



STATE OF URBAN HEALTH IN UTTAR PRADESH



सत्यमेव जयते

Ministry of Health and Family Welfare
Government of India

**STATE OF
URBAN HEALTH
IN
UTTAR PRADESH**

About the State Health Report

This report is an attempt to bridge information gap relating to health of the urban poor in Uttar Pradesh. The Urban Health Resource Centre (UHRC) has been designated as the nodal technical agency for urban health by the Ministry of Health and Family Welfare, Government of India. Based on request of the MoHFW to generate information on health of the urban poor, UHRC analyzed the National Family Health Survey (NFHS) data to arrive at health estimates of the urban poor and additionally undertook analyses of policies and programmes aimed at improving their health status. This report is part of the series of state urban health reports for better informing the urban health programming efforts in the respective states.

This report has been prepared by Dr Siddharth Agarwal, Dr. S. Kaushik and Anuj Srivastava.

For additional copies / information contact:

Director (Area Projects)

Room No. 520 "A" Wing
Ministry of Health and Family Welfare
Nirman Bhavan,
New Delhi - 110001
Phone : 23063523, Fax : 23063523
E-Mail : dirdrs@nic.in

Urban Health Resource Center

F – 9/ 4, Vasant Vihar, New Delhi – 110057
Phone : 41010920, 26149771 / 81, Fax : 41669281
E- Mail : info@uhrc.in, Website: www.uhrc.in

About UHRC

The Urban Health Resource Centre is working towards addressing health issues of the urban poor in partnership with government and civil society. It provides technical assistance, generates and disseminates urban health information to address knowledge gaps on the health of people in disadvantaged slum settlements. Demonstration and research activities conducted by UHRC at diverse cities provide evidence based inputs for strengthening programming efforts of government and non-governmental agencies. UHRC advocates at various platforms for enhanced attention to the health of the urban poor.

The UHRC evolved as an independent non-profit Indian organization from the USAID funded Environmental Health Project in India. The urban health activities of UHRC are sustained through continued support from USAID.

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Contents

Foreword

Acknowledgements

Acronyms and Abbreviations

Executive Summary

Section 1 : HEALTH OF THE URBAN POOR- 3

INDIA'S EMERGING PRIORITY

- | | | |
|-----|--|---|
| 1.1 | India's Urbanization and Urban Poverty | 3 |
| 1.2 | Importance of focusing on the urban poor | 4 |
| 1.3 | Why are the Urban Poor Vulnerable | 4 |
| 1.4 | Government of India's Focus on Health for the Urban Poor | 6 |

Section 2 : URBAN POVERTY, POLICIES AND 11

RCH SERVICES IN UTTAR PRADESH

- | | | |
|-----|--|----|
| 2.1 | Uttar Pradesh – the urban poor scenario | 11 |
| 2.2 | Urban Slum Improvement and RCH Policies in U.P. | 14 |
| 2.3 | Reproductive and Child Health Services in U.P. | 23 |
| 2.4 | Situation Analysis of Agra – a million city of U. P. | 27 |

Section 3 : REPRODUCTIVE AND CHILD HEALTH 33

CONDITIONS AMONG THE URBAN POOR IN U.P.- RE-ANALYSIS OF NFHS 2 (1998-99) DATA

- | | | |
|-----|--|----|
| 3.1 | Overview and Methodology | 33 |
| 3.2 | Neonatal, Infant and Child Mortality | 36 |
| 3.3 | Childhood morbidity and health services | 39 |
| 3.4 | Nutritional Status of Women and Children | 44 |
| 3.5 | Maternal Health | 49 |
| 3.6 | Fertility and Family Planning | 52 |
| 3.7 | Environmental Health Condition | 56 |

Conclusion 60

Annex 63

Annex 1 The Standard of Living Index 63

Annex 2 Select health indicators by Standard of Living Index –NFHS 2, 1998-99 67

Age distribution of population by standard of living–UP NFHS 2, 1998-99 71

Population Profile by standard of living– UP NFHS 2, 1998-99 73

Annex 3 Select health indicators by Standard of Living Index - District Level Household Survey (DLHS) - 2002-04

List of Tables

Table 1	Factors contributing to the vulnerability of the urban poor	5
Table 2:	UP: Regional Trends in Poverty	13
Table 3	Profile of Big, Medium and Small Sized Cities of U.P.	13
Table 4	Health care delivery outlets in Main cities of UP	24
Table 5	Status of Vulnerability in Slums of Agra	27
Table 6	Number of households, ever-married women and children under 3 years by SLI covered in NFHS-2 in Uttar Pradesh	34

List of Figures

Fig 1	Health and Basic Services Availability in Slums of Agra by Vulnerability	6
Fig 2	Access and Availability of Services among the urban poor(NFHS 2)	26
Fig 3	Caste Composition of Urban Uttar Pradesh	35
Fig 4	Neonatal, Infant and Child Mortality by economic groups	37
Fig 5	Immunization Coverage by Age 1 among Children 12-23 Months of Age by economic groups	39
Fig 6	Prevalence of Diarrhea in the Preceding 2 Weeks of Survey by economic groups	41
Fig 7	Knowledge about Treatment during Diarrhea by economic groups	42
Fig 8	Treatment during Diarrhea by economic groups	42
Fig 9	Prevalence of ARI 2 weeks prior to survey by economic groups	43
Fig 10	Nutritional Status of Children under 3 Years by economic groups	45
Fig 11	Breast Feeding Practices by economic groups	45
Fig 12	Percentage of Children who Received Complementary Food by 7 - 9 Months by economic groups	46
Fig 13	Prevalence of Anemia among Children by economic groups	46
Fig 14	Percentage of Children (12-35 Months) who Received at least One Dose of Vitamin A by economic groups	47
Fig 15	Prevalence of Anemia among Women by economic groups	48
Fig 16	Antenatal Care Received by Mothers during Pregnancy by economic groups	49
Fig 17	Place and Assistance during Delivery by economic groups	50

Fig 18	Total Fertility Rate by economic groups	52
Fig 19	Knowledge of methods of contraception by economic group	53
Fig 20	Current Use of Contraceptives by economic groups	53
Fig 21	Access to Water Supply by economic groups	56
Fig 22	Households having Access to Private Sanitation Facility by economic groups	57



1 8; ep t; rs

Prasanna Hota

Health & FW Secretary
Tel.: 23061863, 23063221, 23062432
Fax: 23061252, 23061887
e-mail : secyfw@nb.nic.in
secyhth@hub.nic.in
Puruhota@hotmail.com

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LokLF; , d ifjokj dY; k.k e=ky;
fuekZ.k Hkou] ubZ fnYyh % 110011
GOVERNMENT OF INDIA
MINISTRY OF HEALTH & FAMILY WELFARE
NIRMAN BHAVAN, NEW DELHI - 110011

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FOREWORD

1. The Urban population of India constitutes 285 million people and, in some quarters, it is estimated to double by 2025. Over one-fourth of this population lives in urban slums under poor and unsatisfactory environmental conditions, with high levels of susceptibility to disease and ill health. Trends in urban poverty suggest that the number of urban poor in the country is, in all, likelihood, expected to increase considerably in the years to come. Therefore, as a step in the right direction, "Urban Health" has been acknowledgment as one of the thrust areas in the Tenth Five-Year Plan, National Population Policy (NPP, 2000), National Health Policy (NHP, 2002), and Reproductive and Child Health Program (RCH-II), which is now an intrinsic component of the on-going National Rural Health Mission (NRHM). The Ministry of Health & Family Welfare (MOHFW), Government of India has already circulated detailed guidelines to all states for development of city level urban slum health project proposals, with the objective of improving access to health care services by the urban poor. Along with the development of these guidelines, the MOHFW, in partnership with the Urban Health Resource Centre (UHRC) (formerly known as the Environmental health Project viz. EHP of USAID) has developed four comprehensive sample urban health proposals for cities with differing population sizes, namely, population of around 1 lakhs, 1-10 lakh, million plus and a mega city. Regional workshop, using the sample proposal and other resource material, are also being conducted, from time to time, besides State -Specific Urban Health Meetings and events to provide an impetus for the States to quickly operationalize their urban health projects. The Area Projects Division of this Ministry has been actively pursuing these endeavors with the State Governments in association with Urban Health Resource Centre.

2. Non-availability of urban poor specific data has been and continues to be a serious constraint and impediment to formulating effective policies and programmes for improving health conditions of urban slum settlements. Therefore, the UHRC-the Government of India designated nodal technical agency for the urban health program-was earlier requested to look into the matter and explore the possibilities for assembling the required urban health related data through various surveys/studies, including nationwide surveys such as NFHS, and undertake brief policy analyses wherever possible.

3. This report provides urban poor specific information on demographic indicators, health conditions and access to services by them for the State of Uttar Pradesh. This is perhaps for the first time that data specific to health of urban poor has been generated for the states which would be found useful in better informing program



1 Ei dZ l s igys l kpkj , p vkbbh@, MI l s cpts HIV/AIDS:Prevention is better than cure

managers and also serve as benchmark for data from future surveys such as the NFHS-3. The report also gives inter-alia an overview of relevant Central and State Policies and provisions that exist for improving lives of urban slum dwellers. I am sure that the concerned State Governments would be trying their best to effectively utilize the relevant provisions under these policies to expand access of health care services to the urban poor.

4. It is hoped that the state/city governments and other urban health stakeholders in the state will benefit immensely from the analysis of policies, programmes and data on health status of the urban poor contained in this report and would effectively utilize this information for better urban health program planning and implementation. **I take this opportunity to make an appeal to the various State Governments in this country to accord the necessary and deserving high levels of priority to the critically important issue of Urban Health and take all the necessary follow up actions accordingly. While pursuing this effort, the State Government must feel free to seek and obtain any technical support they may find necessary from both the Area Projects Division of this Ministry and the Urban Health Resource Centre (UHRC), which is the Government of India designated nodal technical agency for the Urban Health Programme in the country.**



(PRASANNA HOTA)

Secretary to the Government of India

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It is hoped that this report would help policy makers and program managers in their efforts in improving the health of the residents of Uttar Pradesh’s underserved urban settlements.

Abbreviations and Acronyms

ANM	Auxiliary Nurse Midwife
ARI	Acute Respiratory Infection
AWW	Angan Wadi Workers
BCG	Bacille Calmette Guerin
BPL	Below Poverty Line
CARE	Cooperative Assistance for Relief Everywhere
CBO	Community Based Organization
CHC	Community Health Centre
DHFW	Department of Health and Family Welfare
DHS	Demographic Health Survey
DPT	Diphtheria Pertussis Tetanus
DUDA	District Urban Development Authority
EAG	Empowered Action Group
EHP	Environmental Health Project
GOI	Government of India
HP	Health Post
ICDS	Integrated Child Development Services
IMR	Infant Mortality Rate
ISSA	Integrated System for Survey Analysis
IUD	Intra Uterine Device
MCH	Maternal and Child Health
MMR	Maternal Mortality Ratio
MOHFW	Ministry of Health and Family Welfare
MP	Madhya Pradesh
MPW	Multi Purpose Worker
NFHS	National Family Health Survey
NGO	Non Government Organization
NHP	National Health Policy
NPP	National Population Policy
NSDP	National Slum Development Program
OBC	Other Backward Classes
OPV	Oral Polio Vaccine
ORS	Oral Rehydration Solutions
PHC	Primary Health Centre
PPC	Post Partum Centre
PPW	Proportion Possession Weighting
RCH	Reproductive and Child Health
RMP	Registered Medical Practitioner
SC	Scheduled Caste
SD	Standard Deviation

SHG	Self Help Group
SIFPSA	State Innovations in Family Planning Agency
SJSRY	Swarna Jayanti Shahari Rozgar Yojana
SLI	Standard of Living Index
ST	Scheduled Tribe
SUDA	State Urban Development Authority
TFR	Total Fertility Rate
TT	Tetanus Toxoid
UFWC	Urban Family Welfare Center
UHC	Urban Health Centre
UNICEF	United Nations Children's Fund
U5MR	Under Five Mortality Rate
VAMBAY	Valmiki Ambedkar Awas Yojana

Executive Summary

India's Urbanization and Poverty Scenario

Urban migration and a high natural growth of urban population has resulted in rapid growth of urban agglomerations. The current urban population of India, 285 million is estimated to double and reach 576 million by 2030. Percentage decadal growth in urban areas was 31.2% vis-à-vis 17.9% in rural areas between 1991 and 2001. Over one-fourth of the urban population of India today lives in urban slums under inhumane conditions with increased susceptibility to disease and ill health. Trends in urban poverty suggest that the number of urban poor will increase considerably unless a well-planned, long-term intervention strategy is in place.

Importance of Focusing on the Health of Urban Poor

The urban poor suffer from adverse health outcomes which do not get reflected in commonly available urban health statistics. Most sources of health information which are available as rural and urban averages mask the inequalities which exist within the various economic groups in urban areas. For instance, the under five mortality rates (U5MR) among the urban poor (112.2) are nearly three times higher than the rates for the urban high income groups (39.4). As per the NFHS 2 data, only 43% the urban poor children are fully immunized by completion of one year of age. The percentage of severely underweight children among the urban poor is 23.0 which is twice the urban average (11.6%) and five times (4.5%) that of urban high income group.

Why are the Urban Poor Vulnerable

The poor in urban areas are vulnerable to health risks as a consequence of living in a degraded environment, inaccessibility to health care, irregular employment, widespread illiteracy and lack of negotiating capacity to demand better services. A significant proportion of slums are not listed in official records and therefore remain outside the purview of public services including health which further accentuate their vulnerability. As the vulnerability of urban poor is influenced by a variety of factors, the variation in these factors results in some slums being more vulnerable than others. It is essential that development programmes recognize the differential vulnerability of slums so that context specific approaches and effective targeting of resources to the most vulnerable is made possible.

Government of India's Focus on Health of the Urban Poor

The Government has recognized the non-availability of primary health care services to the urban poor in important policy statements such as the National Population Policy (NPP) 2000, RCH II and Tenth Five Year Plan. The Government of India in the RCH II envisages a specific focus on lesser developed states like Uttar Pradesh for the delivery of RCH services with a focus on urban poor. The Ministry of Health and Family Welfare, Government of India has formulated guidelines for development of city level urban slum health projects which provides a mechanism for urban health delivery and its overall management. The National Rural Health Mission (NRHM) (2005-2012) launched by the Government of India, recognizing the needs of the urban poor population has constituted a Task Group on Urban Health to recommend strategies for urban poor. The National Urban Renewal Mission (NURM) has a sub-mission on basic services to the urban poor which covers over sixty cities in India including the six million cities in Uttar Pradesh.

Uttar Pradesh – Urban poverty, Policies and Reproductive and Child Health (RCH) services

Uttar Pradesh, the most populous Indian state is home to 166 million people or one-sixth of the country's population. Almost 34.5 million persons comprising 20.8 percent of the population live in urban areas of the state spread over 704 towns and cities. The urban population in Uttar Pradesh grew by 33 per cent during the decade 1991-2001 compared with 26 per cent for the overall population growth rate. By 2016, almost 30 percent of the state population would be residing in urban areas. The six million-plus cities of Uttar Pradesh (Kanpur, Lucknow, Agra, Varanasi, Meerut and Allahabad) comprises over one-fourth (28 per cent) of the urban population of the state.

Estimates for poverty levels are at 31% for urban UP. In absolute terms, with nearly 11 million urban poor, Uttar Pradesh houses the largest number of urban poor in a single state. Not only does the state have a heavy burden of poverty, it also ranks low in terms of other social indicators among the states in the country. As per the Human Development Report, 2001 released by the Planning Commission the Human Development Index (HDI), for urban UP has the lowest HDI of the urban population of states and union territories of India. The Human poverty index of urban Uttar Pradesh is also the highest among the states of India.

U.P. Government has formulated its own policy level mandate related to RCH. The State Population Policy, Plan on Nutrition and Programs for women, adolescents and the girl child focuses on various aspects of Reproductive and Child Health. In spite of the clear mandate at the policy level, this has not been translated into effective programmes which have had significant impact on the health of the urban poor.

In urban areas of UP, MCH services are provided by government or municipal hospitals, the Family Welfare Centers, D-Type health centers (DTHC) and PP centers. Select RCH services are also supported through Anganwadi Centers. The existing health service delivery system is a multi-tiered system of first tier and tertiary referral hospitals. The two key stakeholders for providing the health care are Urban Local bodies and Department of Health and Family Welfare.

The situation analysis of Agra – a million plus city of UP is presented in this document as a reference case study of a rapidly urbanizing city. In Agra, primary health care services are provided by 15 DTHCs. Though, initially planned for a population of 50,000, due to substantial increase in population, each D type center is now catering to a population of 70,000 to 100,000. Increasing population pressure along with shortage of staff has rendered large areas of the city as either underserved or unserved. As part of the slum vulnerability assessment in Agra, 393 slums were identified and assessed, out of which 183 and 173 respectively have been categorized as most and moderately vulnerable. This assessment is based on the criteria of socio-economic and health status of the community as a whole, access and availability of basic infrastructure, water supply, health facilities, presence of Anganwadi Center (AWC) and existing capacity of community groups. Out of the 393 slums assessed in Agra only 215 were recorded in the official list (DUDA). A few NGOs and Charitable health providers are the potential private resources that can be utilized for improving the health of urban poor.

Reproductive and Child Health conditions among urban poor in U.P. – Reanalysis of NFHS 2 (1998-99) Data

Commonly available data including NFHS on health conditions in UP provides for rural – urban comparisons. Urban averages mask the inherent inequalities that exist and the real plight of the urban poor does not come into light. NFHS 2 (1998-99) data for the state of Uttar Pradesh was analyzed according to Standard of Living Index (SLI), an asset-based indicator to understand the comparative health status of urban poor. This report uses the low SLI segment of urban population as representative of ‘urban poor’.

Among the urban poor households in Uttar Pradesh only one sixth have access to pipe water supply while only one-third have access to a private sanitary facility. The inadequacy in availability and use of health infrastructure coupled with poor economic and environmental conditions severely restricts the chances of child’s survival as is depicted by high Neonatal mortality rate, Infant mortality rate and Under-5 year mortality rate among urban poor at 43.7, 79 and 130.6 respectively. This is significantly higher than the urban average. This situation is further worsened by the fact that only 29.7 per cent of the children aged 12-23 months are completely immunized. Immunization dropout and left out rates are far higher among urban poor households (9.7 and 49.7 respectively), in comparison to the urban average (30.1 and 14.5 respectively).

The pressure on the limited resources escalates with the increasing number of urban poor. Total Fertility Rate (TFR) among urban poor is 3.7 compared to the urban average of 2.9. Bringing the TFR to replacement levels appears to be a herculean task with the contraceptive use rate of only 21.3% among the urban poor. Only 9.1% of the mothers among urban poor received the recommended 3 or more ante natal check ups which serve as important contact points to disseminate RCH related information including family planning. Domiciliary delivery is still the norm with 85.3 per cent of the deliveries taking place at home. Only 26.2 per cent of the deliveries were attended by trained personnel.

Further evidence of the rich-poor divide for RCH services and awareness in urban areas is evident as the proportion of children from poor urban families who are severely underweight is five times (36.2 per cent) as compared to children from rich families (7.3 per cent). Prevalence of anemia was found to be higher among children belonging to this category. Only 2.7 percent of the newborns in urban poor households were breastfed within one hour of birth while 44.8 percent of the children do not receive complementary foods by 7-9 months of age.

Conclusion

The current poverty scenario in U.P. indicates that three out of every ten urban dwellers in U.P. are poor. The real health conditions and service coverage for the urban poor is masked by the urban average figures. The reanalysis of the NFHS data by economic classes highlights the poor state of slum dwellers in Uttar Pradesh. Though there are various policies and programmes which address the concerns of the urban poor, their impact on the lives of the urban poor has been limited because of little coordination among different programmes and departments.

In order to strengthen services and improve the health of the urban poor, the following measures are suggested :

1. Augment urban health infrastructure and services in order to increase access of primary health care services to the urban poor. Partnerships with the private sector is an effective way to improve access to health services in urban slums

2. Improve functional coordination among stakeholders (like health, ICDS, water supply, sanitation, slum development, public distribution system, private health service providers etc). A task-force at the city level comprising officials of different departments which reviews different programmes can bring in synergy and improve impact of the various programmes.
3. Improve capacity of Municipalities and Municipal Corporations to manage health services better. This can be achieved through training programs which expose the elected representatives and officials to the various policy and program provisions which can be leveraged for improving the health of slum dwellers. Exposure visits to successfully managed urban health programs can also help urban local bodies to initiate similar programs in their cities.
4. Recognize that all slums are not alike and the need to focus on the most vulnerable. It is essential that all slums are listed and assessed for their health vulnerability. Slum lists should be periodically updated as rapid urbanization results in the creation of new slum clusters regularly.
5. Migratory trends need to be considered while planning RCH services. Specific communication strategies should be designed for such populations and health providers should be mandated to provide services to temporary and new residents in addition to population in their service records.
6. Strengthen community networks such as self-help groups and their linkages with health providers. Such groups can generate awareness, increase demand and negotiate for better services.

SECTION 1

**Health of the Urban Poor:
India's emerging priority**

SECTION 1

Health of the Urban Poor-India's emerging priority

1.1 India's Urbanisation and Urban Poverty

Urbanization is fast becoming the defining process in shaping the course of social transformation and ensuing development concerns in India. Out of the total population of 1027 million (as on 1st March, 2001). 742 million lived in rural areas and 285 million in urban* areas. The percentage decadal growth of population in rural and urban areas during the decade was 17.9 and 31.2 percent respectively¹. An analysis of population growth trends between 1991 and 2001 shows that while India grew at an average annual growth rate of 2%, urban India grew at 3%, mega cities at 4% and slum populations rose by 5%². If urban India was considered a separate country, it would be fourth largest in the world after China, India and the United States. Population projections by the United Nations indicate that by 2030, India's urban population will grow to 576 million and constitute 40 per cent of the total population³. In 2001, there were 35 "millionplus cities" and 393 cities above 100,000 population. It is estimated that the number of million plus cities in India will grow to 51 by 2011 and 75 by 2021. In addition there would be 500 large cities with population above 100,000 by 2021³.

About one-fourth (24 %) of the urban population of India is poor i.e. their expenditure on consumption goods is less than the poverty line of Rs 454 per month⁴. The benefits of urbanization have eluded this burgeoning 67 million⁴ urban poor population, most of whom live in slums. This rapid and unplanned urbanization and simultaneous growth of urban population in the limited living spaces has a visible impact on the quality of life of the slum dwellers of the city. Existing services and infrastructure is hard-pressed to cater to this growing urban population and the urban poor bear the brunt of this burden. When infrastructure and services are lacking, urban settlements are amongst the world's most life threatening environments⁵.

* Census of India defines urban areas as a) all areas with a municipality, corporation, cantonment board or notified area committee etc b) a place satisfying the following three criteria simultaneously: a minimum population of 5,000; at least 75 percent of male working population engaged in non agricultural pursuits and a density of population of at least 400 per sq. km. (1000 per sq. mile)

Urban poor constitutes one-fourth of India's urban population.

1. Registrar General of India. 2001. *Primary Census Abstract. Total Population: Table A-5*. New Delhi: Registrar General and Census Commissioner.
2. Chatterjee G. 2002. *Consensus versus confrontation: Local authorities and State Agencies form Partnerships with Urban Poor Communities in Mumbai*. Nairobi : UNHABITAT.
3. United Nations, 2002. *World Urbanization Prospects : The 2001 Revision*. New York: The United Nations.
4. National Sample Survey Organization. 2001. *Household Consumer Expenditure in India 1999-2000 - Key results*. New Delhi : NSSO, Ministry of Statistics and Programme Implementation.
5. WHO. 1999. *Creating healthy cities in 21st century*, In David Satterthwaite (eds.). *The Earthscan Reader on Sustainable Cities*, London: Earthscan Publications.

The urban advantage evades the 67 million urban poor.

The eight large and less developed states of India - Uttar Pradesh, Madhya Pradesh, Rajasthan, Bihar, Orissa, Jharkhand, Chhatisgarh and Uttaranchal constitute 32% of the total urban population and home to 43% of India's urban poor⁶. Thus, 28 million or almost one third of the urban population is poor in these States. There will be no surprise in noting that these less developed states perform much below the national averages for various maternal and child health indicators. There is a need to focus on these states in urban health programs as well.

1.2 Importance of Focusing on the health of the Urban Poor

The urban poor suffer from adverse health outcomes which do not get reflected in commonly available health statistics. Most sources of health information which provide for rural and urban disaggregation mask the inequalities which exist within the various economic groups. For instance, the under five mortality rates among the urban poor (112.2) are nearly three times higher than that for the urban high income groups (39.4)⁷. As per the NFHS II data among children 12-23 months of age belonging to the urban poor only 43% are fully immunized⁷. The proportion of severely under-weight children among the urban poor is 23.0 which is twice the urban average (11.6 per cent) and five times (4.5 per cent) that of urban high income group.

The poor health conditions among slum dwellers who comprise a large section of our growing cities need to be addressed on a priority basis. The health and productivity of this section is also vital as they play an important role in the economic activities of cities which in turn contribute to the economic growth of the country.

1.3 Why are the Urban Poor Vulnerable

'Vulnerability' can be defined as a situation where the people are more prone to face negative situations and there is a higher likelihood of succumbing to them⁸. With reference to health, vulnerability contributes to increased morbidity and mortality.

The urban poor are known to be especially vulnerable to health risks due to the interplay of a number of factors which are summarized in Table 1.

6. Registrar General of India. 2001. *Primary Census Abstract. Total Population: Table A-5*. New Delhi: Registrar General and Census Commissioner.
7. USAID-EHP. 2003. *Health, Nutrition and Population by Economic Groups in India*. New Delhi: USAID-EHP
8. Loughhead S et al., 2001. *Urban Poverty and Vulnerability in India*, New Delhi: Department for International Development (DfID).

Factors	Situation Affecting Health Vulnerability in slums
Economic conditions	Irregular employment, poor access to fair credit
Social conditions	Widespread alcoholism, gender inequity, poor educational status
Living environment	Poor access to safe water supply and sanitation facilities, overcrowding, poor housing and insecure land tenure
Access and use of public health care services	Lack of access to ICDS and primary health care services, Poor quality of health care.
Hidden / Unlisted slums	Many slums are not notified in official records and remain outside the purview of civic and health services.
Rapid mobility	Temporary migrants denied access to health services and other development programmes, Difficulty in tracking and providing follow-up health services to recent migrants.
Health and disease	High prevalence of diarrhea, fever and cough among children
Negotiating Capacity	Lack of organized community collective efforts in slums

All Slums are not Equal

As discussed, the vulnerability of urban poor is influenced by a variety of factors. The variation in each of the factors results in some slums being more vulnerable than others. It is essential that development programmes recognize the differential vulnerability of slums so that context specific approaches and effective targeting of resources to the most vulnerable is made possible.

Various agencies have developed different criteria for assessing health vulnerability of slums^{9,10,11}. An approach of assessing health vulnerability of urban slums based on factors described in Table 1 has been developed by EHP (now UHRC)¹². In the vulnerability assessment carried out by this agency, all slums in the city were first identified and listed– including the ones which were absent in official records. Slums were then assessed on the criteria

**Though 252 slums are listed by DUDA, however during the assessment 37 listed slums could not be located hence only 215 of the recognized slums were assessed*

Table 1: Factors contributing to the vulnerability of the urban poor.

MISSING SLUMS

In Indore, there were 438 officially recognized slums (Based on List from the Mayor's and Municipal office). Through a process of mapping and categorization, an additional 101 slums were identified in a study conducted by EHP (now UHRC)¹².

In the city of Agra, as per the list of the DUDA, there were 215 slums with an estimated population of 3 lakhs. A listing of all slums in the city estimated the number of slums to be 393 with an estimated population of approximately 8 lakhs.

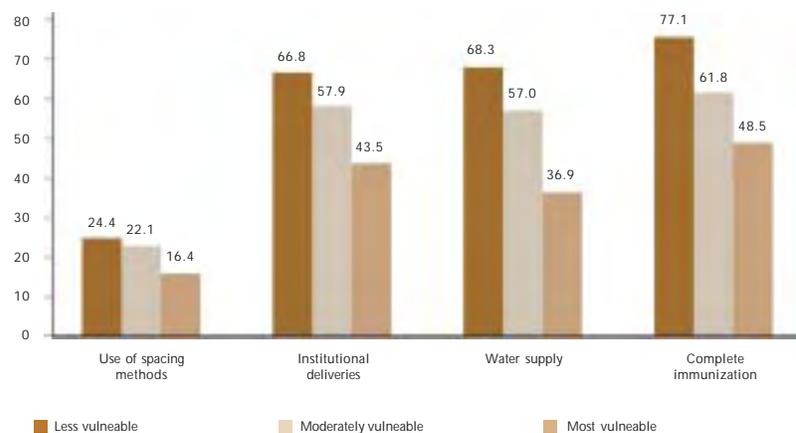
9. Loughhead S et al., 2001. *Urban Poverty and Vulnerability in India*, New Delhi : Department for International Development (DfID).
10. Cleene S, 1999. *Community Learning Information Communication Case Study: Kerala Community Development Society*. London : GHK Research and Training.
11. Plummer J, Ayamnuang N. 2001. *Poverty in Vientiane: A Participatory Poverty Assessment*. London : GHK International.
12. Taneja S and Agarwal S. 2004. *Situational Analysis for guiding USAID/EHP India's Technical Assistance Efforts in Indore, Madhya Pradesh, India*, Environment Health Project Activity Report 133. Washington D.C : Environmental Health Project.

Slums are not equally vulnerable and it is essential to focus on the most vulnerable.

mentioned in Table 1 by visits to slums and discussions with persons having indepth knowledge of the slums. The findings of the slum assessment exercise were triangulated and validated with inputs from key stakeholders i.e. Community Based Organizations, staff of government outreach projects, NGOs and community leaders, ward councilors and others, resulting in categorization of slums into most, moderate and less vulnerable slums. Vulnerability assessment using this methodology in Agra revealed that of these 393 slums in the city, 183 were categorized as most vulnerable, 173 as moderately vulnerable slums and 37 as least vulnerable slums¹³.

In a maternal and child health survey conducted in the slums of Agra by EHP (presently UHRC), it emerged that the health of the residents of most vulnerable slums are much worse than those of other slums. For instance, while only 43.5 per cent of the deliveries in most vulnerable slums took place in health facilities while the corresponding figure in less vulnerable slums was 66.8. In most vulnerable slums, only 48.5 per cent of the children were completely immunized as against 75.6 per cent in less vulnerable slums¹⁴. The poor health status in the vulnerable slums is an outcome of the poor environmental conditions and economic status of the residents of these slums.

Fig 1: Health and Basic Services Availability in Slums of Agra by Vulnerability



This differential health vulnerability in urban slums calls for a better understanding of the current scenario, and developing programs in context to this situation. The lack of information because of outdated and incomplete slum lists maintained by government bodies comes in the way of more effective programmes and policies for urban slums.

1.4 Government of India's Focus on Health for the Urban Poor

The Government has acknowledged the non-availability as well as substantial under utilization of available primary health care facilities in urban areas along with an overcrowding at secondary and tertiary care centers.

13. Department of Medical Health and Family Welfare. 2004. Five Year Urban Health Proposal for Agra, Uttar Pradesh. Lucknow: Department of Medical Health and Family Welfare, Government of Uttar Pradesh.
14. USAID-EHP. 2005. Maternal and Child Survey in Slums of Agra. New Delhi: USAID-EHP.

MCH services to the urban poor have been recognized as important thrust area by the government under the National Population Policy-2000¹⁵, National Health Policy-2002¹⁶, RCH II and the Tenth Five Year Plan¹⁷. The 2010 goals of the NPP 2000, which are to ensure universal immunization, intensify neonatal care, facilitate 80% institutional deliveries, reduce IMR from 68 per 1000 births to 30 per 1000 births and MMR to 100/ 100,000, envisaged that a comprehensive urban health care strategy be finalised for achieving access to all in urban areas, especially urban slums. NHP-2002 envisages setting up of an organized two-tier Urban Primary Health Care structure. The National Rural Health Mission (NRHM) (2005-2012) launched by the Government of India, recognizing the needs of the urban poor population has constituted a Task Group on Urban Health to recommend strategies for urban poor. The National Urban Renewal Mission (NURM) has a sub-mission on basic services to the urban poor which covers over sixty cities in India including the six million cities in Uttar Pradesh.

The second phase of the Reproductive and Child Health Programme (RCH II), which is a component of the NRHM, seeks to improve the health status of urban poor by ensuring accessibility and availability of primary health care and family welfare services to them. The program envisages focusing on backward states like U.P. (which are performing poorly on maternal and child health indicators) for the delivery of RCH services with a focus on urban poor. Pursuing the cause of health improvement among the urban poor, the MOHFW has encouraged state governments to identify priority districts and initiate the urban health project to augment infrastructure development and community provider linkages. The Ministry of Health and Family Welfare, Government of India has formulated guidelines for development of city level urban slum health projects which provides a mechanism for urban health delivery and its overall management¹⁸. The guidelines suggest provision of a primary health care delivery center for every 50,000 urban population, manned with 3-4 ANMs¹⁸.

The RCH-II places special emphasis on the health of the urban poor.

15. Ministry of Health and Family Welfare (MOHFW). 2000. *National Population Policy, 2000*. New Delhi: Department of Family Welfare, MOHFW.
16. Ministry of Health and Family Welfare (MOHFW). 2002. *National Health Policy, 2002*. New Delhi: Department of Health, MOHFW.
17. Planning Commission. 2002. *Tenth Five Year Plan, 2002-2007*, New Delhi : Planning Commission, Government of India.
18. Ministry of Health and Family Welfare (MOHFW). 2004. *Guidelines for Development of City level Urban Slum Health Projects*. New Delhi : Department of Family Welfare, MOHFW.

KEY MESSAGES

- Out of the total population of 1027 million as on 1st March, 2001, about 742 million live in rural areas and 285 million in urban areas.
- Urban population will reach about 576 million by the year 2030 and will comprise approximately 40% of India's population.
- The "urban advantage" evades the urban poor who constitute 67 million of the urban population; many dwelling in slums or slum like settlements.
- Slum statistics do not get updated, and there are vast hidden and missing slum pockets (where the large portions of urban poor reside) that do not find a mention in the averages.
- The under 5 mortality rates are nearly three times higher among the urban poor compared to the urban high income groups.
- Identifying, listing and plotting of all slums including unlisted and hidden clusters is important to ensure equity and reach to hitherto underserved clusters.
- Assessment of slums is crucial to determine differential needs and identifying the most vulnerable. The criteria for slum assessment should include factors that affect health vulnerability: socio-economic and living conditions, accessibility to public health services, and existence of organized community groups amongst others.
- The Ministry of Health and Family Welfare, Government of India has formulated guidelines for development of city level urban slum health projects which provides a mechanism for urban health delivery and its overall management.
- RCH II envisages focusing on less developed states like Uttar Pradesh.

SECTION 2

Urban Poverty, Policies and RCH Services in Uttar Pradesh

SECTION 2

Urban Poverty, Policies and RCH Services in Uttar Pradesh

2.1 Uttar Pradesh (U.P.) - The Urban Poor Scenario

Uttar Pradesh, the most populous Indian state, accounts for one-tenth of India's land mass and one-sixth of India's population. Almost 34.5 million persons comprising 21 per cent of the population live in urban areas of the state spread over 704 towns and cities (2001 Census). The urban population in Uttar Pradesh grew by 33 per cent during the decade 1991-2001 compared with 26 per cent for the overall population growth rate. By 2016, almost 30 per cent of the state population would be residing in urban areas¹. As the rest of the country, urbanization in Uttar Pradesh is top-heavy i.e., a few large cities and metropolises comprise a large proportion of the urban population. The six cities of Uttar Pradesh (Kanpur, Lucknow, Agra, Varanasi, Meerut and Allahabad) having million plus population each comprises over one-fourth (28 per cent) of the urban population of the state. The other 47 cities which have a population of over a lakh account for a third (35 per cent) of the urban population. The remaining 652 towns are inhabited by the remaining 40 per cent of the state's urban population. The map shows the level of urbanization in the districts of Uttar Pradesh. The western part of the state is the most urbanized followed by the central and eastern parts of the state. Most districts of eastern Uttar Pradesh, have urban population less than 10 per cent of the total population.

One-third of the urban population comprising 11 million persons in Uttar Pradesh is below the poverty line.

Large magnitude of the urban poor

Estimates for poverty levels are at 31% for urban UP. In absolute terms, with nearly 11 million urban poor, Uttar Pradesh houses the largest number of urban poor in a single state. A large proportion of the urban poor remain unaccounted for by authorities and consequently underserved by basic education and health care. Not only does the state have a heavy burden of poverty, it also ranks low in terms of other social indicators among the states in the country. As per the Human Development Report, 2001 released by the Planning Commission the Human Development Index (HDI)^{*}, for urban UP is the lowest among the urban population of states and union

^{*} The HDI is a composite of variables capturing attainments in three dimensions of human development viz, economic, education and health. These have been captured by per capita monthly expenditure adjusted for inequality, a combination of literacy rate and intensity of formal education; and a combination of life expectancy at age 1 and infant mortality rate.

1. National Institute of Urban Affairs, 2000. *Urban Statistics Handbook*. New Delhi : National Institute of Urban Affairs.

Uttar Pradesh Level of Urbanisation 2001



Urban Uttar Pradesh ranks among the worst in terms of social and economic indicators.

territories of India (1991). The position of urban Uttar Pradesh in terms of human development has been deteriorating over time. The HDI of urban UP was ranked 25 among the states of India in 1981 which further declined to 32 in 1991. The Human poverty index (1991)* of urban Uttar Pradesh is also the highest among the states of India².

Regional Diversity with Uttar Pradesh

Distinguishing feature of Uttar Pradesh's poverty is its regional diversity. In terms of economic indicators like agricultural productivity, infrastructural facilities, industrial growth, the Uttar Pradesh's economy can be categorized into four regions; Western, Eastern, Central, and Bundelkhand. The Western Uttar Pradesh is agriculturally prosperous, relatively more industrialized and has seen greater degree of urbanization. At the other end is Bundelkhand

* The human poverty index is a composite variable capturing deprivation in three dimensions of human development viz, economic, educational and health. These have been captured by proportion of population below poverty line, proportion of population without access to safe drinking water/ sanitation/electricity, medical attention at birth/ vaccination and proportion of population not expected to survive beyond 40.

2. Planning Commission. 2001. National Human Development Report, 2001, New Delhi: Planning Commission, Government of India.

which is characterized by low agricultural growth, fewer industrial units, making this region as the least developed in the state³.

As is evident from the table below the regional disparity is also reflected in the distribution of the urban poor. Urban poverty, as a proportion of urban population, is highest in the southern region of the state while in the other regions proportion of poor persons in urban areas is similar to the state average of 30 per cent³. In absolute numbers, Western Uttar Pradesh has the highest number with 5.2 million poor persons residing in urban areas followed by Central and southern regions with approximately 2.5 million poor persons each.

Region	% of the population below poverty line		No. of poor persons in urban areas
	Urban	Rural	
Western	30	21.7	5,172,696
Central	33.4	42.2	2,530,552
Eastern	31.1	36.4	2,439,853
Southern	40.9	20.9	756,087
Uttar Pradesh	30.7	31.1	10,899,187

Western Uttar Pradesh is home to half of Uttar Pradesh's urban poor population.

Table 2: UP: Regional Trends in Poverty

Poverty in Select Cities of Uttar Pradesh

Table 3 presents the growth rate of population (between 1991 and 2001) and the proportion of slum population (as per census estimates) in select cities of Uttar Pradesh. It is observed that there is a wide variation in the proportion of slum population in cities of the state. In some rapidly growing cities of the state like Meerut, Ghaziabad and Moradabad, nearly one of every two residents lives in slums – indicating that most of the migration into these cities finds its way into slums.

	Urban population		Growth Rate (%)	% slum population '01
	1991	2001		
Western				
Agra	891790	1,259,979	41.3	9.67
Meerut	753778	1,074,229	42.5	43.87
Ghaziabad	454156	968,521	113.3	47.93
Saharanpur	374945	452925	20.8	31.80
Aligarh	480520	667732	39.0	52.42
Moradabad	429214	641240	49.4	51.21

Table 3: Profile of big, medium and small cities of U.P.

3. World Bank. 2002. Poverty in India : The Challenge of Uttar Pradesh, New Delhi : The World Bank.

Central				
Lucknow	1619115	2,207,340	36.3	8.2
Kanpur	1879420	2,532,138	34.7	14.5
Eastern				
Varanasi	932399	1,100,748	18.1	42.81
Gorakhpur	505566	624,570	23.5	33.46
Faizabad	124437	208164	67.3	17.77
Allahabad	806486	990298	22.8	32.32
Bundelkhand				
Jhansi	313491	383,248	22.3	42.55

The rapidly growing urban population poses great challenge to the efforts of the state government towards improving the health of the urban poor. The government of Uttar Pradesh has reflected its commitment towards addressing the problems of urban poor by implementing some of the policies. Description of some of the policies is given in this section.

2.2 Urban Slum Improvement and Reproductive and Child Health Policies in U.P.

Uttar Pradesh population policy has special focus on the urban poor.

The **Uttar Pradesh state government** has formulated its own policy level mandate related to issues of mother and child health. The **UP Population Policy**⁴ sets out specific targets with a goal of reaching replacement level fertility by 2016. It aims to achieve a contraceptive prevalence rate by modern methods of 52% from 22% by creating an encouraging environment for greater demand and access to RCH services. Some of the objectives laid down are to reduce IMR to 73 infant deaths per 1000 live births by 2006 and to 67 by 2011; and MMR to 394 for every 100,000 live births by 2010 and 2016 respectively.

The population policy of Uttar Pradesh recognizes the poor health conditions of the slum dwellers and inadequacy of health services for the urban poor inhabitations. It envisages the following measures for the improvement of the health of the urban poor in Uttar Pradesh.

1. Urban health posts with adequate space, equipment and trained personnel will be set up on the same pattern as primary health centres in rural areas. They would be responsible for providing door-to-door service in urban slums.
2. All efforts will be made to involve all health infrastructure in urban

4. Department of Health and Family Welfare. 2000. Population Policy of Uttar Pradesh. Lucknow : Government of Uttar Pradesh.

areas, other than that of the state health department in the delivery of RCH and family planning services.

3. A Senior Officer in the Directorate of Family Welfare will be designated as Nodal Officer (Urban Health) and would be responsible for coordinating with municipal corporations, nagar panchayats, and other departments/agencies to ensure the availability of supplies of contraceptives and reproductive health products like DDKs, ORS and IFA, and provision of training to municipal providers.
4. Private sector organizations like NGOs, corporate bodies, and trusts would be encouraged and motivated to adopt *mohallas* and slums to provide the entire range of health care.
5. All traditional birth attendants or *dais* in urban centres would be trained in elements of hygiene and safe delivery practices and for counselling for family planning. They would also act as depot holders for contraceptives.
6. Innovative methods of social marketing would be used for promotion and making available contraceptives and health products in slums.

The government of UP has followed up on the above measures and decided to implement Urban Health programme in 14 districts with large slum population. The districts include Agra, Aligarh, Allahabad, Bareilly, Jhansi, Faizabad, Ghaziabad, Gorakhpur, Kanpur Nagar, Saharanpur, Meerut, Moradabad, Varanasi and Lucknow. To effectively coordinate the urban health programme, an urban health cell has been constituted and an Senior Officer in the Directorate of Family Welfare has been designated as the nodal officer⁵.

To effectively tackle the problem of malnourishment in the state the government has formulated the ***State Plan of Action on Nutrition (SPAN)***⁶. It aims at reducing moderate malnutrition from 52% in children 0-3 years in the year 2000 to 40% in 2005 and 20% in 2010 and severe malnutrition from 20% at present to 5% in 2005 and 1% in 2010. It also ensures that by the year 2010, clinical cases of Vitamin A deficiency will be eliminated. Establishment of State Nutrition Surveillance System (SNSS) is also proposed. SPAN ensures effective operationalisation of two State Nutrition Resource Centres based at S.N. Medical College, Agra and King George Medical University, Lucknow, one at Agra focussing on Women and Child Nutrition and second one at Lucknow on Micronutrients Deficiency Disorders Control. SPAN also advocates extension of urban services through State Urban Development Agency (SUDA) and District Urban Development Agencies (DUDA) and ICDS for the poor with increased emphasis on providing adequate nutrition to the vulnerable groups like pregnant and lactating mothers

Government of Uttar Pradesh is to implement urban health programme in 14 districts in the first phase.

5. Department of Medical and Family Welfare, 2004. Minutes of the meeting held on 15th April 2004, chaired by Principal Secretary, Family Welfare, Government of Uttar Pradesh.

6. Department of Women and Child Development. *State Plan of Action on Nutrition*, Lucknow : Government of Uttar Pradesh.

and children. Strengthening the Urban Poverty Alleviation Programme and the scheme of Environmental Improvement of Urban Slums are some of the important components for addressing malnutrition in urban areas. It envisages expansion of ICDS centres in all slum areas through appropriate linkages with SUDA/ DUDA networks. 'Innovation Fund' and 'Adolescent Girl Scheme' are also underway to focus on the urban poor⁷.

The **Janani Suraksha Yojana**, under the National Rural Health Mission, extends cash benefits to all women below the poverty line in the eight EAG states including Uttar Pradesh. Under this scheme, poor women in urban areas receive Rs. 600 for delivering in health institutions and the accredited worker received Rs. 200 for providing certain basic support services while facilitating the delivery.

Apart from policies which are directly aimed at improving the health of the population, policies related to housing, land tenure, employment, slum improvement, women's empowerment, food security etc also impinge on the health of the urban poor. In the following section, we discuss these policies affecting the lives of the urban poor and thereby on their health.

Policies Aimed at Improving Housing and Slum Development

The Government of India launched the **Jawaharlal Nehru National Urban Renewal Mission (JNNURM)** on December 3, 2005. The Mission will focus attention to the integrated development of urban infrastructure and services with special emphasis on basic services to the urban poor. The duration of the Mission would be seven years beginning from the year 2005-06 and would cover 60 cities in the country. **The Sub-Mission on Basic Services** for the Urban Poor will cover projects for providing housing at affordable costs, projects on water supply/sewerage/ community toilets, construction and improvement of drains, environment improvement of slums and solid waste management, street lighting, civic amenities like community halls, child care centers and slum rehabilitation etc. In Uttar Pradesh, the six cities with million plus populations (Lucknow, Varanasi, Agra, Kanpur, Meerut and Allahabad) and Mathura have been covered under this sub-mission.

VAMBAY (Valmiki Ambedkar Awas Yojana) introduced in 2001-02, aims to meet a longstanding gap in programs for slum-dwellers, namely, provision of a shelter or upgrading the existing shelter of people living below the poverty line in urban slums. Provision of sanitation and water supply is also included in the scheme. The program is intended to be implemented in partnership with State Governments, who will set up the implementation

7. Notice number F.No.1-4/2002-CD.I.(Pt), Government of India, Ministry of Human Resource Development, Department of Women and Child Development.
8. Government of Uttar Pradesh. 1962. UP Slum Areas (Improvement and Clearance) Act, 1962, Lucknow : Eastern Book Company.

machinery, arrange for land where required, and arrange for the credit component of the housing program. The government of India sanctioned Rs. 6684 lakhs till March 31, 2004 for Uttar Pradesh while the fund release was only 3750 lakhs. A total of 17591 slums dwellings in Uttar Pradesh were constructed during the period.

The National Slum Development Program (NSDP) also deals with the development of urban slums. The objectives of this program is up gradation of urban slums by providing physical amenities like water supply, storm water drains, community bath, widening and paving of existing lanes, sewers, community latrines, street lights etc. Besides, the funds under NSDP can be used for provision of community infrastructure and social amenities like pre school education, non formal education, adult education, maternity, child health and primary health care including immunization etc. The program also has a component of shelter up gradation or construction of new houses.

In Uttar Pradesh, the NSDP is operational in only 88 towns out of 704 towns⁸. In order that any visible impact of NSDP is felt the programme should cover at least all district head quarter towns. Further in the 88 towns in which the programme is operational it is imperative that all slums of these 88 towns are provided benefits of the scheme. Since the inception of the scheme, Rs. 26621.15 Lakh has been spent and 274.14 Lakh population have been benefited till 2003-04. Financial target for the year 2004-05 is Rs. 4279.00 lakh aiming to benefit an 29.15 Lakh population.

Recently, VAMBAY along with the National Slum Development Programme (NSDP) have been integrated with the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) in the seven cities of UP where the mission is operational. In other cities not covered under JNNURM, a new Integrated Housing and Infrastructure Development Scheme has been launched.

The **Integrated Development of Small and Medium Towns (IDSMT)** scheme was initiated in 1979-80 to provide sufficient infrastructure facilities in these towns, generating employment by creating resource generating ventures in the small and medium towns and reducing the migration of population from rural areas to large cities. The scheme makes the towns with a population of 20,000 to 50,000 the prime target, while the inclusion of towns in 50,000 to 3,00,000 category and less than 20,000 category is on a selective basis.

Accelerated Urban Water Supply Programme (AUWSP) a centrally sponsored scheme, launched during the Eighth Plan in the year 1993-94.

The objective of this scheme is to solve drinking water problem in towns having population less than 20,000. Under this scheme, considering the water scarcity and the narrow revenue base of these small towns, the scheme is funded by the central and state Governments in the ratio of 50:50. Under AUWSP, out of 425 towns in Uttar Pradesh having population less than 20,000, 121 Towns have been provided with adequate Water supply during Ninth Plan⁹. Augmentation for the remaining towns is being taken up in the Tenth Plan for which data is not available.

The existing schemes under the Accelerated Urban Water Supply Programme (AUWSP) and Integrated Development of Small and Medium Towns (IDSMT) have been subsumed under the **Urban Infrastructure Development Scheme for Small & Medium Towns**. The scheme will apply to all cities/towns, excepting cities/towns covered under Jawaharlal Nehru National Urban Renewal Mission (JNNURM). Funds would be provided to only those towns and cities where elections to local bodies have been held and elected bodies are in position. The State Governments may prioritize towns and cities on the basis of their felt-need. The sharing of funds would be in the ratio of 80:10 between Central Government & State Government and the balance 10 per cent could be raised by the nodal/implementing agencies from the financial institutions. The scheme will be implemented through a designated State level nodal agency.

To leverage funds from other schemes and for evolving a more integrated plan for urban poor, an Innovation has been done in the state of U.P. **Maharishi Valmiki Malin Basti Sudhar Yojna** proposed by SUDA whereby Ten different Government Departments have allocated the plan funds for SC Slums of Urban area and they will spend 21% of their total plan funds on SC/ST communities. 119 slums with predominantly SC/ST populations have been identified state-wide during 2001-02¹⁰. Primary Education, Energy and Social Welfare Departments, Urban Development, Housing, Non-Conventional Energy (for Community Toilets) have been allocated plan outlays. The intention is to invest the earmarked funds against the priority infrastructure requirements of the residents (as identified through the CDS process). This programme has fulfilled an important need of bringing about synergy amongst different development programmes by pooling resources and efforts aimed at SC dominated urban poor settlements.

Besides the above discussed programs, there are some legal provisions affecting the availability of land for slum development. **Urban Land Ceiling (Ceiling and regulation) Act**, 1976 in UP prevents concentration of urban property in the hands of a few persons and of making land available for construction of houses for low income groups and economically weaker

9. Planning Department. 2004. Annual Plan 2004-5, Lucknow: Planning Department, Government of Uttar Pradesh.

10. Planning Department. 2002. Tenth Five year Plan 2002-2007. Lucknow: Planning Department, Government of Uttar Pradesh.

sections. **UP Slum Areas (Clearance and Improvement) Act** passed in 1962 which empowers Competent Authority to declare slum area to be clearance area for the purposes of developing the land¹¹.

Thus a number of programmes for improving housing and infrastructure to the urban poor are operational in Uttar Pradesh. Slum development for urban poor is dependent on a number of agencies such as water supply, sanitation, housing boards, municipalities etc. It is imperative to improve coordination and convergence among different agencies for greater impact of such programmes.

Policies Aimed at Generating Employment for the Urban Poor

The **Swarana Jayanti Shahari Rojgar Yojana (SJSRY)** includes a wage employment and self employment (micro-credit/micro enterprise) scheme directed at the urban poor. The Yojna shall rest on a foundation of Community empowerment instead of traditional method of top-down implementation. Hence community organizations like R.C.V.s, N.H.G.s and C.D.S.* will be set up in the target areas. The C.D.S. shall be focal point for the purpose of identification of beneficiaries, preparation of applications, monitoring of loan recoveries, and providing other support to the programme. The C.D.S. will also identify viable projects suitable for the area. Under this programme Central and State funding has been fixed at 75:25. The main programmes under the yojana include the urban self employment programme and the urban wage employment programme.

Urban Self Employment Programme (USEP) would include assistance to individual urban poor. The Maximum unit cost of the project for individual self employment will be Rs. 50,000/- (Maximum Subsidy will be 15% of the Project Cost Subject to maximum of Rs. 7500/-). The beneficiary is required to contribute 5% of the Project Cost. Besides Govt. Subsidy and contribution of the beneficiary, rest of the project cost will be finance by Banks as loan.

Under this programme Rs.5853.56 Lakh has been spent and 1,25,654 beneficiaries have been benefited up to the year 2003-04 in Uttar Pradesh.

* A Neighborhood (NHG) is an informal association of 10 to 40 women living in close proximity, who select one or more women volunteers from amongst themselves as Resident Community Volunteers (RCV). A Neighborhood Committee (NHC) is a formal association of all women from various Neighborhood Groups within the same electoral area, with the RCVs as their representatives. A Community Development Society (CDS) is a federation of NHCs sharing common goals and objectives at the ward, zone or city level. The CDS is the nodal agency through which all scheme based and institutional finance is channeled.

11. Government of Uttar Pradesh. 1962. UP Slum Areas Improvement and Clearance Act, 1962. Lucknow : Eastern Book Company.

Financial target for the year 2004-05 is Rs. 224.99 lakh aiming to target 3000 beneficiaries.

Urban Wage Employment Programme (UWEP) - This programme shall apply to local bodies, the population of which was less than 5 Lakh as per 1991 census. The Programme shall seek to provide wage employment to beneficiaries living below the poverty line within the jurisdiction of urban local bodies by utilizing their labour for construction of socially and economically useful public assets. The material and labour components ratio for works under this programme shall be 60:40. The prevailing minimum wage rate for each area shall be paid to the beneficiaries. Under this programme Rs. 8205.51 Lakh has been spent and 5164556 mandays has been generated up to the year 2003-04 in Uttar Pradesh¹².

Dr Shyama Prasad Mukherjee Self Employment Scheme caters to the needs of unemployed youth of urban poor families who have technical knowledge. The Maximum unit cost of the project for individual self employment is Rs. 50,000/- (Maximum Subsidy will be 15% of the Project Cost Subject to maximum of Rs. 7500/-). The beneficiary is required to contribute 5% of the Project Cost. Besides Govt. Subsidy and contribution of the beneficiary, rest of the project cost will be financed by Banks as loan. It is proposed that 20 thousand beneficiaries would be benefited per year. For the plan period of 5 years the outlay required would be Rs 10 crore.

Policies Aimed at Improving the Status of Women

The social status of women has an important bearing on the process of health care seeking both as a child and mother. The government of India launched the **Balika Samridhi Yojana** in 1997. Under this scheme if a girl child is born in a family below the poverty line as defined by the Government of India, the parents will be entitled to a post - birth grant amount of Rs 500/- and the girl child will also become entitled to annual scholarships as under for each successfully completed year of schooling. Subsequently in 1999 the BSY was reviewed & modified instead of cash payment now the amount is deposited in the Bank/ Post Office in the name of girl child & this can be withdrawn for insurance premium & incremental graded scholarship to girl child as she graduates from different grades.

Development of Women and Child in Urban Areas (DWCUA) scheme is distinguished by the special incentive extended to urban poor women, who decide to set up Self-employment ventures in a group as opposed to individual effort. Groups of urban poor women shall take up an economic activity suited to their skill, training, aptitude and local conditions. DWCUA group

12. Planning Department. 2004. Annual Plan 2004-5, Lucknow: Planning Department, Government of Uttar Pradesh.

should consist of at least ten urban poor women, one of whom shall be organizer. The group will also select its own economic activity on the basis of actual potentials out of an identified shelf of projects. DWCUA group shall be entitled to a subsidy of Rs. 125,000/- or 50% of the cost of Project, whichever is less. For setting up of Thrift & Credit Society, the DWCUA group shall be entitled to a lump sum grant of Rs. 25000/- as revolving fund @ Rs. 1000/- per member only after one year of its formation. These funds will be used by the Group/Society for income generating activities. Where an individual member of the society saves Rs. 500/- and Rs. 750/- in fixed deposit for 12 months, she will also be entitled to a subsidy for Rs. 30/- and Rs. 60/- respectively for being paid as insurance premium. The government of Uttar Pradesh has allocated Rs.707.28 Lakh till 2003-04 under this scheme and 732 DWCUA groups has been benefited¹³.

Policies Aimed at Improving Food Security of the Urban Poor

The *Antyodaya Anna Yojana* launched in December 2000 targets the poorest of the households for distribution of subsidized rations. Each family having a red card is entitled to 25 kg of food grains each month at subsidized rate of Rs. 2.5 per kg for wheat and Rs.3 per kg for rice. As of 22-3-2005, 32.42 lakh households in Uttar Pradesh have been identified and issued special ration cards under this scheme¹⁴.

The *Annapoorna Yojana* targets people 65 years of age and older who live in BPL families. 20% of those receiving eligible under Age old pension scheme are given 10 kg of rice free of cost. The 2004-05 Annual Plan of Uttar Pradesh allocated Rs. 2200 lakh to cover 112872 beneficiaries under this scheme.

Policy for Strengthening Capacity of Urban Local Bodies

Apart from the above mentioned sector specific policies, the **74th Amendment** to the Indian constitution has endowed urban local bodies with substantially increased powers and have constitutionally mandated a number of vital functions, placed in the Eleventh and Twelfth schedule of the constitution, relating to poverty alleviation, local planning, primary and secondary health and education to be carried out by the local bodies.

Following the 74th Constitutional Amendment Act, 1992, the Government of Uttar Pradesh has taken steps to decentralize governance in urban local bodies. The Uttar Pradesh Local Self Government Laws (Amendment) Act, 1994 was passed by the legislature of Uttar Pradesh to incorporate the

13. Planning Department. 2004. Annual Plan 2004-5, Lucknow: Planning Department, Government of Uttar Pradesh.

14. Ministry of Consumer Affairs, Food & Public Distribution. 2005. *Antyodaya Anna Yojana*. Available at : <http://fcamin.nic.in/aay.htm>. Accessed on 4 August 2005.

The 74th Constitutional Amendment has mandated Urban Local Bodies to manage a range of services including health.

mandatory provisions of the Constitutional Amendment Act 1992. To let the local bodies effectively function the Uttar Pradesh government has devolved 7% of the States Tax revenue to the urban local bodies which has substantially increased the fund flow to ULBs. To improve the financial position of ULBs and compel them to take more internal resources imposition of all taxes enumerated in the Municipal Acts, has been made compulsory since September 1998. Ten percent of devolution share has been linked to the financial performance of ULBs. The financial powers of Nagar Ayukt in case of Nagar Nigams and President in case of Nagar Palika Parishads and Nagar Panchayats have been substantially increased.

In spite of all these measures, the financial position of ULBs in Uttar Pradesh continues to be precarious and they are often unable to meet expenditure on salaries and other essential services like power dues. As a result, the quality of urban services remains poor. Urgent steps are therefore, called to revamp the financial situation of ULBs. The fiscal domain of these bodies needs to be expanded and they have to be persuaded to take steps to raise revenue from their own resources. Access of these bodies to institutional sources of funding and capital market has to be improved.

Policy Analysis and Suggestions

Capacity of Municipal Bodies need to be enhanced for them to manage health services effectively.

Though a policy level mandate exists, the inadequate allocation of resources along with multiplicity of departments at the district, hampers the efforts for improving the conditions of the urban poor. To translate policies into effective programmes the following measures are suggested :

1. Increased coordination and convergence: It is evident from the discussion in the previous section that improvement in the conditions of the urban poor requires efforts of multiple departments. Hence, a functional taskforce under the chairmanship of the District Magistrate that reviews all urban programmes and schemes regularly would bring in more synergy and improve the impact of the various programmes.
2. Regular updation of slum lists : Rapid urbanization results in the addition of new slum clusters which remain outside the purview of health and other civic services. The Municipal authorities in collaboration of the elected ward members should develop mechanisms for updating the slum list and bring them under the purview of health and other services.
3. Capacity building of Urban Local Bodies : Though constitutional provisions have been made and the government has shown keen enthusiasm to implement the 74th Amendment the capacity of the urban local bodies remains severely restricted. Though the options for generating revenue have been devolved to urban local bodies, the deficit

between revenue generated and expenditure stands at Rs. 2211 crores for urban local bodies in Uttar Pradesh. There is a need to chart out a plan for improving the knowledge and capacity of the local elected representatives and ULB officials by a) increasing awareness of programmes and policies of the various departments so that the resources of various schemes are adequately leveraged and utilized and b) exposure visits to successfully managed urban health programmes.

4. Develop model municipal managed health programmes in utilizing government programmes optimally in 1-2 cities to serve as learning sites. Currently, there are no health programmes managed by municipalities in Uttar Pradesh. A few municipalities having the requisite capacity can be identified and handed over the management of urban health programmes in their cities using the funds of the health department. This can be then replicated in more municipalities after incorporating lessons learnt from the initial experiments.
5. Policy provisions and programmes for the improvement of the socio-economic status of the urban poor are known to have a number of operational weaknesses. The identification of below poverty line families is beset with inaccuracies originating in the surveys to identify BPL families. Personal and political influences also play a part while review of the BPL list is kept in abeyance for long. The help of credible NGOs to conduct these surveys can be resorted to improve the accuracy of such surveys and ensure that development programmes reach their intended beneficiaries.

2.3 Reproductive and Child Health Services in Urban U.P.

Unlike in the rural areas, where the health department has a wide network of primary health care facilities providing reproductive and child health services, the urban slums lack basic health infrastructure and outreach services. Thus, they are often bypassed even by national programmes providing immunization, safe motherhood and family planning services. The sparse health coverage provided by health facilities like urban family welfare centers, health posts, and maternity homes in cities is used more for emergencies and curative services. Often these facilities are far from their service area, poorly staffed, with inadequate space and supply of medicines and equipment. Urban local bodies like municipal corporations and nagar panchayats are also expected to provide health care, but resource scarcity restricts them to only providing sanitation services. NGOs and private trusts are also few and far between.

Urban areas do not have a wide network of primary health care facilities unlike rural areas.

A large section of the slum population remain outside the purview of health care services.

First and Second Tier Health Services

The Government of Uttar Pradesh has committed itself to make provisions for health care services to its population. Though the efforts have been rural centric some efforts have also been made to improve the delivery of primary health care services to the population living in urban areas. It has established D Type health centers and dispensaries for providing family welfare services and OPD facilities. The Urban Local bodies and Department of Health and Family Welfare are the two main stakeholders for managing these services. In urban areas of UP, first tier health services are available through D-type health centers, the family welfare centre, health post and PP centers¹⁵. Second tier health services are provided in urban areas through District Male and Female or Combined Hospitals. At present there are 80 District Level Hospitals, 6 Combined Hospitals and 63 Female Hospitals in Uttar Pradesh.

Table 4: Health care delivery outlets in main cities of UP (Data received from UP Government)

City	First Tier facilities	PP Centers (District)
Ghaziabad	9	1
Aligarh	6	1
Bareilly	6	1
Faizabad	2	2
Moradabad	13	1
Allahabad	11	1
Meerut	9	1
Kanpur Nagar	24	2
	<i>(8 Maternity homes/5 family welfare centers of Nagar Nigam)</i>	
Gorakhpur	15	1
Saharanpur	9	1
Agra	15	1

The data given in the table above reveals inadequacy of primary health care services. The first tier health facilities were planned for a population of 50000 but as a result of rapid population growth they are currently serving a population of more than 75000. The situation gets compounded due to lack of adequate infrastructure, equipments and medicines. The staff mainly Doctors and ANM are also inadequate. The high population- staff ratio results in poor service coverage with some areas being entirely unserved. From the above assessment it becomes evident to consider the poor health indicators for deciding the norms of staff population ratio. Uttar Pradesh has eight medical colleges and one post-graduate institute which offer tertiary and superspecialty health services.

15. Ministry of Health and Family Welfare. 2005. Annual Report 2003-04. New Delhi: MoHFW.

ICDS Services

MCH services are also delivered through Anganwadi centers, the norm being one for population of 1000. The *ICDS programme* is designed to provide the first interface between health care service providers and disadvantaged young children. Studies have shown maternal and child health to be better in ICDS areas compared with non-ICDS areas^{16, 17}. However, the ICDS programme has a limited presence in urban areas with only 11 of the 834 ICDS projects being operational in urban areas. With the growth of population over the years and rapid urbanization, there is a perceived need for more Anganwadi Centers within the existing Projects, to cover the population as per the schematic norm and to increase outreach of ICDS in urban areas. There should be efforts for improving coordination among Health department and ICDS. A circular for improving coordination between ICDS and Health has already been issued at the State level.

Private Health Care providers

A large network of private providers exists along with a large number of public sector providers. The total number of private sector doctors is estimated at 1,57,259 (Registered and unregistered all inclusive). The Dai's (TBAs) are estimated at 1, 12,259 (Trained and untrained) Commercial outlets including medical shops, pharmacies etc. number about 6,98,000. Unlike the distribution of public sector providers, the highest concentration of the private providers is in the western region. The distribution of health providers understandably has strong bearing on the health care in U.P. Regions with lower concentration of medical providers (in proportion to population) have lower maternal and child health care coefficient and higher unmet need for family planning services¹⁸.

Options for improving the health care delivery for urban poor

1. Augment urban health infrastructure and services - An analysis of overall government expenditure on health care indicates that it is regressive. Though some services, such as immunization and non-hospital outpatients' care are pro-poor most of the government expenditure is on curative care and maintenance of staff and hospitals. Out of every Rs. 100/- spent in public sector on curative health care services in U.P. the poorest 20% of the population receives Rs. 10/- on health services while the richest 20% received Rs. 41/- . Public spending in U.P. is clearly less pro-poor than spending in many other states¹⁹. Unless an adequate and reliable supply of medicines

ICDS coverage in urban areas is very limited.

Most health care needs of the urban poor are met by private health providers.

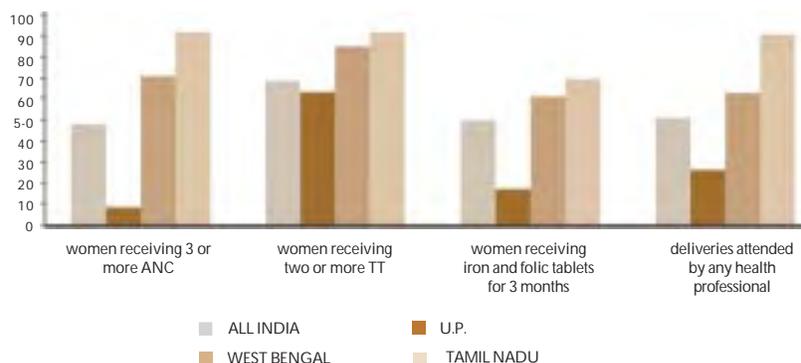
16. Agarwal, K. N, et al., 2000. Impact of the Integrated Child Development Services (ICDS) on Maternal Nutrition and Birth Weight in Rural Varanasi. *Indian Pediatrics*; 37: 1321-1327
17. Sarma, K.V.R., et al., 1990. ICDS - An Epidemiological and Qualitative Study, NIN Scientific Report. Hyderabad : National Institute of Nutrition.
18. Planning Department. 2004. Annual Plan 2004-05, Lucknow : Planning Department, Government of Uttar Pradesh.
19. Mahal A, Yazbeck AS, Peters DH, Ramana GNV. 2001. *The poor and health service use in India*. Washington D.C. : The World Bank.

Partnership with the private sector is an effective way to increase access of health services to the urban poor.

and medical supplies flows to the primary health care facilities on a regular basis, these facilities will continue to be under-utilized by intended beneficiaries and the poor. Adequate funding of the personnel cost is another critical constraint. Besides filling of staff vacancies, allocations are also needed for improving the capacities and performances of practitioners now working in public health service delivery.

2. Coopt private sector services - The large presence of private providers makes it imperative that the private sector plays a key role in the delivery of health services in U.P. The need is to build a system which promotes effective participation of private sector with dignity as an equal partner. The Government of Uttar Pradesh could initiate model public private partnerships such as being promoted in Agra under the Urban Health Program.

Fig 2: Access and availability of services among the urban poor (NFHS II)



3. Improve ICDS coverage in urban slum settlements – It has been observed that the health status of women and children is better in areas covered by ICDS. Anganwadi centers improve the status of women and children by improving the nutritional status of young children and pregnant and lactating mothers, providing health education and by facilitating the work of health workers in the community. Coverage of ICDS has been found to be significantly lower in urban areas. Improving ICDS coverage in urban poor localities can be an important strategy to improve health conditions of the urban poor.

4. Strengthen community capacity and access to services - Efforts must also be made to improve the access of public health care facilities. Link workers selected from the community and provided appropriate training can improve access to health services and improve the health status of the community. Strengthening community based organizations like SHGs, Basti Vikas Samitis, Mahila mandals is an effective mechanism to strengthen linkages between the community and the health system. Such groups can complement the efforts of health workers in generating awareness about health issues and counseling for family planning.

2.4 Situation Analysis of Agra (a million plus city of U.P.)

Background

The Government of India having recognized urban health as a thrust area selected Agra as one of the four cities for which a sample urban health proposal were to be developed. These proposals will serve as examples for planning sustainable systems that provide comprehensive primary and secondary health care to the vulnerable urban population. The Urban Health Situation Analysis* was carried out from January – April 2004 in Agra to develop the urban health proposal for Agra city. It revealed that the urban poor population was growing rapidly mainly due to migration from the neighboring districts. The decennial growth rate of Agra city (1991-2001) is 41.1% which is twice the national decennial growth rate of 21.3%.

Urban Slum Scenario

Identification and qualitative assessment of slums in the city estimates that about 50% of the residents live in slums and squatter settlements. However, official figures reported in the 2001 census indicate only 9.67% slum population. The official slums list of DUDA in Agra records 252 slums. During vulnerability assessment exercise, only 215 DUDA recognized slums could be found in the city and subsequently assessed. The vulnerability assessment exercise carried out in the city revealed a total of 393 slums.

A large proportion of slums in Agra are not listed in official records.

	Most Vulnerable	Moderately Vulnerable	Less Vulnerable	Total
Listed Slums	90	88	37	215
Unlisted Slums	93	85	0	178
Total	183	173	37	393

Table 5: Status of Vulnerability in Slums of Agra

Environmental conditions in the slums

- A large number of slums are located near dirty, open 'nalas'. This leads to higher malaria, diarrheal disease incidence in these slums.
- Slum dwellers have individual sources of water (taps / handpumps) in

* The methodology used for carrying out this situation analysis included: Review and Analysis Information from Secondary Sources including Desktop and library searches, analysis of available data (NFHS); Key Informant Interviews: Representatives from Municipal Corporation, Health Department, NGOs and CBOs; FGDs and Slum Visits

Sanitation is among the most pressing issues in the slums of Agra.

most slums. However, water supply is generally limited to 2-6 hours in a day. Water quality is poor (yellowish, hard water, smelly) in a few slums.

- Sanitation is one of the most pressing issue in a majority of slums with situations varying from existence of individual toilets which lead into open drains to a total absence of individual or public toilet facility. Children defecate in drains in most slums.
- Drains are open and narrow, which remain blocked due to disposal of solid waste and irregular cleaning. Regular cleaning is done in 'better off' slums where residents pay monthly charges to private cleaning staff.

Existing Health Care Facilities

Health services in Agra are provided by the Public sector, Department of Medical, Health and Family Welfare, and Agra Municipal Corporation and Private sector (hospitals, nursing homes, and clinics). In addition, there are several charitable hospitals, which provide subsidized health services to the poor. Also, there are Central Government health facilities, which include Railways hospitals, ESI hospital and dispensaries and Cantonment hospitals and dispensaries. There are 15 D Type centers, One Post partum, two urban family welfare centers and three second tier services. Besides the government services there are private and charitable health care providers in the city.

Maternal and Child Health

Most pregnancies occurring in slums do not get registered either with the ANMs or private practitioners or 'D' Type Health Centers.

Majority of the women do not receive the mandatory three ANC check ups. Large number of women reported that they did not received the recommended two TT injections.

Majority of the deliveries are home deliveries by dais who charge ranging from Rs.500/- to Rs.1000/- for conducting a delivery.

Immunization sessions were either not held or irregularly held, resulting in very poor coverage. The slums which are situated at the periphery of the city have very low immunization coverage. Similarly, the slums located around medical college/D type health centers have relatively better coverage as most of the mothers take their children to immunization centers.

Urban Health Stakeholders

- Department of Family welfare and Nagar Nigam provide health services through 15 first tier services located at various parts of the city.
- Private sector- Non Government Organizations (NGO) - There were few civil society groups, include community based groups, non-government organizations, social trusts and charitable institutions etc. engaged in some or the other form in order to make qualitative improvement and wider coverage in the slums.

- Community Based Organizations (CBO) - Jatav Mahapanchayat a caste based group found in habitation dominated by Jatavs. They work for community welfare and also organize the community for furthering its welfare cause. Self Help Groups and Neighborhood groups formed under the SJSRY are also present but are not effective.
- Some community based projects are being undertaken in urban slums that are supported by NGOs like CARE, SIFPSA, and UNICEF. Their main focus is on providing preventive and curative Mother and Child Health services. However, linkages with public sector are poor.
- ICDS is currently being implemented in one urban block of Agra. Of the 95 ICDS centers, only 43 are located in slum areas. There is a proposal for expanding the reach of the ICDS to cover an additional 180 centers.

Though a number of stakeholders provide health services, urban poor in Agra is grossly underserved.

Analysis and Important Highlights for Guiding Interventions

On the basis of the described situation in the slums of Agra city, an intervention to improve the health of the urban poor should consider the following points to improve the impact of its programmes.

1. All slums are not equal: need for targeting the vulnerable

The health vulnerability assessment in the slums of Agra has revealed that all slums are not alike and that some slums are needier than the others. It is therefore necessary to targeting resources and efforts at the more vulnerable slums for for more effective health programming.

Slums are not equally vulnerable and it is essential to focus on the most vulnerable.

2. Health service delivery and possible mechanisms for improving coverage

Health infrastructure is inadequate and quality of preventive and curative services is poor due to increasing population pressure on existing resources. Improving service coverage and improvement in the quality and demand for health services can be possible through :

- Relocation of the existing services as per the concentration of the urban poor habitations
- Increasing the availability of the staff as per the norms on contractual basis.
- Developing a participatory management system for ensuring convergence of different stakeholders as well as participation of community leaders in the management of health care facilities, Urban Health Centre level Coordination Committees at the UH centre level may be a useful start.
- Better utilization of existing services and development of strategies to introduce new services such as post-natal care, improving referral system, inclusion of private practitioners (RMPs and Dais) in behavior promotion and vaccinations programs.

Linkages among various stakeholders and with the community results in improved and more regular services to the urban poor.

- Linkages and coordination between community and providers and among the providers themselves to improve service regularity and coverage. e.g. Strengthening linkages between ANM and AWW; and between traditional birth attendants and maternity services. The first tier will be implementing a community health promotion strategy, by way of promoting community-provider linkages through the link volunteers and *Mahila Aarogya Samitis* promoted at the slum level.
- Public Private Partnership : The vast reach of private health providers can be effectively used to improve health status of the urban poor. The Government of Uttar Pradesh has initiated partnerships with the not-for-profit private sector agencies for the Agra Urban Health Program for a) provision of 1st tier services in select zones; b) provision of 2nd tier services in identified areas; and c) strengthen community linkages of Public sector services through partnership with NGOs and charitable/not-for-profit health agencies having experience in social mobilization.
- Mobilization of local resources -The District Health Administration with support of the City Urban Health Task Force can build an “Urban Health Fund” to support part of the recurring costs after the project period.

3. Improving Sanitation and Environmental living conditions:

To support the efforts towards improving the environmental living conditions in the slum the urban health proposal incorporates cost of developing a proposal by Agra Municipal Corporation to seek a grant under the centrally sponsored schemes to improve the sanitation facilities for the urban poor, and thereby ensure basic civic amenities for improved health status.

KEY MESSAGES

- In Uttar Pradesh, 34.5 million persons comprising one-fifth of the population live in urban areas of the state spread over 704 towns and cities.
- Almost one-third of the urban population in the State lives below the poverty line.
- The Government of Uttar Pradesh has initiated various policies and programmes aimed at improving the living conditions of the urban poor.
- There is a need for coordination and convergence among different development programmes for greater impact.
- Capacity building of urban local bodies for mobilizing local resources and better financial management would result in better implementation and initiation of more need based programmes at local level.
- The government first tier services in urban areas of Uttar Pradesh have not grown in proportion to growth of urban population resulting in large areas being underserved or totally left out.
- The situation analysis conducted in Agra has revealed that over 50 per cent of the urban population is residing in slum or slum like conditions.

SECTION 3

Reproductive and Child Health conditions among Urban Poor in Uttar Pradesh

SECTION 3

Reproductive and Child Health conditions among Urban Poor in Uttar Pradesh

(Reanalysis of NFHS 2, 1998-99 data)

3.1 Overview and methodology

India, long considered a land of villages, is projected to become predominantly urban by 2015 with a significant proportion of people living in poverty. There is very limited information available regarding the health conditions of urban poor in India. Most available information including the National Family Health Survey provides for only rural – urban comparisons. This commonly leads to false conclusions about the conditions of the urban poor as the averages tend to mask the inherent inequalities that exist. There is a need to disaggregate the existing urban health data by economic status to unveil the disparities which exist in the health status among the various economic groups. The Standard of Living Index (SLI), an asset based indicator provided in the NFHS datasets provides an opportunity to analyze health information by economic groups.

In this section health information provided by the NFHS-2 is disaggregated by the standard of living index (for detailed methodology see Annex 1). Various studies and a consultation with a panel of experts have validated the use of standard of living index as indicative of the economic status of the household (see Annex 1). **The figures for the low SLI segment of urban population have been taken as representative of ‘urban poor’.** **The remaining two categories of SLI – the medium and high SLI – are representative of the middle and high income groups respectively.** This endeavor of disaggregating health data by economic status is aimed at providing a better picture of

There is limited information on health of the urban poor.

Urban averages mask the inherent inequalities which exist within urban areas.

The NFHS is a national level household survey to gather information on fertility, family planning, infant and child mortality, reproductive health, child health, nutrition of women and children, and the quality of health and family welfare services. The first survey was conducted in 1992-93 and the second round was done during 1998-99. The NFHS-2 sample represented more than 99 percent of India's population living in all 26 states. It covered approximately 90,000 ever-married women in the age group 15–49 at the national level and 9292 women in Uttar Pradesh.

The SLI used in the NFHS is a summary measure calculated by considering the house type, toilet facility, source of lighting, main fuel for cooking, source of drinking water, separate room for cooking, ownership of house, ownership of agricultural land, ownership of irrigated land, ownership of livestock and ownership of durable goods by the household.

reproductive and child health in underserved urban settlements. This will help policymakers and program administrators in planning and implementing more effective strategies for improving population, health, and nutrition programs for the urban poor.

Distribution of the urban sample of Uttar Pradesh by SLI

Table 6 shows the sample size by SLI of households, currently married women, ever-married women and children under age 3. The table shows that the sample in all categories of SLI are large enough to provide statistically significant estimates.

Table 6: Number of households, ever-married women and children under 3 years by SLI covered in NFHS-2 in Uttar Pradesh

	URBAN			
	Low	Medium	High	Total
Number of households	219	818	770	1807
Number of currently married women	175	781	802	1758
Number of ever-married women	189	826	826	1841
Number of children under age 3	102	344	261	707

Background characteristics of Urban Uttar Pradesh

The composition of the urban poor in Uttar Pradesh is different from the rest of the state. The socio-demographic composition of any population based on aspects such as caste, religion, age and schooling is usually correlated with health outcomes and hence it is necessary to understand these issues with respect to composition of the urban poor to better design health interventions. The composition of the urban poor and its associated challenges are as follows:

As this report was being finalized (March-April 2006), the data of the District Level Household Survey (DLHS) conducted during 2002-04 was released. This survey funded by the Ministry of Health and Family Welfare and carried out by the International Institute of Population Sciences, Mumbai aimed to provide district level estimates of RCH conditions among the population. In Uttar Pradesh, the survey covered a sample of 64,207 currently married women of which 19012 resided in urban areas of the state.

With the objective of presenting more recent data on the health of the urban poor population in the state, we have analyzed this data by the Standard of Living Index (SLI) and presented in Annex 3.

- More than one-third (37 %) of the urban population (male and female) is below 15 years of age. The young age structure of the population highlights the momentum of continued population growth in urban areas. The unique needs of adolescents who would be shortly entering the reproductive ages should be catered through specific programmes so that desired behaviours are practiced by them in the coming years.
- A vast majority (84 %) of the urban poor women are illiterate compared with 16 per cent among the urban high income families. The school attendance especially among girls is also much lower among the urban poor. The low level of education poses a number of challenges in the adoption of recommended behaviors pertaining to care of mothers and babies.
- Urban poor in U.P. have a higher proportion (57.1 %) of people belonging to socially disadvantaged SC/ST/OBCs* in comparison to the urban rich. (Fig 3). The SC/ST/OBC groups are worse-off in their fertility levels, family planning acceptance rates, infant and child mortality and utilization of maternal and child health services. Hence, special efforts are needed to reach these groups (which constitute a

Urban poor have higher proportion of SC / STs, Muslims and illiterate population. They also have a younger age structure.

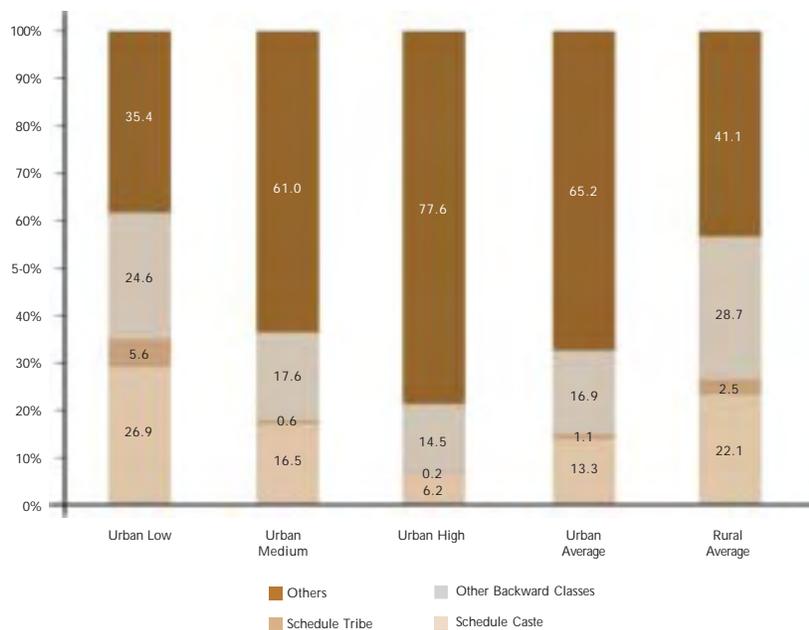


Fig 3: Caste composition of Urban UP

* Scheduled Castes (SC) and Scheduled tribes (ST) are the castes and tribes which are specified under the Article 341 of the Indian Constitution. The Other Backward Castes (OBC) are those castes/communities that are notified as socially and educationally Backward Classes by the State Governments or those that may be notified as such by the Central Government from time to time.

major proportion of the urban poor) as they continue to be left out of various developmental programs.

- The proportion of Muslims is also higher (28 %) among the urban poor compared with rural areas. As health care provision to this group poses certain unique challenges, the higher concentration of Muslims in underserved urban localities needs to be factored in while designing health and population stabilization interventions.

3.2 Neonatal, Infant and Child Mortality

Infant and child mortality* rates reflect the level of socio economic development and quality of life and are used for monitoring and evaluating population and health programs and policies. It is disturbing to note that the IMR of urban UP has shown a marginal increase from 59.1/1000 live births in NFHS 1 to 60.4/1000 live births in NFHS 2. The Child mortality rate has come down from 31.6 to 27.1 during the period between the two rounds of the NFHS. About 1 in 17 children in urban UP die in the first year of life and 1 in 12 die before reaching age 5. In absolute terms, approximately 30,000 neonatal deaths, 50,000 infant deaths and 70,000 child deaths occur every year in urban Uttar Pradesh alone. IMR in urban UP is 28% higher than the corresponding all India rate of 47/1000 live births and under 5 mortality rate is 35% higher than the corresponding all India rate of 63/1000 live births¹. The differentials across economic groups in the urban areas of Uttar Pradesh are as follows :

- Neonatal mortality is significantly high among the urban poor (Urban low SLI) at 43.7 per thousand live births in comparison to the urban average of 38.3. (Fig 4). The contributing factors of high neonatal mortality are the low ANC coverage, high proportion of domiciliary deliveries, many of which are attended by untrained health personnel in unhygienic conditions.
- The infant mortality rate among the urban poor is 79.0 per thousand live births as against the urban average of 60.4. (Fig 3). This reflects a) poor availability and utilization of health services b) delay in recognition of early warning signs and prompt treatment of childhood ailments (owing to lack of awareness) and c) continued deprivation of resources to secure normal growth as well as catch up growth in cases of low birth weight, which is common occurrence among the urban poor.

* Mortality rates are defined as :

Neonatal mortality: The probability of dying in the first month of life

Infant mortality: The probability of dying before the first birthday

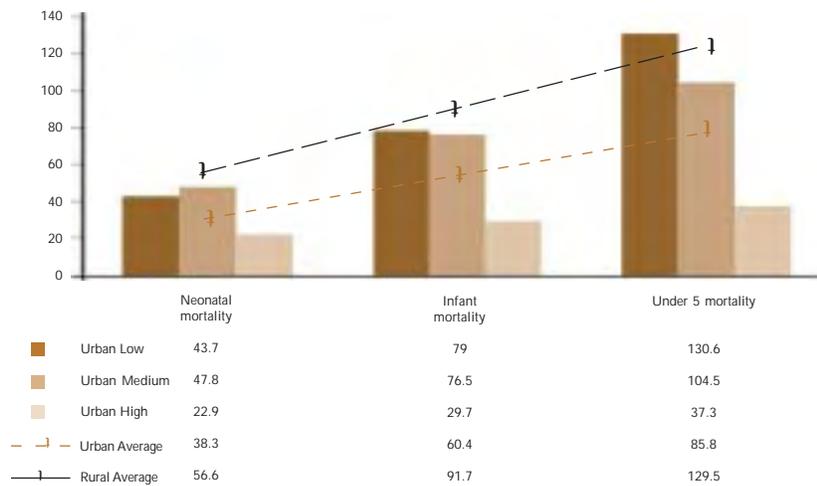
Child mortality: The probability of dying between the first and fifth birthdays

Under 5 mortality: The probability of dying before the fifth birthday

Infant and child mortality among urban poor are significantly higher than urban averages.

1. International Institute for Population Sciences (IIPS) and ORC-Macro (2001), *National Family Health Survey (NFHS-2), India 1998-1999: Uttar Pradesh*. Mumbai : IIPS.

- Under 5 mortality rates (U5MR) vary dramatically among the various categories of urban areas. The U5MR is 130.6 among the urban poor as compared to the urban average of 85.8. The high U5MR is a consequence of the inability to recover in the existing limiting environment, paucity of time to seek health care as parents/ caretakers are daily wagers and being pre-occupied with younger (often more vulnerable) children and low health awareness.



Promoting safe delivery practices and early and closely spaced births will address high neonatal mortality.

Fig 4: Neonatal, infant and child mortality by economic groups.

Policy provisions and program recommendations

The State of Uttar Pradesh has made lot of efforts to bring down the child mortality, which is alarmingly high. It emerged from a study in the urban slums of Lucknow that the major killers of infants in the neonatal period were asphyxia, prematurity and tetanus². The mortality risk was higher among women with poor obstetric history, higher parity and those delivered by untrained persons. Hence it becomes very important that the antenatal and postnatal services to the mothers are improved. The major killers during the post neonatal period was pneumonia, diarrhea disease and anemia and/ or malnutrition³. The impact of these two is accentuated by the fact that the majority of the children are malnourished. Therefore, interventions to improve the nutritional status of preschool children can reduce post neonatal mortality.

While institutional deliveries need to be encouraged, keeping in view the dependency on the proximate "dai" (traditional community based birth attendant) and the community's faith in utilizing her services, a

Addressing poor hygiene and malnutrition among urban poor children will contribute to lower post-neonatal mortality.

- Kapoor, R. K. et al., 1996. Perinatal mortality in urban slums in Lucknow. *Indian Pediatrics*. 33(1):19-23.
- Awasti, S. et al., 1998. Cause-specific mortality in under fives in the urban slums of Lucknow, North India. *Journal of Tropical Pediatrics* 44(6):358-361.

comprehensive dai training program for urban set ups needs to be planned and implemented

The high NMR and child mortality rates also emphasize the need for gradually focusing on integrated programs for maternal and child health and evolving life cycle approach as women are anemic prior to conception and throughout pregnancy. Among the low income groups in Uttar Pradesh, more than 50 per cent of the women gave birth to their first child when they were less than 18 years of age and the birth interval in 40 per cent of the births were less than 24 months⁴. Early and closely spaced child bearing depletes the mother's limited stores resulting in sub optimal fetal growth thereby increasing susceptibility of infants and young children. This also contributes to high maternal mortality which at 707 maternal deaths per 100,000 live births is the highest in India⁵. The integrated programs for maternal and child health are vital for improving maternal health and reducing incidence of low-birth weight with the long-term objective of improving child survival and health.

KEY MESSAGES

- Neonatal, infant and child mortality rates among the urban poor in Uttar Pradesh are amongst the highest in the country.
- It is essential to increase coverage of antenatal care services and increasing deliveries attended by skilled personnel to reduce maternal and neonatal mortality
- Vaccinating all children and improving sanitation and water supply can address the cause of postneonatal mortality to a considerable extent.
- An integration of child survival strategies with maternal health is required for sustained improvements in child survival and health.

4. International Institute for Population Sciences (IIPS) and ORC-Macro (2001), *National Family Health Survey (NFHS-2), India 1998-1999: Uttar Pradesh*. Mumbai : IIPS.

5. Office of the Registrar General. 2002. SRS Bulletin, Volume 36, No. 1. New Delhi: Office of the Registrar General, India.

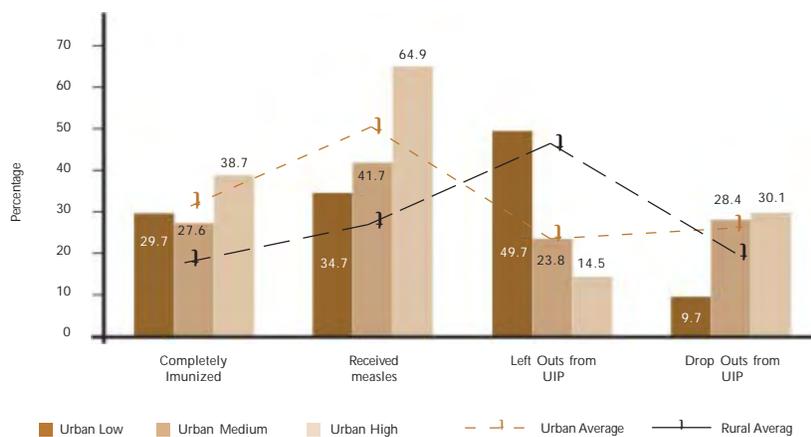
♣ *Dropout rate is the proportion of eligible children who received DPT1 but did not received DPT3 and left out rate is the proportion of eligible children did not receive any vaccination in first nine months of life.*

* *Complete Immunization - one dose of BCG, three doses of DPT and OPV, and one dose of Measles as per the GOI guidelines.*

3.3 Childhood morbidity and health services

Outbreaks of Vaccine Preventable Diseases are more common in urban slums owing to high population density and continuous influx of a new pool of infective agents with the immigrating population^{6,7,8}. Measles produces a higher percentage of younger cases with associated higher mortality, owing to prolonged exposure to infected siblings in the small living space of slums. Severity of infection is higher in these secondary cases⁹. Resurgence of diphtheria in urban slums has been recently reported¹⁰. The main reasons attributed were lack of immunization, rapid population migration and overcrowding. Immunization programs in urban areas can exert significant effects on vaccine preventable disease associated mortality by limiting the number of cases, decreasing clustering of cases within households and increasing time lapse between outbreaks. The vaccination of children against six serious preventable diseases (tuberculosis, diphtheria, pertussis, tetanus, polio and measles) has been a cornerstone of the child health care system in India. The coverage of immunization among the urban poor in Uttar Pradesh is as follows :

- Only 29.7 of all children aged 12-23 months among urban poor had received complete immunisation*. (Fig 5)
- Only about one-third (34.7 percent) of children from urban poor households were vaccinated against measles by the age of 12 months as compared to the urban average of 50.0 percent.



- Dropout and left out rates* are far higher among urban poor households (9.7% and 49.7% respectively), in comparison to the urban average (26.2 and 24.2% respectively).

The high drop and left out rates in immunization are a result of the weak birth registration system particularly for the urban slums. Many of the births,

Lack of immunization, rapid migration and over-crowding in slums results in high prevalence of vaccine preventable diseases.

It is necessary to extend immunization coverage to all slums including unlisted slums and children of temporary migrants.

Fig 5: Immunization Coverage Among Children 12 - 23 Months of Age by economic groups.

- Loening W and Coovadia H. 1983. Age specific occurrence rates of measles in urban, peri-urban, and rural environment: Implications for time of vaccination. *The Lancet*; 322 (8345) : 324-6.
- Lal, S. et al., 2003. Innovative approaches to Universalize Immunization in rural areas. *Indian Journal of Community Medicine*. 28 (2) : 51-56.
- AFP Alert. National Polio. Surveillance Project. A Govt. of India - WHO Initiative volume 6, No. 3, July 2002-Dec. 2002.
- Aaby P. The impact of measles and measles vaccinations on child survival: Contradictions and resolutions. Bandim Health Project, Danish Epidemiology Science Centre, Apartado 861, Bissau, Guinea-Bissau.
- Lodha, R. et al., 2000. Diphtheria in urban slums in north India. *The Lancet*. 355 : 204.

particularly domiciliary deliveries which account for 85.3% of the births in the urban poor of Uttar Pradesh, remain unregistered. This is compounded by inefficient monitoring of both service quality (in form of supportive supervision of health staff, and identification of training needs) and service utilization for immunization.

Further, left outs are often not identified as they are “difficult to reach” due to a) their residence being in a distant pocket of the slum, b) the family being a recent migrant with limited information about immunization services (dates and venue) and c) families resistant towards immunizing children amongst other reasons. Nearly half of the children of the urban poor in Uttar Pradesh are left out of the immunization programme which indicates that a large proportion of slums are out of reach of health services. Thus, emphasis should be on updating slum clusters on a regular basis to include new cluster and conducting outreach camps in these slums to improve immunization coverage.

Factors that need attention to improve immunization coverage among the urban poor include the following: (i) The catchment areas of D-type health centers are often not updated to respond to the dynamic character of urban growth. (ii) There are grey ‘border areas’ between zones of the service delivery units, which are then missed out owing to this ambiguity. (iii) National events (such as pulse polio campaign) divert ANMs efforts away from routine immunization programs. (iv) Often planners and service providing personnel harbor the perspective that slums are ‘illegal’ and hence should actually be evicted or uprooted and that providing them services contributes to giving them legal sanctity. This concept also deprives a large number of children from essential vaccines and other preventive care, contributing to the colossal presence of disease causing pathogens in our environment. (v) Providers often continue to practice the concept of waiting for an optimum number of children to arrive or collect before opening a multi dose vial such as measles or BCG. This usually leads to a large number of missed opportunities for timely child immunization.

Strengthening community-provider linkages can help in improving immunization coverage.

Policy provisions and program implications

The urban health plans of 14 cities in Uttar Pradesh are being developed and implementation will be initiated with support from Government of India as part of RCH-2. This is a step towards strengthening the urban health delivery system. Identification, assessment and plotting of all listed and unlisted slums on city maps is required to define catchment areas of UHCs and comprehensive planning for outreach camps by ANMs. A mechanism for supportive supervision to ensure quality of immunization services needs to be established since the overworked ANM cannot provide

good quality service to all beneficiaries throughout the immunization session. Staff sensitization and motivation workshops may be planned on a regular basis to identify emerging needs for support and training of the health staff.

It is essential to improve awareness about health issues in the community, build collective negotiation capacity and strengthen linkages of the community and the health system. An effort towards this direction is the development of women based institutions like *Mahila Arogya Samitis* which being initiated as part of the urban health program. This will ensure better logistics and effective coordination for increasing immunization coverage.

Diarrhea: prevalence, practices and treatment

Diarrhea is the second most important killer of children under age five world wide, following acute respiratory infection¹¹. It is important to increase awareness among mothers and communities about the causes and treatment of diarrhea. Diarrhea is most common among the urban poor with 25.9 percent of children reporting diarrhea in the past two weeks preceding the survey. (Fig 6). The near absence of sanitation and drainage facilities is directly associated with high diarrhea prevalence. Over 80 % urban poor households in Uttar Pradesh have no access to piped water supply.

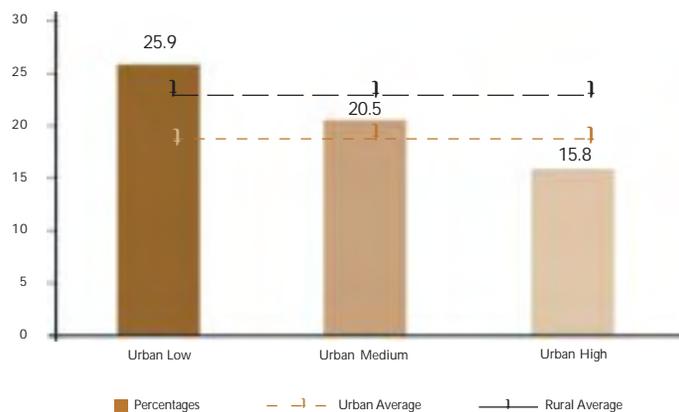


Fig 6: Prevalence of diarrhea 2 weeks preceding the survey by economic groups

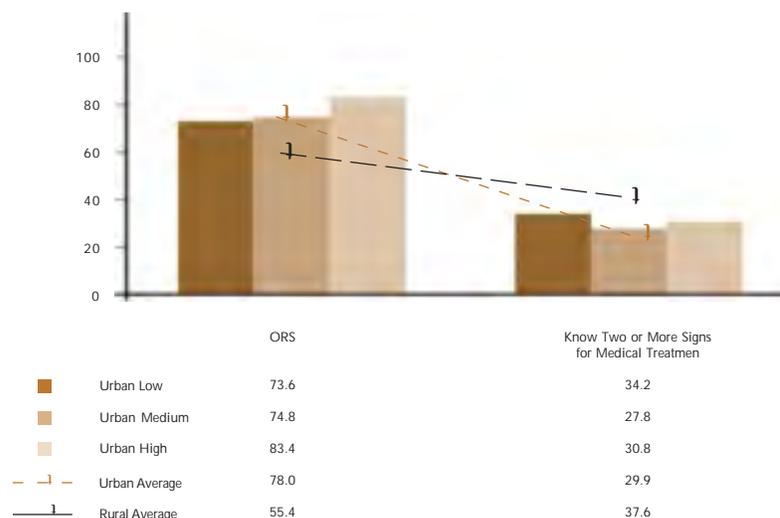
Practices during Diarrhea

Oral Rehydration Therapy (ORT), a simple, cost-effective treatment given at home using either packets of Oral Rehydration Salts (ORS) or a simple home solution of sugar, salt and water has contributed significantly to reduce child mortality due to diarrhea¹². Level of knowledge about treatment of diarrhea by using ORS is low (73.6 percent) among the urban poor in

- Gordon, B. et al., 2004. *Inheriting the World : The Atlas of Children's Health and the Environment*. Geneva : World Health Organization.
- Victora CG, Bryce J, Fontaine O, Monasch R. 2000. Reducing Deaths from Diarrhea through Oral Rehydration Therapy. *Bulletin of the World Health Organization*, 78:1246-1255.

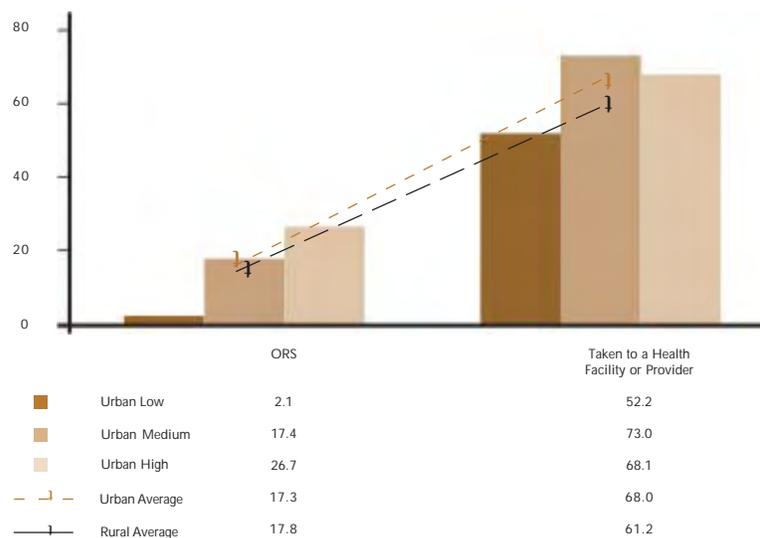
comparison to the urban average (78.0 percent) (Fig 7). The overall use of ORS during diarrhea is almost non-existent (2.1 %) among the low income urban population. There is evidence to support that mother’s exposure to mass media increases awareness and use of ORS¹³. One of the factors affecting

Fig 7: Knowledge about treatment during diarrhea by economic groups



the use of ORS in urban areas is its availability. The health programmes should tie up with other community based programmes like SJSRY and ICDS to improve access to ORS.

Fig 8: Treatment during Diarrhoea by economic groups



Acute Respiratory Infection

Acute respiratory infections—primarily pneumonia—are a major cause of illness among children throughout the world. In developing countries, an estimated 4.1 million children under age five die from acute respiratory

13. International Institute for Population Sciences (IIPS) and ORC-Macro (2001), *National Family Health Survey (NFHS-2), India 1998-1999: Uttar Pradesh*. Mumbai : IIPS.

infections (ARI) every year¹⁴. In India, as in many other countries, ARI is the leading cause of childhood death¹⁵. ARI assumes more significance in an

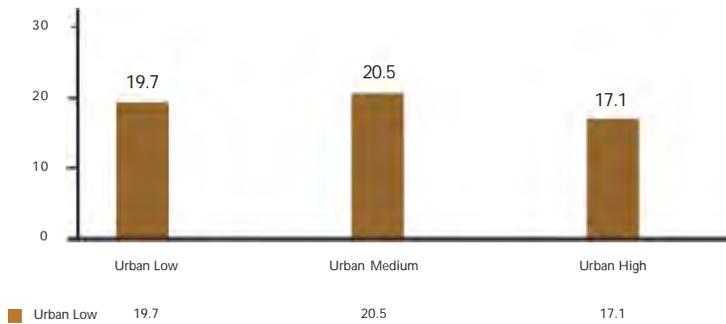


Fig 9: Prevalence of ARI 2 weeks preceding the survey by economic groups

urban slum setting where congestion and air pollution (both indoor and outdoor) are very common. The proportion of children in urban Uttar Pradesh with ARI varies from 19.7 per cent among low income population to 17.1 among the urban high income groups. It is estimated that 60 percent of ARI deaths can be prevented seeking health care immediately on developing signs of ARI and by selective use of antibiotics.

Policy provision and program implications

- Resources of the National Slum Development Program and other schemes should be utilized for the construction of community toilets for the urban poor and slum dwellers. This will improve environmental hygiene and decrease diarrhea.
- There is also a clear need for the urban health improvement program to build functional linkages with the sanitation program and actively advocate for augmenting sanitation services.

Hygiene conditions and access to safe water in slums need to be improved to address high childhood morbidity.

KEY MESSAGES

- Only 30 % of the children are completely immunized by the age of one year amongst the urban poor population of Uttar Pradesh.
- Supply, demand and policy issues plague immunization coverage among the urban poor.
- Strengthened outreach and promoting use of fixed facilities for immunization services holds the key to reach the urban poor children.
- Community based organizations in urban slums can become depot holders for ORS, nutritional supplements and should be trained in effective counseling.
- The capacity of community level workers in slums for early identification and prompt treatment or referral for diarrhea and ARI should be enhanced.
- DUDA must be effectively involved in the promotional efforts keeping in mind its large presence in the slums in the form of CDS and NHGs

14 WHO (World Health Organization). 1995. The world health report 1995: Bridging the gaps. Geneva: World Health Organization.

15 Murray, C.J.L., and A. D. Lopez, eds. 1996. The global burden of disease. Cambridge, Massachusetts: Harvard University Press.

Malnutrition among urban poor children is a contributing factor to high morbidity and mortality.

- There is a need to focus on hygiene promotion at the household level in the absence of sanitary facilities. This is particularly relevant for slum conditions for diarrhea prevention.
- The community level workers' capacity for early identification and prompt treatment or referral for diarrhea should be enhanced. The link worker proposed in the GOI guidelines for the urban health programming may perform this role with appropriate training and communication tools.
- Community Based Organizations, active women from the community or local shops could serve as depot holders for ORS to improve access for diarrhea affected children in slums.
- Adverse economic conditions and lack of social support networks results in women taking infants and children to their work place which exposes them to health hazards. There is also a need to expand day care services for children of poor working women.

3.4 Nutritional Status of women and children

Nutritional status is a major determinant of the health and well being of children. Malnutrition among children is often caused by the synergistic effects of inadequate or improper food intake, repeated episodes of parasitic or other childhood diseases such as diarrhoea, and improper care during illness^{16,17}. Malnutrition is an important factor contributing to high morbidity and mortality among children^{17,18}. Nutritional status of women and girls is compromised by unequal access to food, by heavy work demands, and by special nutritional needs (such as for iron owing to menstrual loss), females are particularly susceptible to illness, particularly anemia. Anemia among women is an important cause of maternal and perinatal mortality by contributing to increased risk of premature delivery and low birth weight¹⁹. Undernutrition is more common for children of mother who are malnourished. The nutritional status of urban poor children in Uttar Pradesh is as follows :

16. Pelletier DL, Frongillo EA Jr, Schroeder DB and Habicht JP. 1995. The effects of malnutrition on child mortality in developing countries. *Bulletin of the World Health Organization*. 73 : 443-448.
17. Ruzicka, L. T. and P. Kane. 1985. Nutrition and child survival in south Asia. In K. Srinivasan and S. Mukerji, (eds.) *Dynamics of Population and Family Welfare*, Bombay: Himalaya Publishing House.
18. Briend, A., B. Wojtyniak, and M. G. M. Rowland. 1988. Breast feeding, nutritional status, and child survival in rural Bangladesh. *British Medical Journal* 296(6626): 879-82.
19. Seshadri, Subadra. 1997. Nutritional Anaemia in South Asia. In Stuart Gillespie (ed.), *Malnutrition in South Asia : A Regional Profile*. Katmandu : Regional Office for South Asia : UNICEF.

- The rich-poor divide in urban areas is evident as children from poor urban families (58.3 %) are more likely to be undernourished as compared to children from rich families (35.6 %). (Fig 10)
- More than half of (58.3 %) of the urban poor children are underweight. This is worse in comparison to other urban categories and the urban average of 42.6.
- 65 percent of the urban poor children are stunted.

** Children who are more than two standard deviations below the median of the reference population in terms of height-for-age are considered short for their age or stunted.*

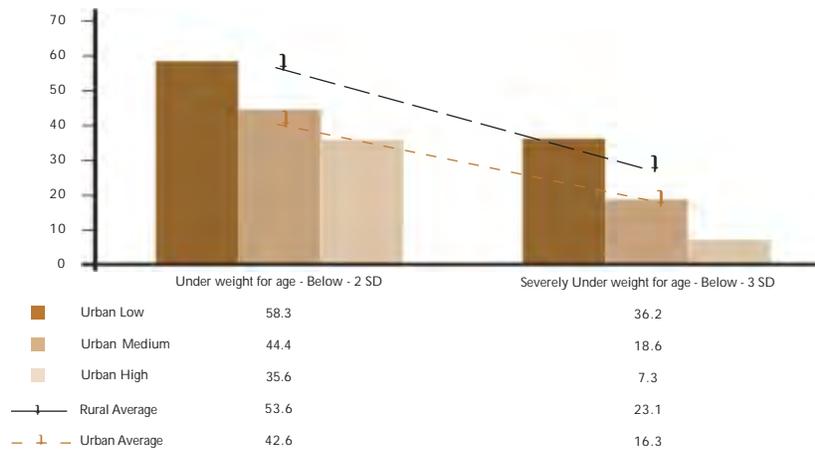


Fig 10 : Nutritional status of children under 3 years by Economic groups

Infant Feeding practices

Infant feeding practices have significant effects on both mothers and children. Mothers are affected through the influence on fertility levels and the length of birth intervals. Early appropriate and exclusive breastfeeding improves nutritional status and reduces morbidity and mortality. The timing and type of supplementary foods introduced in an infant's diet also has a bearing on his nutritional status. Breastfeeding and complementary feeding have been scientifically proven to be valuable interventions for improving child survival²⁰. Infant feeding practices among the urban poor in Uttar Pradesh is as follows:

- Only 2.7 percent of the urban poor neonates are breastfed within one hour of birth as against the urban average of 7.9 percent. (fig 11)

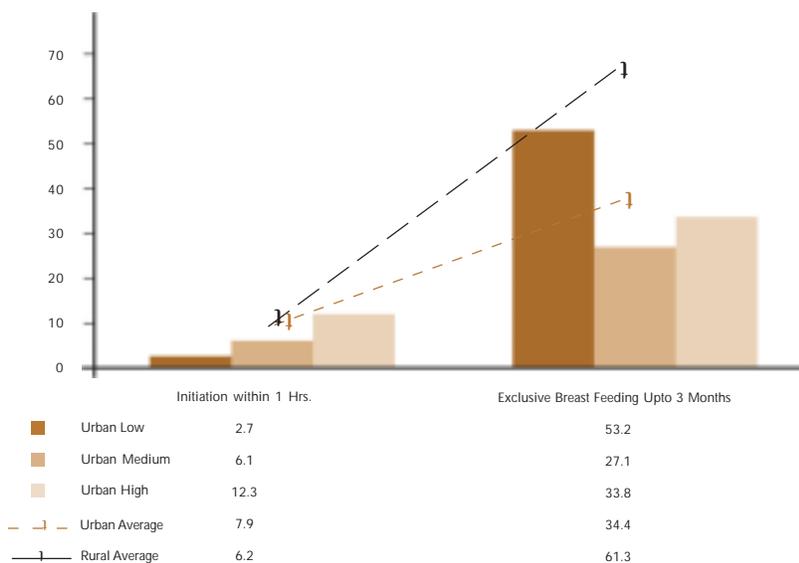


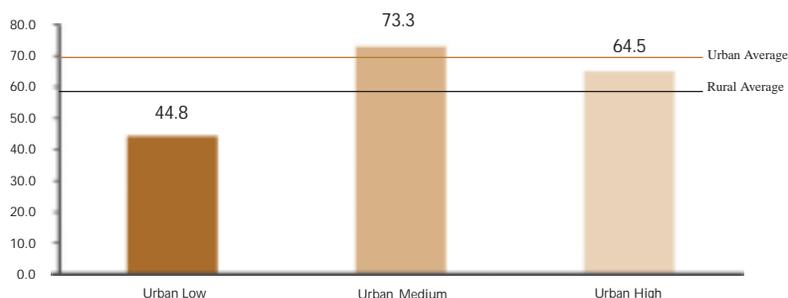
Fig 11: Breastfeeding practices by economic groups

Breastfeeding practices among the urban poor are dismal.

20. Jones et al., 2003. How many child deaths we can prevent this year? *Lancet* 362: 65-71.

- More than half (55.2 percent) of the children do not receive complementary foods by 7-9 months of age among the urban poor (Fig 12).

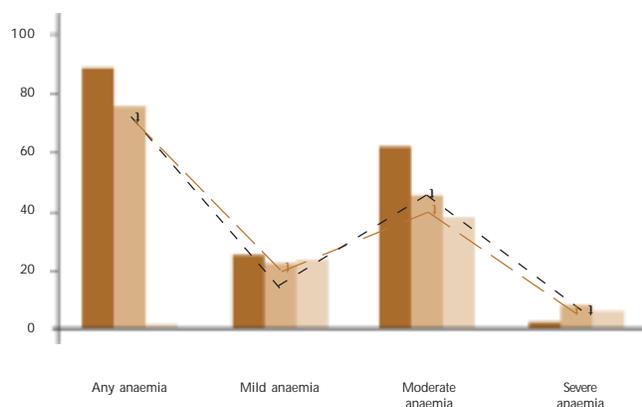
Fig 12: Percentage of Children Who Receive Complementary Food By 7 - 9 Months by economic groups



Anemia among children

Anemia is a serious concern for young children because it can result in impaired cognitive performance, behavioral and motor development, coordination, language development as well as increased morbidity from infectious diseases²¹. One of the most vulnerable groups is children in the age group of 6-24 months²². Prevalence of anemia is higher (89 percent) among the urban poor children of UP than the urban or rural average (74 percent). (Fig 13)

Fig 13: Prevalence of anemia among children by economic groups



- J.Seshadri, Subadra. 1997. Nutritional Anaemia in South Asia. In Stuart Gillespie (ed.), *Malnutrition in South Asia: A Regional Profile*. Katmandu : Regional Office for South Asia : UNICEF.
- Stolzfus, Rebecca J. and Michele L. Dreyfuss. 1998. *Guidelines for the Use of Iron Supplements to Prevent and Treat Iron Deficiency Anemia*. International Nutritional Anemia Consultative Group. Washington D.C. : International Life Sciences Institute Press.

Vitamin A supplementation

Vitamin A deficiency, which is one of the most common nutritional deficiency disorders in the world, is associated with night blindness and compromised immune capacity to battle infections. Vitamin A supplementation is the fastest and most cost-effective approach to improving the vitamin A status of the population. Among the urban poor in Uttar Pradesh, only 12.3 percent of children aged 12-35 months, received at least one dose of vitamin A as against the urban average of 21.1 percent. (Fig 14). Inefficiencies in the supply chain of Vitamin A is an important impediment to the widespread use which needs to be addressed on a priority basis.

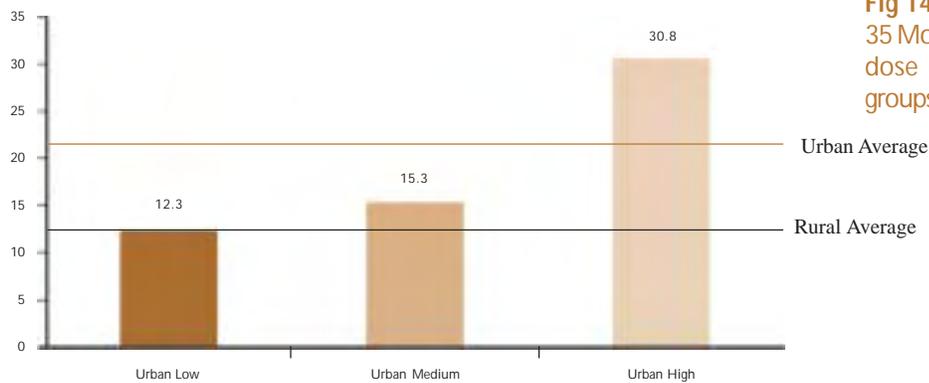


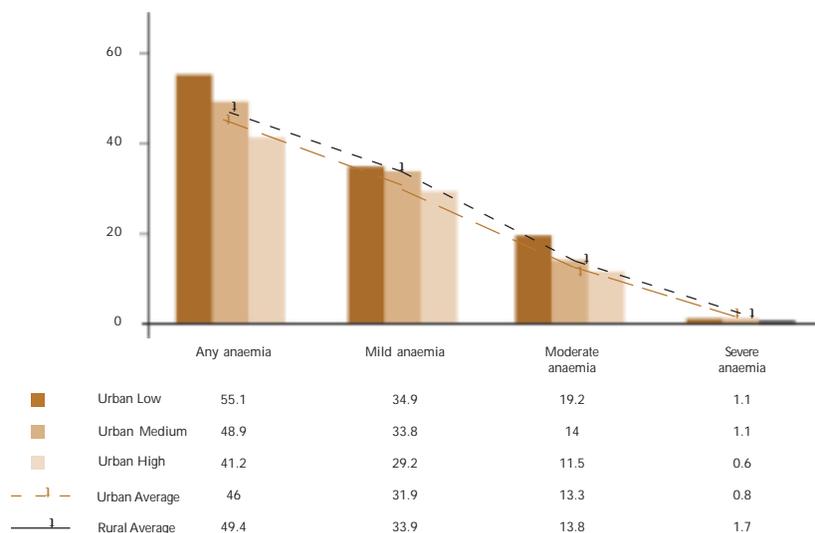
Fig 14: Percentage of children (12-35 Months) who received atleast one dose of Vitamin A by economic groups

Anemia among women

The occurrence of anemia is high across all economic groups with it being higher among the urban poor women (55.1 percent) in comparison to urban or rural average (46 % and 49.4 % respectively) (Fig 15). Anemia among pregnant women is significantly associated with low birth weight and limited reserves of iron at birth. The high prevalence rate of anemia emphasizes the need for regular ANC which would ensure proper distribution and counseling for proper consumption of IFA tablets. Link workers recruited from the community can also help in ensuring the IFA tablets are consumed regularly by providing counseling, emphasizing its importance for the health of mother and children and helping women overcome the perceived side effects of consuming IFA tablets. Where the women's groups are active, peer support can also encourage women to consume IFA tablets. The high prevalence of anemia is also associated with dietary factors (limited intake of iron / folate rich foods, high intake of iron absorption inhibitors or low intake of iron absorption facilitators) or behavioral causes (improper hygiene and consequent helminthic infections). Regular counseling is required especially during pregnancy to encourage and support appropriate nutritional practices. Though IFA consumption may provide immediate relief from symptoms

High prevalence of anemia contributes to high maternal morbidity and mortality.

Fig 15: Prevalence of anemia among women by economic groups



and improve blood hemoglobin profile, sustained improvement in anemia status can be achieved only through nutritional and behavioral modifications.

Policy provisions and program implications

Improving coverage of ICDS in urban slums can improve nutritional status of women and children.

Promotion of optimal feeding practices including exclusive breastfeeding for six months, timely initiation of complementary feeds and good cooking and hygiene practices needs to be undertaken particularly at the slum level through peer counseling and regular visits by trained CBOs or other slum level health volunteers. The coverage of ICDS should be expanded to the urban slums as many studies have pointed to the positive correlation between the existence of an aganwadi center and improved nutritional status. Schemes like the Antyodaya Anna Yojana which targets the poorest of the households for distribution of subsidized rations should be made accessible to improve the nutrition status of the mother.

KEY MESSAGES

- More than half of the urban poor children in UP are underweight
- High malnourishment, threatening environment, low level of immunization and ineffective health services along with poverty are forming a vicious circle which affect adversely maternal and child survival.
- The high prevalence of anemia should be addressed by improving IFA distribution and better counseling and nutrition during pregnancy.
- The coverage of ICDS services in urban poor localities should be improved.
- Community based organizations can become depot holders for IFA, nutritional supplements and should be trained in effective counseling.

3.5 Maternal Health

Pregnancy and childbirth are the leading causes of death, disease and disability among women of reproductive age. They account for at least 18% of the burden of disease in this age group – more than any other single health problem²³. Maternal health interventions in the form of antenatal care, skilled attendance during delivery and helping women prevent unwanted pregnancy are among the most cost-effective and life-saving investments in public health.

Antenatal care

Lack of antenatal care is an important risk factor for maternal death^{24,25}. Women having developed contacts with the health system in the antenatal period may lead to shorter delays in decision making about the place of care and therefore lower mortality²⁶. Women's tetanus immunization provided in the antenatal service package contributes to lower neonatal mortality due to tetanus which is a major killer of neonates in India²⁷. Iron and folic acid supplementation in the antenatal care package has reduced the prevalence of anemia among pregnant women and thereby to lower

Only one in ten women in urban slums received 3 or more antenatal checkups.

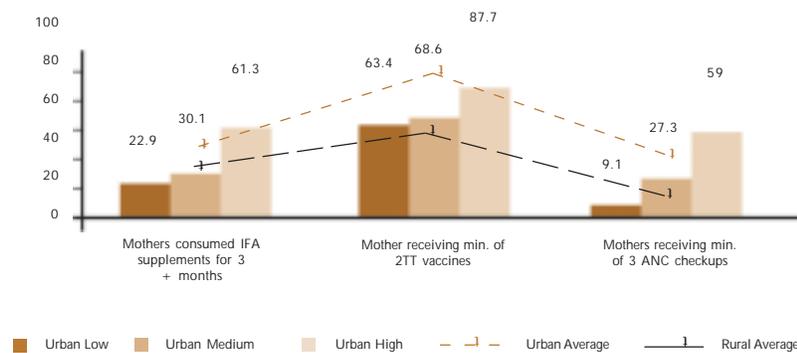


Fig 16: Antenatal care received by mothers during pregnancy by economic groups

maternal and perinatal mortality²⁸. The Reproductive and Child Health Programme recommends that as part of antenatal care, pregnant women should be provided with at least three antenatal check ups, two doses of tetanus toxoid vaccine and iron and folic acid supplementation for at least three months during pregnancy. Only 9.1 percent of the mothers in urban poor households received the recommended three or more antenatal check ups as against the urban average of 36.8 percent. (Fig 16) For 63.4 percent of births, urban poor mothers received two or more doses of TT vaccine and only 22.9 percent of mothers consumed iron and folic acid tablets for more than 3 months.

- 23 World Bank. 1993. World Development Report 1993: Investing in Health. Washington, DC: World Bank.
- 24 Bhatia. J.C. 1993. Levels and causes of maternal mortality in Southern India. Studies in Family Planning. 24: 310-318.
- 25 Anandalakshmy P.N. 1993. Demographic, socio-economic and medical factors affecting maternal mortality - an Indian experience. The Journal of Family Welfare. 39: 1-4.
- 26 Jejeebhoy, S. J. 1997. Maternal mortality and morbidity in India: Priorities for social science research. Journal of Family Welfare. 43: 31-52.
- 27 Luther, NY. 1998. Mother's Tetanus Immunization is associated Not Only with Lower Neonatal Mortality but Also with Lower Early-Childhood Mortality. NFHS Bulletin. No. 10. Mumbai : IIPS and Honolulu: East West Center.
- 28 International Institute for Population Sciences (IIPS) and ORC Macro. 2000. National Family Health Survey (NFHS-2), 1998-99: Mumbai : IIPS.

Program Implications

The low ANC coverage reflects the gap in the health care delivery system where large pockets of slums are completely uncovered by health services while in others health workers and facilities cater to populations which are much higher than the prescribed norms. Local RMPs who have significant presence in the community can be trained and provided incentives to provide antenatal care to women. Link workers, SHG's, CBO's can facilitate delivery of health services including ANC by providing information and increasing demand for services, serving as depot holders for essential medicines and contraceptives and by developing linkages between the community and health providers.

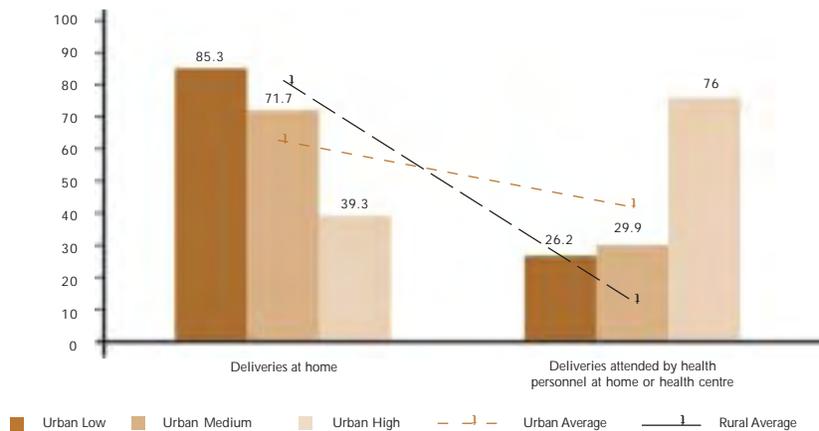
Care during delivery

Seven out of eight deliveries among urban poor take place at home.

Skilled care during childbirth is important because a significant proportion of women and newborns develop serious and hard to predict complications during or immediately after delivery. Skilled attendants—health professionals such as doctors or midwives possessing requisite midwifery skills—can recognise these complications timely, and either treat them or refer women to health centres or hospitals immediately if more advanced care is needed. Once an obstetric complication develops, a trained traditional birth attendant or nurse can do little at home because surgical intervention is often necessary. The practices among the urban poor in Uttar Pradesh for delivery is as follows :

- Domiciliary delivery is still the norm among the urban poor with 85.3% of deliveries taking place at home.
- The deliveries attended by a health professional at home or at a health facility among the urban poor households is only 26.2 percent in comparison to the urban average of 51.7 percent. (Fig 17)

Fig 17: Place and assistance during delivery by economic groups



Program Implications

- a) Institutional deliveries should be promoted by increasing the number of health facilities providing round the clock maternity services and encouraging slum communities to avail of such services. Effective implementation of the Janani Suraksha Yojana (JSY) such that it proactively reaches out to the most vulnerable will also help in increasing the percentage of institutional deliveries.
- b) Though promoting institutional deliveries is the ideal option for ensuring safe delivery, the lack of adequate public health facilities is a constraint. Home deliveries are likely to continue for a long time and a comprehensive training package for the “dais” therefore needs to be formulated and implemented. The curriculum for dai training should cover i) skill and practice of clean delivery, ii) early identification of sickness and prompt referral and iii) promoting early initiation of breastfeeding and provision of warmth to the newborn. Follow up is also necessary to ensure practice of training inputs.
- c) It is also observed that a large number of slum women return to their native villages for delivery. In order to ensure that these women adhere to safe delivery practices, specific communication strategies should target such temporary migrants and supplemented by attractive pictorial cards which depict recommended behaviors and which could also be used for referral at their native villages.
- d) There is a continued influx of migrants into urban areas owing to better economic opportunities in cities. RCH services should be better planned such that each ANM and MPW has a defined catchment area and is mandated through official circulars to (i) add new migrants into the program as they come in and provide a report of new migrants every quarter (ii) conduct special counseling sessions for new migrants to inform them about available services at UHCs and providing them a Family Health Card.

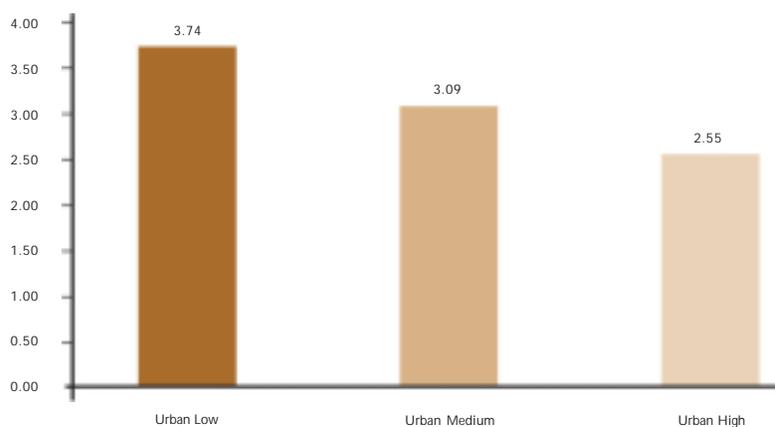
Providing services to the rapidly mobile slum population is a challenge for health providers.

KEY MESSAGES

- Only one in ten pregnant women received the recommended three antenatal visits. Such low ANC coverage reflects the glaring gaps in the health care delivery system especially for the urban poor.
- Since three out of four deliveries are domiciliary there is an urgent need to identify and train all TBAs in slum settlements and ensure support to them through various state government schemes.
- Large scale migration and rapid mobility of population needs to be factored in while planning the delivery of health services.

Programs need to target men in addition to targeting women to address low usage of family planning methods.

Fig 18: Total Fertility Rate by Economic groups



3.6 Fertility and family planning

High population growth rate in urban areas is not only because of rapid in-migration but also because of large families and the limited use of family planning methods especially among the urban poor. Addressing the high fertility and low use of family planning methods is not only important from the view point of reducing the rapid growth of population but also to reduce high parity and closely spaced births which have a significant bearing on maternal and child health. The Total Fertility Rate (average number of children that will be born to a woman if she experiences the current fertility pattern throughout her reproductive period span 15-49 yrs) among urban poor is 3.74 which is much higher than the urban average of 2.88 in Uttar Pradesh. (Fig 18). Mean number of children ever born to ever married women age 40-49 among urban poor is 6.4 as against the urban average of 5.2.

The high TFR across different economic groups in Uttar Pradesh shows that the medium and long term objectives of State Population Policy 2000 to bring TFR to 2.6 and replacement levels by 2011 and 2016 respectively calls for urgent and intense efforts with a unified multi-sectoral approach.

The low status of women, low levels of education and traditional beliefs in Uttar Pradesh is an important challenge for increasing contraceptive prevalence and the desire for smaller families^{29,30}. Efforts to improve the status of women such as improving literacy and education levels, increasing avenues of employment, raising the age at marriage and gender equitable property rights should complement efforts to improve availability of contraceptives in urban slum communities.

In India, gender inequalities favor men and sexual and reproductive health decisions are usually made by them. However, the Indian family welfare programme has targeted only women and very limited attention has been

29. Devi, R. et al., 1996. Unmet Need for Family Planning in Uttar Pradesh. *National Family Health Surveys Subject Reports. No. 1*. Mumbai : International Institute for Population Sciences; and Honolulu : East West Center.
30. Viswanathan, Hema, Sona Godfrey, and Nancy Yinger. 1998. *Reaching Women: A Study of Unmet Need in Uttar Pradesh, India*. Washington, DC: International Center for Research on Women.

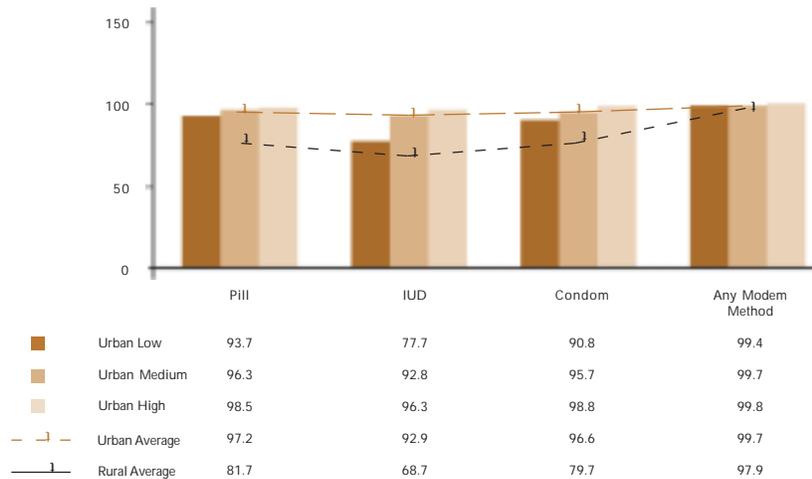


Fig 19: Knowledge of methods of Contraception by economic groups

focused on men. The lack of information and sensitization on family planning issues by men has been one of the bottlenecks in the increase of contraceptive use. The Reproductive and Child Health Programme envisages to pay more attention to men in order to have more impact on contraceptive prevalence.

Though knowledge about temporary methods of contraception ranges is high only 21 percent of women from Urban poor were actually using any modern contraceptive methods in comparison to 45 percent of urban average. (Fig 20) The use of spacing method (Pill/IUD/Condoms) is extremely low (6.7%) among the urban poor. Another important dimension is the unmet need for spacing method is highest in the state of Uttar Pradesh at 25%. The government should make efforts to involve the other community based programmes for improving the availability and information of family planning methods.

Spacing methods need to be promoted to address closely spaced births and thereby improve maternal and child health.

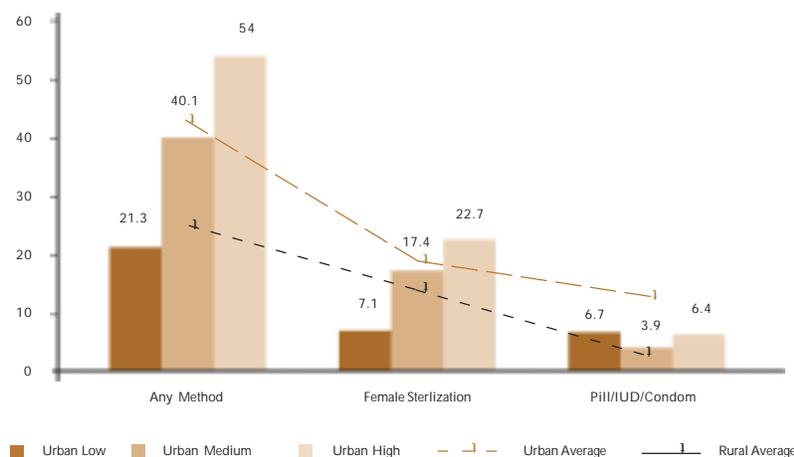


Fig 20: Current Use of Contraceptives by economic groups

Program Implications

1. There is an urgent need to promote the use of spacing methods in wake of high proportion of closely spaced births (inter-pregnancy interval of less than 24 months) and high TFR among the urban poor.

Building on existing networks that have strong linkages with the community can be a useful strategy for improving usage of family planning services. The use of dairy cooperative based community based distribution channels in Uttar Pradesh by SIFPSA has resulted in significant increases in contraceptive prevalence in project areas. The method mix has also changed from an almost exclusive reliance in sterilization to greater use of spacing methods. Similar channels such as the use of contractors or *thekedaars* who mobilize a large informal sector workforce could also be used for involved for promoting family planning among men.

Link volunteers and community based organizations can help in increasing knowledge, demand and use of family planning methods.

Training community members to function as link volunteers can help in **extending outreach services** to the door steps of the slum dwellers resulting in better demand for health and family welfare services and ensuring clients satisfaction. In the Calcutta Slum Improvement Project, **honorary female health workers** played a significant role in bringing about health improvements of the community due to their accessibility, low cost of health care, home visits, and positive attitude.

2. Strengthening community based organizations like SHGs is an effective mechanism to strengthen linkages between the community and the health system. Such groups can complement the efforts of health workers in generating awareness about health and family welfare issues and counseling for family planning and acting as depot holders for temporary methods.
3. It is essential to target IEC towards men and solicit their support as in a patriarchal society like Uttar Pradesh, it is the men who take most of the important decisions like those related to family size and use of family planning. Studies in Uttar Pradesh have shown that men's lack of reproductive health knowledge can have dangerous implications for women, who often must defer to male family members in matters of health. Ensuring that men understand the basic facts about fertility and reproductive health, as well as the importance of appropriate care is vital to women's health and well-being^{31,32}.
4. Specific strategies are required to improve contraceptive prevalence among Muslims which is lower than the state's average. Though this might be partly attributed to poor socio-economic and educational status of this

31. Bloom SS et al., What husbands in Northern India know about reproductive health: correlates of knowledge about pregnancy and maternal and sexual health, *Journal of Biosocial Science*, 2000, 32(2):237–251.

32. Singh, K. K. et al., 1998. Husbands' Reproductive Health Knowledge, Attitudes, and Behavior in Uttar Pradesh, India. *Studies in Family Planning* 29 (4): 388-99.

community and restrictions placed on female movements outside home, it is also observed that localities dominated by Muslims are not served adequately by health workers due to misplaced sense of insecurity about visiting these areas³³. It is therefore essential to address these concerns through educational and motivational campaigns. Other initiatives such as community based distribution, social marketing in Muslim localities and involving Muslim organizations in advocacy can be tried out. Respecting the community's beliefs and traditions, a choice of spacing methods (IUDs, pills and condoms) could be more effective rather than efforts towards permanent methods. Taking the support of religious and opinion leaders could also help in making inroads to improving attitudes and acceptance of family planning among minority groups.

5. Adolescence is a crucial period of life when attitudes towards sexuality, reproductive health and contraceptive methods are formed. This is also a period when ignorance on these issues is common and there exists huge information needs. Programs such as the Kishori Shakti Yojana of the Department of Women and Children, directed at adolescents can help them to be better prepared for parenthood and increase usage of contraception.
6. Linking education programs such as Sarva Shiksha Abhiyan which have components of adult education with messages on family planning can improve knowledge and improve attitudes and usage of contraception.

KEY MESSAGES

- The high TFR of 3.7 among the urban poor emphasizes the need for increasing age at marriage and the use of family planning methods.
- The use of sterilization is low (7.1 per cent) and there is a high unmet need for limiting methods among the urban poor in Uttar Pradesh. This needs to be addressed by improving information about the methods and access to these services.
- The use of spacing methods is also very low (6.7 per cent). The increased use of spacing methods will result in longer birth intervals and thereby better reproductive health and improved child survival.
- The use of community based distribution and social marketing channels can improve the usage of spacing methods.
- As men are the primary decision makers, it is essential to target messages specifically to them.

33. Khan, M.E.; Patel, Bella, C. 1997. Reproductive Behaviour of Muslims in Uttar Pradesh. *The Journal of Family Welfare*. 43(1): 13-29.

Lack of safe water and toilet facilities contributes to high disease burden among the urban poor.

Four-fifths of urban poor in Uttar Pradesh do not have access to piped water supply.

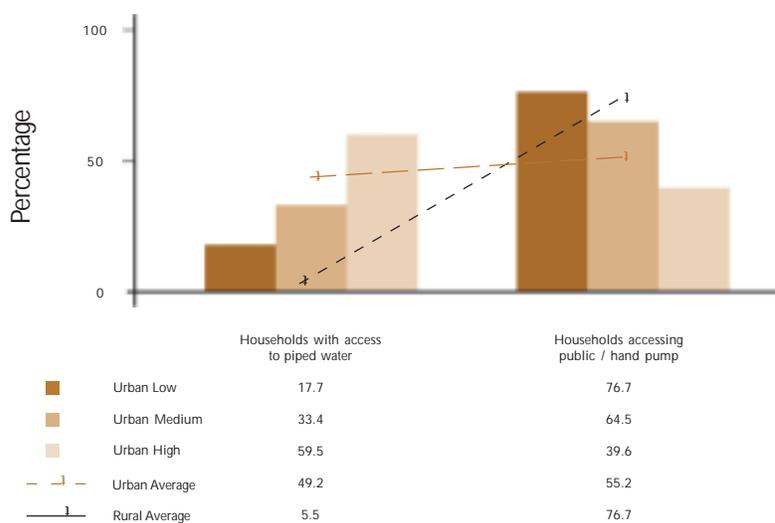
3.7 Environmental Health Conditions

Access to safe water and sanitary means of excreta disposal are basic human rights and form an indispensable components of primary health care. Provision of adequate sanitation services and safe water supply represents an effective health intervention that reduces the mortality caused by diarrhoeal disease by an average of 65 per cent and related morbidity by 26%³⁴. Inadequate sanitation, hygiene and water result not only in more sickness and death but also in higher health costs, lower worker productivity and lower school enrollment and retention rates.

Access to water

The poor in urban areas bear a disproportionately higher burden of the non-availability of water as well as its poor quality. 82.3 percent of the urban poor households have no access to piped water. Nearly three-fourths of the urban low and two-thirds of medium income households derive their drinking water from public taps/hand pumps. (Fig 21)

Fig 21: Access to water supply by economic groups



Sanitation facility

Only one-third of the urban low income households use a private sanitary facility (Flush/pit toilet) for the disposal of excreta as compared to the urban average of 83.4 percent (Fig 22). Around 30% of the urban low income households have toilet facilities within their premises.

34. WHO and UNICEF, 2000: *Global Water Supply and Sanitation Assessment 2000 Report*. WHO and UNICEF.

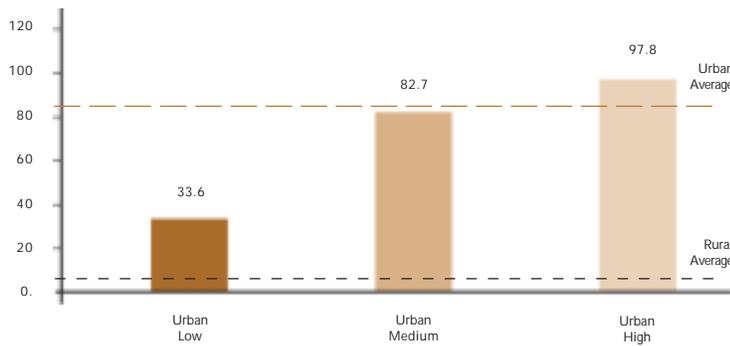


Fig 22: Households Having Access to Private Sanitation Facility by economic groups

Policy provisions and program implications

A number of policy provisions exist for the improvement of amenities in slums. VAMBAY (Valmiki Ambedkar Awas Yojana) introduced in 2001-02, aims to meet a longstanding gap in programs for slum-dwellers, namely, provision of a shelter or upgrading the existing shelter of people living below the poverty line in urban slums. Provision of sanitation and water supply is also included in the scheme. The National Slum Development Program (NSDP) also deals with improving the conditions of urban slums by providing physical amenities like water supply, storm water drains, community bath, widening and paving of existing lanes, sewers, community latrines, street lights etc.

Two-thirds of urban poor in Uttar Pradesh do not have access to private sanitary facility.

KEY MESSAGES

- Improved environmental health conditions can result in significant improvements in health conditions
- Only one-fifth and one-third of the urban poor in Uttar Pradesh have access to safe water supply and private sanitary facility respectively
- Funds available under various projects such as NSDP and VAMBAY needs to be effectively utilized to provide water supply and sanitation services to the urban poor

Subsequent to the second round of the National Family Health Survey, other surveys have been conducted to assess the RCH conditions in Uttar Pradesh. Prominent among them have been the second round of the District Level Household Survey (DLHS) conducted during 2002-04 by the Ministry of Family Welfare, Government of India and the Reproductive Health Indicator Survey conducted by the USAID in 2005. These surveys also reveal the dismal state of health of the urban poor in Uttar Pradesh and the stark differences which exist between the urban poor and the rest of the urban population.

The reanalyzed data of the DLHS for Uttar Pradesh is presented in Annex 3 with the objective of presenting more recent data on health of the urban poor in Uttar Pradesh. The findings are very similar to that observed by the second round of the NFHS conducted approximately five years preceding this survey. The health of the urban poor in Uttar Pradesh continues to be dismal and disparities continue to exist. However, some improvement have been observed in medical treatment of diarrhea, use of ORS and breast feeding practices.

CONCLUSION

Conclusion

Large urban poor population, unmet RCH needs

Growing Urban Poverty : Uttar Pradesh, the most populous Indian state, is home to 166 million persons or one-sixth of the country's population. Urban population comprises 21% of the total population and almost one-third (31 %) of the urban population is estimated to be below the poverty line.

Poor Health Conditions : The health conditions of the urban poor population in Uttar Pradesh as in the rest of the country are masked by the urban average figures – the common form of available data. Reanalysis of NFHS-2 data by economic groups suggests that the under-5 mortality rate is 130.6 among the urban poor as compared to the urban average of 85.8 and only 30 % of the urban poor children are completely immunized by the age of one year. 85.3 % of the deliveries among the urban poor in Uttar Pradesh take place at home without a trained health professional which places the life of both the mother and new born child to great risk. Other surveys such as the Reproductive Health Indicator Survey (2005) and the District Level Household Survey (DLHS) (2002-04) also reveal stark differences in the health status of the urban poor and rest of the urban population in Uttar Pradesh.

Weak Policy Implementation : The UP government has formulated a number of policies and programmes which are aimed at improving the lives of the urban poor in the state as part of their mandate. However, this has not been translated into effective programmes which have had a significant impact on the health of the urban poor.

Inadequate primary health infrastructure : Urban areas do not have a wide network of primary health care services unlike rural areas. The rapid growth of urban population has also rendered the already limited health facilities more inadequate to serve the needs of the urban poor. As a result some slum settlements are entirely uncovered by health services and the quality of services in others is seriously compromised.

Poor Environmental Conditions in Slums : The health vulnerability of the slum dwellers is further accentuated by the poor environmental conditions in which they reside. Increased coordination and convergence of departments in-charge of water supply, sanitation and slum improvements with the health department is a pre-requisite for improving the health conditions of slum dwellers.

Options to improve the health of the urban poor

A multitude of factors like inadequate health services in slums, lack of functional convergence among different departments and programmes and poor capacity of urban local bodies operate resulting in poor health outcomes among the slum dwellers. In order to strengthen services and improve the health of the urban poor, the following measures are suggested.

Need to target the underserved : The situation analysis of Agra city discussed in Section 2 and several other surveys have shown that there is a large number of unlisted slums many of which remain invisible. Further, all slums of the city are not alike and there exists considerable differences in the health vulnerability of its residents. Disparities in health indicators across different slums exist owing to differing socio-economic, environmental and infrastructural conditions. It is essential to identify and plot all slums and undertake a vulnerability assessment of all slums in a city and for extra focus on the more needy slums.

Need to augment and strengthen urban health infrastructure and services : The lack of public health infrastructure makes it imperative that the private sector which has a large presence in the health service delivery in the disadvantaged urban settlements can be effectively utilized to improve the health conditions of the poor. It has been observed those partnerships with organizations having prior presence in slums results in improved and more cost effective health services. NGO partners can help the government in scaling up health services more rapidly and in a more sustained way.

Functional Convergence of all stakeholders needed : As discussed in Section 2, there are various policies and programmes which are aimed at improving the conditions in urban slums. There are various stakeholders like sanitation, water supply, ICDS, public distribution system, education, slum development etc whose work impinges on the health of slum dwellers. It is generally observed that these departments operate in isolation with little or no coordination. Hence, there is a need for greater coordination and convergence among the various government departments and other non-governmental agencies which are working for the urban poor. A functional taskforce aimed at improving the health of the urban poor under the chairmanship of the District Magistrate that reviews all programmes and schemes regularly would bring in more synergy and improve the impact of the various programmes.

Improve the capacity of Urban Local Bodies : In order to effectively manage health services in challenging situations such as in urban slums and to initiate new models of service delivery like public private partnerships, it is

essential to enhance the capacity of the urban local bodies (who are responsible for health services in urban areas after the 74th Constitutional Amendment). There is a need to chart out a plan for improving the capability of the local elected representatives and improve the performance of urban local bodies for better management of urban health and poverty alleviation efforts.

Migratory Trends need to be considered for planning of RCH services: An important challenge in planning and delivering health services in urban slums is the rapid mobility of population. City landscapes change rapidly because of rapid immigration resulting in the creation of new slum clusters. Government slum records should be updated on a regular basis and new slums should be included in the service areas of health and other civic amenities. Slums also witness temporary migrations for certain months of the year (for instance during harvesting season when demand for manpower in villages is high) while it is common for most slum women to go back to their native villages for delivery. Such movements make the process of maintaining client lists and following up of such clients by health workers complicated. Behavior promotion activities also get disrupted because of such movements. It is necessary to factor in the rapid mobility of population in slums while planning for health services in slums. Steps to make the services reach the migrant population could include (i) distribution of pictorial cards among migrants which emphasize desirable behaviors and which can be used at health facilities at the place of destination (ii) sensitizing health providers to offer services even temporary migrants without discrimination (iii) Encouraging temporary migrants to avail services from nearby health facility after they return to the slum even if camp has been already held.

Strengthen community networks and their linkages with health providers: Building on existing networks that have strong linkages with the community can be a useful strategy for improving coverage of health services. Strengthening community based organizations like SHGs is an effective mechanism to strengthen linkages between the community and the health system. Such groups can complement the efforts of health workers in generating awareness about health issues and counseling for family planning. They can also increase accountability of the government health services and ensure regularity of health services. The negotiation capacity of slum dwellers needs to be enhanced by promoting collective and organized efforts such as the mohalla samitis and SHGs for socio-economic empowerment and ability to better utilize available resources through NSDP, VAMBAY, housing and other schemes.

ANNEXURE

Annex 1

The Standard of Living Index

The Standard of Living Index (SLI) used in the NFHS, District Level Household Survey (DLHS) and other surveys have been developed by considering many socioeconomic parameters. The SLI is a summary household measure and is calculated by adding the scores* for house type, toilet facility, source of lighting, main fuel for cooking, source of drinking water, separate room for cooking, ownership of house, ownership of agricultural land, ownership of irrigated land, ownership of livestock and ownership of durable goods. The index is calculated by summing the weights, which have been developed by International Institute of Population Sciences, Mumbai. These weights are based upon the relative significance of ownership of these items, rather than on a more formal analysis.

Validity of using low SLI as representative of the poor

Possession of items at household levels has been used for developing many standard of living indices. Possession of consumer durables and housing facilities has been shown in all countries to be associated with standard of living e.g., the higher the standard of living of a household, the more possessions they tend to have and the better their housing conditions are. In general, the 'rich' do not choose to live like the 'poor' in any country and the 'poor' generally lack possessions due to a lack of resources rather than out of choice. It is also fairly evident that the possessions used in the two indices ('possession of durables' and 'housing facility') are relevant measures of standard of living in the Indian context.

** House type: 4 for pucca, 2 for semi-pucca, 0 for kachha; Toilet facility: 4 for own flush toilet, 2 for public or shared flush toilet or own pit toilet, 1 for shared or public pit toilet, 0 for no facility; Source of lighting: 2 for electricity, 1 for kerosene, gas, or oil, 0 for other source of lighting; Main fuel for cooking: 2 for electricity, liquid petroleum gas, or biogas, 1 for coal, charcoal, or kerosene, 0 for other fuel; Source of drinking water: 2 for pipe, hand pump, or well in residence/yard/plot, 1 for public tap, hand pump, or well, 0 for other water source; Separate room for cooking: 1 for yes, 0 for no; Ownership of house: 2 for yes, 0 for no; Ownership of agricultural land: 4 for 5 acres or more, 3 for 2.0–4.9 acres, 2 for less than 2 acres or acreage not known, 0 for no agricultural land; Ownership of irrigated land: 2 if household owns at least some irrigated land, 0 for no irrigated land; Ownership of livestock: 2 if owns livestock, 0 if does not own livestock; Ownership of durable goods: 4 each for a car or tractor, 3 each for a moped/scooter/motorcycle, telephone, refrigerator, or color television, 2 each for a bicycle, electric fan, radio/transistor, sewing machine, black and white television, water pump, bullock cart, or thresher, 1 each for a mattress, pressure cooker, chair, cot/bed, table, or clock/watch. Index scores range from 0–14 for a low SLI to 15–24 for a medium SLI and 25–66 for a high SLI.*

The possession of durable goods is an indicator of a household's socioeconomic level, though these goods may also have other benefits¹. Current estimates from a number of sources suggest that about 30% of urban dwellers are poor and that urban poverty contributes to approximately 25% of the total poverty in India². Hence, it can be concluded that low SLI is adequately representative of the poor. By SLI measures also, about one – third (36 percent) of Indian households have a low standard of living.

Construct validation is based on assessing how well a 'particular measure relates to other measures consistent with theoretically derived hypotheses concerning the concepts (or constructs) that are being measured'³. In the case of the concept of SLI, it is predicted that those who are the 'poorest' are more likely to suffer from ill health than those with a higher standard of living. Therefore, it would be expected that areas with high levels of poverty would also be areas with high levels of ill health (all other things being equal). Similarly, the concept predicts that people suffering from a low standard of living are also likely to suffer from a range of deprivations, for example, food deprivation (e.g., food of insufficient quantity and/or quality). Consequently, an area with low standard of living is also likely to contain food-deprived households. Hence, indicators of ill health and severe deprivation can be used as validation criteria for assessing the construct validity of SLI indices, e.g., the most valid (accurate) indices are likely to be those with the highest correlations with ill health and severe deprivation.

Reanalysis of NFHS data by SLI used in this report helps disaggregate the average data in a manner that shows consistency among the different indicators. This means that, for example, if IMR among low SLI is high as compared to average, then access to services such as TT and measles immunization is also consistently low. This further corroborates the reliability of SLI as an index representative of the economic status of households.

The District Level Household Survey (DLHS) uses a smaller set of assets compared with the NFHS to compute its Standard of Living Index (SLI). The Index is computed by summing the scores of individual assets as follows : Drinking Water : 3 for Own Tap, 2 for Shared Tap, 1 for hand pump or well and 0 for other sources; Types of House : 4 for Pucca , 2 for Semi-Pucca and 0 for Kachcha house; Source of Lighting : 2 for electricity; 1 for Kerosene and 0 for other; Fuel for Cooking : 2 for LPG, 1 for kerosene and 0 for other; Toilets Facility : 4 for Own Flush Toilet, 2 for Own Pit Toilet, 2 for Shared Toilet and 0 for No Toilet; Ownership of Items : 2 for Fan, 2 for Radio / Transistor, 2 for Sewing machine, 3 for Television, 2 for bicycle, 3 for motor cycle, 4 for Car, 4 for Tractor.

The total scores vary from the lowest of 0 to a maximum of 40. On the basis of the score, households have been categorized into three classes Standard of Living Index (SLI) as : Low SLI (Score of less than 9); Medium SLI (greater than 9 but less than or equal to 19) and high SLI (greater than 19).

1. Supriti, Barnhardt S and Ramanathan R. 2002. *Urban Poverty Alleviation in India: A General Assessment and a Particular Perspective*; Bangalore : Ramanathan Foundation.
2. Subramaniam. 2003. *Inequalities in health in India: The methodological construction of indices and measures- Draft report*, Department of health and social behavior, Harvard School of Public Health.
3. Carmines EG, Zeller RA. 1991. *Reliability and Validity assessment*. Newbury Park : Sage Publications.

Comparisons of SLI and other Indices of poverty

The Principle Component Method was used to compare the SLI with state level estimates of people living below the poverty line. This analysis revealed that low SLI captured all population proportion below poverty line for most states.

An alternative SLI was calculated using a different method of weighting the indices. Proportionate Possession Weighting (PPW) is an adjustment that reflects the differences between various social and demographic groups and, as a result, takes account of these differences within population. Unlike the NFHS SLI, this PPW index refers entirely to a household's possessions. A good measure of the validity of each component of the NFHS and PPW, standard of living show the results of a criterion validity exercise at the individual level, they display the results from a series of bivariate logistic regression analyses for the odds of stunting in children, if a household lacks a standard living item. The analysis shows that a household that does not have a telephone or a color TV is 3.5 times more likely to have a stunted child than a household that owns a telephone. Households, which own a color television, are three times less likely to have stunted children than households that do not. Similarly, children in households that possess refrigerators or mopeds or pressure cookers are half as likely to suffer from stunting as households, which do not own these items. The comparison of NFHS SLI and PPW indices through the Pearson's correlation coefficients shows a very high positive correlation. These consumer durables seem to be valid measures of standard of living.

Both NFHS and PPW indices were found reliable based on Cronbach's alpha coefficients. The alpha coefficient is the average correlation between the set of questions asked (the standard of living index) and all other possible sets of deprivation questions (standard of living indices) of equal length (equal number of questions). Cronbach's alpha coefficients score is 0.86 for 20 items used in PPW SLI and 0.79 for 27 components of NFHS SLI. According to Nunnally (1981), "in the early stages of research ... one saves time and energy by working with instruments that have modest reliability, for which purpose reliabilities of 0.70 or higher will suffice For basic research, it can be argued that increasing reliabilities much beyond 0.80 is often wasteful of time and funds, at that level correlation are attenuated very little by measurement error⁴ .

4 International Institute for Population Sciences (IIPS) and ORC-Macro (2001), *National Family Health Survey (NFHS-2), India 1998-1999: India* IIPS, Mumbai.

Review of methodology for re-analysis by expert group

A one day expert group consultation was organized to review the process of NFHS 2 data reanalysis by SLI on April 22, 2003^{*}. The expert group recommended that reanalysis of NFHS 2 data by Standard of Living Index would be a valuable exercise that would present representative data describing the health status of the urban poor at the state level as well as national level. NFHS SLI is well-accepted by development experts, academic institutions and Government of India institutions. It was also recommended that the disaggregating of data provided very good analysis to indicate the disparity between the low SLI population and the mean and will unmask the inequities that exist. It will also help understand further correlation with a range of variables. The experts cautioned against using reanalyzed NFHS data for comparing the urban poor with the rural poor or vice versa. To the extent possible, analysis should also provide the confidence intervals for important estimates in the disaggregated data. Findings of such an exercise should be disseminated at larger platforms for use in planning and programming, sooner rather than later, as such information is currently sparse.

Re-analysis of NFHS-2 data using ISSA Package

Standard of Living Index of NFHS-2 is the basis for the disaggregation of the data in the reanalysis used in this report. Data have been disaggregated for urban areas by using ISSA (Integrated System for Survey Analysis) developed by ORC MACRO International. This software package originally developed for Demographic and Health Surveys conducted in other developing countries which are similar to the NFHS. ISSA provides complete processing for survey data including data entry, secondary processing, tabulation, report generation, data file documentation. It uses dictionaries to describe data, and applications to define what to do with the data. The re-coded NFHS-2 data of the respective states and all India is used for the reanalysis. As the first step, the data was analyzed for rural and urban areas. Subsequently urban data was separately disaggregated into three groups each by low, medium and high SLI. For conducting the aforementioned analysis of the recoded data, a set of programs was developed in the ISSA package which generated the required tables by standard of living index. Similar analysis have been carried out for the District Level Household Survey data.

^{*} The experts participated in the meeting were Dr. Arvind Pandey, Director, IRMS, ICMR, New Delhi; Dr. HPS Sachdev, Professor, Department of Pediatrics of Maulana Azad Medical College, New Delhi; Dr. PM Kulkarni, Professor, Centre for Studies in Regional Development, School of Social Sciences, JNU, New Delhi; Dr. Massee Bateman, Senior Advisor in Child Health, USAID/India, New Delhi; Dr. Laveesh Bhandari, Director, Indicus Analytics, New Delhi; Mr. Jyoti Tewari, Program Management Specialist, PHN, USAID/India

ANNEX 2 - Select health indicators by Standard of Living Index- Uttar Pradesh NFHS 2, 1998-99

Health Indicator	U R B A N				R U R A L			
	LOW	MEDIUM	HIGH	Total	LOW	MEDIUM	HIGH	Total
Mortality								
Neonatal Mortality (for the five-year period preceding the survey)	43.7	47.8	22.9	38.3	61.5	56.2	41.4	56.6
Infant Mortality (for the five-year period preceding the survey)	79.0	76.5	29.7	60.4	110.7	85.1	56.9	91.7
Under-5 Mortality (for the five-year period preceding the survey)	130.6	104.5	37.3	85.8	159.4	119.3	65.9	129.5
Immunization rates								
Percentage of children completely immunized among 12-23 months children	29.7	27.6	38.7	32.3	11.0	21.4	34.0	19.2
Percentage of children receiving measles immunization among 12-23 months children	34.7	41.7	64.9	50.0	22.7	31.5	65.5	31.7
Percentage of children left out from UIP (Children not receiving DPT 1) among 12-23 months children	49.7	23.8	14.5	24.2	57.1	43.7	17.7	46.2
Percentage of children dropping out from UIP (DPT 1 to DPT 3) among 12-23 months children	9.7	28.4	30.1	26.2	22.2	22.2	28.6	22.9
Childhood Morbidity								
Percentage of children suffering in past two weeks from:								
ARI	19.7	20.5	17.1	18.9	21.4	21.7	21.0	21.5
Fever	28.9	23.2	20.9	23.1	29.6	28.2	28.4	28.7
Any diarrhoea	25.9	20.5	15.8	19.4	23.2	25.2	21.8	24.1
Percentage of mother who know about ORS	73.6	74.8	83.4	78.0	47.8	58.8	70.8	55.4
Percentage of mother who know two or more signs for medical treatment of diarrhea	34.2	27.8	30.8	29.9	36.2	38.5	39.8	37.6

	U R B A N				R U R A L			
	LOW	MEDIUM	HIGH	Total	LOW	MEDIUM	HIGH	Total
Percentage of children taken to health facility for diarrhea	52.2	73.0	68.1	68.0	59.0	60.0	70.3	61.2
Percentage of children treated with ORS or recommended home fluid	2.1	17.4	26.7	17.3	18.3	17.8	18.5	17.8
Care seeking								
Percentage of children taken to health facility for symptoms of ARI (fever, cough, rapid breathing)	86.4	64.6	71.9	70.2	54.2	61.0	70.2	59.7
Malnutrition among children								
Percentage of children under 3 years underweight for age – Below –2 SD (includes children below – 3 SD)	58.3	44.4	35.6	42.6	61.7	52.4	33.8	53.6
Percentage of children under 3 years underweight for age – Below –3 SD	36.2	18.6	7.3	16.3	28.7	21.6	11.5	23.1
Percentage of children under 3 years undernourished (stunted) for age – Below –2 SD (includes children below – 3 SD)	64.4	53.7	32.0	46.7	62.2	56.9	44.0	57.3
Percentage of children under 3 years undernourished (stunted) for age – Below –3 SD	46.7	26.1	8.8	21.8	38.4	32.4	16.9	32.9
Breast feeding								
Percentage of infants breast fed within one hour of birth	2.7	6.1	12.3	7.9	5.1	6.1	10.9	6.2
Percentage of infants whose mother squeezed first milk from breast	89.1	79.2	66.7	76.0	76.6	75.0	74.1	75.6
Percentage of children 0-3 months who are exclusively breastfed	53.2	27.1	33.8	-	65.5	63.1	39.2	-
Complementary feeding								
Percentage of children 7-9 months who receive breast milk and solid/mushy food	44.8	73.3	64.5	-	59.0	57.7	70.3	-

	U R B A N				R U R A L			
	LOW	MEDIUM	HIGH	Total	LOW	MEDIUM	HIGH	Total
Anemia among children								
Any anemia	89.2	75.9	66.9	74.1	75.8	74.6	70.0	73.9
Mild anemia	25.5	21.9	23.6	22.7	19.7	19.0	16.9	18.8
Moderate anemia	62.0	46.0	37.8	45.0	49.9	48.5	45.4	48.4
Severe anemia	1.7	8.0	5.5	6.5	6.1	7.1	7.7	6.7
Vitamin A Supplementation								
Percentage of children 12-35 months of age who have received at least one of vitamin A	12.3	15.3	30.8	21.1	9.4	13.2	20.7	12.5
Percentage of children 12-35 months of age who have received at least one of vitamin A within last 6 months	10.4	10.6	19.0	14.0	6.7	8.9	14.9	8.7
Anemia among women								
Any anemia	55.1	48.9	41.2	46.0	52.8	49.2	49.2	49.4
Mild anemia	34.9	33.8	29.2	31.9	35.5	33.9	33.9	33.9
Moderate anemia	19.2	14.0	11.5	13.3	14.7	13.9	13.9	13.8
Severe anemia	1.1	1.1	0.6	0.8	2.6	1.3	1.3	1.7
Antenatal care								
Percentage of births whose mothers consumed iron-folic acid supplements for 3+ months	22.9	30.1	61.3	40.3	15.5	21.9	21.9	21.2
Percentage of births whose mothers received tetanus toxoid vaccines (minimum of 2)	63.4	68.6	87.7	76.7	36.2	49.3	49.3	46.5
Percentage of births whose mothers had antenatal visits (minimum of 3)	9.1	27.3	59.0	36.8	5.9	10.4	10.4	10.6
Safe delivery								
Percentages of deliveries at home	85.3	71.7	39.3	61.4	93.0	85.7	85.7	87.6
Percentages of deliveries at a health center (public/private/NGO)	13.1	26.2	59.8	37.1	6.3	12.6	12.6	11.3
Percentage of deliveries attended by a health professional at home or at a health facility	26.2	29.9	76.0	51.7	9.6	17.6	17.6	16.7

	U R B A N				R U R A L			
	LOW	MEDIUM	HIGH	Total	LOW	MEDIUM	HIGH	Total
Fertility and the Use of contraception								
Total Fertility Rate (TFR)	3.74	3.09	2.55	2.88	4.83	4.13	3.64	4.31
Birth Interval (median number of months between current and previous birth)	30.9	31.1	31.9	31.3	30.2	30.3	29.9	30.2
Modern Contraceptive prevalence rate (any method, currently married women)	21.3	40.1	54.0	44.8	19.6	23.7	36.1	23.9
Permanent sterilization method rate	7.1	17.4	22.7	19.0	11.8	14.9	20.6	14.7
Female sterilization method in proportion to total modern contraceptive prevalence method (percentile)	51.4	53.7	50.1	51.9	79.6	81.0	72.3	80.3
Environmental health conditions								
Percentage of Households with access to piped water supply at home	17.7	33.4	59.5	49.2	3.4	6.1	8.9	5.5
Percentage of Households accessing public tap / hand pump for drinking water	76.7	64.5	39.6	55.2	74.7	77.7	85.0	76.7
Percentage of Household using a sanitary facility for the disposal of excreta (flush / pit toilet)	33.6	82.7	97.8	83.4	3.9	10.7	49.8	11.1
Percentage of Household not having any toilet facility	69.8	17.3	2.2	16.5	95.9	89.0	49.9	88.6
Number of households (Weighted)	219	818	770	1807				
Number of currently married women (Weighted)	175	781	802	1758	2300	3911	761	6972
Number of ever-married women (Weighted)	189	826	826	1841	2409	4062	786	7257
Number of children under age 3 (Weighted)	102	344	261	707	1338	1944	337	3619

ANNEX 3 - Age distribution of population by standard of living-Uttar Pradesh NFHS 2, 1998-99

	URBAN				RURAL			
	LOW	MEDIUM	HIGH	TOTAL	LOW	MEDIUM	HIGH	TOTAL
Population by age (male)								
< 1								
1-4.....	3.4	2.3	1.7	2.1	3.1	3.1	2.8	3.1
5-9.....	10.7	9.4	8.2	8.9	12.5	11.3	9.3	11.5
10-14.....	17.9	13.4	10.1	12.4	17.9	15.4	13.0	16.0
15-19.....	14.0	14.8	13.5	14.2	14.7	13.5	12.2	13.8
20-24.....	12.1	13.4	11.3	12.4	9.0	10.8	9.9	10.1
25-29.....	5.6	9.5	11.0	9.7	4.9	7.5	9.3	6.8
30-34.....	6.3	6.3	7.0	6.7	5.7	6.5	9.2	6.5
35-39.....	4.2	5.1	6.6	5.6	5.8	5.1	6.0	5.4
40-44.....	5.5	6.6	6.8	6.5	6.3	4.9	4.6	5.4
45-49.....	5.8	4.4	6.1	5.3	4.4	4.3	3.6	4.3
50-54.....	4.9	4.8	5.0	4.9	3.4	3.7	3.3	3.5
55-59.....	1.1	2.9	3.7	3.1	2.7	3.3	3.7	3.1
60-64.....	1.6	1.9	2.1	2.0	1.6	1.9	2.4	1.9
65-69.....	3.3	1.5	2.1	1.9	2.8	3.2	3.3	3.1
70-74.....	1.3	1.4	1.7	1.5	1.8	1.6	2.5	1.8
75-79.....	1.2	1.1	1.4	1.2	2.0	2.1	1.9	2.1
80 +	0.5	0.4	0.8	0.6	0.4	0.6	1.0	0.6
Missing /DK	0.6	0.9	0.9	0.8	0.9	1.2	1.9	1.2
Total percent	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total male population	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	591.0	2,624.0	2,511.0	5,810.0	7,251.0	11,856	2,185.0	21,822.0
Population by age (female)								
< 1								
1-4.....	3.1	2.3	2.0	2.3	3.1	2.8	2.6	2.9
5-9.....	15.3	9.4	5.9	8.5	12.9	11.3	10.7	11.9
10-14.....	13.9	14.2	10.4	12.5	15.5	14.3	11.6	14.5
15-19.....	11.1	14.0	12.0	12.8	13.0	12.4	9.7	12.2
20-24.....	11.7	12.5	12.5	12.4	8.9	11.3	12.9	10.6
25-29.....	8.0	9.6	10.4	9.7	7.0	9.3	10.6	8.6
30-34.....	7.2	6.8	8.6	7.6	7.7	7.6	9.2	7.8
35-39.....	5.4	6.2	7.1	6.5	7.2	5.4	5.8	6.0
40-44.....	5.4	6.6	7.9	7.0	5.4	5.2	4.3	5.2
45-49.....	3.4	4.3	5.2	4.6	3.9	4.2	3.8	4.0
50-54.....	4.3	4.2	4.9	4.5	3.0	4.0	4.8	3.8
55-59.....	2.9	2.6	2.9	2.8	2.2	2.5	3.5	2.5
60-64.....	1.4	1.5	2.6	2.0	2.2	2.6	2.6	2.4
65-69.....	2.4	2.0	2.7	2.3	3.4	2.9	3.3	3.1
70-74.....	1.0	1.1	1.9	1.4	1.8	1.7	1.5	1.7
75-79.....	1.9	1.7	1.3	1.6	1.5	1.1	1.5	1.3
80 +	0.4	0.6	0.6	0.6	0.3	0.5	0.5	0.4
Missing /DK	1.1	0.5	1.1	0.8	0.9	0.8	1.2	0.9
Total percent	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total female population	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	584.0	2,446.0	2,295.0	5,408.0	6,866.0	11,126.0	2,171.0	20,686.0

Population Profile by Standard of Living Index –Uttar Pradesh NFHS 2, 1998-99

	U R B A N					R U R A L				
	LOW	MEDIUM	HIGH	TOTAL		LOW	MEDIUM	HIGH	TOTAL	
Religion of HH										
Hindu.....	71.0	61.4	77.7	69.5		85.9	86.1	85.8	86.1	
Muslim.....	28.2	37.6	20.1	29.0		13.4	12.9	10.5	12.8	
Christian..	0.2	0.4	1.7	0.2		0.0	0.1	0.2	0.1	
Other.....	0.0	0.3	0.6	1.3		0.4	0.6	3.3	0.9	
missing	0.5	0.3	0.0	0.2		0.3	0.2	0.2	0.2	
Caste/tribe of HH										
Scheduled caste.....	26.9	16.5	6.2	13.3		31.6	17.4	5.8	22.1	
Scheduled tribe.....	5.6	0.6	0.2	1.1		2.8	2.4	1.9	2.5	
Other backward class...	24.6	17.6	14.5	16.9		29.2	30.3	19.6	28.7	
Other (none).....	35.4	61.0	77.6	65.2		29.1	45.1	70.8	41.1	
MISSING	7.6	4.2	1.5	3.4		7.4	4.8	1.8	5.5	
Mean HH size	5.4	6.1	6.1	6.1		5.3	6.8	8.2	6.3	
School attendance										
Age group (male)										
6-10.....	59.2	86.3	98.1	87.1		75.1	87.2	94.0	83.0	
11-14.....	44.3	76.7	94.2	81.3		69.7	84.9	93.8	80.4	
15-17.....	17.7	42.9	79.1	56.5		39.5	62.8	86.8	58.1	
School attendance										
Age group (female)										
6-10.....	55.0	82.0	94.5	83.3		60.9	75.9	91.4	71.4	
11-14.....	37.1	72.5	96.5	80.0		42.4	60.5	85.1	57.1	
15-17.....	9.3	51.3	86.2	61.1		10.6	24.5	57.7	24.7	
Lifestyle Indicators										
Percentage of usual household members age 15 and above who										
Male										
Chew paan masal or tobacco	27.2	19.6	19.0	27.5		29.0	27.5	19.9	38.9	
Drink alcohol	12.7	7.3	5.7	9.7		9.8	7.7	6.1	12.1	
Currently smoke	26.8	17.5	12.0	21.9		31.0	24.5	17.1	37.5	
Ever smoked	28.7	19.2	13.7	24.3		33.9	26.9	18.6	41.0	
Female										
Chew paan masal or tobacco	15.2	8.3	5.5	10.6		9.8	8.2	4.9	11.6	
Drink alcohol	0.3	0.1	0.2	0.2		0.2	0.2	0.1	0.2	
Currently smoke	1.1	0.5	0.6	0.8		3.6	2.4	1.3	3.8	
Ever smoked	2.0	0.6	0.8	1.1		4.0	2.6	1.4	4.1	

Select Health Indicators by Standard of Living Index – Uttar Pradesh, District Level Household Survey (2002 – 04

Health Indicator	U R B A N				R U R A L			
	LOW	MEDIUM	HIGH	Total	LOW	MEDIUM	HIGH	Total
Immunization rates								
Percentage of children completely immunized among 12-23 months children	18.9	28.3	57.6	37.2	17.6	30.3	47.4	22.5
Percentage of children receiving measles immunization among 12-23 months children	25.2	35.3	66.7	44.8	26.2	40.1	61.1	31.6
Percentage of children left out from UJIP (Children not receiving DPT 1) among 12-23 months children	57.3	46	18	38.1	50.1	36.9	20.4	45.1
Percentage of children dropping out from UJIP (DPT 1 to DPT 3) among 12-23 months children	15.6	16.5	12.1	14.6	22.6	19.5	20.4	21.7
Childhood Morbidity								
Percentage of children suffering in past two weeks from:								
Any diarrhoea	20.5	19.6	15.9	18.3	20	19.4	16.2	19.6
ARI	13.8	12.6	11.4	12.4	13.7	15	15	14.1
Percentage of children taken to health facility for diarrhoea	72.5	77.2	83.5	78.1	69.7	76.5	82.2	72
Percentage of children treated with ORS or recommended home fluid	11.8	19.8	36.1	23.2	10	16	20.9	12
Percentage of children taken to health facility for symptoms of ARI (fever, cough, rapid breathing)	80.4	85.4	85.2	83.9	76	79.8	87	77.7
Breast feeding								
Percentage of infants breast fed within two hours of birth	6.7	8.9	12.9	9.9	5.8	8.5	14.7	7.1
Percentage of infants whose mother squeezed first milk from breast	75.4	74	65	70.8	72.9	70.4	61.6	71.6

	U R B A N				R U R A L			
	LOW	MEDIUM	HIGH	Total	LOW	MEDIUM	HIGH	Total
Vitamin A Supplementation Percentage of children 12-35 months of age who have received at least one of vitamin A	8	14.9	29.1	18.8	9.2	13.7	25.4	11.3
Antenatal care Percentage of births whose mothers received iron-folic acid supplements for 3+ months	4.3	9	20.4	12.3	5	8.4	15.6	6.4
Percentage of births whose mothers received tetanus toxoid vaccines (minimum of 2)	53.5	70	87.3	72.6	52.1	68	83.3	57.8
Percentage of births whose mothers had ante-natal visits (minimum of 3)	11.3	24.9	51.6	32	9.1	17.4	33.7	12.6
Safe delivery Percentages of deliveries at home	87.3	72.9	39.2	63.3	89	77.6	57.3	84.3
Percentages of deliveries at a health center (public/private/NGO)	12.7	27.1	60.8	36.7	11	22.4	42.7	15.7
Percentage of deliveries attended by a health professional at home or at a health facility	21.8	38.9	71.2	47.2	15.6	29.4	50.8	21

	U R B A N				R U R A L			
	LOW	MEDIUM	HIGH	Total	LOW	MEDIUM	HIGH	Total
Fertility and the Use of contraception								
Mean Children Ever Born (CEB)	3.8	3.5	2.7	3.2	3.6	3.1	2.7	3.4
Birth Interval (median number of months between current and previous birth)	31	29	32	31	30	29	29	30
Contraceptive prevalence rate (any method, currently married women)	32.1	44.9	60.5	49.9	32.3	42.7	57.3	37
Permanent sterilization method rate	12.8	16.3	19.7	17.2	15	19.8	24.7	17
Use of Spacing methods	7.6	16.9	28.5	20.7	5.2	11.5	20.6	8.1
Environmental health conditions								
Percentage of Households with access to piped water supply at home	3.9	10.2	16.5	6.1	6.7	24.2	56.4	35.0
Percentage of Households accessing public tap / hand pump for drinking water	80.1	80.7	78.8	80.1	85.6	72.9	41.8	61.6
Percentage of Household using a sanitary facility for the disposal of excreta (flush / pit toilet)	3.0	25.6	75.3	12.6	17.5	70.7	98.1	71.5
Percentage of Household not having any toilet facility	97.0	74.4	24.7	87.4	83.5	29.3	1.9	28.5
Number of households	4983	7438	10321	22742	35201	11016	3091	49308
Number of currently- married women	3797	6166	9049	19012	29830	11690	3675	45195
Number of children under age 4	1989	2777	3139	7905	15393	5391	1419	22203

