Infrastructure Economics
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Module – 04
Lecture - 16
Health: As a Social Infrastructure

After discussing education in my last lecture, I would like to discuss health as a Social Infrastructure in the next lecture.

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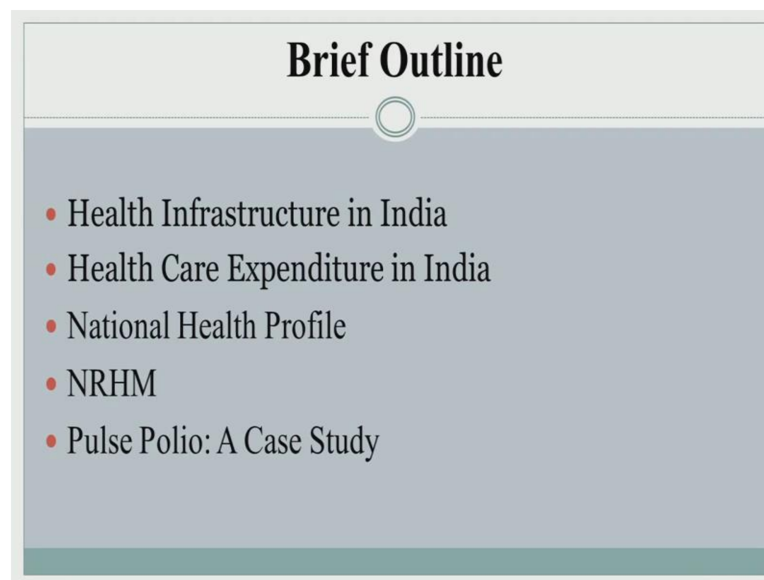

Let me briefly discuss that how health infrastructure in India has developed more recently and how the percentage of GDP… what percentage of GDP is basically paid for the health care expenditure. What is basically national health profile of India? We will also present two case studies: NRHM and pulse polio. And through this we will really have a live example of how health care facilities do play an important role in society.

Let me begin with the national health mission, which was financially supports the states to strength… strengthen the public health system including the upgradation of the existing or construction of new infrastructure. So, the high focus states under national health mission can spend up to 33 percent and other states up to 25 percent of their national health mission funds on the infrastructure.

So, here we can find out that out of the total allocation of national health mission 25 percent to 33 percent of expenditure is on the infrastructure facilities developed for the health centers. Government of India spending on health care remained very low compared to the other country, which is around 1.2 percent of GDP, approximately 4 percent of the total government expenditure and 17.8 percent of social service expenditure.

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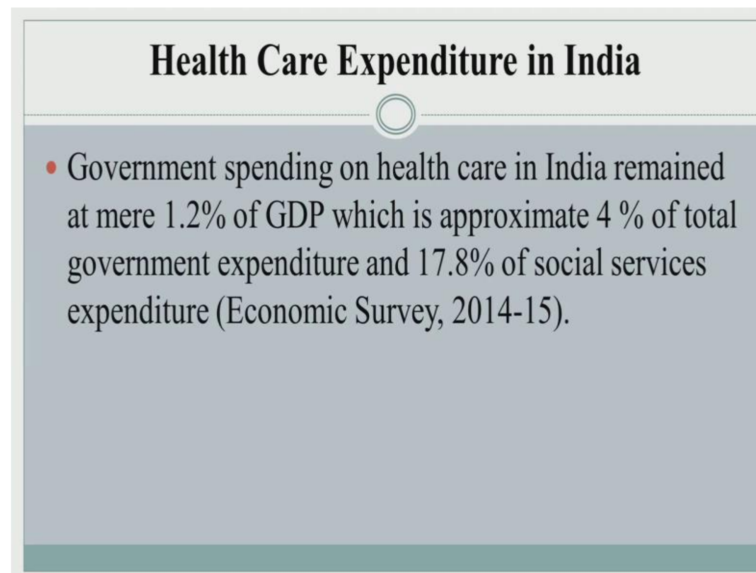

This is the recent statistics by the government of India in economic survey 2014 and 15. And this shows that compared to many Nordic nations – Finland, Netherlands, Denmark and many European countries the expenditure on health is very less as a part of our GDP. And with the second largest population in the world this percentage of GDP on health is not really one of the positive indicator that India is really going to achieve a major targets in the health sector.

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Population Norms for Setting Health Facility in India

Table 1: Population Norms for setting up of a Public Health Facility in India

Health Infrastructure	Population Norm (General Areas)	Population Norm (Hilly/tribal/difficult Areas)
Sub Centre	5000	3000
Primary Health Centre	30000	20000
Community Health Centre	120000	80000

Source: National Health Mission (2013)

So, if one can see here the population norms for sitting up of a public health facility in India, health infrastructure, for example, for opening up a sub-centers, population norms in general areas is 5000; population norms in tribal, hilly and difficult areas is basically 3000 population. So, if the government has to establish the primary health center, the population norms in general area is 30,000 while the population norms in hilly and tribal area is 20,000.

If government is really opening the Community Health Centers (CHC) then in that case, the population norms for sitting up those CHC is 1, 20,000. While the population norms in tribal area and hilly area is 80,000. So, this indicates that how much population is required for opening up health centers.

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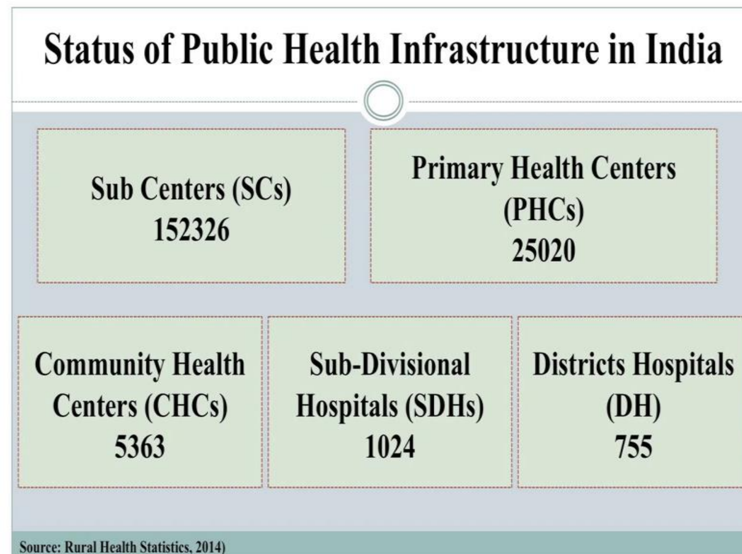

Let me also see here or discuss here the status of public health infrastructure in India.In terms of the sub-centers, the number of sub-centers available in India is 1, 52,326. The primary health centre is 25,020, community health centers 5363, sub-divisional hospitals 1024 and district hospitals 755. This is the government of India rural health statistics, 2014. So, this indicates that with current population, this particular statistics of sub-centers, primary health centers, community health centers, sub-divisional hospitals and district hospitals is not really up to the mark.

And this shows that India is really having a poor health infrastructure, especially the health infrastructure provided by the government. Public health infrastructure facilities is not really up to the mark and that is the biggest challenge and question for the policy maker today to work on this.

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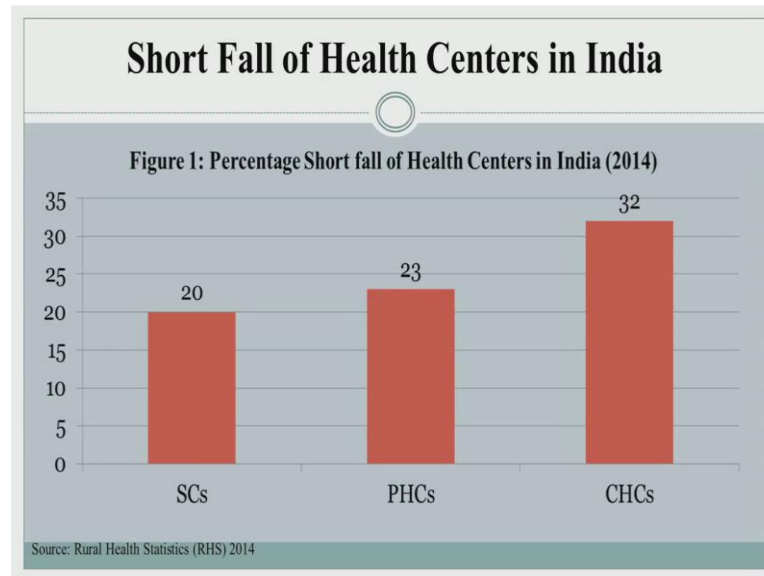

Let me also see here the fall of public centers in India, public health center in India is in terms of percentage. If you can just see here, the sub-centers, the percentage of sub-centers is 20 percent less compared to the requirement of sub-centers. In terms of public health centers, we have 23 percent shortage of public health centers; in community health centers we have 33 percent shortage, in terms of community health centers.

And this statistics is based on the parameteres which government has set for establishing those sub-centers, public health centers and community health centers. If one can really reform that parameters, if one can really think on the parameters as per the sub-centers, public health centers and community health centers established in other countries, where health infrastructure is really very conducive and really strong. And in that case, we will further have shortage of health centers in India.

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Findings of National Health Profile

The Reproductive and Child Health programme, part of the National Health Profile 2010, reveals the following:

- Only 52% mothers had at least three antenatal care visits
- 46.6% of child births were assisted by a doctor, nurse, ANM or other health personnel

So, let me find out national health profile of India today. The Reproductive and Child Health Programme, part of the National Health Profile 2010, reveals the following statistics: Only 52 percent mothers had at least three antenatal care visits, 46.6 percent of child birth were assisted by doctor, nurse, ANM or other health personal. It means that majority of the child birth were not really assisted if by the doctors and nurse till today. This percentage may be around 54 percent, where the child births were not assisted by the doctors, nurse, ANM staffs and other health personals.

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- Only 38.7% of institutional births were reported
- 43.5% of children were immunized between the age of 12 and 23 months for BCG, measles, and three doses each of polio/DPT
- 5.1% of children between the age of 12 and 23 months did not receive any immunisation

Only 38.7 of institutional births were reported. This again shows a very poor condition of the institutional birth and that indicates that still the majority of the population is not really either… not really having the health centers nearby or they do not have trust in such health centers. That is why they are basically doing it by the non-institutional mechanism. 43.5 percent of children were immunized between the age of 12 and 23 months of BCG, BCL and three dose each for polio and DPT.

And these statistics is improved little bit in last few years. Around 5.1 percent of children between the age of 12 and 23 months did not receive any immunization and that is a small percentage of children between the age of 12 to 23 months.

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But if we can just see here, the government of India's Rural Health Mission, which was launched by the government of India in 2005, there were many objectives; and some of those objective were to reduce the infant mortality rate and maternal mortality rate, universal access to public health service, ensure sanitation and hygiene during the birth time, prevention and control of communicable diseases, and provide adequate and effective health care facilities to rural area.

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Approaches of NRHM

- Community Based Approach
- Flexibility in Financing
- Efficient Management
- Monitoring
- Innovations in Health Care Facilities

So, let me also discuss the approach of NRHM. The approach was the community-based approach: flexibility in financing, efficient management, monitoring and innovation in healthcare facilities.

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Success of NRHM

- Massive increase in institutional deliveries
- 7.5 lakh ASHAs working at grass root level
- Beneficiaries under Janani Surakha Yojana (JSY) has increased from 7 lakhs in 2005-06 to 86 lakhs in 2008-09
- IMR has gone down- 53/1000
- MMR decreased to 254/1000
- TFR -2.7

One can also see here the success of NRHM in last few years: massive increase in institutional deliveries, 7.5 lakhs ASHAs workers at gross root level, beneficiaries under Janani Suraksha Yojana has increased from 7 lakhs in 2005 to 86 lakhs in 2008 - 09. This

is one of the major improvements. Infant mortality rate has gone down 53 for each 1000 birth.

MMR decreased to 254 out of 1000 and total fertility rate is 2.7 and these statistics shows that through NRHM, in a very short period of time, India is targeting some of the major targets especially for infant mortality rate and maternal mortality rate and total fertility rate. At the same time, the number of beneficiaries under the Janani Suraksha Yojana has also increased from 7 lakhs to 86 lakhs and which has the tremendous… if one can see the current statistics in 2014-15, one can also see here that these Yojana is really improving the health condition in rural India.

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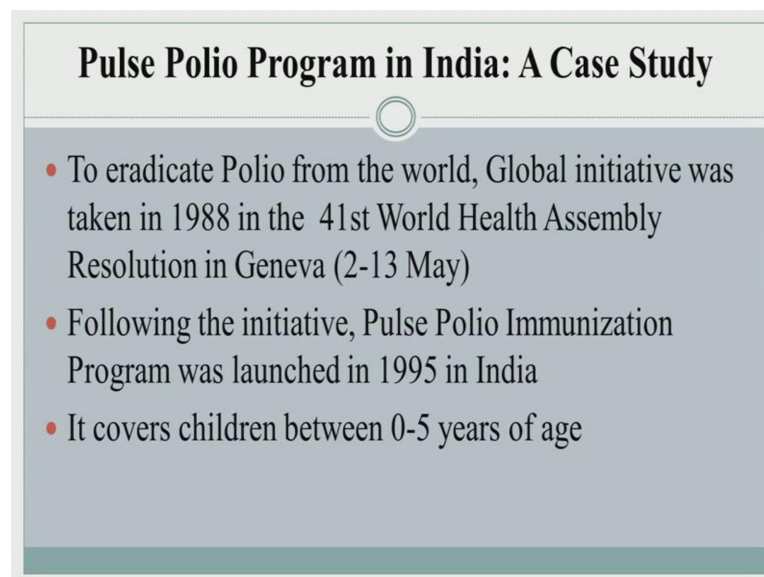

Let me also talk about… little bit talk about the pulse polio program in India, which is one of the major successful program in the world and many countries do appreciate the steps taken by India in last few years. The purpose of this pulse polio program was to eradicate polio from the world. Global initiative was taken in 1988 in the 41st world health assembly resolution in Geneva during 2nd to 13th of May.

Following the initiative, pulse polio immunization program was launched in 1995 in India. It covers children between 0 to 5 years of age. Approximately, 172 million children are covered under this program every national immunization day.

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- Approximately 172 million children are covered under this program every National Immunization Day (NID)
- 24 lakhs vaccinators and almost 1.5 lakh supervisors are responsible for the implementation of this program
- Apart from massive deployment of staffs, Rapid Response Team (RRT) has been developed in each State/UT.

24 lakhs vaccinators and almost 1.5 lakhs supervisors are responsible for the implementation of this programme and this shows that how India is really aggressive in… especially in controlling polio through this particular program. Apart from massive deployment of staffs, rapid response team has been also developed in each state and union territories. Polio booths at Indian borders are established to check the disease from cross borders.

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- Polio Booths at Indian Borders are established to check the disease from cross borders
- Mandatory Requirement of Polio Vaccination is ensured from March 1, 2014 by the government for Indian travellers going abroad in the countries like Afghanistan, Pakistan, Nigeria and other polio affected countries of Sub-Saharan Africa- effective.

Mandatory requirement of polio vaccination is ensured from March 1… March 1st, 2014 by the government for Indian travelers going abroad in the countries like Afghanistan, Pakistan, Nigeria and other polio affected countries of Sub-Saharan Africa nations.

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Last Reported Cases of Polio in India

Date	Location
January 13, 2011	Panchla, Howrah (WB)
October 22, 2010	Pakur (Jharkhand)
October 24, 1999	Aligarh (UP)

Source: NRHM (2014)

So, last reported case of polio in India: January 13th, 2011 in Panchla, Howrah (West Bengal); October 22nd, 2010 in Pakur (Jharkhand) and October 24th, 1999 in Aligarh, (Uttar Pradesh). Success in eradicating polio from India is really appreciated by the international organizations, such as World Health Organization. And now, new cases of polio, has not been reported in last 4 years.

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Success in Eradicating Polio from India

- No new cases of Polio has been reported in last four years (2012, 2013, 2014 and 2015 till today) in India
- As a result of successful polio immunization program in India, World Health Organization (WHO) removed India from the (active endemic wild polio virus transmission) potentially at risk country in Feb. 2012.

No news of such cases in 2012, 13, 14 and in 2015 also till today. As a result of successful polio immunization program in India, World Health Organization removed India from the active endemic wild polio virus transmission, which is basically the potentially at risk country in February 2012.

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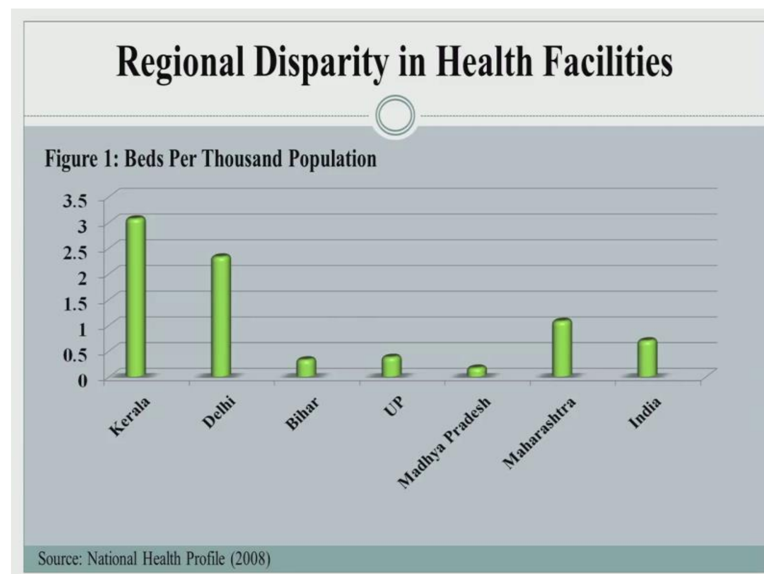

Let me compare the… after this successful program on polio, let me also compare the regional disparity in health facilities in India in terms of beds per 1000 population. The more number of beds per 1000 population in available in Kerala, after that in Delhi. We

find out that Bihar, Uttar Pradesh, Madhya Pradesh are really having even the average per bed 1000 population which India is having, below that level of availability Bihar, UP and Madhya Pradesh is having today.

But at the same time, we can also notices here that Bihar, Utter Pradesh and Madhya Pradesh, these states are not less populated like state like Kerala. These states are really heavily populated, densely populated. Bihar is the largest densely populated state in India in the recent census. So, this shows that the poor facility of beds per 1000 population in the most populated this states in India and that is really one of the challenge and major drawback in improving health infrastructure in the populated states like Bihar, UP and Madhya Pradesh.

So, what this regional disparity is showing us that where the states which were really having much better to development index through the improvement in education or through the expenditure on help infrastructure such as Kerala, Delhi. They were really improved a lot, including Maharashtra, which as much better conditions compared to Bihar, UP and Madhya Pradesh.

So, the states which had better investment on health, they were having much better infrastructure improved, much better infrastructure established. But the states which were not really having better infrastructure or investment on health infrastructure, they are really lacking behind. And there is a vicious circle where if you do not have improved health infrastructure today, you are not really going to lead your population. Not only in terms of having the healthy population but you are not really having active population because ill health population is really making a negative impact on the world force and they are not really more active participate in the level market, compared to the statistics of Kerala where majority of the male workers and even the female workers are not only participated in labor market… in the domestic level market, but today they are equally participating in the global labor market.

Especially, majority of the workers from the Kerala, they all are also in the health service, nursing service, outside India and within India. That shows that how concern they are really in their health services. And how government has really transformed the population to think, to act, and to experience the better health condition and better health infrastructure in last few years.

So, this result disparity has to be… it has to come down. Otherwise this type of infrastructure lack is going to really… it is going to really create the problem for those states such as Delhi which has large patients migrating from Bihar and UP, also from Rajasthan and Madhya Pradesh. Because the better health facility are developed in Delhi, because Delhi is the capital of India and huge expenditures are being made for many better hospitals. Such as AIIMS and Safdarjung and Ram Manohar Lohia and many other state run health centers and hospitals.

So, that way the better health infrastructure states are really… they are really getting the patients, really getting the cases from different states, of those states where the health facilities are really poor. So, this challenge is going to increase day by day, because if regional disparities are not really taken care, then we are not really stopping migration of the patients from one place to other place. This type of migration is not because of finding a job, because this type of migration is for finding a better hospital, finding a better doctor, finding a better lab for different health check ups. And in that condition a bulk of population from Bihar, UP and Madhya Pradesh is find very difficult time outside Bihar, outside UP, for their health, which is one of the important facilities… should be developed by the local government as well as by the central government.

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Conclusion

- India has not achieved universal access to health care facilities
- IMR and MMR still very high
- Two countries, India (21%) and Nigeria (13%), together account for more than one-third of deaths among children below 5 years of age (WHO, 2014)
- Need for Accessibility, affordability and availability of health care facilities

So, let me conclude that India has not achieved universal access to health care facilities. Infant mortality rate and maternal mortality rate still very high compared to other

countries. Two countries, India and Nigeria, together account for more than one-third of the deaths among children below 5 years of age, which is the statistics by World Health Organization in 2014. And these examples of regional disparities of health infrastructure; at the same time high infant motility rate, low level of institutional delivery, high level of maternal mortality rate, these statistics shows that India need accessibility, affordability and availability of health care facilities in a very speedy way. Otherwise, it will be very difficult to really take care of the large population of in India, which is really having the shortage of health centers and shortage of health infrastructure.

Without improving the health infrastructure, other physical infrastructure which is being developed will not be really conducive for the further economic development of India. This is not only true for the case of India but in any other developing and least developed country if the conducive atmosphere is not being developed by the government, because health is one of the sector, where private parties do not want to join. And even if they want to join the purpose is not to really take care of the society, but to earn as much as they can. For example, some of the hospitals, which is also situated in Delhi, for example Apollo, Escorts and other hospitals, which is basically funded by the private investment. In those hospitals the cost of hospitalization, the cost of being treated in the hospitals is so high that poor people cannot afford to really think for going to those hospitals.

One can also see some of the beds for the poor people are really reserved in those hospitals. But compared to the total number of beds, the small part of that percentage is being reserved for the poor people. That is not going to really answer the question of the large migration of the patient and the poor people, who really finds very difficult time in Delhi or in other metros to have cheapest health service provided.

So, in such a situation where… and health is not really the matter where… health services are not really the services which everybody wants without any reason. Health is basically a service. Health is not basically a luxury service. It is an essential service where state has to play an important role and this 1.1 percent expenditure on health or around 1 percent of health expenditure as a part of GDP is not really going to answer the question of growing requirement of health facilities and health infrastructure in India.

So, to sum up one can only say that India, a country which has second largest population in the world, should not really ignore the… improving the health infrastructure. Because

improving health infrastructure is leading us to a better social infrastructure for the economic development. And there is a link between the social infrastructure and physical infrastructure, which we have constantly discussed in this course in last few lectures. So, certainly that link will be missing if the health care facilities are not really developed in a better way.

Thank you.