Urban Services Planning
Professor Debapratim Pandit
Department of Architecture and Regional Planning
Indian Institute of Technology, Kharagpur
Lecture 50
Health in Urban Planning

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Welcome back in lecture 50, we will talk about Health in Urban Planning in general. The different concepts that we will cover are health in urban planning, measuring health outcomes, the planning process, then we will talk about routine immunization micro planning. And then we will do a case study on Patna RI microplanning. And then, we will look at some other case studies as well.

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So, when we talk about health in urban planning, usually, we have learned that urban planning originated from the basic fundamental premise that you have to improve the health care of health of citizens. So, urban planning and public health shares many objectives which are similar. So, that means, we overall both wants to improve the human wellbeing that means both via health services as well as urban planning the target is to improve the overall well beings of a human being in urban areas.

Then, the other aspect is service gap assessment and service delivery. So, this is in regards to health services, of course, but of course, when we talk about urban planning, and as the different when we talk about the health part of urban planning, we will definitely look into what sort of services are being currently provided, and what sort of services should be provided or what is expected to be provided, where is the gap, so that has to be identified and we have to provide those services.

Then we also deals with complex social systems. So, it is not a very straightforward like thing, like you provide a particular infrastructure facilities and it is done to make people, to improve human wellbeing, we have to address different concerns different aspects of human life, and that is a, it is a very complex system and it requires interventions from multiple directions, and finally, public participation, that means you have to take the people along with you.

So, these are common in general urban planning as well as planning for health services in an urban area. So, whenever we are planning for urban areas or vice versa, when we are planning for health facilities infrastructure for urban areas so, overall, our target is similar. So, that means that there are a lot of intertwining between these two aspects.

So, first, we have to determine the needs of people and communities and their its implications on human health and wellbeing. And that means that whatever people require every project that we will plan, every aspect that we will plan, that has impact on human health and overall wellbeing. So that has to be considered.

Then transformation of the conditions in which people live and work. So, that means to improve health of a particular individual, we have to transform the when we want to change the health of the overall wellbeing we have to change the way they lead or the way people work. So, to do that, there has to be changes in the urban plan. So, improvement have to have access to facilities and services. So, for that, we have to also do urban planning as well.

Then improving lifestyles and ability to develop social networks, how do I build communities, how do I design because design a particular area, so that it facilitates social development of social networks or improves over all lifestyle of people. Building capacity towards all these above objectives, as well as the political and institutional way to do this kind of to achieve this kind of objective is also part of the entire process.

So, some of the tools that usually we use are the geographic information systems, like we have seen earlier that we can determine the spread of diseases or we can do surveillance using and we can record the data using this GIS system and so on. Then health impact assessment that helps, what is the effect on health on every work that we do or every change we make in an urban area that helps you look into. Then community assessment tools, we have to really look into certain measures to which we can measure how the community is performing in terms of the health indices and so on.

Then participation of public health professionals in urban planning and planning boards and urban planners in campaigns promoting physical activity and health department boards they should be also there in the different activities or different programs of the health department boards as well. So, that means even though Health Department and the Urban Planning Departments as separate but there has to be a lot of overlaps and there has to be sharing of knowledge sharing of this experiences between them. So, that overall this objective which are common to both of them can be achieved.

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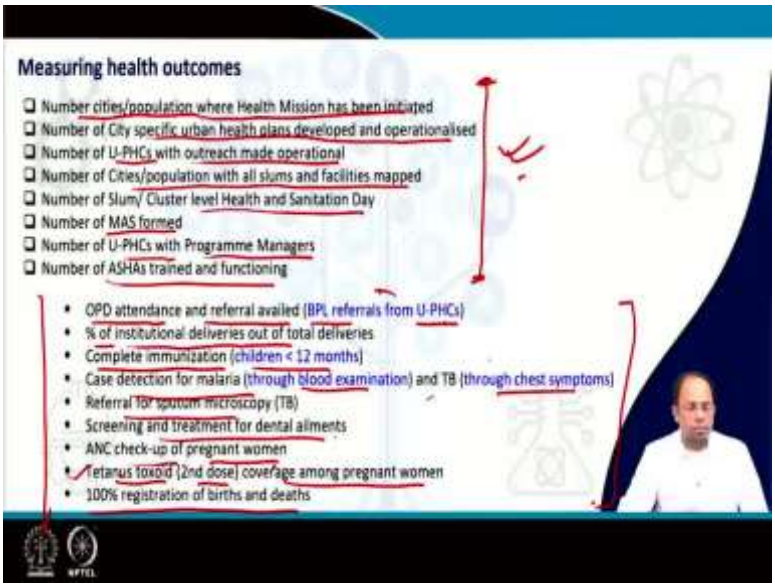

So, how do I measure health outcomes like there has to be certain indicators certain measures to measure the health of the community or the health of the population in the urban areas. So, some of the broad measures could be number of when we talk about the overall country or an overall state, the number of cities population where health mission has been initiated, number of city specific urban health plans developed and operationalize, number of urban public health centers with outreach mode operational, which can do outreach activities, number of cities population with all slums and facilities map, number of slum cluster level health and sanitation day, number of mass formed, number of urban primary health centers with program managers, number of ASHAs who are prayed and also their functioning.

So, all this gives us an idea about how much amount of effort has been gone into provision of health services. Similarly, if I really want to see if whatever I am providing, this is what is being provided is having an effect at all or not. In that case, we can measure something like these are could be the indicators which could be measured such as what is the outpatient department or outpatient attendance and reference referral availed.

So, how many BPL below poverty line cards or these people with these kind of cards have come to from the urban primary health centers, how many of them has been referred to the secondary order facilities or so on. So, that itself is a measure of how effective is this particular system, then percentage of institutional deliveries out of that total delivery, people used to deliver it homes, and also instead of that, now, if proper services are being provided, they would be able to deliver at certain health facilities.

So, what is that percentage? So that will give us an idea that how good are the services that I am providing, then complete immunization percentage of children below 12 months, then case detection of malaria through blood examination and for TB through chest examination or via referral for or how many referrals have come for sputum microscopy, which is also an indicator testing that TB surveillance screening is going on.

So, all this gives us an idea about how good are the services or health services that are provided in an urban area. Similarly, screening for treatment for dental ailments, ANC checkups, this is like this anti natal checkups that is before but what kind of checkups for the pregnant woman if it is being done, tetanus toxoid, second dose coverage among pregnant women, because this is you have to give this kind of vaccine, this kind of dose, so that this kind of infections does not happen.

Then 100 percent registration of births and deaths. So, these are an indicator of how good are the urban services which are being provided in this particular area. So, this is how we measure that the services that we are delivering is it having really an effect on the community or not. And this is from the supply side, this will determine really, if you have done something or not and this is if what you have done is having an effect at all or not.

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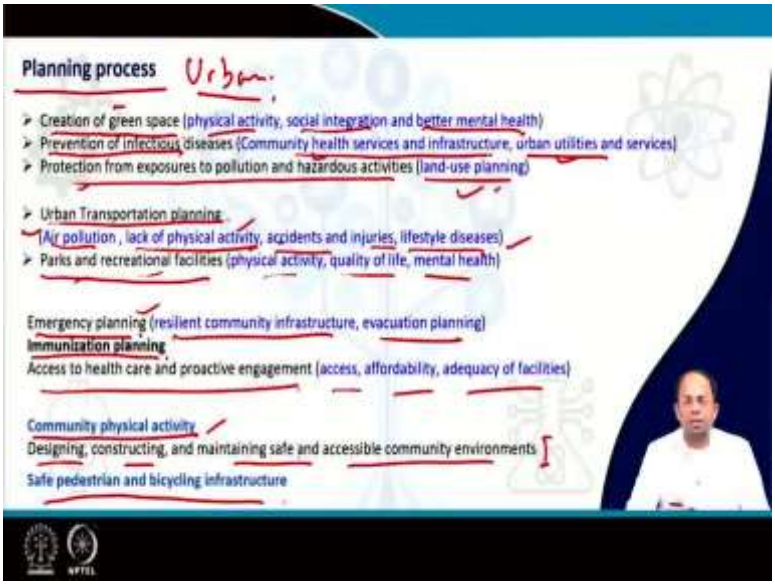

Now, when we talk about the general urban planning process, I would say basic planning process. So, how do I improve urban health. So, there are basic three measures that we talk about, one is creation of green space, which will help us to do more physical activities, it will help us to make bring people together so that we can achieve social integration, and it will give a place for old people and other kinds of people to come and enjoy which will also improve the mental health of the individuals.

Now, the second one is prevention of infectious diseases. So, the infectious diseases spread in an area if the total urban services and utilities are not proper, proper sanitation and all these facilities are not sanitation services are not being provided. And also the community health services and infrastructure that means that UPHC is community health centers what is the quality of those kinds of services, this is what governs the prevention of infectious diseases.

And finally, protection from exposure to pollution and hazardous activities. This that means, if I do land use planning properly, then I can separate the residential areas from the industrial areas or areas or heavy industries which are polluting we cannot we can align them in such a way so that people are not affected. So, that is how land use planning could be done to

improve urban health. Similarly, location of Urban Health Services provision of urban services could be done in such a way so that they improve reduction or prevention of infectious diseases in the first place.

Now, the other part is urban transportation planning. So, this is where usually we have studies on how to reduce air pollution in an urban area particularly generated from transport vehicles and all. Then, proper transportation planning can lead us to use non-motorized modes both bicycling and this walking so, that will improve our physical activities. So, how do you address lack of physical activity? How do you prevent accidents and injuries, lifestyle diseases by providing certain parks where people can exercise take a walk and all this?

So, these are all part of urban transportation planning. Similarly, for along with that, we can also provide parks and recreational facilities like provision of green space could be in a form of parks and recreation facilities, where we can do physical activities, we can look into the mental health of people and then the quality of life that we can improve quality of life by providing this kind of facilities and so on.

Then, the other aspects that we can plan or in the other aspects in the planning process is emergency planning. So, how do I create resilient community infrastructure. So, when we talk about emergency planning, we are talking about evacuation planning from an urban area or resilient community provision of certain kinds of community infrastructure. So, this emergency planning is part of the overall urban planning process, but also this has implications in terms of health.

Then, immunization planning in urban areas, how do I plan so, that people are immunized may be this has the importance of this has come during the COVID we have seen that the importance of immunization there has to be a proper plan. So, that immunization programs are carried on properly. Then access to health care and proactive engagement such as access, affordability and adequacy of facilities in an urban area, how much amount of this facilities have to be provided. So, some of these are guided by the guidelines which we have discussed earlier, but other things you have to do really assessment in that urban area that okay based on the transportation system based on distances, based on the quality or the now the size of the facility what exactly is to be provided or not.

Then community physic. So, overall, we can encourage community physical activities like people exercising going for morning walks and all this if I design, construct and maintain safe

and accessible community environments. So, that means our committee environment or urban design has to be in design in such a way so that it encourages physical activity.

And finally, pedestrian and bicycling infrastructure can be provided so that people can do can engage in physical activity while walking to maybe the transit modes and all this instead of using their own cars and so on, that also will reduce air pollution. So, these are the different aspects in the urban planning process, which can play a role in the improving health of the citizens.

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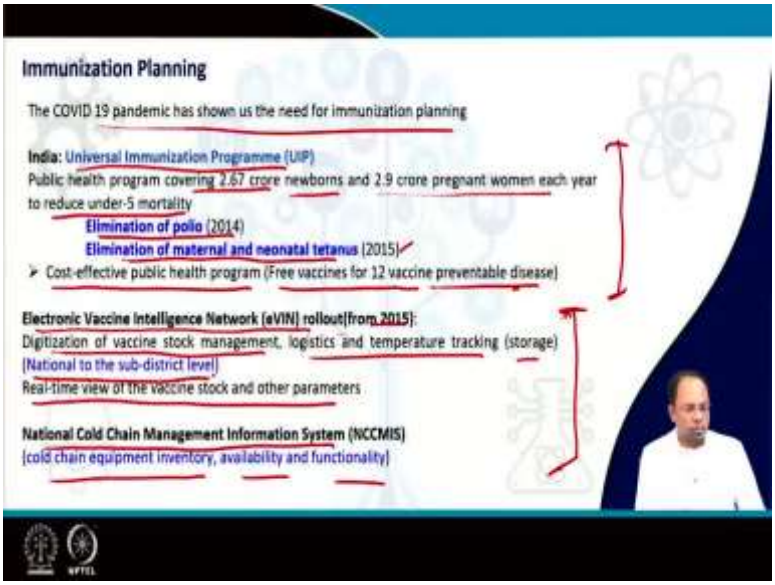

Now, coming to immunization planning, as we were discussing that the COVID-19 pandemic has shown us the need for immunization planning in the first place. So, in India, we are lucky that in our country, we have a universal program, which has been running for, for a long time, and this is a health program covering around 2.67 crore new born and 2.9 crores pregnant women every year. So, it is a massive program and this has been, this has been done to reduce under five mortalities and it has really achieved a lot of in that regards.

So, in 2014, we were able to eliminate polio from our country, because of this kind of immunization program. Similarly, we have been eliminated, we have eliminated maternal and neonatal tetanus by 2015. So, as you can understand, these are big achievements, considering the size and, the our afford or the income level of our country.

Then, overall cost effective public health programs are carried out under this immunization program by provision of pre-vaccines, which are like 12 vaccines are provided, so, to children so, that many diseases can be prevented. So, all these are carried on under the

immunization program. But the problem is how do you ensure a good universal immunization programs so that people are not left out or in case it is not only the people whom you have to engage with you do not only have to bring that people for immunization, but also how do you maintain the logistics of the vaccines that are being supplied and also they are stored in cold storages.

So, all this has to be managed in the first place. So, we have seen that in even in very developed countries, people, some people do not want to take vaccines and all because of certain fears and all so, that that also can be addressed by these kind of programs.

So, from 2015, we have been able to start the electronic vaccine intelligence network rollout network, eVIN this has been rolled out from 2015 this digit, this is digitization of vaccine stock management to know where how much vaccines are available, logistics and temperature tracking that means where how many vaccines is stored at what temperature and so on.

And this is done both at the national and sub district level. So, that means starting from the highest hierarchy to the to the grassroots this system is working and it shows us a real time view of vaccine stock and other parameters which is very, very effective in vaccine distribution as well as supply.

And along with that the National Cold Chain Management Information System, this is cold chain equipment inventory availability and functionality This keeps the cold chains ready and effective. And so that we know that all this we have adequate facilities for this kind of cold chains which can be used for storage or vaccines and so on. So, you see, these are the systems which were in place which has helped India to provide the immunization services which were provided during COVID at a very, very effective manner. So that is because we were ready for this or this kind of problems.

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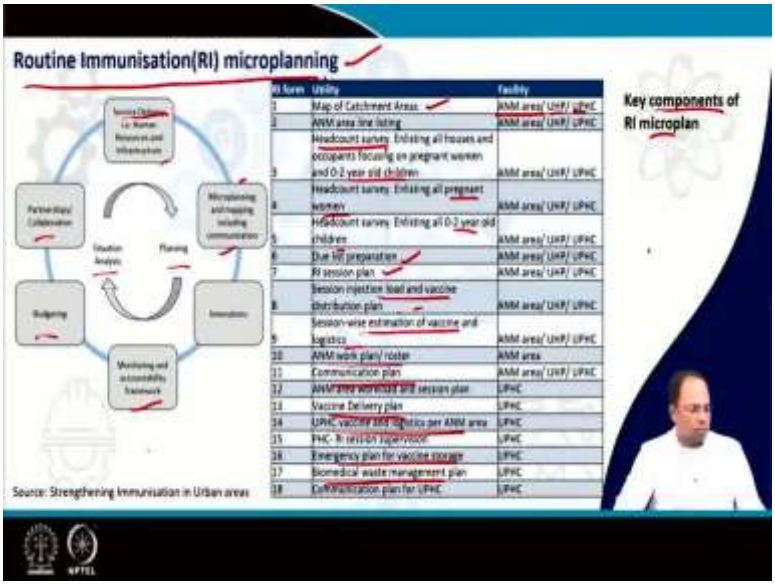

So, this routine immunization programs that are carried out in the country, it requires a lot of planning and it is usually known as routine immunization RI micro planning. So, you can see that there are several components of this. First of all, you have to create the map of the catchment area and it is done based on the area covered by one ANM or UHP or UPHC.

So, this not only that, how many people reside in that headcount survey. So how many it depends on all pregnant woman headcount, 0 to 2-year-old children headcount so because those are the people whom we give the dosage, vaccine dosages and so on. Then due list preparation who are left out sorry, then this RI session plan that means who will get vaccine, when and what are the sessions for that, session injection load and vaccine distribution plan based on the session plan, you would be determining how many vaccines would be required, what would be the distribution of those vaccines in the different areas. Session wise estimation of vaccine logistics.

Then ANM work plan rooster, how the ANM will be engaged, then communication plan, vaccine delivery plan UPSC vaccine and logistics plan, emergency plan for vaccine storage and biomedical waste management plan from all these activities. So, all these are part of the vaccination micro plan. So, this has to be done and until unless you do this kind of exercise for the urban area you will not be able to do proper immunization.

So, this is what has been listed over here. So, there is planning and then based on the situation we analyze and continuously improve our planning. And so, there is budgeting, there are partners you have to identify that is service delivery, for how much human resource and

infrastructure required for to do this kind of service delivery and overall micro planning and mapping including communication that okay the program would happen at this point of time people should come there, all this has to be done and finally, certain innovations and monitoring and accountability framework so, to monitor all these activities is also part of the overall micro planning process.

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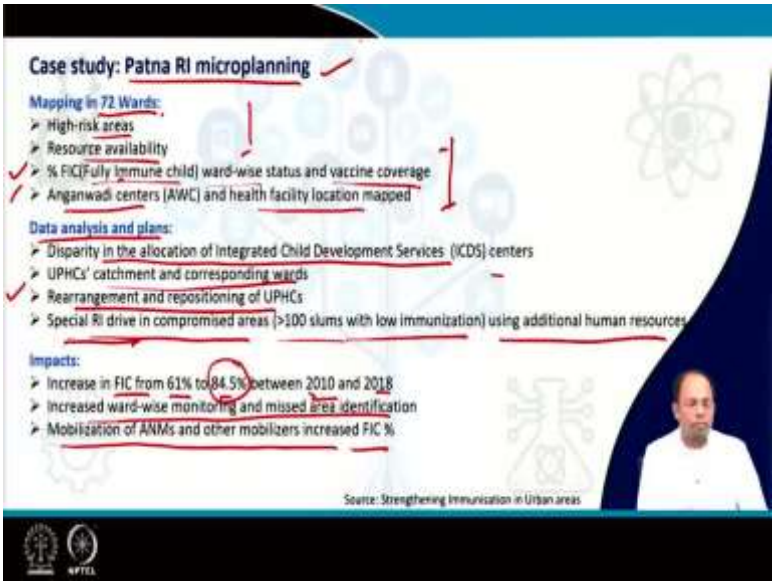

Now, coming to a case study of Patna, where RI microplanning was conducted, this was done in 72 wards of Patna, all 72 wards of Patna. High-risk areas were initially identified. Then resource availability was determined that how much resource availability for doing this kind of program. Percentage of fully immune child and its status ward wise and overall vaccine coverage in those wards were determined. The locations of anganwadi centers and health facility locations were mapped so that we know from where the services could the vaccine dissemination program can be carried out.

Then, finally all the data was analyzed like what kind of based on this, what deficiencies and what problems are there. Then based on that disparity in allocation of integrated Child Development Service Centers from where the vaccine are given this was determined UPHCs catchment and corresponding wards, where which UPHC will cover which catch area which ward that was determined.

Then, rearrangement and repositioning of UPHC was done based on all this analysis that we have done earlier special RI drive was done in the compromised areas where greater than 100 slums with low immunization was there. So, they are specialized drives were conducted and

for that additional human resources were also engaged. So, stand so, what it talks about is we you have to first understand where are the gaps, this is where the gap analysis is happening, and then based on that you have to provide the facilities or infrastructure to conduct that, where facilities or infrastructure difficult to be provided, there we can create specialized camps and all or specialized drives, where we can conduct this kind of services.

So, the impact of this drive FIC improved from 61 to 84 percent, between 2010 to 2018. So, you can understand 84 percent of this child were fully immune, fully given vaccination and all, this these are given not one but two vaccines, then increase ward wise monitoring and missed area identification. So, there were earlier more areas were missed, which was reduced and mobilization of AMN and another mobilize mobilizers increased the fully immune child percentage. So, this is a success case for Patna, but it was done via detail microplanning.

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So, this is for doing that three modern continued from the previous slide. They were model immunization centers were also created in Patna. Three modern centers were created at New Gardiner road hospital, Red Cross building and the subdivision hospital at Danapur. And the idea was to attract and encourage immunization among the urban people, urban population because many people are you know do not they are apprehensive of this kind of drives and all.

So this provided online surveillance through CCTV, IEC regarding vaccination on TB, proper sanitization, successful administration of vaccines during COVID-19. And overall, this helped in successful administration of vaccine during COVID-19. And within this particular

facility, along with proper sanitization a immunization corner was created like over here you can see, which is a dedicated area where the proper seating arrangements where the vaccines were. So, that is how you have to do this kind of activities so that you attract people also to come for vaccination and so on.

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Some other case studies, like for example, along with creation of nice vaccination centers, we can also create these kind of Android apps where a nearby vaccination center application has been created for Bangalore. It shows where the nearest vaccination sites are, and particularly these are not only for the fixed RI centers, but also for outreach sites as well. So, that means you can find in your area where camps are being conducted, and all you can go and conduct or you can avail vaccination. And also the days and times for these vaccinations were also shown via this app, as you can see in this particularly area.

Then, in addition, other ways to improve the communication, like for example, umbrellas by providing Madhya Pradesh, where the frontline workers were provided with this kind of umbrellas. And as you can see, that the names of antigens were written on the umbrella itself, which will make people understand that these are the vaccines that has to be provided and so on.

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So, these are some of the references that you can study.

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To conclude, urban planning and urban health planning shares several objectives and perspectives and urban plans should give adequate considerations to National Urban Health missions and programs and we should improve the overall health in urban areas.