



Volume: 2, Issue: 8, 193-197  
Aug 2015  
www.allsubjectjournal.com  
e-ISSN: 2349-4182  
p-ISSN: 2349-5979  
Impact Factor: 3.762

**Nilesh G Patel**  
Final Year Resident,  
Community Medicine  
Department, B. J. Medical  
College, Ahmedabad,  
Gujarat, India.

**Jay Patwa**  
Final Year Resident,  
Community Medicine  
Department, B. J. Medical  
College, Ahmedabad,  
Gujarat, India.

**Mk Lala**  
Associate Professor,  
Community Medicine  
Department, B. J. Medical  
College, Ahmedabad,  
Gujarat, India.

**Correspondence**  
**Nilesh G Patel**  
Final Year Resident,  
Community Medicine  
Department, B. J. Medical  
College, Ahmedabad,  
Gujarat, India.

## As A Public Health Expert, Area Needs To Focus: Rural, Urban or Urban Slum

**Nilesh G Patel, Jay Patwa, Mk Lala**

### Abstract

The World Health Day theme for 2010 was “Urbanization and Health”.

Differences are unavoidable but inequities can never be justifiable or acceptable. Problems are in this all three rural, urban and urban slums. Urban have comparatively good picture but rural and urban slums have really serious condition and as developing country, India have to decide priorities among all this as have a limited resources. Cross sectional study and Meta-analysis with Sample size of 30 for assessment of child health, 30 for assessment of maternal health, families were selected randomly from urban, rural and urban slum – 30 from each and 30 for assessment of total expenditure on health, families were selected randomly from urban, rural and urban slum areas - 30 from each. For comparison of different health indicators different health survey data have used. Results of this study and also indicators in national health surveys shows Child health including immunization and nutrition status is significantly very good in urban areas in compare to rural area. Overall on the basis of findings of this study and present data available from various national health surveys, we can say that overall picture of urban area is better in comparison to rural and urban slum areas. Comparison of rural and urban slum areas shows that picture of rural and urban slum are more or less similar but urban slum have advantages like nearer to health care facilities, have good transportation, these areas are easy to reach due to this advantages, if proper focus given to these areas then we can make improvement with our limited resources

**Keywords:** Public Health Expert, Rural, Urban, Urban Slum

### Introduction

The World Health Day theme for 2010 was “Urbanization and Health”.

Differences are unavoidable but inequities can never be justifiable or acceptable. India has a long history of adhering to the ideology of equity where policy decisions to promote equity such as ‘reservations for the disadvantaged’ have been an integral part of the country’s strategy since independence. These principles have also found their way into the health sector and promoting equity in health has always been high on the agenda of the Indian government<sup>[1]</sup>.

For developing countries, we know a good deal about what determines health in rural areas, but we have much less information about determinants of health in urban areas while the developing world is rapidly becoming more urban<sup>[4]</sup>.

In the early 2000s, three distinct types of inequities and differences plagued India, namely

- (1) Urban-rural differences
- (2) Interstate differences
- (3) Intrastate differences

These included differences in the availability of health resources (input), health service delivery, and health outcome indicators.

At the turn of the 21st century, India was plagued by significant rural urban, inter-state and inter-district inequities in health. For Example, in 2004, the infant mortality rate (IMR) was 24 points higher in rural areas compared to urban areas.

Slums are often considered the first stop for people moving from rural areas in search of new opportunities, but most existing data usually exclude slum areas because they are considered illegal settlements.

### Urban-Rural-Urban Slum Differences

India, Total population: 1 240 000 000 out of that 31.3% population living in urban areas.<sup>2</sup> As per UN Population Report (by Mid-year 2001), India’s urban slum population is estimated at 158.42 million<sup>[3]</sup>.

In 2004, the infant mortality rate (IMR) in India was 64/1,000 live births and in urban areas was 40/1,000 live births which is 24 points higher in rural areas. 36.7% mothers receiving three or more antenatal checkups in rural areas while 66.8% in urban areas which are 30 points higher. The percentage of institutional deliveries varied from 41.2% in rural areas to 75.3% in urban areas (difference of 34 points). Similarly, there was a difference of 31 points between the percentage of mothers receiving postnatal checkups within 10 days after delivery and a difference of 20 points between the percentages of full immunization in rural and urban areas. This shows there was a significant difference in health service delivery parameters [2].

The Millennium Declaration of the United Nations, to which India is a signatory, specifically recognizes the need to improve the lives of slum dwellers [3].

In NFHS-3, the definition of a slum is a compact area of at least 300 people or about 60 to 70 households living in poorly built congested tenements, in an unhygienic environment, usually with inadequate infrastructure, and lacking in proper sanitary and drinking water facilities.

A simple definition of a slum is a heavily populated urban area characterized by substandard housing and squalor" (UN-HABITAT 2003) [4]. Simple averages show clearly that children in urban areas are significantly healthier than slum children, who in turn are significantly healthier than rural residents [4].

We therefore try to examine which are main factors are behind these differences in health by studying the impact of wealth, environmental conditions, and household characteristics.

As the number of poor and under nourished living in urban areas is increasing more quickly than in rural areas, the locus of poverty and malnourishment is gradually shifting from rural to urban areas (Haddad *et al.* 1999).

Comparing children across rural, urban and slum areas in Bangladesh, children from Slum areas are significantly more likely to have serious behavioral problems (Mullick and Goodman 2005).

Data from Ahmedabad, the largest city in Gujarat, India, indicate that the child health conditions in urban slums are worse than the national average, in terms of child mortality, immunization rates and other indicators, but the greater availability of health practitioners is an advantage for slum children over their rural counterparts.

Major indicators we have considered were child health, maternal health, and total expenditure on health.

This all information leads to conclude that there are problems in this all three rural, urban and urban slums. Urban have comparatively good picture but rural and urban slums have really serious condition and as developing country, India have to decide priorities among all this as have a limited resources.

The present study is aimed to assess the health problems in rural, urban and urban slum with the help of different health indicators, compare them, and find out reasons behind that.

Grossly compare all other indicators related to health, using parameters on the basis of health service delivery and health system strengthening, mortality and out of pocket expenditures on health in rural areas as compared to urban areas.

## Material and Method

### Study Design

Cross sectional study cum Meta-analysis,

### Sample size

For assessment of child health, children were selected randomly from urban, rural and urban slum areas – 30 from each.

For assessment of maternal health, families were selected randomly from urban, rural and urban slum – 30 from each.

For assessment of total expenditure on health, families were selected randomly from urban, rural and urban slum areas - 30 from each

For comparison of different health indicators different health survey data have used.

### Study Area

Urban and Urban slum area - Field practice area of B. J. Medical College, Ahmedabad, (Parmesvar Park, Kalapi nagar), sahibag,

Rural area - Chunipur and Devpura village of Ahmedabad district.

### Study Population

Residents of Field practice area of B. J. Medical College, Ahmedabad, (Parmesvar Park, Kalapi nagar), Sahibag, Chunipur.

### Data collection

Total 30 houses in Rural, Urban and Urban slum areas each, were surveyed for interview 30 children and 30 mothers in each for assess child health and maternal health.

First house was selected randomly and then 3<sup>rd</sup> house was visited for survey till desired number reach.

All participants were interviewed with pre-designed questionnaire.

30 houses were surveyed in rural, urban and urban slum for total expenditure on health of those families.

Head of those families were interviewed with pre-designed questionnaire

### For assess, total expenditure on health

Sex of head of the family, type of family, mean of total Family members, Total monthly income of all family members, percentage of monthly expenditure on Health Use of hospital public or private were recorded.

### For assess, child health

percentage of child going Aanganvali, Immunization status of child, Physical examination of Child including weight of Child, Height of the Child, Weight for height, Weight for Age, Mid upper Arm circumference, Nutrition status of child according to IMNCI protocol in which zone it is Red Zone, Yellow zone or Green Zone, any Infant Death in Family before were recorded

### For assess, maternal health

mean age of the mother at first pregnancy, mean of total number of child she has, percentage of mothers have 3 or more year space between two children, percentage of hospital delivery, mean of Total number of ante natal visits, percentage of had taken Iron-folic acid tablets, percentage of using of Family planning methods, percentage of death of any woman in family during or after pregnancy due to complication of pregnancy were recorded.

The basic data sources that have been used in this study are the:

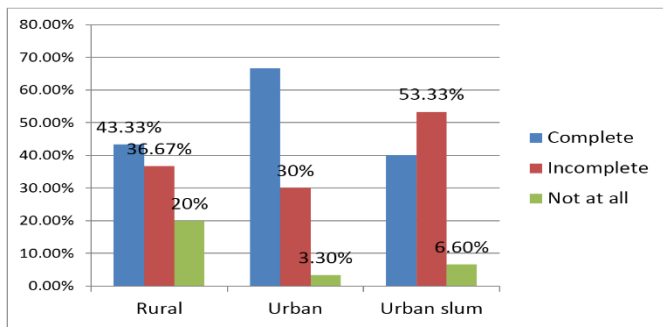
1. Sample Registration System (SRS) bulletins released by the Registrar General of India.
2. Reports of the Coverage Evaluation Surveys (CES) by UNICEF
3. Bulletins on Rural Health Statistics (RHS), State-Wise Progress reports, and Common Review Mission reports released by the Ministry of Health and Family Welfare.
4. NFHS-3

**Data Analysis**

Statistical analysis was performed using Microsoft excel and EPI-INFO version [7].

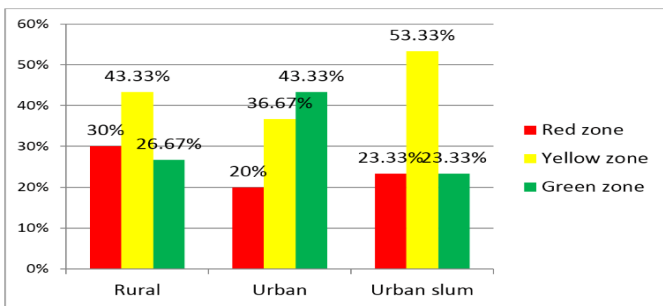
**Observations and Results**

In this cross-sectional study, Results of assessment of child health shows



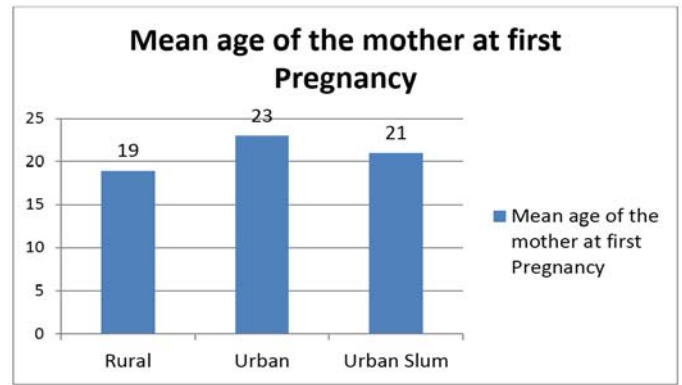
**Fig 1:** Immunization Status of child

Fig 1 shows Results of Immunization status of child shows: Percentages of complete Immunization status of child in rural, urban and urban slum areas are 43.33%, 66.67% and 40.06% respectively. Percentages of incomplete Immunization status of child in rural, urban and urban slum areas are 36.67%, 30% and 53.33% respectively. Percentages of no Immunization at all of child in rural, urban and urban slum areas are 20%, 3.3% and 6.6% respectively.



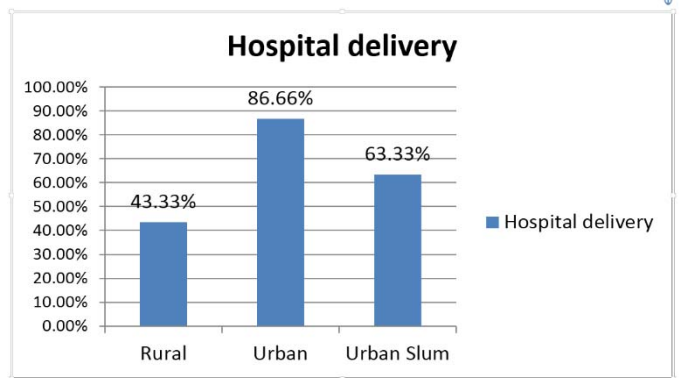
**Fig 2:** Nutritional Status of child according to IMNCI protocol

Fig 2 shows Results of Nutrition status of child according to IMNCI protocol or Law weight for age show: Percentage of Red zone in rural, urban and urban slum areas are 30%, 20% and 23.33% respectively. Percentage of Yellow zone in rural, urban and urban slum areas are 43.33%, 36.67% and 53.33% respectively. Percentage of Green zone in rural, urban and urban slum areas are 26.67%, 43.33% and 23.33% respectively. Percentages of Child going Anganwadi in rural, urban and urban slum areas are 60%, 26% and 70% respectively. Percentages of Infant Death in Family in rural, urban and urban slum areas are 6.6%, 3.3% and 3.3% respectively. In this cross-sectional study, Results of assessment of maternal health shows:



**Fig 3:** Mean age of mother at her first pregnancy

Fig 3 shows Mean age of the mother at first Pregnancy in rural, urban and urban slum areas are 19, 23 and 21 respectively. Mean of total number of child mother has in rural, urban and urban slum areas are 3.5, 2.5 and 4 respectively. Percentages of 3 or more year space between two children in rural, urban and urban slum areas are 23.33%, 53.33% and 26.66% respectively.



**Fig 4:** Percentage of Hospital delivery

Fig 4 shows Percentages of Hospital delivery in rural, urban and urban slum areas are 43.33%, 86.66% and 63.33% respectively. Mean of ante-natal visits in rural, urban and urban slum areas are 1.5, 4 and 2 respectively. Percentages of death of any woman in family during or after pregnancy due to complication of pregnancy in rural, urban and urban slum areas are 6.6%, 0% and 3.3% respectively. Percentages of mother have taken Iron-folic acid tablets in rural, urban and urban slum areas 36.66%, 83.33% and 53.33% respectively. Percentages of Family planning methods had used in past in rural, urban and urban slum areas are 30%, 66.66% and 20% respectively. In this cross-sectional study, Results of assessment of Total expenditure on health shows: Percentages of male as head of the family in rural, urban and urban slum areas 90%, 97% and 93% are respectively. Results of Type of family shows: Percentages of Joint families in rural, urban and urban slum areas are 63.33%, 30% and 46.67% respectively. Percentages of Nuclear families in rural, urban and urban slum areas are 23.33%, 56.67% and 33.33% respectively. Percentages of all other types of families in rural, urban and urban slum areas are 13.33%, 13.33% and 20% respectively. Mean score of Total Family members in rural, urban and urban slum areas are 6, 4 and 5 respectively.

Percentages of Total monthly expenditure on Health in rural, urban and urban slum areas are 6%, 9% and 8% respectively. Results of Use of Hospital services: Public or Private shows: Percentages of use of public hospital in rural, urban and urban slum areas are 43.33%, 20% and 60% respectively. Percentages of use of private hospital in rural, urban and urban slum areas are 56.67%, 80% and 40% respectively.

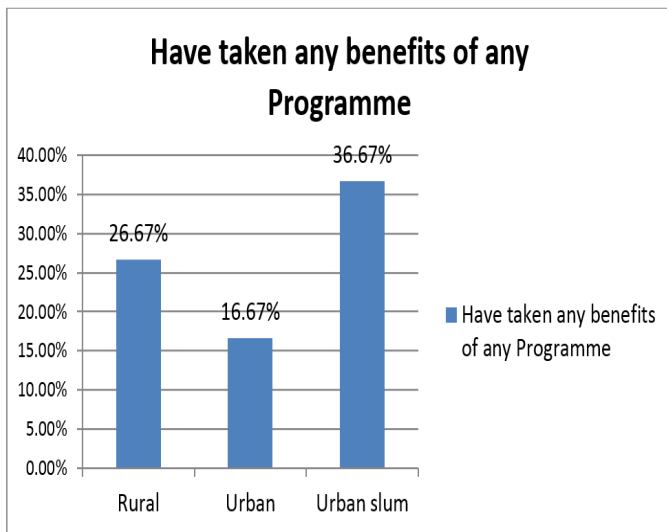


Fig 5: Families that take benefits of any Government Programme

Fig 5 shows Percentages of taken any benefits of any government Programme in rural, urban and urban slum areas are 26.67%, 16.67% and 6.67% respectively.

Table 1: Assessment of expenditure on health

No.		Rural	Urban	Urban Slum	
1	Sex of head of the family	Male	90%	97%	93%
		Female	10%	3%	7%
2	Type of family	Joint	63.33%	30%	46.67%
		Nuclear	23.33%	56.67%	33.33%
		Other	13.33%	13.33%	20%
3	Mean score of Total Family members	6	4	5	
4	Average of Total monthly income of all family members				
5	Average of Total average monthly expenditure on Health	6%	9%	8%	
6	Use of hospital	Public	43.33%	20%	60%
		Private	56.67%	80%	40%
7	Have taken any benefits of any Programme	26.67%	16.67%	36.67%	

Table 2: Assessment of Child health

No		Rural	Urban	Urban slum	
1	Child going anganvadi	60%	26%	70%	
2	Immunization status of child	Complete	43.33%	66.67%	40.06%
		Incomplete	36.67%	30%	53.33%
		Not at all	20%	3.3%	6.6%
3	Infant Death in Family	6.6%	3.3%	3.3%	
4	Nutrition status of child according to IMNCI protocol Or Law weight for age	Red zone	30%	20%	23.33%
		Yellow zone	43.33%	36.67%	53.33%
		Green zone	26.67%	43.33%	23.33%

Table 3: Assessment of maternal health

No.		Rural	Urban	Urban Slum
1	Mean age of the mother at first Pregnancy	19	23	21
2	Mean of total number of child she has	3.5	2.5	4
3	3 or more year Space between two children	23.33%	53.33%	26.66%
4	Hospital delivery	43.33%	86.66%	63.33%
5	Mean of ante natal visits	1.5	4	2
6	Death of any woman in family during or after pregnancy due to complication of pregnancy	6.6%	0%	3.3%
7	Taken Iron-folic acid tablets	36.66%	83.33%	53.33%
8	Had used of Family planning methods	30%	66.66%	20%

Discussion

Results of this study and also indicators in national health surveys shows Child health including immunization and nutrition status is significantly very good in urban areas in compare to rural area.

In all comparison of urban and rural, urban areas have really better results in compare to rural areas. But in that comparison we forgot URBAN SLUM areas which are at intermediate stage. And that happen due to rapid urbanization in last few years. Rural areas are away from the tertiary care hospitals and district level hospitals and have transportation problems, they are may be hard to reach areas, may be health care facilities are not well established in rural areas this may results in worsen the condition. But in comparison to rural area URBAN SLUM areas have some advantages, of course there is some challenges also.

The urban poor suffer from poor health status. As per NFHS III (2005-06) data under 5 Mortality Rate (U5MR) among the urban poor at 72.7, is significantly higher than the urban average of 51.9, More than 46% of urban poor children are underweight and almost 60% of urban poor children miss total immunization before completing 1 year.

Poor environmental condition in the slums along with high population density makes them vulnerable to lung diseases like Asthma, Tuberculosis (TB) etc. Slums also have a high-incidence of vector borne diseases (VBDs) and cases of malaria among the urban poor are twice as high as other urbanites [5].

Conclusion and Recommendations

Results of this present study shows percentages of Child going anganvadi in Urban slum areas (70%) and rural (60%) have not significant difference but it may show effect on immunization and nutritional status of children.

Analysis of Immunization status of child in urban rural areas show there is only 40% children have complete immunization but major bulk of children incomplete immunization (53.33%). These urban slum areas are nearer to tertiary care hospitals and district hospitals, and children who have incomplete immunization are already register in system so easy to trace them and located near so easy to reach there. So we have to focus on urban slum areas as we can improve immunization status of children with our limited resources.

Same this can be apply for all results which are poorer in urban slum in comparison to urban area. Nutritional status of children in urban area is so much better then urban slum and rural area. But analysis of data from urban slum areas shows

bulk of 53.33% children in yellow zone which can improve and move to green zone if properly manage them with early diagnose.

Factors, which are significantly, associated most with infant and maternal health and mortality are levels of maternal education, early childbearing, and inadequate birth spacing.

Children born to adolescent mothers are at higher risk. Infant mortality rates are highest among mothers under 20 years of age. The rates are lowest among the children born to mothers between the ages of 20-24, remain low up to 25-34 years of age, and increase again after that age <sup>[7]</sup>.

Spacing between childbirths: Children born less than two years after the first delivery are less likely to survive; there is a consistent and significant impact of birth intervals less than 24 months on child survival <sup>[7]</sup>.

For example, a child born within 24 months of the previous child has 68% higher risk of dying within the neonatal period and 99% higher risk of dying in the post-neonatal period. The risk further increases sharply if the previous child has died. A short birth interval not only increases mortality risk of the subsequently born children, but also of those born earlier <sup>[7]</sup>. Education of mother is higher in rural area in compare to urban slums this is favorable factor for rural area.

Overall on the basis of findings of this study and present data available from various national health surveys, we can say that overall picture of urban area is better in comparison to rural and urban slum areas. Comparison of rural and urban slum areas shows that picture of rural and urban slum are more or less similar but urban slum have advantages like nearer to health care facilities, have good transportation, these areas are easy to reach due to this advantages, if proper focus given to these areas then we can make improvement with our limited resources.

### Bibliography

1. Addressing the social determinants of health through health system strengthening and inter-sectoral convergence: the case of the Indian National Rural Health Mission.
2. World Health Organization – Non communicable Diseases (NCD) Country Profiles, 2014.
3. REPORT OF THE COMMITTEE ON SLUM STATISTICS/CENSUS, 2011 Government of India, ministry of housing and urban poverty alleviation, national buildings organization, New Delhi
4. What Explains Divergences in Child Health between Rural, Urban, and Slum Areas? Evidence from India. Claus C portner, Yu-hsuan Suz, November 2013
5. NATIONAL URBAN HEALTH MISSION FRAMEWORK FOR IMPLEMENTATION
6. Practices Regarding Child Birth and Basic Newborn Care among Urban - Slum Population
7. Infant and Child Mortality in India - Levels trends and determinants
8. Registrar General (2006). SRS bulletin, sample registration system. Volume 40, No. 1. New Delhi: Registrar General.
9. UNICEF (2005). Coverage evaluation survey. All India report 2005. New Delhi: UNICEF.
10. Registrar General (2009). Special bulletin on maternal mortality in India 200406, sample registration system. New Delhi: Registrar General.
11. Ministry of Health and Family Welfare (2011). Bulletin on rural health statistics in India. New Delhi: Ministry of

Health and Family Welfare, Statistics Division, Government of India.

12. Ministry of Health and Family Welfare (2006). National Rural Health Mission, framework for implementation 2005-2012. New Delhi: Ministry of Health and Family Welfare, Government of India.
13. NRHM Division (2011). Framework for preparation of annual Programme implementation plan of NRHM 2012-13. New Delhi: NRHM Division, Ministry of Health and Family Welfare. Available from: [http://pipnrhm-mohfw.nic.in/PIP2012-13\\_files/Guidelines.htm](http://pipnrhm-mohfw.nic.in/PIP2012-13_files/Guidelines.htm) [cited 15 November 2012].
14. Maternal Health Division (2011). Guidelines for Janani-Shishu Suraksha Karyakram. New Delhi: Maternal Health Division, Ministry of Health and Family Welfare. Available from: <http://cghealth.nic.in/ehealth/2011/jssk/GuidelinesforJSSK1.pdf> [cited November 2012].
15. November 2012.