EVALUATION OF HEALTH EQUITY ASSESSMENT & RESPONSE TOOL IN TAMIL NADU

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ABSTRACT

The world's population living in towns and cities surpassed 50% for the first time in history in 2007, and this proportion is growing. Most of this growth will occur in low- and middle-income countries. Currently, urbanization is occurring fastest in Africa, and involves the largest number of people in Asia. urban living continues to offer many opportunities, including potential access to better health care, today's urban environments can concentrate health risks, magnify the consequences, and introduce new hazards. The impact of urbanization on population health, health equity and the environment are become key concerns for national and municipal authorities. Urban HEART is a tool intended to give policy-makers and key stakeholders at national and local levels a user-friendly guide to assess and respond to urban health inequities. It is currently being pilot-tested in many developed and developing countries. Urban HEART guides a systematic assessment of unfair health conditions in the urban setting by reviewing evidence on key health outcomes and major health determinants grouped within four major policy domains. This study is one of the exploratory research, provides insights into and comprehension of an health inequity. In this study five districts were chosen namely Chennai, Coimbatore, Madurai, Thanjavur and Theni. The following health outcomes and determinants were chosen. Health outcomes like Maternal mortality, Perinatal mortality and Under 5 mortality were chosen. Health determinants like Access to drinking water, Literacy rate, Employment rate, Voters' participation, Homicide, HIV prevalence and urban population growth were chosen. The data was collected for the health outcome and the determinants from the five chosen cities for the year 2000, 2005, 2008, 2009 and projection for 2010. There are two main tools used to assess and analyze health equity: **Urban Health Equity Monitor** (Monitor) enables policy and decision makers to plot health indicator. **Urban Health Equity Matrix** presents a broad comparison of the performance of cities across health determinant indicators from the four policy domains. From the matrix we derive that there exists inequities of health outcomes and determinants among the five cities analysed. Some of the indicators show the achievement of near targets while some indicators shows poor performance throughout the state. The results are discussed and suitable suggestions are given. The analysis will be extended throughout the 32 districts of Tamil nadu and it can be taken up to national level with intra and interstate analysis in future.

INTRODUCTION

RESEARCH BACKGROUND

Urbanization today

The world's population living in towns and cities surpassed 50% for the first time in history in 2007, and this proportion is growing. By 2030, six in ten of us will be urban dwellers. Urbanization is a product of migration from rural areas as well as natural urban demographic growth. It is accelerating: historical data on growth of cities from one million to eight million inhabitants shows that for London, it took around 130 years across the 19th century. For Bangkok, in the mid-20th century, the same growth took 45 years and for Seoul, just 25 years. In the years to come, it is predicted that the growth of midsize cities with 1-10m people will outpace the growth of megacities of over 10 million.

Impact of urbanization on health

Urbanization is such a powerful phenomenon that it is, in itself, a major determinant of public health in the 21st century. In many cases, especially in the developing world, the speed of urban growth has outpaced the ability of governments to build essential infrastructures that make life in cities safe, rewarding, and healthy. Health challenges relate to water, environment, violence and injury, non communicable diseases like cardiovascular diseases, cancers, diabetes and chronic respiratory diseases, unhealthy diets and physical inactivity, harmful use of alcohol as well as the risks associated with disease outbreaks.

Since 2007, a majority of the world's population lives in urban areas. The impact of urbanization on population health, health equity and the environment are become key concerns for national and municipal authorities.

Differences in health across the population can be observed in any city. Genetic and constitutional variations ensure that the health of individuals varies, as it does for any other physical characteristics. Older people tend to be sicker than younger people, because of natural ageing process.

Urban HEART is a tool intended to give policy-makers and key stakeholders at national and local levels a user-friendly guide to assess and respond to urban health inequities. It is currently being pilot-tested in many developed and developing countries

IDENTIFIED PROBLEM

In 2007, for the first time, more people lived in cities and towns than in rural areas. The city's promise lies in proximity: to health-supporting physical and social infrastructure, technology, and jobs, schools, as well as health care services. Action to turn proximity into accessibility and to improve health, education, and social services in cities is a priority outlined by World Health Organization's on the social determinants of health (CSDH).

There are huge differences in health between and within countries is a matter of social justice and an ethical imperative. Further it was recognized principles alone are insufficient and evidence is required on what is likely to work in practice to improve health and reduce health inequalities.

Based on this multilateral agencies including WHO was called on to use a common global framework of indicators to monitor development progress, strengthen technical capacity of member states and developing mechanisms for inter-sectoral action for health, monitor progress on health inequity; support the establishment of global and national health equity surveillance system

NEED FOR STUDY

URBAN HEART (urban health equity assessment and response tool) was developed to:

1. Identify and analyze differences in health outcomes and opportunities between people living in various parts of cities or belonging to different socioeconomic groups; and
2. Facilitate decisions on viable and effective strategies, interventions and actions that should be used to reduce inter- and intra- city health inequities.

Implementing urban HEART will equip policy-makers with the necessary evidence and strategies to reduce inter- and intra-city health inequities. With growing urban population there is a need to evaluate the inequities of health and to initiate the corrective measures.

This tool was never applied in India and a pilot study is undertaken to assess the health inequities among five major cities in Tamil nadu.

OBJECTIVES AND SCOPE

The adoption and use of Urban HEART by national and local governments, partner organizations, and urbanized/rapidly-urbanizing communities is intended to:

1. Help policy-makers and key stakeholders achieve a better understanding of the health determinants and risk factors, and the associated health outcomes faced by people living in a city;
2. Stimulate policy-makers, programme managers and key stakeholders to make strategic decisions and prioritize specific actions and interventions that are sensitive to the needs of vulnerable and disadvantaged groups in cities through inter-sectoral collaboration;

3. Assist communities to identify gaps, priorities and required interventions to overcome existing gaps and promote health equity; and
4. Assist programme managers and staff in the development of better inter-sectoral collaboration and communication strategies dealing with the various determinants of health, particularly those affecting disadvantaged populations.

REVIEW OF LITERATURE

First Meeting of Urban HEART Ad-hoc Advisory Group, Jan 5-6, 2009, Kobe, JAPAN

The first meeting of the Urban HEART Ad-hoc Advisory Group was held in Kobe, Japan, between January 5-6, 2009. A number of suggestions and recommendations were made in plenary discussions and through group work. This document tries to capture essential recommendations from the perspective of finalizing Urban HEART and is not intended to present an exhaustive list of suggestions from advisors.

Summary of key recommendations

The following were key recommendations made by advisors based on the input provided by WHO Kobe Centre on the current status of the tool:

1. a. Collection of disaggregated data and need for analysis at the local area level;
   b. Importance of the role of local governments and communities in promoting public policies that impact people's lives.

2. Add working definitions to clarify concepts referred to in the tool e.g. inequality, inequity.
3. To ensure local ownership of the tool and its results, it is critical that the approach to implementation is **participatory** and **multi-sectoral** in nature, and involves local governments, local communities, and where applicable national authorities.
4. Develop a policy brief that explains clearly to policy-makers the value of addressing health equity applying a social determinant of health approach in urban settings.
5. Indicators, currently included in the assessment component, were endorsed by the advisory group on their relevance and utility. Specific advice was provided on:
   a. Core, strongly desirable, and optional indicators;
   b. Engaging in further deliberations on the global comparability of indicators;
   c. Importance of including process indicators including short, medium, and long term indicators;
   d. Exploring the possibility of incorporating qualitative indicators.
6. With respect to the data being collected advisors agreed on the following key issues:
   a. Data should be mainly collected from routine or available information sources;
   b. Data quality, in terms of validity and reliability, should be emphasized.
7. For sustainability of the tool it is important that the recommended process of implementation is cyclical and, where possible, integrated with the urban planning and policy making processes. Specific recommendations were made during Group Work II on this issue.

Methodology

Target respondents

State department of health, The minister for health, The secretary for health, The Director , State health Mission, The Director of Medical Education, The Directorate of Public health, The Directorate of Health statistics, The Directorate of municipal administration, The Director General of Police, The NACO,The State Water Supply Board - TWARD, National Rural Health Mission NRHM, State Employment Bureau,The State Education department, Ministries of Housing, Transport, Education, Finance, National media (health reporters)

Sampling methods

The total number of districts in Tamil Nadu is 32. A district of Tamil Nadu is headed by a Deputy Commissioner who is overall in-charge of the administration of that particular district. He has to perform triple functions as he holds three positions: at once he is the Deputy Commissioner, the district Magistrate and the Collector. In this study five districts were chosen namely Chennai, Coimbatore, Madurai, Thanjavur and Theni

The following health outcomes and determinants were chosen

- Health outcomes
- Health determinants

Data processing & Tools for analysis

ASSESSMENT

I.1. Overview

The assessment component of Urban HEART is an indicator guide designed to identify differences between various population groups within the city or across cities using indicators of key health outcomes, and major health-determinants grouped into four policy domains.

(1) Physical environment and infrastructure;
(2) Social and human development;
(3) Economics; and
(4) Governance.

There are two main tools used to assess and analyze health equity:

(1) **Urban Health Equity Monitor** (Monitor) enables policy and decision makers to plot health indicators (e.g. *all cancer mortality rate per 100,000*) within or across cities over time. The Monitor also uses the national average and future policy targets – national or international – as benchmarks to provide a reference point for tracking inequities; and

(2) **Urban Health Equity Matrix** presents a broad comparison of the performance of cities across health determinant indicators from the four policy domains. It aids policy and decision-makers with a simple visual to identify where the inequities are.

Data analysis and interpretation

Table 8: Data from Chennai

	2000	2005	2008	2009	projected at 2010
MMR		20	30	19	22.84
PMR		8.52	7.85	7.62	7.91
<5 Mor rate		9.2	8.81	8.74	8.61
access to safe drinking water		76.6	72.1		69.1
litrecy rate	84.91	88.37	93.00		94.3
employment rate	33.86	36.40	38.21		36.03
Percentage of voters	44.89	64.64			84.39
homicide	57	123	100		73.36
HIV positivity among PPTCT %	1	0.25	0.41	0.5	0.67
urban population growth	1.24	3.04	2.82		2.44

The data collected is tabulated against the years

Table 9: Data from Coimbatore

	2000	2005	2008	2009	projected at 2010
MMR		56	83	55	65.3
PMR		14.57	12.18	12.35	11.52
<5 Mor rate		12.75	10.02	9.13	8.23
access to safe drinking water		96.1	97.1		97.77
litrecy rate	75.77	85.78	95.13		99.03
employment rate	46.17	48.86	51.06		52.12
Percentage of voters	59.63	73.91			88.19
homicide	64	87	88		97.59
HIV positivity among PPTCT %	0.5	0.33	1.02	1.25	1.62
urban population growth	4.33	3.05	2.82		2.29

The data collected is tabulated against the years

Table 10: Data from Madurai

	2000	2005	2008	2009	projected at 2010
MMR		111	108	91	92.46
PMR		21.72	22.11	20.83	21.01
<5 Mor rate		21.14	20.58	18.50	18.60
access to safe drinking water in %		83.1	87.7		90.77
litrecy rate in %	76.86	81.12	86.20		87.83
employment rate in %	42.21	42.00	41.98		41.89
Percentage of voters	57.44	70.08			82.72
homicide in no	61	36	55		73.8
HIV positivity among PPTCT %	0.5	1.25	0.88	0	-0.31
urban population growth	1.90	3.05	2.82		2.5

The data collected is tabulated against the years

Table 11: Data from Theni

	2000	2005	2008	2009	projected at 2010
MMR		139	84	68	49.31
PMR		19.76	19.58	19.86	19.79
<5 Mor rate		19.37	17.08	15.8	15.12
access to safe drinking water		98.3	98.4		98.47
literacy rate	70.31	75.23	81.02		82.9
employment rate	47.63	46.42	45.74		45.25
Percentage of voters	49.54	70.32			91.1
homicide	24	29	28		26.61
HIV positivity among PPTCT %		0.63	1.01	1.25	1.36
urban population growth	5.53	3.05	2.82		1.79

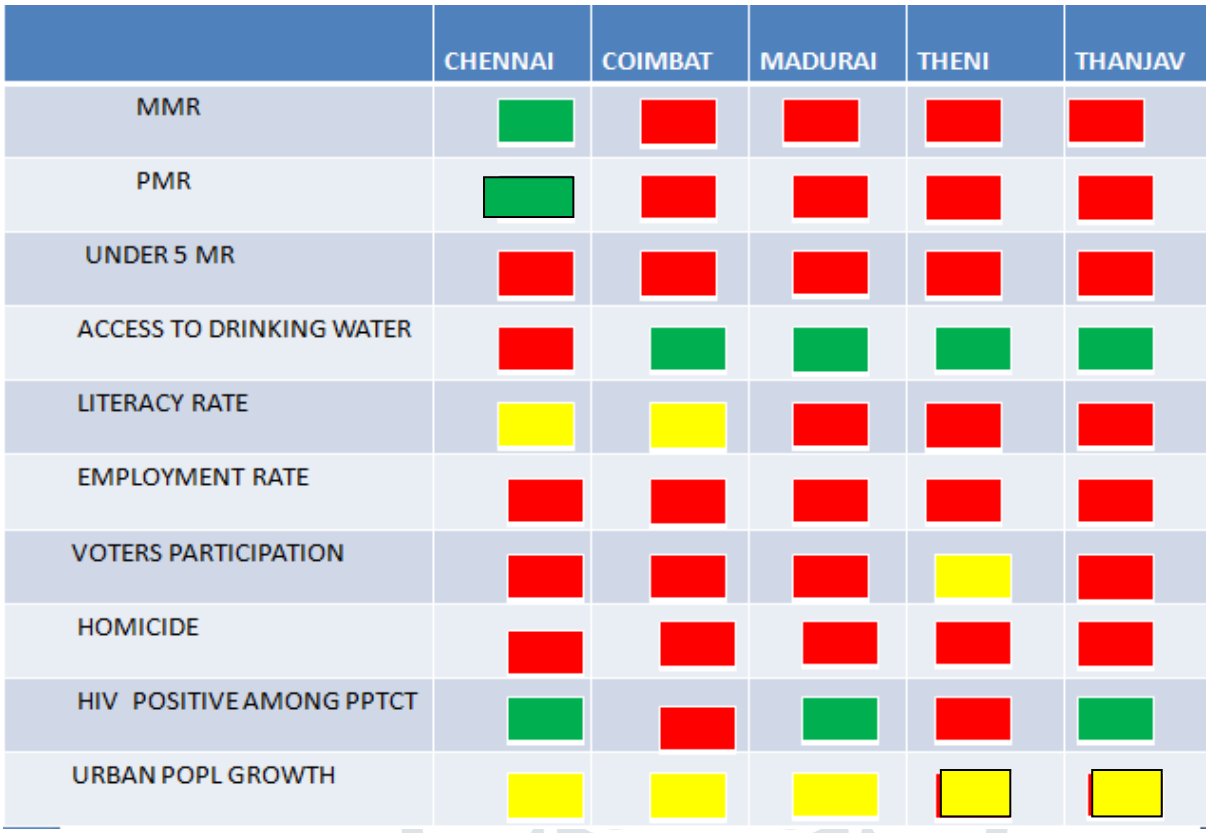
The data collected is tabulated against the years

Table 12: data from Thanjavur

	2000	2005	2008	2009	projected at 2010
MMR		103	83	62	57.53
PMR		22.58	20.81	18.12	17.85
<5 Mor rate		20.68	16.29	15.26	13.73
access to safe drinking water		91.2	91.8		92.2
literacy rate	74.43	79.18	84.39		86.22
employment rate	40.41	40.58	40.79		40.85
Percentage of voters	63.87	74.64			85.41
homicide	66	63	66		68.87
HIV positivity among PPTCT %		0	0.62	0.13	0.36
urban population growth	2.82	3.05	2.82		2.6

The data collected is tabulated against the years

Figure 24 : URBAN EQUITY MATRIX FOR 5 CITIES



This picture highlights the performance of the cities studied with reference to the health outcomes and the health determinants. This red squares draws the attention for the policy changes and action strategies. The matrix can show the city performance and can be easily compared to the other cities. The performance of a given city in different outcomes and determinants will also highlight the need for intervention in the specific targets

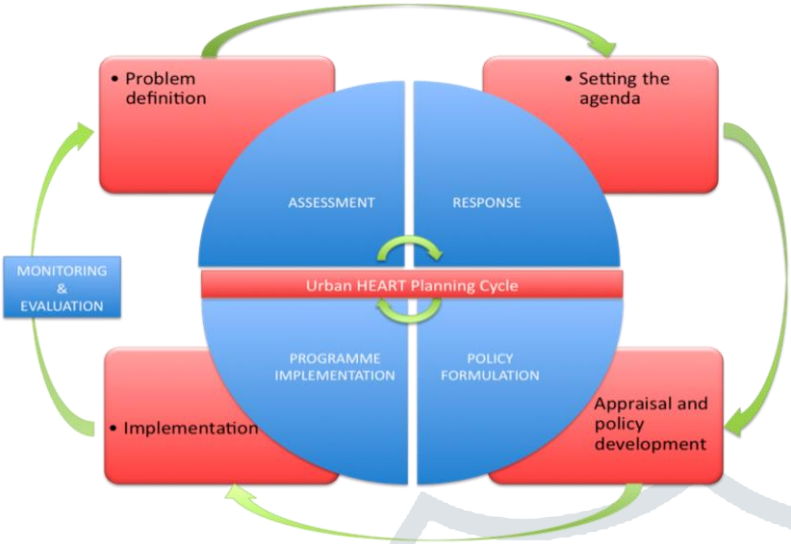
Conclusions

Summary and findings

- From the matrix we derive that there exists inequities of health outcomes and determinants among the five cities analysed.
- The major issues in terms of maternal mortality is yet to be sorted out in all except Chennai
- The same picture exists in terms of perinatal mortality
- Under 5 mortality is below the target of MDG level for all cities
- The access to drinking water is achieved in all cities except Chennai
- The literacy rate is within the national average for Chennai and Coimbatore but all the cities fall short of MDG TARGET
- Employment rate is yet to achieve the national targets if not MDG in all cities
- The voters participation is at the national level in Theni and yet to improve in all the other four cities
- Our expectation will be a crimeless city but the homicide rate has to be brought down in all the cities
- Lot of good work is being done in the field of HIV prevention but the targets are yet to be achieved at the national level in Coimbatore and Theni
- The maximum expected urban population growth is 8% in any city and it showing lesser levels in Theni and Thanjavur

Suggestions and recommendations

FIGURE 25: URBAN HEART PLANNING CYCLE



Women's health
Include health in women's livelihood projects
Provide life skills training for women (budgeting, saving)
Conduct community participatory research to understand "felt needs" of women and how they think their needs can be met
Provide health education for girls
Make family planning information and contraceptives readily accessible

Child survival, health and nutrition
Organize breastfeeding support groups
Organize child feeding, nutrition, micronutrient supplementation and salt iodization programmes
Support the integration of child maltreatment prevention strategies into initiatives aimed at reducing adverse childhood experiences and enhancing child development
Support immunization programmes
Train mothers on child health and first aid and encourage regular health visits
Provide incentives for visiting health centre
Strengthen de-worming campaigns

Water and sanitation
Promote knowledge of apt water storage, sanitation and personal hygiene practices
Ensure adequate water supply for washing and bathing
Support construction of household latrines
Promote proper food storage practices
Provide community water supply and infrastructure
Improve drainage for waste water
Build more footpaths
Provide facilities to promote hand-washing
Provide technical support for improved house structure or extensions
Ensure availability of affordable materials to improve homes

Literacy
Organize literacy programmes for all ages

Jobs
Provide training for gainful work and pre-employment seminars to improve chances for getting a job (how to prepare a CV, how to conduct oneself in an interview)

Voting rights and political participation

Recognize informal settlers as "citizens"

Conclusions

- Improved health and social status of people in cities while addressing social inequities in health;
- Municipal and national authorities equipped with relevant evidence to inform important decisions related to prioritization and resource allocation;
- Communities mobilized and empowered to promote health equity;
- Promotion of inter-sectoral action for health.

Directions for future research

The more health outcomes will be taken

The health determinants have to be included from all the domains

The data will be further disintegrated in terms of socioeconomic status, age, sex and other details

The analysis will be extended throughout the 32 districts of Tamil nadu

Further it can be taken up to national level with intra and interstate analysis