

# Urban Poverty and Health Inequality in India

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## *INTRODUCTION*

Since 2007, the world's urban residents have outnumbered rural.<sup>1</sup> Over 30 percent of Indians live in urban areas, and the proportion is projected to grow to 40 percent, or about 590 million people, by 2030.<sup>2</sup> Urban population growth is attributable to natural increase, rural to urban migration, and city's encroachment on surrounding areas. A focus on the urban-rural dichotomy, however, masks important intra-urban differentials and inequalities. One of the most striking disparities within cities is that of health status and outcomes.<sup>3</sup> An urban advantage in health has been found when comparing averages *between* urban and rural areas, but when investigating health indicators *within* urban areas, significant heterogeneity arises.<sup>4</sup> Young children, especially those under the age of five, from disadvantaged families are particularly vulnerable to heightened levels of morbidity and mortality in urban areas, due in part to poor residential and environmental conditions as well as household deprivation in a highly commoditized context.<sup>5</sup> Finally, a double burden of disease, characterized by the co-occurrence of infectious and chronic conditions, is on the rise in urban India. Dengue fever, tuberculosis and HIV plague urban residents alongside cardiovascular disease, respiratory illness and diabetes.

Given the increasing number of poor urban residents and slum dwellers in cities and towns across India, and our limited understanding of the interconnections between urban deprivation and poor health, further study of this issue is essential. This chapter aims to present a nuanced review and analysis of the relationship between urban poverty and poor health – the “urban health penalty” – in India. We start with the premise that good health is a fundamental human right. But good health also incentivizes and enables educational attainment and the production of human capital, which is associated with higher wages across the life course and thus a wider set of life opportunities.<sup>6</sup> Health is therefore a vital investment in India's economic and social development; failing to mitigate the growing burden of health inequalities in urban areas will cost both innumerable lives and vast sums of money. It is for these reasons that the burden of disease and its association with poverty, exclusion and deprivation in urban India requires heightened and more detailed attention and action.

## *The Multidimensionality of Poverty*

Traditionally, poverty has been defined as income inadequacy. In developing countries, poverty has been conventionally evaluated with reference to sufficient calorie consumption, which in India today is about 2,400 calories in rural areas and 2,100 calories in urban areas, per day.<sup>7</sup> These calorie requirements are then converted into financial terms, below which point individuals are considered “poor”. There are a number of issues with this method, however, including questions about how the calorie cutoffs are chosen and whether the bundles of food that are priced out to estimate the income poverty threshold reflect realistic consumption requirements. Additionally, food energy intake has actually been declining in India, raising questions about whether the calorie norm is a relevant indicator of subsistence.<sup>8</sup>

But poverty in India is no longer conceived of simply as insufficient food intake.<sup>9</sup> In 2009, Professor Tendulkar was invited to chair a committee formed by the Government of India to review the methodology used to estimate poverty. The controversial “Tendulkar methodology” that was produced includes spending on health and education, but for a number of reasons computed poverty lines at unimaginably low levels – 22.42 rupees per capita per day in rural areas and 28.65 rupees per capita per day in urban areas – resulting in public outcry. Although the methodology is still in use, the cutoffs are now 27.2 rupees in rural areas and 33.3 in urban areas.<sup>10</sup> More recently, the Indian Government has described poverty more broadly as a “multidimensional problem that includes low access to opportunities for developing human capital and to education, health, family planning, and nutrition.”<sup>11</sup> As a way of implementing one aspect of this concept, India’s cabinet recently approved by ordinance an executive order (The National Food Security Law), formalizing the legal right to food, as an integral component of good health, and creating what is likely to be the world’s largest food subsidy program.<sup>12</sup> The bill includes free meals for poor children as well as nutritional and monetary support for pregnant women,<sup>13</sup> and at the writing of this paper was pending ratification by Parliament.<sup>14</sup> The Law is expected to reduce mortality and morbidity in children and limit complications experienced by pregnant women.

Many public policy researchers and practitioners have argued in favor of including expenditures on education<sup>15</sup> and health<sup>16</sup> in computing the poverty line in the Indian context. Spending on health is increasingly viewed as an essential welfare-enhancing expenditure. Indeed, the high cost of healthcare – a large proportion of which is paid for out of pocket in urban areas – can lead to catastrophic expenditures and descent into poverty, more so among the most vulnerable groups. Urban residents may be especially vulnerable to the higher cost of health services, which are often of poor quality<sup>17</sup> and associated with unnecessary drug purchases.<sup>18</sup> Impoverishment due to high out of pocket expenditures associated with

healthcare utilization is far too common in India, and threatens the efficacy of both individual- and population-level poverty reduction programs and policies.<sup>19</sup>

### *Urban Deprivation and Inequality*

Poverty is becoming increasingly concentrated in urban areas and is qualitatively different from rural poverty.<sup>20</sup> The urban poor suffer from both absolute and relative deprivation; the former referring to a standard of living common to all,<sup>21</sup> and the latter referring to an unfair discrepancy between one individual's situation and that of another.<sup>22</sup> Exclusion, which is related to and often an outcome of relative deprivation, is an important aspect of urban poverty. This can take the form of economic, political, natural resource, basic services and/or social exclusion (restrictions on participation "on fair terms" in local and national social life).<sup>23</sup> All forms of exclusion reduce access to opportunities and thus perpetuate poverty. According to Amartya Sen, opportunities are obtained via the exercise of economic, social and political freedoms, which in turn translate into increased labor force participation, better health, and social empowerment. Sen quotes Aristotle, who argues that wealth is "merely useful and for the sake of something else".<sup>24</sup> Opportunity, which is obtained by the accumulation of education, wealth and social connections, has indeed been associated with health across a wide variety of contexts and cultures, including that of urban India.<sup>25</sup>

Although the urban-rural dichotomy is simplistic due to its definition being based on administrative, political and/or geographical needs<sup>26</sup> (India uses a rather strict definition<sup>i</sup>),<sup>27</sup> it is a widely used metric by which to categorize populations. Wratten argues that there are five interrelated and core characteristics of urban poverty, all of which are directly related to health: environmental risk; commercial exchange; social diversity, fragmentation and crime; intervention from the state and police.<sup>28</sup> Environmental risk refers to exposure to overcrowded housing in hazardous locations such as flood-prone areas, toxic waste sites, garbage dumps and/or proximity to busy roads, railroad tracks or other sources of particulate and noise pollution. Environmental conditions also include poor access to improved water and sanitation services, which is associated with exposure to diarrheal diseases and cholera, intestinal worms, dengue and malaria. "Commercial exchange" relates to the commoditization of daily living in urban areas, described as urban residents' reliance on "market exchange to buy basic goods and services and to earn money". Financial hardship reduces diet diversity and increases stress, among its many other ills, and is associated with high blood pressure, use of alcohol and tobacco, and higher simple carbohydrate and lower fiber

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<sup>i</sup> All places with a Municipality, Corporation, Cantonment, or Notified Town Area; All other places that satisfy the following criteria: Minimum population of 5,000; at least 75 percent of the male population was non-agricultural; a density of population of at least 400 people per sq. Km

intake, all of which increase risk of chronic diseases such as diabetes and cardiovascular disease.<sup>29</sup> Subsistence production and unpaid productive or domestic work does not feed families in urban areas where households require money to pay for rent and food.

Wratten's third factor of social fragmentation is exacerbated by relative deprivation in urban areas, which is associated with higher levels of crime and violence as well as drug and alcohol abuse. A final core characteristic of urban poverty is associated with insecurity and intervention by a coercive and/or negligent authority. Some examples include persecution by corrupt and violent police, the state's neglecting to provide public services and the insecurity of tenure associated with not owning one's home or land, which can understandably increase risk of anxiety and depression. Wratten argues that these five vulnerabilities interact with gender, class, migration status, national and international policies as well as external shocks to produce urban deprivation. The deprivations in urban areas associated with poor living conditions, exclusion, and lack of services can be characterized as *cumulative* over the long term.<sup>30</sup> Add to this other underappreciated risks like traffic accidents and vulnerability to natural disasters,<sup>31</sup> and the "urban health penalty" in India comes into clearer focus.

One of these additional components of urban vulnerability and poor health that is very important in the Indian context is migration. Many urban poor were pushed from rural villages by lack of work and limited opportunities for mobility, and pulled to urban areas by the prospect of paid employment and a more diverse set of economic and social options. Migrants, however, often settle in squalid living conditions, are unfamiliar with health systems and other public services, and represent a diversity of backgrounds, languages, and cultures, which can make the development of social capital and supportive networks difficult. Finally, migrants are, by definition, characterized by their mobility, which can preclude long-term contact with service providers.<sup>32</sup>

This constellation of vulnerabilities has been found to be associated with increased risk of morbidity and mortality in urban areas in India, particularly that of children.<sup>33</sup> Good early child health is particularly important for a wide variety of later life outcomes, including reduced levels of disability, improved mental health, and higher educational attainment and future wages.<sup>34</sup> Even growth in the fetal period is associated with risk of future adult morbidity – limited nutrition in the womb is associated with increased risk of coronary heart disease, stroke, diabetes and hypertension.<sup>35</sup> This has implications for the double burden of disease and increasing expenditure on health as levels of morbidity continue to rise. If no action is taken, the current and future burdens of disease associated with poverty and deprivations in urban areas will weigh increasingly heavily on the population's health and the Indian Government's finances as urban areas continue to grow in size.

## *Slums as a Manifestation of Poverty and Urban Disparities*

Urbanization should be considered a structural determinant of health.<sup>36</sup> Rapid and unplanned urbanization creates social stratification and segregation, which is often manifested geographically in slums and informal settlements. It is well known that context matters for health indicators and outcomes. Indeed, it is not only household level factors alone that affect health, but “the cumulative impact of social customs, living conditions, family conditions and access to services.”<sup>37</sup> Nancy Krieger argues that people living in poor neighborhoods are likely to have poorer health than equally poor people living in more affluent neighborhoods.<sup>38</sup> Women may be particularly vulnerable;<sup>39</sup> slum residence is associated with higher fertility, and women are generally disadvantaged as compared to men in terms of education, literacy and income. Indeed, slum-dwelling women in India are more likely to be underweight than their non slum-dwelling counterparts<sup>40</sup> and poor women are more likely to report worse maternal and child health indicators than their non-poor counterparts.<sup>41</sup>

Public policy and rhetoric around urban poverty and health in India has focused on slum areas in spite of significant definitional and operational challenges associated with what constitutes a slum. The *Rajiv Awas Yojana* “envisages a ‘slum-free India’” and the Jawaharlal Nehru National Urban Renewal Mission (JNNURM), along with its Sub-Missions Basic Services to the Urban poor and Integrated Housing and Slum Development Program aim to improve and provide basic services to an estimated 42.6 million people living in 8.3 million households in 640 cities in 26 States and Union Territories (as of the 2001 Census).<sup>42</sup> Additionally, the proposed National Urban Health Mission, whose prime objective is to foster “sustainably healthy cities,”<sup>43</sup> similarly emphasizes slum dwellers and “other vulnerable groups.”<sup>44</sup> But who are slum dwellers and are they also the urban poor? Just as with defining who is poor, there are many different ways to characterize slum areas.<sup>45</sup> By at least one definition of slum and one of poverty, and using data from the most recent National Family and Health Survey (NFHS-3) from 2005-2006, researchers have found that not all poor are slum dwellers and not all slum dwellers are poor. More specifically, the proportion of slum dwelling populations designated as poor ranged from 42 percent in Delhi to only 9 percent in Indore, indicating that many poor urban residents do not live in slums.

The closest to a universal definition of slum dwelling was developed by the UN-HABITAT, the United Nation’s Human Settlements Programme<sup>46</sup>: According to this definition, a slum household is a group of individuals living under the same roof in an urban area and lacking one or more of the following:

- Durable housing of permanent nature that protects against extreme weather conditions
- Sufficient living space (no more than three people per room)
- Easy access to safe water in sufficient amounts at an affordable price

- Access to adequate sanitation in the form of a private or public toilet shared by a reasonable number of people
- Security of tenure; protection from forced eviction

The definition used in the 2011 Census of India is slightly different<sup>47</sup>: A contiguous area with 60-70 households having all of the following slum-like characteristics:

- Predominant roof material made of something other than concrete
- No drinking water source available inside the house
- No latrine available inside the house
- No drainage or open drainage

There are many ways in which poverty combines and interacts with slum dwelling; the following empirical analyses will unpack their implications for health. In brief, results indicate significant intra-urban variation in child morbidity and mortality, and some evidence to suggest an “urban penalty” in the case of child morbidity. Urban poor and slum dwelling children under age five have higher levels of stunting and mortality than their non-poor and non-slum dwelling urban counterparts, respectively; urban poor children are more stunted but not more likely to die than their rural counterparts, and rural children are more likely to be stunted than their slum dwelling counterparts. These findings indicate that the characterization of urban deprivation matters and supports previous findings that not all poor are slum dwellers and not all slum dwellers are poor. In general, however, the damaging and even deadly relationship between urbanization, poverty and poor child health in India requires immediate policy action. The cost of the current and future burdens of communicable and non-communicable diseases in India is already astronomical, and will continue to grow if action is not taken to prioritize and improve population and urban health.

## ***EMPIRICAL ANALYSES***

### *PART 1: Health Disparities within Urban Areas*

Intra-urban health disparities are one of the most predictable, troubling and unfair results of the marginalization and exclusion of the urban poor. Improving child health is a Millennium Development Goal priority; Goal Number 4 is to reduce child mortality. More specifically, by 2015, countries are expected to halve the proportion of children under five years old who are stunted, wasted or underweight, as compared to 1990 levels. This is especially important in the Indian context where almost half of children under 5 are stunted and 43 percent of children are underweight.<sup>48</sup> Child health indicators are some of the most frequently evaluated when investigating health differentials because of their association

with morbidity and mortality, as well as motor and mental development delay, reduced educational attainment and lower wages and productivity over the life course.<sup>49</sup> Child health is an important indicator of future generations' economic and social potential, and is as much a basic right as food, shelter and a healthy living environment.

Stunting, defined as a height for age of more than two standard deviations below the median of the reference population, is an indicator of chronic nutritional deficiency, exposure to communicable diseases like diarrhea, malaria and pneumonia, as well as poor sanitation.<sup>50</sup> Stunting is a widely used indicator of health, and given its high levels in India, is considered a priority child health indicator. We also assess levels of child mortality, another widely used health indicator.<sup>51</sup> Taken together, these morbidity and mortality indicators provide insight into the state of child health in India, and serve as a basis for comparison across residential contexts and dimensions of deprivation.

Using data from the third National Family and Health Survey (NFHS-3) from 2005-2006, the following analyses document the association between poverty and poor health.<sup>ii</sup> We compare indicators of morbidity and mortality between 1) Children in each wealth quintile in urban areas, 2) Slum-dwelling and non-slum dwelling children in urban areas, 3) Rural and urban poor and non-poor children, and 4) Rural and urban slum dwelling and non-slum dwelling children. An urban wealth index<sup>iii</sup> is computed from reported household assets<sup>iv</sup> and consolidated into quintiles; "poor" children are from households whose wealth index score puts them under one standard deviation below the median wealth index score. Slum dwelling status is based on the definition developed for a report by the Committee on Slum Statistics/Census, which was then used (with some minor changes) to assign slum dwelling status in the 2011 Census:<sup>52</sup> A contiguous area with 20-25 households having all of the following slum-like characteristics: a) Predominant roof material made of something other than concrete; b) No drinking water source available inside the house; c) No latrine available inside the house; d) No drainage or open drainage. Children were defined as living in a slum if more than 25 percent of survey respondents' homes in their primary sampling unit reported all of the above. This characterization may be more precise than other definitions of slums because it does not refer to whether the community is notified or considered a legal settlement by the state or local authorities.

Figure 1 displays the predicted probabilities of the child morbidity and mortality indicators by standard deviations from the mean of the wealth index. These descriptive statistics indicate that the probability of

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<sup>ii</sup> Analyses are weighted by the probability that survey respondents were sampled.

<sup>iii</sup> The National Family and Health Surveys do not collect information on income or consumption expenditure so poverty based on rupees earned per day is not calculable.

<sup>iv</sup> Radio, television, refrigerator, bicycle, motorcycle/scooter, car, modern cooking fuel, mobile phone, watch, mattress, pressure cooker, chair, cot/bed, table, electric fan, sewing machine, computer, water pump

stunting and death in children under the age of five years old is associated with household wealth as measured by asset ownership, a standard proxy for wealth when analyzing NFHS data.<sup>53</sup> More specifically, the probability of poor health declines monotonically as the wealth index increases. While over 60 percent of children living in households with a wealth score two standard deviations below the mean are stunted, a quarter of children living in households with a wealth score of two standard deviations above the mean are stunted. The corresponding predicted probabilities are 7.8 and 2 percent for the probability of losing a child under five years old. These differences are statistically significant.

**FIGURE 1:** Predicted probabilities of child morbidity and mortality by standard deviations above and below the mean of the wealth index<sup>v</sup>

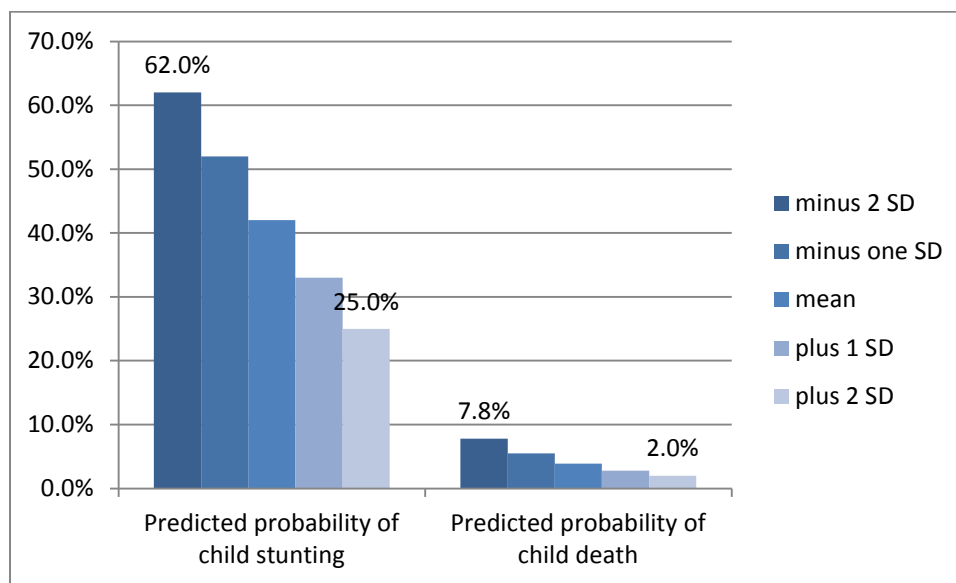
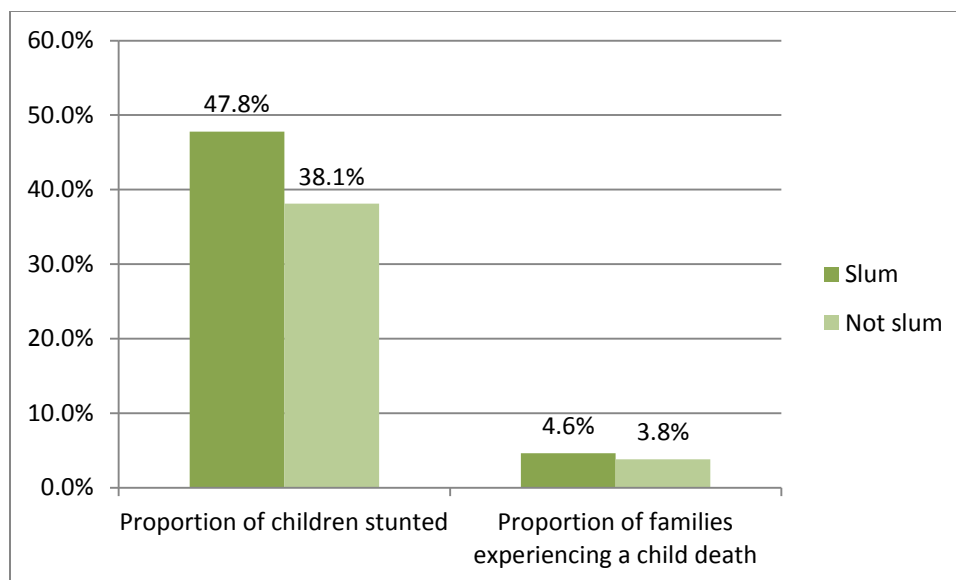


Figure 2 displays the burden of morbidity and mortality by slum status as defined by the recommendations of the Committee on Slum Statistics/Census. The descriptive statistics indicate that the probability of child stunting and death is higher among slum dwellers as compared to non-slum dwellers. These differences are statistically significant. Whereas almost 48 percent of slum dwelling children are stunted, the corresponding proportion is 38 percent among non-slum dwelling children. The corresponding proportions are 4.6 and 3.8 percent for the proportion of families experiencing the death of a child under five years old.

**FIGURE 2:** Burden of child morbidity and mortality by slum dwelling status

<sup>v</sup> Mean of the wealth index is 5.7. Minus 2 SD corresponds to 1.08, minus 1 SD corresponds to 3.40, plus 1 SD corresponds to 8.03, and plus 2 SD corresponds to 10.35 of the wealth index, respectively.





It is important to note that these descriptive statistics do not hold constant factors associated both with health indicators and socioeconomic or slum dwelling status, including mother’s education, caste, height, number of children ever born, and child’s birth weight. The results, therefore, should be understood as the bivariate association between health indicators, wealth and slum status. One cannot say, for example, that a lower score on the wealth index *causes* poorer health, just that about 42 percent of children living in households with average wealth are stunted. This relationship might not be due to wealth per se, but what wealth is associated with, including but not limited to the factors listed above.

That being said, there is a clear and consistent relationship between urban deprivation and poor health *within* urban areas. The poor and slum dwellers have a consistently higher burden of mortality and morbidity than their richer and/or non slum-dwelling counterparts. Although we cannot say from these data by what precise mechanism poor health manifests in the urban poor, the studies previously mentioned point to the cumulative effect of poor infrastructure and environmental conditions, insufficient provision of public services, social exclusion and commoditization. Many of these challenges fall within the scope of the National Urban Health Mission.<sup>54</sup> Child health, which has implications for adult health, in urban India is very clearly graded by economic and social resources. Intra-urban inequalities in health are thus fertile ground for public policy intervention.

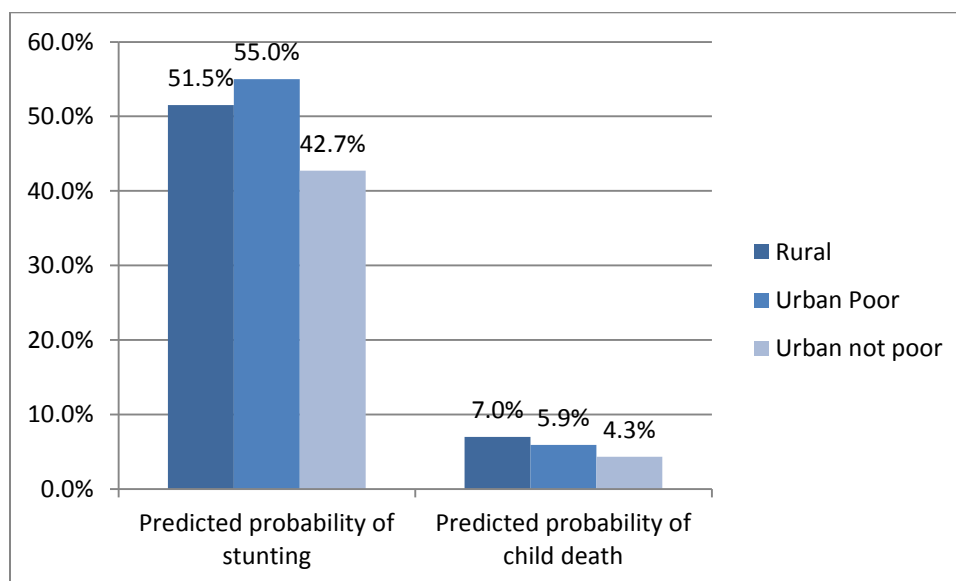
#### *PART 2: Is There an Urban/Rural Divide?*

It is generally assumed that urban residents have better health than rural residents; this is called the “urban health advantage” and is thought to be associated with increased access to health services, a more diverse diet, and higher levels of educational attainment, among other purported benefits of living in an urban

area. A belief that the health of rural populations is poorer than that of their urban counterparts has resulted in a predominantly rural focus of health policy and planning in India and other low- and middle-income countries. But empirical work has shown, for example, that adult mortality rates (ages 15-45) in 11 of 13 sub-Saharan countries are actually higher in urban than in rural areas,<sup>55</sup> and in a study across 47 developing countries, “the urban poor actually have higher rates of stunting and mortality than their rural counterparts.”<sup>56</sup> Indeed, urban residents experience increased risk of diarrheal and parasitic diseases, dengue and other mosquito-borne diseases, contact with disease vectors and rodents due to crowded living conditions, proximity to garbage and other hazardous materials and lack of appropriate water and sanitation. Urban dwellers are also at risk of non-communicable diseases like overweight and diabetes. Finally, traffic accidents, natural disasters, indoor and outdoor air pollution and stress of living with minimal privacy and not enough money, are some additional public health threats that are concentrated in urban areas.<sup>57</sup>

The following analyses again use data from the NFHS-3 to investigate child health in rural areas as compared to health among the urban poor and slum dwellers. Figure 3 displays predicted probabilities of child morbidity and mortality for rural children and urban poor<sup>vi</sup> and non-poor children. While 52 percent of rural children are stunted, the corresponding proportion of poor urban children is 55 percent. Child death, however, is more common in rural areas than urban areas, regardless of household wealth.

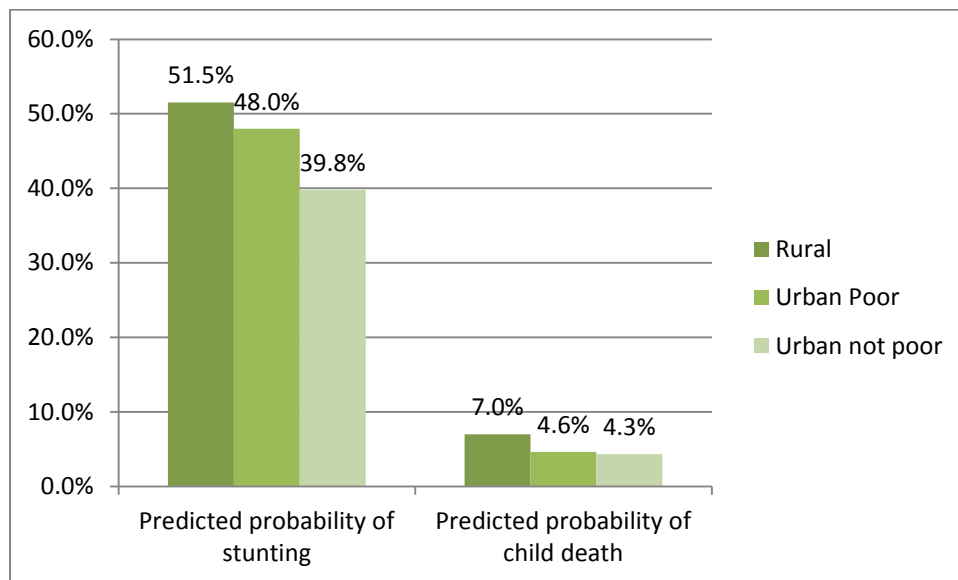
**FIGURE 3:** Predicted probabilities of child morbidity and mortality for rural, urban poor and urban non-poor



<sup>vi</sup> Poor in urban areas is defined as families whose wealth index score puts them under one standard deviation below the median wealth index.

Figure 4 displays the burden of child morbidity and mortality for rural children and urban slum dwelling and non-slum dwelling children. Both stunting and death are more common in rural children than in urban children regardless of slum dwelling status.

**FIGURE 4:** Burden of child morbidity and mortality by rural and slum dwelling status



## ***DISCUSSION***

These descriptive statistics demonstrate significant intra-urban variation in child morbidity and mortality and some evidence to suggest an “urban penalty” in the case of child morbidity. Specifically, the descriptive statistics presented in Part 1 indicate that both child morbidity and mortality are higher among slum dwellers and the poor in urban areas than their richer and/or non-slum dwelling counterparts. While socioeconomic gradients in health have been found in a wide variety of contexts, these data indicate that India is no exception when it comes to significant heterogeneity in levels of poor health *within* urban areas. Indian cities compete in the global economy,<sup>58</sup> and urban areas house the engines key to its economic growth.<sup>59</sup> Unhealthy and unequal urban residents will weigh increasingly heavily in both financial and human terms if action is not taken to address these significant intra-urban health inequalities.

In Part 2, we find that stunting is higher among urban poor children as compared to their rural counterparts. This may reflect the poor environmental, epidemiological and nutritional conditions associated with urban deprivation, which include but are not limited to poor ventilation, heightened contact with human excreta, limited access to potable water, crowded living and working quarters that increase risk of infectious disease spread, environmental hazards such as garbage, toxic waste and

pollution from cooking fuel, traffic and industry pollutants. Additionally, the commoditization of urban living may make it more difficult to obtain a varied and nutritious diet. Rather than planting and harvesting vegetables, the urban poor must buy them with what little money have left over after paying for rent, transportation, and other services. More often than not, children do not get either the macro- or the micronutrients their growing bodies require. Stunting and malnutrition are thus important indicators of deprivation broadly defined.

In the event of an acute health episode, however, children under five years old appear more likely to be able to avert death in urban areas than in rural areas, regardless of household deprivation and/or poor environmental living conditions. This may reflect their proximity to health services, which are essential during a particularly severe health episode. However, while the density of health providers in urban areas is high and access to health services may be less of a concern than in rural areas, the cost and quality of the services provided present significant issues. The health services accessed by the poor are of particularly poor quality – private providers located in their areas often have little or no medical training,<sup>60</sup> and public providers exert very little effort due to poor incentive structures. In short, the urban poor “receive low quality care from the private sector because doctors do not *know* much and low-quality care from the public sector because doctors do not *do* much”.<sup>61</sup> But the poor pay significant sums for this care and its associated medications, many of which are unnecessary. The World Health Organization estimates that over 80 percent of medical care in India is paid for out of pocket, representing almost three times public spending. Indeed, the Indian Government spends just 1.2 percent of GDP on health,<sup>62</sup> while total health expenditure (public and private combined) is estimated to be 3.9 percent.<sup>63</sup> India’s 1.2 percent public expenditure compares unfavorably to the Philippines’ 7.5 percent and even Sri Lanka’s 1.8 percent, for which Sri Lankans obtain significantly better health indicators than Indians.<sup>64</sup>

Catastrophic health expenditure impoverishes. It also keeps families from exiting poverty.<sup>65</sup> Lower child mortality in urban India as compared to that in rural areas comes at significant cost, and there is minimal to no financial protection for families experiencing catastrophic expenditures on health. Indeed, the descriptive statistics based on cross-sectional data that are presented here offer no insight into whether poor families contain stunted children, or whether chronically sick and thus stunted children have contributed to their family’s impoverishment. Regardless of the directionality, these data provide compelling evidence of an “urban health penalty”.

A second important result presented in Part 2 is that children living in slums are *less* likely to experience both morbidity and mortality than their rural counterparts. This contrasts sharply with the higher probability of stunting among the urban poor than their rural counterparts. This apparent discrepancy can

be understood in two ways. The first is that slum dwelling is somehow poorly defined or measured incorrectly. But these results were robust to the slum definition used (comparison of multiple definitions of slum dwelling not shown). It is more likely that many slum dwellers are not poor and many poor are not slum dwellers. Using data from the 61st round of the National Sample Survey, Chandrasekhar and Montgomery find precisely this: the proportion living below the poverty line in non-notified slums is 52 percent, 44 percent in notified slums and 23 percent in non-slum areas. These findings indicate that many poor households do not live in slums and/or the official poverty line (the authors used 538.6 rupees per capita per month) is set too low.<sup>66</sup> A health policy focus on slum areas therefore may not address child morbidity among the urban poor, and this should be taken explicitly into account in any future development, revision and/or implementation of policies intended to improve the health of urban residents.

### ***CONCLUSIONS AND RECOMMENDATIONS***

Despite evidence of significant intra-urban and urban-rural disparities in health in India, urban health has historically been given low priority.<sup>67</sup> But public policy is one of the most important tools to address and remedy the determinants of poor health.<sup>68</sup> Operationalized through laws, regulations and guidelines, public policy can significantly improve population health.<sup>69</sup> Poor health is expensive, both for individuals and for the Indian Government. Private, out of pocket expenditure on health in India is some of the highest in the world. Poor health in early life is associated with increased risk of chronic conditions later on, care for which the government ultimately pays for directly with the provision of health services that are too expensive for individuals to privately access, and indirectly in the loss of investment of human capital<sup>70</sup> and productivity<sup>71</sup> associated with chronic poor health. Finally, the limited financial protection available for health-related expenditures both impoverishes and keeps poor families from escaping poverty, limiting the scope of India's development trajectory.

While the need for action on poor urban health is clear, policymaking is by definition political,<sup>72</sup> as evidenced by the controversy generated by a large purported decrease in the proportion of Indians living below the poverty line just ahead of election season.<sup>73</sup> We argue, however, that investing in improving urban health – and child health in particular – is economically and socially essential for the following reasons:

- 1) Urban areas are and will continue to be the engine of India's economic growth and development. But poor health and inequality in urban India reduces human capital attainment and productivity, increases social fragmentation, and threatens sustainable development.

2) Health services are particularly expensive in urban areas and their quality is extremely variable. There are large numbers of informal and untrained healthcare providers as well as highly trained specialists, but preventive and primary care delivered by a qualified general practitioner is not sufficiently available. Lack of access to quality and appropriate services contributes to poor health across the life course.

3) Poor health in early life as evidenced by stunting is associated with chronic disease in later life, leading to a double burden of communicable and chronic disease. While infectious diseases remain rampant in India,<sup>74</sup> chronic disease is becoming more and more common, expensive and difficult to treat, threatening households with constant risk of catastrophic expenditure.

In sum, it is the quality, type, expense and management – not simply the quantity – of health services in urban areas that requires addressing.<sup>75</sup> Based on the previously enumerated economic and social implications of non-action, the following are actionable items we recommend the Government of India adopt to weaken and ultimately break the relationship between urbanization, poverty and poor health:

**Increase public spending on urban primary care:** The government of India spends significantly less on health than other countries in the region, and the budget allocation for urban health is especially low. Increasing spending to address the quality, type, expense and management of urban health care services can be done in conjunction with cost-saving actions including the promotion of generic drugs to reduce unnecessary expenditure. This will have a direct impact on poverty reduction by decreasing private out of pocket expenditure on health care.<sup>76</sup>

**Strengthen regulation and incentive structures in both the public and private sector** to improve health service quality. The demand for health services is high in urban India – poor Indians actually access *more* services than their wealthier counterparts for short-term morbidities such as respiratory episodes (colds/coughs/allergies), minor injuries and diarrhea.<sup>77</sup> But the quality of services accessed (public and private) by urban residents – and the urban poor in particular – is low; appropriately qualified general practitioners are in particularly short supply. Resources must be committed to developing a regulatory system, including accreditation procedures and rankings for the many types of qualifications available, as described in the 2010 Clinical Establishments Act. These actions should be prioritized in all states and coordinated by a central agency, such as the National Health Regulatory and Development Authority, recommended in 2012 by the High Level Expert Group on Universal Health Coverage.<sup>78</sup>

**Address governance structures for urban health** by prioritizing the needs of neglected urban populations at both Central and State Government levels. Currently, it is unclear whether Municipal Corporations, other city governing bodies, states, or the Central Government is responsible for

developing, financing and implementing urban health policies and programs. Coordination between these bodies is virtually nonexistent.<sup>79</sup> In practice, central and local authorities split the responsibility for urban healthcare provision, resulting in unclear accountability mechanisms and weak coordination among stakeholders.<sup>80</sup> The importance of the role of good governance in mitigating health poor health in urban areas cannot be overstated.<sup>81</sup>

**Explore innovative approaches to collaboratively improve urban health** through public-private partnerships (PPPs). Formally acknowledging and better integrating the complex array of public and private healthcare providers in urban areas is essential for improving service delivery. Not-for-profit, faith-based and big business groups, among other providers, coexist in the urban space;<sup>82</sup> contractual arrangements, referral systems and other alternative partnerships should be explored to better manage urban healthcare provision shortfalls.

Finally, **city planning and management should acknowledge and incorporate the infrastructural determinants of health** including, but not limited to, the provision of potable water, sanitation, pedestrian walkways, and security of tenure. Vertical programming for specific health issues, such as malaria, HIV and leprosy,<sup>83</sup> while admirable, has diverted attention from primary healthcare and the social determinants of health. Indeed, poverty reduction in general, while outside the scope of this paper apart from the provision of affordable healthcare, must remain a priority of the Indian Government.<sup>84</sup> Neglecting urban inequality and deprivation has consequences for health and for the opportunity of each citizen of India to achieve their potential. A commitment to addressing poor urban health makes sound economic and social sense.

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