

# Development of an urban primary level healthcare services package based on the assessment and prioritisation of the health needs of the urban poor: Study protocol

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**Background.** In the present day, urban living has become a common social context among the world's population, and ensuring prosperity for all is a way of attaining the sustainable development goals (SDGs). As India urbanises, this will begin to exert massive pressure on the healthcare services of urban areas, in the near future. Urban health challenges are multidimensional, and ensuring universal access to healthcare services for the urban poor, whose health needs are diverse, is a theme of contemporary interest.

**Objectives.** To assess the unmet healthcare needs of the urban poor population, to identify reasons for this situation and to develop and cost an urban primary level healthcare services package based on the prioritisation of the healthcare needs of an urban poor population through a multi-stakeholder process.

**Methods.** The planned study will be conducted in multiple phases, in a sequential manner, involving a mixed-methodology study design. It will involve a cross-sectional epidemiological survey, case study documentation, community meetings, and in-depth interviews with healthcare providers and administrators at various levels, followed by a joint stakeholder meeting and costing of the proposed package.

**Results.** In the context of an urban setting, the development of an urban primary level healthcare services package calls for an assessment of the health needs of the urban poor, as well as their necessary order of prioritisation. Without such focused attention, it is likely that urban healthcare packages will fail to respond to the specific health challenges of the urban poor, whose plight remains invisible and subsumed in the larger story of better urban health status.

**Conclusion.** Focusing on the health needs of the urban poor will make the essential healthcare package developed through this study a timely response, and 'will leave no-one behind' in access to essential healthcare, a commitment made by India to achieve the SDGs.

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The significance of urban health was highlighted by the World Health Organization (WHO) in 2010, when the theme of World Health Day was 'Urbanization and Health'.<sup>[1]</sup> One of the major 21st century challenges in population health is that of improving global urban conditions.<sup>[2]</sup> The risks from infectious diseases in overcrowded and substandard housing, acute and chronic pulmonary diseases related to the environmental pollution of urban areas and chronic non-communicable diseases associated with unhealthy urban lifestyles are some of the related health problems.<sup>[3]</sup> Though poverty has traditionally been considered to be a rural phenomenon, urban poverty is becoming more severe, but is largely unacknowledged as a part of urban life.<sup>[4]</sup> Researchers claim that urban poverty does not arise because of distance from infrastructure, but is mainly due to exclusion from the beneficial attributes of urban life, or not having traits of full citizenship.<sup>[5]</sup> Importantly, urban averages mask serious inequalities that exist within urban population groups, often resulting in widening disparities in health. Slum dwellers on the whole experience multiple deprivations that are direct reflections

of poverty, such as houses unfit for habitation, lack of adequate food and education and lack of access to basic minimum services such as safe drinking water, sanitation, drainage, solid waste management, healthcare, etc.<sup>[6]</sup> Informal slum settlements represent the most visible manifestation of urban poverty in India; these informal settlements occupy one-third of the city spaces, and 34.5% of the population of Mumbai, Chennai, Kolkata and Delhi lives in informal settlements, according to the 2001 Planning Commission report.<sup>[7]</sup> In India, alongside rapid urbanisation, the country is tackling the various determinants of health, including social determinants, by means of transformation, during an epidemiological transition; there is an increasing emergence of non-communicable diseases, even while communicable diseases continue to prevail. The urban healthcare system is diverse, with both a public and a private health sector, along with other systems of medicine. Most of the urban areas have a weak public sector governed by varied entities, such as municipal corporations and state government, coupled with a strong private sector providing services at a wide range of costs

and quality. In any developing countries, the purpose of evolving an essential healthcare package (EHCP) is to assist resource allocation in the health sector, especially when faced with a limited health budget and in the context of the huge burden of disease.<sup>[8]</sup> Developing such a package may be seen as a balancing act, in terms of satisfying people's aspirations within the constraints of limited resources, and improving society's health status as a whole. By providing an EHCP, government would be guaranteeing free or subsidised access to a minimum set of health services that meets the basic health needs of the people at affordable costs, which are also affordable to the government. In India, very few studies have focused on a detailed methodology of costing such a service, but the first attempt, which was made by the National Commission on Macroeconomics and Health in 2005, estimated the cost of providing a comprehensive package of healthcare services at INR1 160 per capita per year, if government was the sole provider.<sup>[9]</sup>

From the time of the Alma-Ata Declaration of 1978, primary healthcare was considered to play a key role in attaining 'Health for All', which would permit people to lead socially and economically productive lives, as part of progress towards social justice and universal access to healthcare services. Towards the goal of ensuring that all people obtain essential health services, and protecting people from financial risk, a typical EHCP should aim to cover the needed services based on a health needs assessment of the most disadvantaged population groups. It is a government's responsibility to guarantee the health of its people, and every government is responsible for using its scarce public resources to improve the health of its entire people, especially the poorest sectors of the population. In India, urban health inequalities, entangled with urban health challenges, affect the urban poor disproportionately. At the same time, there appears to be limited use of publicly funded healthcare services, which drives people to spend out of pocket (OOP) on healthcare services, often incurring catastrophic health expenditure. A study among the urban poor in India showcased the fact that OOP spending, and associated financial catastrophe, are highest among the urban poor, and they tend to spend a higher proportion of their income on OOP payments.<sup>[10]</sup> Attention to strengthening primary healthcare services in the urban setting could help the urban poor to receive affordable healthcare without delays, and would make a difference in improving their health overall, as well as reducing the risk of catastrophic health expenditure. In India, the National Urban Health Mission (NUHM) has been launched with the goal of addressing the health concerns of the urban poor population, with the involvement of urban local bodies, thus improving the health status of this population, and particularly the slum dwellers.

In such a scenario, developing a comprehensive basket of urban primary level healthcare services, developed through an iterative process by assessing the health needs of the urban poor, is an urgent need. Our assumption is that developing such a package will ensure that the key healthcare needs of the most vulnerable sectors of the population are met. These same services would be available to the entire urban population, and provisioning a minimum EHCP would act as a foundation for the addition of further services to the package in the future. In a situation of differential urban healthcare

needs and in the context of limited resources, we believe that setting up an EHCP that the government can provide to all, at an affordable cost, and that includes services based on the healthcare needs of the urban poor, is a basic entitlement of the urban poor population. This is a feature of a 'welfare state', such as that of India and Kerala. Based on this hypothesis, the research question is framed as: What would an urban primary level healthcare services package consist of, and what would the cost of services included in such an urban primary level healthcare services package be? Against this background, the objectives of the study are: (i) to assess the unmet healthcare needs of the urban poor population in Thiruvananthapuram Municipal Corporation, and identify reasons for the same; (ii) to develop an urban primary level healthcare services package based on the prioritisation of the healthcare needs of the urban poor population, through a multi-stakeholder process; (iii) to assess the cost of enlisted services in the proposed package; and (iv) to make policy recommendations for making the package accessible to the urban poor.

## Methodology

Ethics approval (ref. no. IEC/993) for this research proposal was received from the Institutional Ethics Committee of Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum.

Health needs are defined as 'objectively determined deficiencies in health that require health care, from promotion to palliation'.<sup>[11]</sup> Operationally, a need is considered a 'met need' only when the person successfully seeks and obtains healthcare, and further completes treatment and reports the problem as being resolved by means of accessing healthcare. If the need is not met, either because of not accessing healthcare, or during the course of accessing healthcare, then it is termed an 'unmet need'. Unmet needs are defined for the purposes of this article at five levels, in terms of barriers related to:

- availability – was a health facility available, for seeking care?
- accessibility – was a health facility accessible, for seeking care?
- acceptability – was a health facility acceptable, for seeking care?
- contact – did the person contact or consult the health provider for treatment?
- effectiveness – did the person consider their treatment to be effective?

The planned study will be conducted in multiple phases, in a sequential manner, involving a mixed methodology study design. Table 1 shows the objectives and the corresponding methodologies used.

## Cross-sectional study

The study is planned in Thiruvananthapuram Municipal Corporation area, Kerala, India as Thiruvananthapuram is considered as an urban agglomeration (UA) falling under the categories of million-plus UAs/cities. Well-defined areas in Urban Primary Health Centers (U-PHCs) will be the study setting. Urban poor populations of the corporation enlisted in the Below Poverty Line (BPL) rank list of each ward in urban Kerala will be the study

**Table 1. Study objectives and corresponding methodologies**

Objective	Method
To assess the unmet healthcare needs of an urban poor population and identify the reasons for their existence	Cross-sectional epidemiological survey Case study documentation
To develop an urban primary level healthcare services package based on the prioritisation of the healthcare needs of an urban poor population through a multi-stakeholder process	Community meetings In-depth interviews with healthcare providers and administrators at various levels Joint stakeholders' meetings
To assess the cost of enlisted services in the proposed package	Step-down cost accounting
To make policy recommendations for making the package accessible to the urban poor	Preparation of policy briefs

universe. Wards are territorial constituencies of municipal areas. Sample size calculation was estimated using a calculation formula based on prevalence.<sup>[12]</sup>

As per National Sample Survey Organization 71st-round survey data from January - June 2014,<sup>[13]</sup> the prevalence of ailments reported during the last 15 days (including hospitalisation) in urban Kerala was 30.6% of the population, and the total population of urban Kerala was estimated to be 15 932 171, according to Census 2011.<sup>[14]</sup> Using a relative precision of 20%, with a design effect of 2 and expecting a non-response rate of 20%, the number of urban poor included in the study was estimated to be 523, at a 95% confidence level. The mean household size for Thiruvananthapuram Corporation is 4.0,<sup>[15]</sup> meaning that a total of roughly 130 urban poor households will be selected.

Sample selection will be done using a multi-stage cluster sampling method. In stage I, five U-PHC areas will be randomly selected from 11 U-PHC areas. In stage II, two wards will be randomly selected from each selected U-PHC area. A new list of urban poor households in the selected ward, made with the help of a junior public health nurse and an accredited social health activist of the concerned U-PHC area, will be made from the available BPL rank list. A random list of maximum 20 numbers will be generated. In each ward, the first household will be selected at a random starting point from the newly organised list of urban poor households, and from there the rest of the households will be covered until the final number of households from the ward (13) is attained. The female head of the household or the next adult woman of the household in seniority will be interviewed. If the respondent is unavailable at the time of the survey, a maximum of three visits will be made to attempt to include the respondent; if the persons are still unavailable, then the next household in the random list will be selected. Data collection will be performed using a cross-sectional survey tool developed by the principal investigator. This tool begins by capturing household sociodemographic information and particulars regarding health needs and health-seeking behaviour. Five categories of health needs will be captured, in which categories A, B and C exclude maternal, reproductive and child healthcare needs:

- A: unwell with conditions that lead to the disruption of daily activities in the past 2 weeks; acute conditions not requiring hospitalisation but requiring outpatient care
- B: suffering from any chronic conditions requiring regular check-ups and medication in the past month
- C: hospitalised in the past year for any illness

- D: has sought care for any maternal and reproductive healthcare needs in the past year
- E: has sought care for any child healthcare needs in the past year.

The most recent episode of illness or healthcare need within the reference time period will be documented. The timely utilisation of healthcare services based on users' needs is taken as an operational representation to identify barriers associated with unmet healthcare needs. Data will be collected using a tool translated into the local Malayalam language.

### Case study documentation

Sample selection for case studies will be done purposively using the cross-sectional epidemiological survey as the survey proceeds. Case studies of households will be recorded to illustrate a spectrum of situations (both typical and extreme) with respect to the extent of participants' health needs. It will be carried out as a prospective two-stage study in which personal documentation will be collected, where participants are provided with a locally translated specially designed 'pictorial notepad' (Fig. 1). The notepad contains monthly forms to record details of illness episodes of households, as well as experience-sharing in a prospective manner for 6 months. Regular phone calls and field visits will monitor the entire process. After a period of 6 months, the data will be analysed, and later in-depth interviews will be carried out to complete the case study documentation.

### Community meetings

Community meetings will be held to reach consensus within the community for prioritising the health needs identified by the cross-sectional epidemiological survey. A community meeting will consist of a small group of 15 - 20 urban poor people selected from the U-PHC area, both male and female, of various age groups, castes, ethnicities, language groups and religions. It will follow structured guidelines that allow discussion among the members, followed by a prioritisation exercise to reach consensus within the group on prioritising the health needs identified by the survey. Each community group will be provided with piggy banks; the number will depend on the categories of need identified, and each group member will be allotted an equal number of one-rupee coins. Each group member will be asked to distribute the one-rupee coins among the identified health needs, according to their personal judgement. An aggregate monetary value for each type of need will be calculated based on the assigned monetary value given by

**Personal documentation**

Serial No.:  
Narratives given by Name:  
Status of the narrator: Name no.:

What do you think about the health condition / status of your family?

POOR (sad face) FAIR (neutral face) EXCELLENT (happy face)

**Particulars**

Date of Handover:  
Date of Return:  
Name of the U-PHC area:  
Ward name/ward No.:  
Household ID No.:

Visit number		Visit - 1	Visit - 2	Visit - 3	Visit - 4
How many the details of illness occurred in last?	Visit - 1	Visit - 2	Visit - 3	Visit - 4	
Did you family member visit the hospital? If yes please specify the family member, type of hospital etc.					
What was the health problem?					
How long did it last?					
Was it an independent / recurrent visit?					
Did you use the medicine from hospital pharmacy / medical shop?					
How much did you pay?					

Fig. 1. Sample pages of the specially designed 'pictorial notepad'. (Full credit for designing the 'pictorial notepad' lies with the corresponding author.)

each group member. The need with the highest aggregate monetary value will be considered as a highly prioritised need. The outcome will be revealed to the whole group so that they can reach consensus on the scoring criteria via discussions.

### In-depth interviews

In-depth interviews will be conducted with healthcare providers of the selected U-PHCs as well as with administrators at the state, district and corporation level, using structured guidelines. Information regarding urban patient load, services provided, the functioning of the U-PHC and the healthcare providers' opinions on developing a package will be recorded, followed by a prioritisation exercise on the health needs identified through the survey.

### Joint stakeholders' meeting

A joint stakeholders' meeting will be held that includes representatives from the community, ward members, healthcare providers and administrators at various levels. The meeting will be conducted as a 2-day-long exercise to reach final agreement on the list of services to be included in the development of an urban primary level healthcare services package. The process will involve the presentation of the entire study findings to the stakeholders, followed by the outlining of the activities that will take place during

the meeting, which include setting up two rounds of discussions among stakeholders regarding the prioritisation of health needs. The findings count on consensus reached, which can be either a complete or a partial agreement among the stakeholders.

### Costing methodology

Based on the results of the joint stakeholders' meeting, a costing of the proposed list of services will be calculated for a population of 50 000 as a baseline, as this is the intended coverage of each U-PHC under NUHM policy. Step-down costing will be performed in this study, estimating the total cost of the resources consumed by a primary healthcare facility in providing the proposed urban primary level healthcare services package. The total cost will be then allocated downward, first to the facility's departments and then to the services/patients within the departments. Thus, unit cost will be estimated by dividing total department costs by the service volume in those departments. Finally, the average cost of the resources used to provide services/treat patients within the department for the listed services in the proposed healthcare services package will be estimated.

### Data analysis

Prior to analysis, the entire data sheet will be corrected manually, and will be cleaned using a computerised process. Data will be

entered into EpiData (EpiData Association, Denmark) version 3.1. After completing the data entry process, the final analysis will be performed using SPSS Statistics (IBM Corp., USA) version 21. We plan to carry out an individual and household level analysis with regard to the types of health need identified. Qualitative data will be analysed through a process of coding, thematic representation, triangulation and the formation of a conceptual framework.

## Results

This study will be on the development of an urban primary level healthcare services package, based on an assessment and prioritisation of the health needs of the urban poor population. The expected results from this study are:

- an assessment of morbidity patterns
- differentiating met v. unmet health needs
- an assessment of the health priorities of different groups within the urban poor population
- collecting input from healthcare providers and administrators
- development of an EHCP
- costing of the EHCP.

The outcome of the study will be different from that of previous research, as it will be based on the community's needs, rather than the widely accepted concept of cost-effectiveness. Starting from a specific population, in this case the urban poor, the package can be tailored according to the needs of a larger population in the long run. The anticipated outcome is the adaptation of this proposed package for the ultimate goal of universal health coverage (UHC), a move towards filling a larger part of the 'cube' in the 3-dimensional UHC model (populations, services and cost), by extending the population covered, including more services and by reducing the cost.

## Discussion

Developing an urban primary level healthcare services package through community consultation is a key strategic process that will achieve better health equity for the urban poor, and a way forward towards achieving UHC. The major strength of the present study lies in its



intention of identifying barriers at multiple levels, which will enable policy recommendations to be made on how these may be effectively addressed, so that creating such a package can translate into prompt and effective healthcare for those most in need.

## Conclusion

Rapid urbanisation in India represents an exceptional administrative and policy challenge. The issue of health inequity is critical for the urban poor, as they are faced with incapacitating challenges. This is the first time that a concrete exercise will be undertaken in India to develop an EHCP for urban primary healthcare and to cost it, which will indicate the resources required for operationalising such a package.

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