.

This paper has highlighted successes and noted improvements that the Department of Health could make to enhance its performance. Data on health status offer strong evidence that mother's education is the key to reducing infant and child mortality. The Department should consider possible partnerships with the Department of Education to further strengthen resources and opportunities for women's education in the state. Government health care in Himachal Pradesh appears not to confer the most benefit on those in greatest need: lower income residents. The Department should seek more definitive data on the determinants of demand for government health services, including income and status as a member of a scheduled tribe or caste, and apply these findings to decisions about where and how to deliver its services. The key to successful decentralization of lower-level health services will be to support local governments by providing the resources and funding they need. The Department should be aware of potential limitations that local governments might face in taking on health care responsibilities, and ensure that it does not pullout of communities before effective structures have been established. It may be advisable to monitor recruitment in its earliest stages in order to draw lessons and make necessary modifications early on in the process.

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