

# 4

Health and Healthcare

@ Institute for Human Development

#### 4.1. Introduction

It is widely acknowledged that health constitutes a core pillar of human development, and is a key indicator for assessing achievements in capability enhancements and well-being. The indicators of health serve as essential components of the Human Development Index (HDI) and the Multidimensional Poverty Index (MPI). Health outcomes are considered as useful measures of how development policies and interventions have reduced deprivations and bridged social disparities. Concerns on health thus stem from both implicit and instrumental premises. Good health is a cherished goal as it helps in realising human capabilities and thus contributes to well-being. Healthy people are more productive and their contribution augments economic development and fuels growing incomes. On the other hand, ill-health stifles the full realisation of psychological, social and economic capabilities, and has financial implications in terms of loss of income and productive time as well as the need to avail of medical care. Thus, the manner in which nations and regions influence the health outcomes of their populace through different policies and interventions often shapes their larger development prospects.

While policy-makers and the development community are well aware of the importance of good health, the real challenge lies in context-specific assessments of priorities and the utilisation of appropriate and efficient instruments in implementing required reforms. Often, preponderance with vertical programmes and target-driven approaches could fail to ensure an inclusive and equitable distribution of resources and sustainability of health programmes. Structural inequalities owing to disparities in income, education and living conditions lead to the inequitable use of public programmes and interventions, thereby making the health systems less responsive to the needs of vulnerable populations. Again, there always remains the tough balancing act for policy-makers between multiple challenges and fewer instruments (including fiscal prudence). Achieving inter-sectoral coordination and convergence, both within public agencies as well as across the diverse set of stakeholders, is always easier said than done, but has a significant bearing on the degree of responsiveness of health outcomes to policies and programmes.

The spate of reform measures during the last decade that have swept across health systems including in India, instil optimism that health policy-makers are increasingly becoming responsive towards

evidence-based decision-making, keeping equity and efficiency central to their concerns. Recent such measures undertaken in India include: the National Rural Health Mission (NRHM) (launched in 2005), which has significantly revitalised rural health care delivery through a largely participatory, convergent approach of planning and decision-making; and recent initiatives in financial risk protection including the flagship Rashtriya Swasthya Bima Yojana (National Health Insurance Scheme), (started in 2008) of the Central Government, which provides cashless hospitalisation facilities to the poor and currently covers about 35 million families nationwide.<sup>1</sup>

The renewed recognition of the importance of the social determinants of health, and the emergence of universal coverage as the avowed milestone for health systems reflects adherence with the larger global thinking on health. A recent body of work needs mention as it has been instrumental in raising further awareness about health systems and policy. Marmot (2007) and Marmot *et al.* (2010) highlight the pathways in health systems 'from root causes to fair outcomes' to place equity in health and healthcare outcomes at the centre-stage of health system goals. They argue that a synergistic view is needed of how inequalities in basic living standards and opportunities constrain the attainment of good health, and equitable access to health services. They posit health outcomes in the larger context of socio-political and economic policy, and reaffirm the importance of health from the perspective of all-round human development.

The notion of universal coverage is conceptually identical. Its ultimate motivation is to eliminate inequity in all its manifestations from health systems by ensuring equitable service access, reducing avoidable and disproportionate risks of ill-health among the vulnerable populations, and extending adequate financial risk protection to ensure that health systems are fair, responsive, and effective. Universal coverage is considered to be the ideal pathway to progress and better outcomes for developing country health systems, and success stories from countries such as Thailand, Sri Lanka, Brazil and Mexico illustrate the same.<sup>2</sup> In India, the universal health coverage agenda has been significantly furthered by the constitution of a High-Level Expert Group (HLEG) by the

1. Data provided at the RSBY national web portal, Available at: <http://www.rsby.gov.in/>, Accessed on 17 July 2013.
2. For case studies on illustrations of the UHC concept, see HLEG (2011).

Planning Commission in 2011, to deliberate on the mechanisms for moving towards effective, equitable, and universal health coverage. In its Report (HLEG, 2011), the Group made a set of recommendations and prescriptions, some of which have been incorporated in the Twelfth Five Year Plan. This development raises hopes that health policy and programmes in India would increasingly take into consideration the conceptual moorings and initiate required reform measures to ensure good health for all at affordable costs.

This chapter draws its motivation primarily from the universal coverage paradigm, which has equity and quality central to its agenda. It reviews the health and healthcare scenario in Delhi, and presents a snapshot of the current trends in key population health indicators over the last decade. While assessing the financing aspect of healthcare, it focuses on the cost of illness and medical services, and evaluates the extent of financial risk protection. It discusses the challenges confronting the health system, and reviews the policy and programmatic responses introduced in recent years, trying, in effect, to identify the possible roadmap towards achieving effective and universal coverage of health services. It draws extensively from published official data and service statistics as well as household survey data, including those collected through a number of past studies conducted by the Institute for Human Development (IHD), including a recent People's Perceptions Survey (2013).

#### 4.2. Health Scenario in Delhi – Status and Recent Trends

We commence with a quick look at the demographic scenario in Delhi, including the size, composition and characteristics of the population which constitute the main aspects of the health system. Delhi constitutes around 1.5 per cent of the national population of 1.22 billion (Census, 2011), with the state's share of the national population remaining almost constant over the last decade. It has a high population density of 11,297 persons per sq. km. (the highest in India), and a highly variable population base because of a nearly equal number of people commuting into Delhi every day for work and business as well as to seek medical care especially from the suburbs, predominantly from the new twin cities of Noida and Ghaziabad to the east and Gurgaon to the south in the neighbouring states of Haryana and Uttar Pradesh, respectively. All this makes it very difficult for planners and policy-makers to ascertain the actual demand for public health utilities.

Within the confines of the state's boundaries, however, the pace of demographic change has witnessed a clear deceleration. Over the last three Census periods (1991, 2001 and 2011), Delhi has registered a fall in the rate of growth of population. The decline in the decadal population growth by almost 27 percentage points (the highest decline registered across the country) indicates a slowing momentum of demographic changes. Fertility levels in Delhi have also been falling at a rapid rate with the total fertility rate at replacement levels of 1.7<sup>3</sup> (NFHS-3, 2005-06), clearly indicating that the state's population is heading towards stability.

##### 4.2.1 Mortality

Overall, Delhi has shown significant improvements in its vital statistics pertaining to the population over the last three decades, demonstrated by the following developments:

- Persistent rise in the life expectancy, also across gender (Table 4.1): the expectancy of life at birth, a key component of the UNDP's HDI calculations, at 72 years, is better than the national average of 68, with females showing a higher level than males of almost 75 years. Since the 1990s, life expectancy levels in Delhi among both males and females have been better than the national average.

Table 4.1

Life Expectancy at Birth across Gender, Delhi and India 1990-2010

	Sex	Life Expectancy at Birth		
		1990	2004	2010
India	Male	59.3	63.6	65.4
	Female	60.6	66.5	68.4
Delhi	Male	65.7	68.3	71.7
	Female	68.9	71.9	74.2

Source: Calculated from life tables using age-specific death rates (ASDRs) from the Sample Registration System (SRS) Data Reports, relevant years.

- Gains in life years are reflected in the level of mortality in Delhi over the recent years, with reductions in the crude death rate (CDR)

3. The latest estimates on fertility in Delhi, according to the State Civil Registration System, 2012, is 1.8 (Communication from Directorate of Family Welfare, Department of Health and Family Welfare, GNCTD).

from 4.7/'000 in 2004 to 4.2/'000 in 2010 (SRS data reports, relevant years) being much better than the national averages for both the years considered (7.5/'000 and 7.2/'000, respectively). The overall mortality scenario in Delhi has also been much better than in the other three metro cities, with the city-state consistently recording the lowest death rate of approximately 4.5/'000 population throughout the last decade (SRS Statistical Report, 2009).

- Infant mortality in Delhi, at 28 (per '000 live births),<sup>4</sup> in 2011, remains one of the key indicators, which, however, falls short of being impressive.<sup>5</sup> This figure for the IMR and its pace of reduction pales in comparison to the corresponding figures in some larger states such as Maharashtra (25) and Tamil Nadu (22) (RGI, 2012), which also have substantial rural populations, higher levels of poverty and a less intensive network of public health infrastructure. In fact, the IMR in the city of Delhi (33 during 2004-09) was higher than in all the three other metros of Kolkata (25/'000), Mumbai (21/'000), and Chennai (19/'000) (RGI 2011).<sup>6</sup>

Delhi's commitment to reduce the IMR in a time-bound manner has been enshrined in the Delhi Development Goals (2006), or more recently by the Delhi State Health Mission, to 15 per 1000 live births by 2015 (DHDR, 2006). Calculations based on the

present trend of IMR reductions from the SRS-based estimates clearly show that Delhi is still quite far from achieving the pegged goals (IMR of 15).<sup>7</sup> Over the period 2006-12, the IMR reduced annually at a rate of around 5.4 per cent. If such a pace can be termed as the 'business as usual' scenario, Delhi can only hope to reach the threshold of 15 in distant 2023 (Figure 4.1). In a 'deadline-set' scenario pegging the target year at 2015, the IMR would need to be reduced by almost 12 per cent annually. In a 'doubling-up' scenario, reductions by about 10 per cent per annum would allow Delhi to reach the target IMR of 15 in 2018.<sup>8</sup> In this context, it would be helpful to understand a few details about the infant mortality scenario in Delhi, for example, where such deaths are clustered, and what steps need to be taken to achieve a faster pace of decline in the same. Demographers and health experts believe that reductions in the IMR require different interventions at different stages of its decline path. Reducing the IMR from very high levels (say around 80-100) would involve taking into account and addressing the incidence of deaths due to infectious diseases such as diarrhoea, pneumonia and other major killer diseases during infancy, and improving the coverage of institutional deliveries. However, the decline becomes more elastic at lower ranges, similar to the levels that Delhi is experiencing, (an IMR of 25-30). Accordingly, two areas of attention are imminent, viz., reducing deaths during the neo-natal period and universalisation of maternal and newborn care through formal, institutional systems.

Segregating infant deaths into early neo-natal deaths (within the first seven days of birth), late neo-natal deaths (between the first to the fourth week of life) and post-neo-natal deaths (age of 28 days to one year) can indicate the time periods in the life of an infant when mortality risks are clustered and are thus the highest. Unfortunately, such segregated data are not readily available from common sources such as the

4. Most recent (2011) SRS estimates (RGI, 2012).

5. Alternative estimates of IMR, from the Annual Report on Registration of Births and Deaths in Delhi, 2012, brought out by the Directorate of Economics and Statistics and the Office of the Registrar General, provides a figure of 23.9 infant deaths per 1000 live births for 2012. See the detailed report available at: <http://www.delhi.gov.in/wps/wcm/connect/73b95e00408f7b6db48cff1dfb6415f9/report+final.pdf?MOD=AJPERES&lmo d=935641067&CACHEID=73b95e00408f7b6db48cff1dfb6415f9> (Accessed on 17 August 2013). Although, these two estimates (SRS and CRS) are not directly comparable due to the use of differing methodologies, and estimates based on Civil Registration System on which the DES estimates are based tend to be under-estimates of infant deaths (based on self-reported, or infant deaths in medical institutions only), the decline seems impressive. However, in recent years the CRS-based estimates have indicated an irregular decline, as a result of much could not unfortunately be made out of the DES estimates.

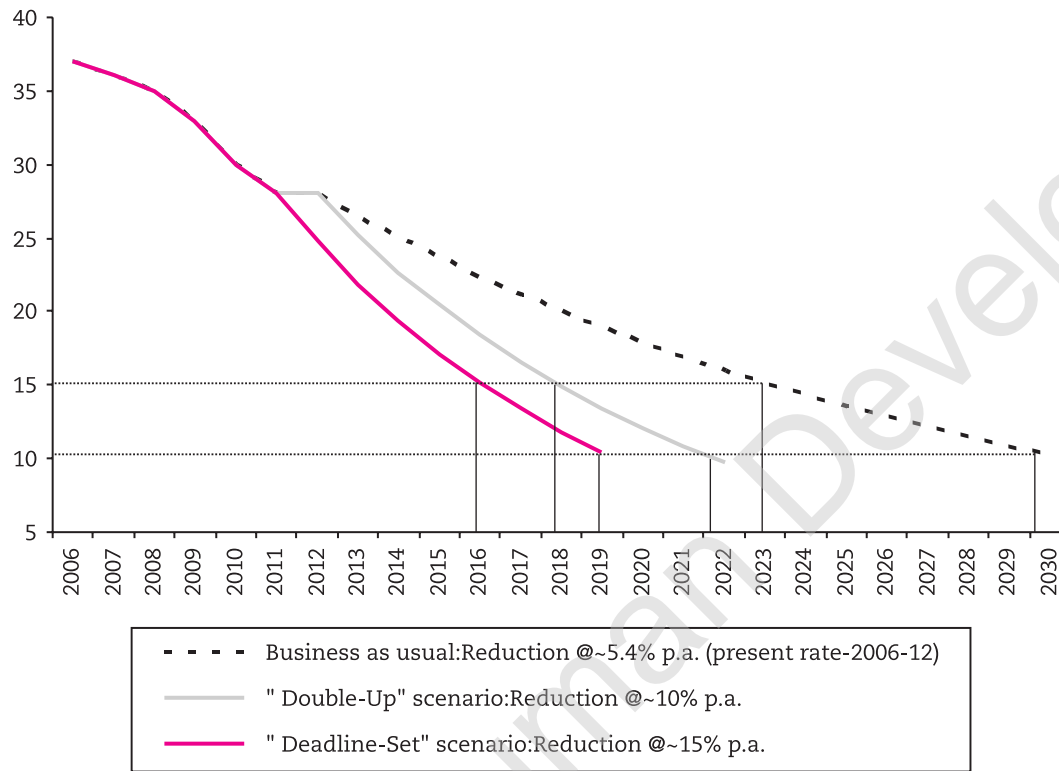
6. According to the latest SRS (October 2012) Report, the IMR of urban Delhi is 26/1000 live births, which is significantly higher than that of urban Maharashtra (17) and Tamil Nadu (19), and at an equal level with that of urban West Bengal and Karnataka.

7. The IMR reduction experience presents a better picture, if we consider the State CRS figures (22) for 2011; nevertheless, we retained SRS figures for a longer time-series and comparability with national patterns. Interestingly, if we consider the CRS level of 22 as the baseline value for the 'reduction-projections' shown in Figure 4.1, the IMR needs to be reduced by about 8 per cent annually, as compared to the present (SRS-based) rate of 5.4 per cent, and the required projected rate of 12 per cent annually to attain the goal of 15 by 2015.

8. Note that these projections are based on the IMR levels of 2011 for which the SRS figures are the latest available. If in the ensuing period, that is, 2011-13, the IMR has fallen by a faster rate, perhaps the trajectories would be slightly modified for each of these scenarios.

Figure 4.1

Projected Levels of Infant Mortality Rate and its Reduction for Delhi, Based on Observed Rate of Reduction\* between 2006-12

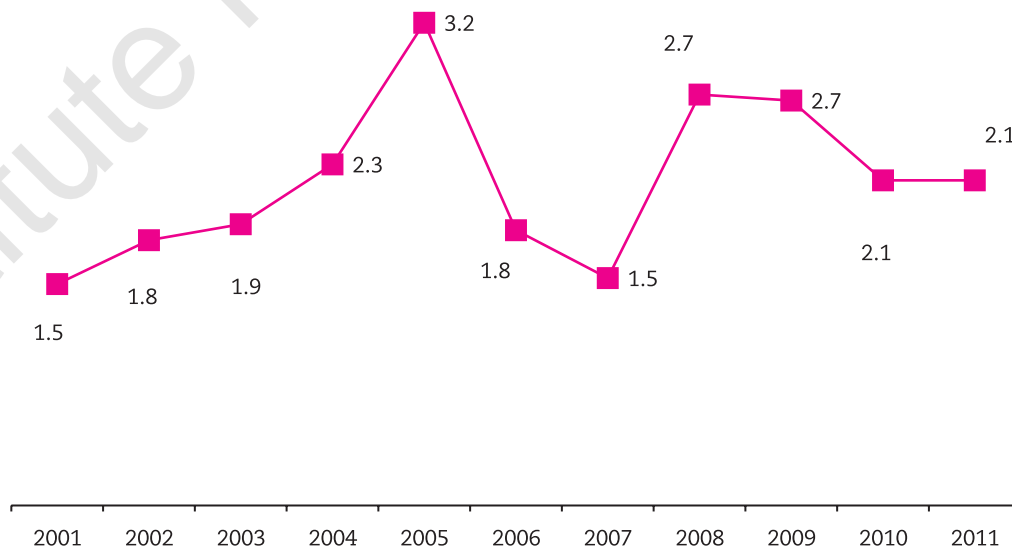


Note: \*Based on SRS figures from 2006 to 2012.

Source: Calculated from the SRS-based IMR levels for Delhi, SRS Bulletins, relevant years.

Figure 4.2

Ratio of Neonatal/Postneotal Infant Deaths, Delhi 2001-2011



Source: Calculated from CRS data for Delhi, relevant years.

SRS.<sup>9</sup> A recent attempt<sup>10</sup> finds that in Delhi (Table 4.2), most neo-natal deaths take place during the first four weeks after birth (and are even more concentrated during weeks 2-4). The decline in infant deaths during the post-neo-natal period is much faster (62 per cent) as compared to the declines achieved during the neo-natal (35 per cent) and early neo-natal (26 per cent) periods.

**Table 4.2**  
**Components of Infant Mortality**

Time Periods	ENN	NN	PNN	Infant
1981-86	24.3	36.9	30.4	66.2
1987-92	21.5	29.4	26.8	55.4
1993-98	24.3	29	17.6	46.1
1999-2005	17.9	24	11.5	35.2

Source: NIMS, ICMR and UNICEF (2012).

The predominance of neo-natal deaths is also evident from CRS data (DES, 2012a) on the reported number of infant deaths (Figure 4.2). For every single infant dying after completing the first month, there are almost two infants observed to be dying below the age of one month. The recent trends demonstrated by the incidence of neo-natal and post-neo-natal deaths in Delhi strongly indicate an urgent need for stressing on mortality risk reductions among infants aged less than a month. How fast and effectively would Delhi have to reduce its mortality risks among infants, in order to stay on track to reach its stated targets, crucially hinges on how the health system, in particular, and other stakeholders, in general, respond to the challenge of bringing down the levels of neo-natal mortality, along with the pace of such reductions.

Conventional proximate determinants of infant mortality include the household environment, maternal characteristics (mothers' education and age at childbirth), poverty and living conditions. One of the major challenges for arresting infant mortality pertains to deliveries conducted at home, which keep women out of the coverage of essential maternal health services. This aspect is elaborated in the next section yet it also needs to be stressed here that efforts aimed at reducing neo-natal mortality,

and improving the survival prospects of infants need to ensure that all pregnancies are within the coverage of qualified, professional assistance, which is significantly instrumental in bringing down the risks of newborn deaths during the first few days and weeks after birth.<sup>11</sup> A few studies in India find a strong influence of socio-economic factors in explaining infant survival in urban settings (Goli et al., 2013). Despite evidence of weakening in recent years (Singh et al., 2011) the socio-economic disparities in childhood mortality, for example, are found to persist through indirect effect via factors such as mother's education. In another analysis, the Gini coefficient of child mortality (denoting socio-economic inequality) in Delhi was found to be quite high (seventh in an all-India ranking), although indicating a marginal decline during the early 1990s and mid 2000s (NIMS, ICMR and UNICEF, 2012).

Maternal mortality is another aspect of the vital statistics for population in Delhi that warrants attention. According to the state's Civil Registration System (CRS), which is the only regular information source for maternal deaths in the state, Delhi's performance in terms of reducing the maternal mortality rate (MMR) to below 100 deaths per 1,000,00 live births by 2015, and further to less than 50 by 2020, seems to be on track (DES, 2013). In 2012, the

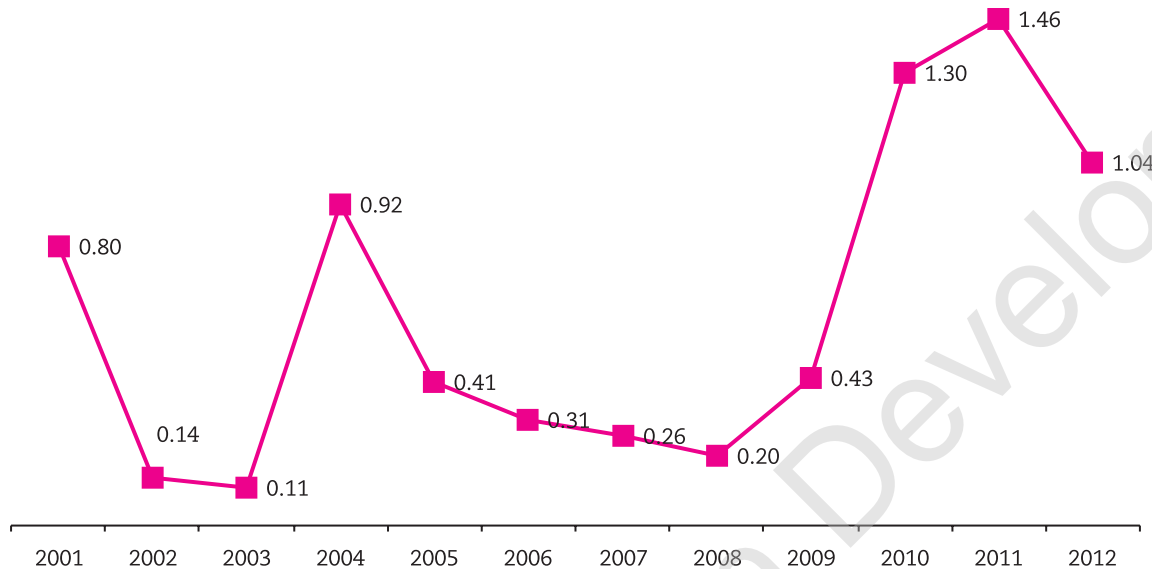
11. In a stakeholder workshop organised at IHD in April 2013, as a part of the DHDR preparation exercise, to discuss the background paper (Mazumdar and Mazumdar 2013), which served as the basis for this chapter involving health policy-makers, medical professionals, academics and representatives of civil society groups and community-based organisations active in Delhi, a common concern raised by the health administrators and medical doctors was the issue of 'floating demand', that of sick infants and neonates born outside Delhi, mostly in the rural areas of the neighbouring states, coming to the state-run hospitals to seek treatment—which inflates the 'real' neo-natal mortality scenario in Delhi. In their opinion, such 'out-born' infants, are often from domiciliary deliveries, or other high-risk pregnancies, and often arrive at the hospitals at an advanced, futile state. Since such deaths get recorded in Delhi, the available figures constitute an over-estimation of the real infant and neo-natal mortality scenario. While such assertions may not be entirely invalid, anecdotal evidences also suggest that pockets of deprivation and low awareness levels, coupled with poor neo-natal care practices often lead to high risks for the newborn, more so for those residing in poor living conditions such as slums or the *Jhuggi Jhopdi (JJ)* clusters. In fact, while recognising such gaps in conventional service delivery systems and typical risk profiles, the Government has initiated a spate of measures targeting these vulnerable, high-risk groups. These include earmarking 200 beds in 14 selected hospitals catering mostly to infants, primarily those belonging to low-income neighborhoods, and assigning Accredited Social Health Activist [ASHA] workers to pre-identified families for delivering home-based newborn care, and proper capacity building of health workers (Directorate of Family Welfare, GNCTD, unpublished correspondence).

9. Some estimates are available though within the reported hospitals, death data analysed by the Directorate of Family Welfare for the periods 2008-09 and 2009-10.

10. NIMS, ICMR and UNICEF, 2012.

Figure 4.3

Decadal Trend of Estimated Maternal Mortality Ratio in Delhi (2001-2012)



Source: Calculated on the basis of data given in Table (i), Vital Statistics by Sex, 2001-2012, DES, 2013.

CRS estimates put the MMR levels at 104, falling from about 130 in 2010 and 146 in 2011. The trends in MMR levels, based on the CRS data, are shown in Figure 4.3. It is not directly possible to account for the fall in MMR during the year 2011-12, in the absence of detailed data, while the spikes in 2010 and 2011 could be largely because of better reporting of maternal deaths due to conducting a higher proportion of deliveries in health facilities. Although the MMR estimates from CRS are not suitable for trend analysis and can be influenced by irregular fluctuations, one can expect these rates to even rise a little in the coming years with better reporting and ultimately levelling off as a result of higher coverage. Detailed studies based on verbal autopsy would allow for better analysis of the levels and risk factors associated with maternal deaths. In the absence of such detailed data, reductions in the MMR levels could at best be achieved and consolidated through proper screening of high-risk pregnancies, and ensuring that deliveries are monitored and conducted in health facilities. Additionally, basic and emergency obstetric care facilities need to be strengthened in health institutions, particularly those catering to the poor and economically weaker sections.

#### 4.2.2 Causes of Death

As compared to other metros and even some other states, Delhi has a strong system of annual registration of total and institutional deaths. With

the medical certification of causes of death made compulsory in 2003, by bringing in all government and private hospitals under the purview of the provision of 10(3) of Registration of Births and Death Act, 1969, the process of Medical Certification of Cause of Death (MCCD) in Delhi has shown remarkable improvements. The 'cause of death' data is a very useful source of information for understanding the levels and trends of different diseases responsible for deaths, which, in turn, also facilitates the current assessments of the burden of diseases. The latest Report on Medical Certification of Causes of Death (MCCD) in Delhi (DES, 2013), reports the major (identified) causes of death among infants to include septicaemia, slow foetal growth and foetal under-nutrition, birth asphyxia and other prenatal causes (DES, 2013). Pneumonia in infancy, which is generally considered to be a major killer disease among infants, contributes to a meagre share of institutional infant deaths. An unpublished analysis of infant death records from government hospitals reveals that in the case of nearly 24 per cent of the infant deaths, the proximate cause was septicaemia, 25 per cent were premature deliveries, 14 per cent were due to birth asphyxia, and 16 per cent were attributable to respiratory infections.<sup>12</sup> While most of these causes could be prevented through timely

12. Unpublished correspondence from the Directorate of Family Welfare, Department of Health and Family Welfare, GNCTD.

medical interventions and better newborn care, this segregation of the proximate causal factors for infant deaths indicates the gaps in reaching out to the mother during the pre-natal, natal and perinatal periods, with the required services.

The profiling of the major causes of death, as available from the 'Cause of Death' statistics from the 2011 Report on MCCD (DES, 2012b) points towards non-communicable diseases (that is, neoplasm, circulatory, injury or other external causes) as the reasons for a considerable proportion of total institutional deaths (36 per cent) in recent years, with an almost equal share across gender (36.9 per cent for males and 37.2 per cent for females). Nevertheless, infectious and parasitic diseases still account for about 15 per cent of the total recent institutional deaths, indicating an incomplete epidemiologic transition as far as the cause of deaths is concerned. Interestingly, respiratory illnesses, which are widely considered to be influenced significantly by exposure to and the quality of outdoor ambient air and indoor pollution, are responsible for only about 6 per cent of the reported deaths. Overall, nearly one-fourth of the deaths occur due to unspecified causes. Although it has not been discussed in detail here, it may be noted that disaggregating the MCCD data (DES, 2012b) by age for major 'killer' diseases, throws up a few interesting facets of the disease epidemiology in Delhi. First, among the major infectious diseases responsible for deaths, tuberculosis (TB) is the cause of the largest number of adult deaths in Delhi and pneumonia for children. Secondly, all the three major non-communicable diseases, that is, cancer, heart diseases and diabetes, showcase casualties in the prime productive ages of 45-64 years. A rising burden of such diseases having differential fatality rates across age groups (with a higher impact in the productive ages), could adversely affect life expectancy levels and have a considerable economic impact. However, being entirely sourced from published 'cause of death' statistics, disaggregating these data further to observe the socio-economic gradient in both mortality levels and its major causes is not possible.

#### 4.2.3 Morbidity Levels and Patterns in Delhi

Information on health status and illnesses in India continues to remain rare in the absence of regular health surveys. The latest NSS 60<sup>th</sup> Round Survey on morbidity (2004-05), which is almost a decade old, reports the morbidity prevalence rate in Delhi at 16, and an incidence rate of 7, both of which are much lower than the national average. For more recent

estimates on the health scenario and the pattern of the disease burden in the state, the hospital-based disease surveillance system in Delhi is a rich, but unexploited information source.<sup>13</sup> On the basis of the most recent year (2010) for which such hospital-based data on disease conditions is available, it has been found that more than two-thirds (67 per cent) of the reported cases sought treatment for infectious and communicable ailments, while the remaining were affected by chronic, non-communicable conditions (DHS, 2011). This clearly reflects the 'double burden' of both communicable and chronic diseases, indicating an incomplete epidemiological transition, which could be explained by the heterogeneity in the demographic and socio-economic composition of the population.

The burden of disease statistics further reveals that for communicable diseases (Figure 4.4), a major share is attributable to acute respiratory infections (43 per cent), followed by acute diarrhoeal diseases (23 per cent). For non-communicable diseases, on the other hand, cardiovascular problems including cerebrovascular diseases (16 per cent), hypertension (19 per cent), and ischemic heart disease (6 per cent) were the major ailments for which patients sought treatment. Another 20 per cent of the reported cases were accounted for by cancers and diabetes (combined for Type I and Type 2). Diseases related to the respiratory system such as asthma and bronchitis, also formed considerable proportions of the reported cases (8 per cent and 5 per cent, respectively). Notably, indicating a growing burden of injuries, nearly one-fifth of the reported cases were related to accidents and other traumas.

Non-communicable diseases also have significant human development consequences. Evidence suggests that contrary to common perceptions, most of the chronic, so-called 'lifestyle diseases' not only afflict the rich, but rather the poor also face disproportionate risks of exposure to such diseases and their risk factors with more severe welfare consequences (Kar *et al.*, 2010; Jeemon and Reddy, 2010; Reddy *et al.*, 2007; Misra *et al.*, 2001; Rastogi *et al.*, 2004). It is thus likely that a large contributor to

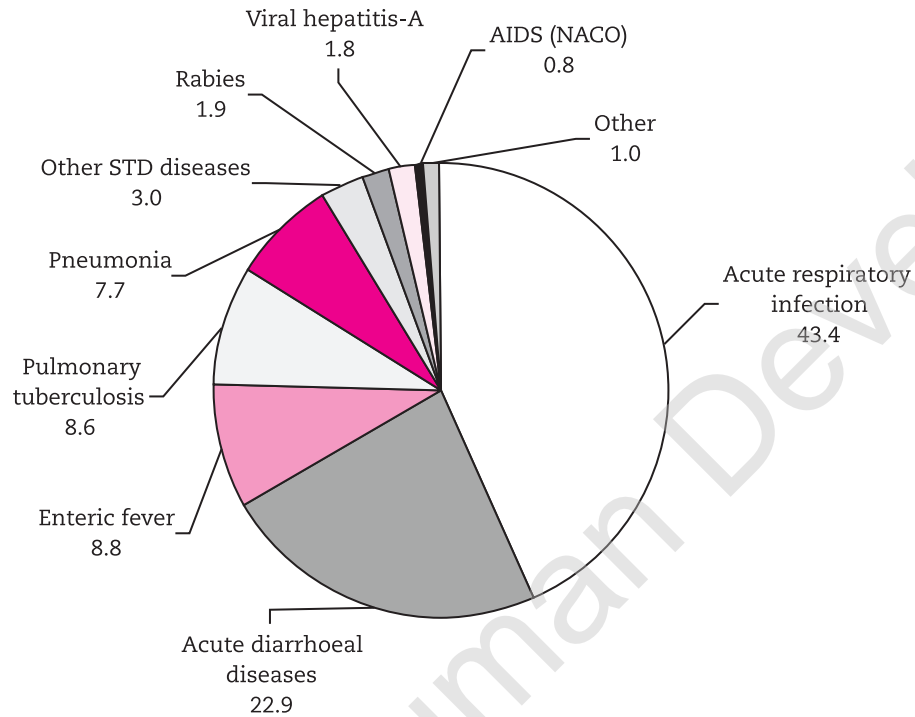
13. Given the fact that more than 95% of illness-episodes in Delhi get treated, a strong hospital information system, or disease surveillance system can be a cost-effective alternative to gain valuable insights into the burden of diseases, and their possible risk-factors. At present the Annual Report of the Directorate of Health Services, compiled by the State Bureau of Health Intelligence, is the only source of tabulated disease, and site-specific information. See DHS (2011) for the latest published Report.



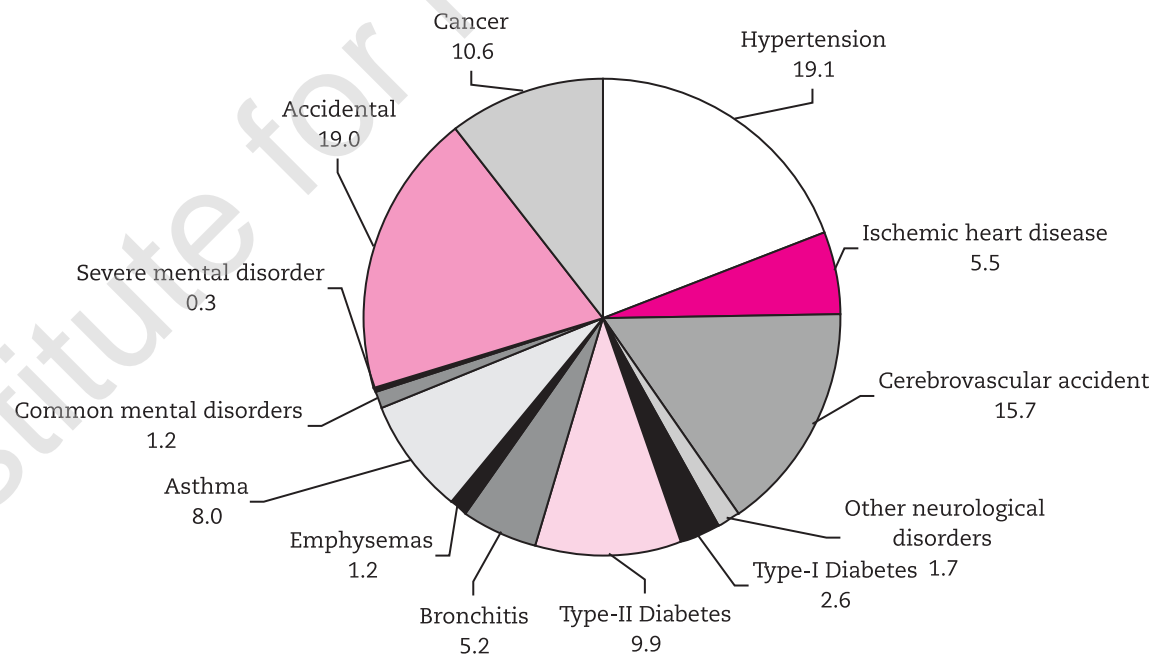
Figure 4.4

Burden of Diseases in Delhi, 2011

Percentage Distribution of Communicable Diseases from Hospital Statistics, Delhi 2010



Percentage Distribution of Non-communicable Diseases, Accidents and Injuries from Hospital Statistics, Delhi 2010



Source: DHS (2011).

the growing burden of chronic diseases in Delhi is the poor, less-educated population residing in slums and other low-income localities, with limited means to afford the economic impacts of chronic ailments, especially for the productive age groups. Thus, the need of the hour is to design appropriate policies and interventions for effectively managing non-communicable diseases, with a greater emphasis on the poor and socio-economically vulnerable population.

Recognising the rise in chronic diseases (lifestyle diseases), the State Government has adopted a holistic approach, focusing more on the preventive and promotive aspects, rather than the costlier option of curative care. The latest budget speech of the Chief Minister (2013) sums up the Government's focus on these key aspects through efforts to "... spread awareness of the insidious nature of lifestyle diseases.....people are encouraged to adopt healthy lifestyles".<sup>14</sup> A few recent initiatives by the State Government such as the setting up Tobacco Cessation Clinics, declaring 2013 as the 'Year of Awareness for Prevention and Early Detection of Diabetes and Hypertension', and observing the last day of every month as 'Dry Day' for not selling tobacco-related products, can be seen as steps in the right direction.<sup>15</sup> With a majority of the Indian Systems of Medicine and Homeopathy (ISMH) dispensaries now functioning along with the allopathic dispensaries, patients now have a larger choice of healthcare providers in a single facility. Although alternative therapies are being preferred (*ayurvedic, unani* and *homeopathy*), broad-based service packages are also being provided. What needs to be accorded due priority includes scaling up of efforts involving routine population-based screening, ensuring the availability of necessary drugs for chronic conditions under the essential drug lists, better monitoring mechanisms through surveillance systems, and emergency facilities for the management of critical conditions.

A related aspect in the context of the burden of diseases and the population health status is the growing share of the aged population, with unique

geriatric health needs. Given Delhi's increasing life expectancy levels, and changing demographic structure following rapid decline in the fertility rates, addressing the health needs of the elderly is a key aspect towards improving the quality of life and well-being of the aged. The Twelfth Plan approach document specifies that a large proportion of the 60+ years population can be expected to suffer from a myriad chronic health conditions and that people in this category are in need of timely interventions. A number of studies (Mazumdar and Mazumdar, 2013) indicate a significant prevalence of functional limitations and psychiatric disorders amongst the elderly, apart from the common chronic and degenerative ailments reported by them. There is an emerging need for comprehensive geriatric care within the primary healthcare framework, to enable the elderly to access their health care needs. Although the response of the health system towards this emerging challenge has been lukewarm, it appears to be headed in the right direction. Some of the interventions that are already in place include facilities for screening aged persons for undiagnosed diseases and disabilities at dispensaries, introducing Senior Citizen Health Cards for keeping a record of such screenings, organisation of 'Sunday Clinics' exclusively for senior citizens in all government hospitals, and the promotion of greater social linkages through senior citizens' clubs.<sup>16</sup>

As this section illustrates, the health system in Delhi is beset with multiple challenges. Risks of infant, and particularly neo-natal deaths persist and necessitate the targeting of pockets wherein these death risks continue to be clustered. The burden of disease too indicates a mixed epidemiological scenario, similar to that observed in other fast-developing states and regions in the country. Acknowledging the socio-economic differentials that are likely to accompany such a transitional health scenario and the steady inflow of patients from across the country to seek care from the impressive health infrastructure network in the city-state, it is imperative for the provisioning and delivery of services to accommodate such need factors.

### 4.3. Coverage of Health Services and Equity in Access

#### 4.3.1 Universal Health Coverage (UHC)

Universal Health Coverage (UHC) aims at ensuring the availability and accessibility of health services at affordable costs, which, in turn, lead to health

14. Page 20 (English version) of the Budget Speech of the Chief Minister of Delhi, Mrs. Sheila Dikshit, delivered during the presentation of the Annual Budget, 2013-14. The full text of the speech is available at: [http://delhi.gov.in/wps/wcm/connect/lib\\_finance/Finance/Home/Budget/Budget+2013-14/Budget+Speech++2013-14+English](http://delhi.gov.in/wps/wcm/connect/lib_finance/Finance/Home/Budget/Budget+2013-14/Budget+Speech++2013-14+English) (accessed online on 20th August, 2013)

15. Official communication from the Directorate of Health Services, GNCTD.

16. Op. cit.

**Box 4.1**

**Twelfth Plan Recommendations on Universal Health Coverage (UHC)**

Universal coverage is one of the cornerstones of the National Health Mission (NHM), following up on the footsteps of the NRHM. The Draft Twelfth Plan document acknowledges Universal Health Coverage (UHC) as a core component of social security. It reaffirms the key recommendations of the High-Level Expert Group (HLEG) on UHC which include:

1. Increase in public expenditure on health to 2.5 per cent of the GDP by the end of the Twelfth Plan and allocating 70 per cent of the expenses on primary healthcare.
2. Ensuring equitable access to medicines, vaccines and healthcare technologies, accompanied by an expanded Essential Drug List and rational drug use.
3. Strengthening of Human Resources for Health (HRH) through increased availability and dedicated training systems for frontline workers.
4. Offering of a National Health Package as an entitlement for all citizens to essential health services, with due considerations for equitable access in urban areas and focusing on the health needs of the urban poor.
5. Development of specialised Health Systems Management Cadres across the states, and the all-India and state level public health service cadres to strengthen the UHC system.
6. Encouraging the setting up of participatory Health Councils and improving access to health services for women, girls and other vulnerable groups.

Source: Adapted from Planning Commission, 2013 (p. 12, Box 20.1).

outcomes that are equitable across income groups, social status, occupations/livelihoods, religions, and ethnicity, or across any other disaggregation. The guiding principles are universalisation, equity, non-exclusion, non-discrimination, and comprehensive good quality healthcare. The underlying objective is to improve health outcomes across population groups, reduce financial risks associated with ill-health, and ensure equity in access. The World Health Assembly, 2005, led by the UHC movement, reiterated the need for all governments to strengthen their health systems, to ensure that people had access to health services and that they did not suffer financial hardships while paying for the same. Currently, about 30 middle-income countries across the world have already implemented programmes aimed at transitioning to the UHC, while many other low-income countries are in the process of doing so (Giedion *et al.*, 2013).

In India too, there is increasing affirmation of the principles and mechanics of universalising healthcare. This stems from a realisation that if implemented in a planned, synchronised and cost-effective manner, UHC holds the key to equitable and effective health coverage for all sections of the populace. The Planning Commission, in its reaffirmation of the recommendations of the High Level Expert Group on UHC (HLEG, 2011), has laid

out the core strategies that would form the basis of health strategies in the Twelfth Five Year Plan (Box 4.1). The UHC vision in India proposes that every citizen be entitled to essential primary, secondary and tertiary healthcare services, guaranteed by the State (HLEG, 2011). As defined by the HLEG, it includes different dimensions of universal health assurance with appropriate quality including promotive, preventive, curative and rehabilitative health services at different levels. Besides being inclusive, all these services are slated to be delivered at affordable costs, so that people do not suffer financial hardships in the pursuit of good health (HLEG, 2011). The Government is mandated to act as not only the provider of health and related services, but also the guarantor and enabler. The vision is to ensure the coverage of health services for all citizens, through the financial protection of services at the primary, secondary and tertiary care levels, with a choice to access care from public sources or from contracted-in private providers. The reforms in the health sector needed to achieve this vision include health financing and financial protection; health service norms; human resources for health; community participation and citizens' engagement; access to medicines, vaccines and technology; and management and institutional reforms.

#### 4.3.2 Health Service Coverage—The Building Blocks

The preparedness for UHC needs a well-built network of public health centres providing quality health services. In the NCT of Delhi, a number of agencies (both public and private) provide healthcare infrastructure and services. In the public sector, the major service providers include the Department of Health and Family Welfare, Government of NCT of Delhi (Directorate of Health Services and Directorate of Family Welfare), and three local government bodies, viz., Delhi Municipal Corporations (DMC), the New Delhi Municipal Council (NDMC) and the Delhi Cantonment Board (DCB). In addition, there are health facilities and institutions operated by the Central Government and different government departments and agencies. Several non-government organisations (NGOs) and a vibrant private sector also provide healthcare services, which are coordinated by the Directorate of Health Services through a set of regulations and guidelines. The private entities in healthcare vary widely, ranging from NGOs and charitable institutions targeted towards the poor to private sector super-specialty hospitals equipped with state-of-the-art international standard facilities. An amorphous, parallel market for healthcare, manned by a motley mix of unqualified, informal medical practitioners or *quacks*, traditional healers and therapists also serves a section of the population, in the lanes of the urban villages (*gaons*) or the JJ colonies and slums, which represent diverse cultures and are home to a steady stream of migrants from other states.

#### Adequacy of Service Coverage

The public sector health facilities in Delhi are organised in a typical hierarchical manner, with service norms that are specific to a largely urban population. Primary Health Centres or urban PHCs provide basic healthcare services while following a proper referral system.<sup>17</sup> With the State Government and other agencies realising the importance of universal coverage as far back as 2006, the coverage of the unserved areas became a priority intervention under the Delhi State Health Mission, supported by the Government of India (GOI) under the National Rural Health Mission (NRHM). Through this activity, 56 new centres have been opened, covering around three million of the hitherto unserved/underserved population for the provision of basic primary

17. These are often referred to interchangeably as dispensaries, government health centres, or Delhi Government dispensaries.

healthcare. These are known as 'Seed Primary Urban Health Centres' (PUHCs) and are subsequently expected to be subsumed into more comprehensive structures. All these PHCs are equipped with basic laboratory facilities, and offer a variety of services including reproductive healthcare, immunisation, family planning, general OPDs, and referral services. The seed PUHCs and certain dispensaries have also started their outreach activities in vulnerable locations, with the help of Auxiliary Nurse Midwives (ANMs) and Accredited Social Health Activists (ASHAs). The aim of these activities is to ensure outreach services in all areas having vulnerable populations. The MCD operates Maternal and Child Welfare (MNCW) centres, with a large pool of ANMs<sup>18</sup> and ASHAs<sup>19</sup> engaged in outreach services that are specifically concerned with maternal and child health. For the smaller unserved clusters requiring outreach activities in primary health services, an efficient network of mobile health clinics was operationalised in 1989, and at present, there are 90 such clinics, of which 77 cover JJ clusters while 13 cover construction sites. A total of 430 locations are currently being covered, with half of the clinics being run through PPP initiatives launched in collaboration with several NGOs. Over the last five years, more than two million patients have been attended to every year at these clinics, making these mobile health facilities significant additions to the conventional PHCs. Mobile dispensaries also offer various services including basic healthcare, family welfare, child immunisation, and health education, while providing medical assistance to certain vulnerable groups, and during large religious gatherings and certain occasions such as *melas*, sports events, and sudden disease outbreaks. In recent initiatives, mobile clinics have reached out to the under-served but high-risk groups by providing services in night shelters, and among the homeless population at certain marked sites. In addition, the MCD runs 29 mobile clinics with the same objective. Similarly, in order to cover important yet traditionally under-served segments of the population, such as school-going children and adolescents, the School Health Scheme (under the rubric of the *Chacha Nehru Sehat Yojana*) of the

18. ANMs are employed as unique outreach workers in Delhi. The efficient functioning of ANMs can help in ensuring better accountability and monitoring, and help prevent duplication or overlapping due to the presence of a number of different supervising agencies/authorities.

19. Delhi is the first state in India to have an urban ASHA initiative. This also offers ASHAs incentives for increasing their motivation, retention and participation in the RCH programme.

**Box 4.2****Chacha Nehru Sehat Yojana (School Health Schemes)**

The School Health Scheme in Delhi was launched in the year 1979, initially in six schools targeted to improve the health and nutrition status of children and to provide them with useful education on hygiene. It has grown to its present proportion of 104 School Health Clinics operating across the districts in Delhi. The specific services offered through these clinics relate to the promotion of positive health, prevention of diseases, early detection, diagnosis, treatment of disease, and referral services to higher health centres for the individuals who require further treatment and management. The school health clinics are set up in school premises for easy accessibility specially meant for children studying in government and government-aided secondary schools (DHS, 2013). Each clinic serves a cluster of 8-10 schools located within a radius of 8-10 km., and targets about 10,000 children. Each of the districts has one special referral centre for services related to the eye, ear, nose, throat and dental treatment of the children who are referred from their respective school clinics. School-going children, who are not covered by any regular school health clinic, are covered under specific mobile clinics set up for them. Under this scheme, approximately one million students were screened for diseases, deficiencies and disabilities, 20,000 students were provided free spectacles, more than 50,000 students have been referred for various treatments, 2.7 million children were dewormed in a single day and 27,046 were given the TT vaccine while and health talks given to 25265 students.

Source: Different official publications and periodic reports of DHS, GNCTD.

Government offers an example of a successful experiment in the area of healthcare (see Box 4.2).

The dispensaries run by the DHS and other government bodies act as frontline health outlets, providing treatment for common ailments, essential medicines, and a number of preventive and health-promoting activities. These dispensaries are envisioned to play a key role in the bottom-up planning and development approach for the health sector. According to the latest available statistics on primary health facilities in Delhi (see Annexure table 4.1), 671 dispensaries are directly run by the state and the three local governments.<sup>20</sup> With a population base of 16.7 million, a simple back-of-the-envelope calculation yields an estimate of about 1.85 dispensaries for a population of 10,000, or roughly about one primary level facility for a population of 25,000 or 5000 families. The inclusion of the 746 additional primary health facilities, which however exclusively serve certain specific categories of the population such as government and public sector employees, and defence personnel, pushes up the ratio to about 4 health facilities for a population of 10,000. However, these ratios mask the actual availability across habitations/areas, given that

20. The 671 dispensaries are organised as follows: 317 allopathic dispensaries/health posts (256 run directly by the State Government, including 57 seed PUHCs, and 61 run by the three local urban local bodies [ULBs]) and 354 AYUSH dispensaries (among these, the State Government directly operates 35 ayurvedic, 97 homeopathic and 17 unani dispensaries) (Source: Official Communication dated 3rd July from Health and Family Welfare Department, GNCTD).

primary health facilities are not uniformly spread across all areas/localities.<sup>21</sup> Being the first point of care, primary level clinics in Delhi need to respond effectively and efficiently to the growing demand for healthcare in the city.<sup>22</sup> These facilities need to be strengthened through systematic planning – for setting up new facilities and augmenting the functioning of the existing ones – by focusing on locality specific services and required capacities.

At the secondary and tertiary levels, Delhi can boast of a large pool of hospitals run by different government bodies. Apart from handling the usual patients, these hospitals provide emergency services and surgical care, and work as higher level referral facilities for the primary level dispensaries

21. In a pioneering attempt, the DHS has mapped all the government health facilities for each district and produced a set of GIS-based maps which are available online at [http://www.delhi.gov.in/wps/wcm/connect/DoIT\\_Health/health/our-services/map+info+delhi+govt.+hospitals](http://www.delhi.gov.in/wps/wcm/connect/DoIT_Health/health/our-services/map+info+delhi+govt.+hospitals).

The maps clearly indicate that primary level health facilities are highly localised in most districts. A drawback of the maps, however, is that they are not overlaid with other demographic and spatial details such as ward level population concentrations, types of localities, etc., which would allow the proper assessment of spatial distribution adjusted for the need factors.

22. Since 1998, 122 new allopathic government dispensaries and PUHCs have been opened till date; another 18 are currently at various stages of planning and implementation. An estimated 1.20 crore (12 million) patients are treated annually in the government dispensaries at present. (Source: Communication received from the State Health Intelligence Bureau, Directorate of Health Services, DHFW, GNCTD).

**Box 4.3**

**The Delhi 'Model' of Rational Drug Use**

Realising the crisis situation in terms of access to drugs faced by the patients visiting government health outlets and their dissatisfaction with the quality of free drugs offered by dispensaries and hospitals, the Government of Delhi adopted a comprehensive Drug Policy in 1994. Delhi was and still is one of the few states to have a policy that targets the availability and accessibility of free drugs for those in need. The onus of this lies with an NGO, the Delhi Society for the Promotion of Rational Use of Drugs (DSPRUD), which works in close collaboration with the Delhi Government and other important stakeholders. The DSPRUD's first recommendation of an Essential Drugs List (EDL) came into existence in 1997; this helped in setting up a centralised, pooled, procurement system of drugs and influenced their rational use. The EDL is mandated for revision every two years. The financial sustainability of drug purchase is ensured by adopting a rigorous selection of suppliers, having a minimum annual threshold turnover and by introducing Good Manufacturing Practice inspections to protect the quality of supply. The bulk purchase of prudently selected EDL drugs is estimated to save almost 30 per cent of the annual drug bill of the Government of Delhi. This further facilitates the procurement of more drugs and has improved availability in more than 80 per cent of the health facilities. Today, with a significant quantum of funds incurred for procuring medicines from the EDL, the Government of Delhi has become one of the largest purchasers of medicines in India. Its drug stock is well distributed among patients, with 80 per cent of the prescriptions complying with the EDL, and 70-95 per cent of the patients reporting receiving the prescribed drugs. The 'Delhi Model' is certainly a success story of free and quality drug access and distribution, which has been achieved with minimal additional expenditure, but by implementing major changes in the managerial system.

Source: Chaudhury *et al.*, 2005.

functioning across the districts.<sup>23</sup> In an important move to promote equity in access for private hospitals including the super-speciality segments, 44 private hospitals (built on land made available to these agencies at concessional rates by the State Government) are required to provide free treatment to patients from the economically weaker sections (EWS). These hospitals are mandated by legislation to reserve at least 25 per cent of their out-patient consultations and 10 per cent of their in-patient admissions for the EWS category, as also approximately 650 free beds and 100 critical care beds. Furthermore, in a recent directive, all health institutions in the state, irrespective of their being under the purview of the public or private sector, are bound by law to attend to all medical emergency cases brought to them (especially victims of crimes

and or road accidents).<sup>24</sup> This is indeed a welcome directive and consistent with the provisions of universal coverage for medical emergencies.

The latest data provided for this Report by the Directorate of Health Services indicates that government hospitals offer 24,181 functional beds (out of a total number of 25,982 sanctioned as in July 2013). Additionally, a total number of 19,838 functional beds are available at private or voluntary organisations, nursing homes/hospitals (DHS, 2013). At present, 111 hospitals run directly by the state and the three local bodies are available for everyone in need of these services, irrespective of any qualifying criteria, thereby putting the average population served per hospital bed in Delhi at 395. Including only the beds in the public sector, the average population served works out to be 720, and is the seventh highest in the country as of 2012 (*ibid.*). Notably, as also in the case of primary health clinics, a few public sector hospitals are either restricted to only a limited group of residents (such as Central/State Government employees, public sector unit (PSU) employees, etc.), or those working in formal enterprises (such as the ESIC hospitals). The very notion of universal coverage implies unrestricted access to services, which, under the present service organisation norms, are only

23. As in 2012, the Government of Delhi had 37 hospitals functioning under the administrative control of the Department of Health and Family Welfare. Apart from this, the MCD runs 61 hospitals, offering a wide range of services across different medical streams. Details of the hospitals run by the other agencies are as follows: NDMC, 4, DGHS, 7, CGHS, 3, Department of AYUSH, 3, the Railway Ministry, 2, the Defence Ministry, 3, ESI Corporation, 4, and autonomous bodies under the Ministry of Health and Family Welfare, 2. In addition, there are 124 public hospitals in Delhi, and approximately 856 hospitals by the private sector (as in 2012). (Source: Official Communication dated 3rd July from Health and Family Welfare Department, GNCTD)

24. Ref. GO, numbered F.24/20/2003/NH/DHS/HQ/15341-018, 16047-219, 16227-238, dated 21 February 2013.

available to a minority. A rethinking of the viability of these 'exclusive' criteria, given the prevailing shortfall in the available health facilities and the targeted goal of the Government of NCT of Delhi to provide three hospital beds per 1000 people, is thus imperative. As per the Twelfth Plan Approach Paper, the State Government plans to add 14,302 new hospital beds across both the public and private sector hospitals, during the period 2012-17 to reach a bed-population ratio of 3 per thousand by 2017 (at a projected population of 19 million of the NCT of Delhi). While such expansion plans are needed to meet the growing need and demand for health services, they also require supportive policies and efforts by other agencies,<sup>25</sup> which are directly or indirectly involved in the healthcare sector.

The availability of hospital beds in Delhi has almost doubled during the last 15 years, from 24,025 beds in 1997 to 44,019 beds in 2013, with 13 new hospitals added over the last 10 years. In spite of pressing problems such as the availability of land, the Government is moving ahead with 19 new hospitals, which are at various stages of planning and implementation (DHS, 2013). At present, the state government runs 39 hospitals, of which 6 hospitals<sup>26</sup> have been recognised as Centres for Excellence for the high quality of services they provide, and for serving as the benchmarks for secondary and specialty care. While such expansion has undoubtedly added substantially to the scale of service provision, certain undesirable consequences of a heavier secondary and tertiary level have also emerged. Often, referral mechanisms are broken with a bye-passing of primary clinics by patients seeking services in the bigger hospitals, with a significant proportion of them arriving from neighbouring states. Apart from leading to overcrowding and efficiency losses, this also adversely affects the quality of services.

25. A major challenge with regard to expansion stems from the non-availability of appropriate land in Delhi. As mentioned by the Directorate of Health Service, many similar projects are awaiting clearance from the Delhi Development Authority (DDA). This involves the availability of adequate and suitable sites for the construction of new hospitals, which the DDA would have to allocate, and the requirement for higher FAR to enhance hospital buildings and facilities.

26. These include the: Institute of Liver and Biliary Sciences (ILBS), Delhi State Cancer Institute (DSCI), Maulana Azad Institute of Dental Sciences (MAIDS), Institute of Human Behaviour and Allied Sciences (IHBAS), Ch. Brahm Prakash Ayurvedic Charak Sansthan (CBPACS), and Chacha Nehru Bal Chikitsalaya (CNBC).

### Availability of Healthcare Providers<sup>27</sup>

In terms of the adequacy of health professionals and the larger health workforce, the scenario in Delhi is quite grim.<sup>28</sup> If the population figures for 2011 are considered for the NCT of Delhi, a paltry 2 healthcare providers were available for a population of 10,000. The scenario remains much the same across all the districts. The manpower planning for the healthcare sector in Delhi thus needs to be at an entirely different scale if the state aims to achieve universal coverage.

In 2012, there were 6533 doctors in government hospitals across different streams and types (DHS, 2012), converting into 3.89 doctors per 10,000 population (*ibid.*).<sup>29</sup> This is a rough estimate of doctor availability in secondary and tertiary healthcare and needs more refined data with appropriate disaggregation (streams of medicines and types of hospitals), in order to assess the actual availability of doctors in general practice in the government sector. These also include specialists and other categories which, in reality, are not available as part of the general practice, thereby further lowering the ratio. Officials and policy-makers in the State Government health department too admit the challenge of ensuring an adequate number and distribution of the health workforce in the state, which, however, remains crippled with a weak supply chain and shortage of manpower. There is an even greater need

27. All calculations in this section are based on the figures provided by the Directorate of Health Services in the recent official publication, HMIS reports, Annual Reports (such as DHS, 2012) and personal communications from officials of the Department of Health and Family Welfare, GNCTD, unless otherwise stated.

28. In the absence of any internationally acceptable gold standard for assessing the sufficiency of the health workforce available, WHO maintains that about 23 healthcare professionals (counting only physicians, nurses and midwives) are required and consistent with achieving adequate coverage rates for 'key primary healthcare interventions prioritised by the Millennium Development Goals' (WHO Health Statistics, 2009, Table 6, Health Workforce, Infrastructure and Essential Medicines, WHO 2009). Available online at: [http://www.who.int/whosis/whostat/EN\\_WHS09\\_Table6.pdf](http://www.who.int/whosis/whostat/EN_WHS09_Table6.pdf), The Human Resources Background Paper I of the Universal Health Coverage India Group maintains a slightly different ratio of 24:5. See Rao, K.D. (undated), "Situational Analysis of the Health Workforce in India", Available at: [http://uhc-india.org/uploads/RaoKD\\_SituationAnalysisoftheHealthWorkforceinIndia.pdf](http://uhc-india.org/uploads/RaoKD_SituationAnalysisoftheHealthWorkforceinIndia.pdf). Last accessed on 30th April, 2013

29. The conventional indicator of the doctor-population ratio, however, only provides a gross idea about the availability of physicians, while the 'actual' availability needs to be calculated by taking into account the type of specialised services provided by doctors of different categories, as they often do not attend to the health needs falling beyond their specialty.

for these services at the primary care level, where only two medical officers, on an average, attend to as many as 400 patients per day. The cumulative number of OPD/emergency patients visiting the Delhi Government hospitals/dispensaries was over 33 million in 2011-12, and over five lakh patients were admitted in Delhi Government hospitals.<sup>30</sup> In terms of sheer numbers, the above figures are almost twice the population of Delhi.

Some measures have been initiated to tackle the dearth of available health workforce such as outsourcing of non-clinical services (for example, sanitation and security of hospitals and dispensaries) and partial contracting-in of paramedics (such as nursing staff, laboratory technicians, OPD registration services, oxygen and other equipment suppliers and maintenance persons). However, even these measures have largely failed to compensate for the short supply of key personnel such as resident technicians (radiologists, anaesthetists, etc.). Close to 40 per cent of the sanctioned posts for medical officers, and 20 per cent for other support staff in health facilities that are directly run by the State Government remain vacant.<sup>31</sup> The scarcity of the health workforce is likely to adversely impact the quality of service provision. More efficient solutions, involving both short and long-term strategies, are needed to meet the growing demand and service expansion, and for ensuring the quality of services being delivered. This Report notes a few possible options in this direction including allowing teaching facilities in some of the larger hospitals, hiring retired physicians, and rotating shifts/operating hours for providing health facilities.

#### Access to Medicines—The 'Free Medicines for All' Mechanism

In India, the high prices and poor availability of medicines, and low affordability amongst the patients are some of the key barriers to access to treatment (Cameron, et al., 2011). Further, high out-of-pocket expenses (OOPE) on medicines are often responsible for increasing health expenditures and consequently even impoverishment among the consumers of healthcare services. Thus, poor availability and unreliable quality of drugs and public health facilities

force people to seek treatment and purchase medicines from the unregulated private sector, often at inflated costs (Selvaraj and Karan, 2009; Also see Garg and Karan, 2009.) Recent policy statements have identified inefficient and iniquitous financing mechanisms, high drug prices, faulty procurement and distributional policies, irrational medicine use and the lack of adequate regulations as the major barriers affecting Access to Medicines (ATM). They recommend the implementation of the 'free essential medicines for all' programme throughout the country,<sup>32</sup> which is being proposed as a way of ensuring regular, equitable and affordable access to quality medicines for all under the universal health coverage (UHC) agenda.

In Delhi, the efforts of the Government to ensure universal coverage and equitable access of drugs by providing both generic and branded drugs free of cost through the network of health facilities to all patients, irrespective of any criteria, is a strong step towards universal coverage and ensuring equitable access to medicines. It also facilitates lower treatment costs, and financial risk protection, especially for the economically weaker sections. Aided by a strong civil society movement (Box 4.3), the so-called 'Delhi Model' remains a pioneering example of rational drug use based on a responsive, realistic essential drug list, efficient procurement and distribution policies, and stringent quality monitoring systems. In fact, Delhi is one of the first states to have a Drug Policy dating back to 1994. Government facilities at the primary, secondary and tertiary levels are also mandated to provide essential medicines free of cost to all patients. These medicines are procured on the basis of the Essential Medicine Lists (EML) suggested by the expert committee and a strong system of review,<sup>33</sup> distinct for both dispensaries

30. Communication received from DoHFW, GNCTD.

31. Recently, governmental action for augmenting the recruitment process through the state cadre formalised through UPSC and contractual engagements through the Delhi State Health Mission (under the NRHM) has narrowed this gap significantly (Source: Official Communication dated 13th August from Health and Family Welfare Department, GNCTD).

32. See Chapter 2, "Access to Medicines, Vaccines and Technology, in High-Level Expert Group Report on Universal Health Coverage for India", Available at: [http://planningcommission.nic.in/reports/genrep/rep\\_uhc0812.pdf](http://planningcommission.nic.in/reports/genrep/rep_uhc0812.pdf). Also see, for the Recommendations on 'Access to Medicines' by Working Group-4 (WG-4) of the Planning Commission. <http://164.100.47.5/newcommittee/reports/EnglishCommittees/Committee%20on%20Health%20and%20Family%20Welfare/45th%20report.pdf>; For the detailed report of the Parliament Standing Committee on Health, and [http://planningcommission.nic.in/aboutus/committee/wrkgrp12/health/WG\\_4drugs.pdf](http://planningcommission.nic.in/aboutus/committee/wrkgrp12/health/WG_4drugs.pdf) for the report of the Planning Commission Working Group (WG-4) on drugs.

33. They are selected with due regard to public health relevance, evidence of efficacy and safety, and comparative cost-effectiveness. This list is a dynamic list and is revised every two years. The procedures for updating the list are in line with the WHO-recommended process for developing clinical practice guidelines. Its key components comprise a systematic approach to collecting and reviewing evidence



**Box 4.4**

**Recent Measures and Strategies towards Inclusive Service Delivery and Effective Coverage in Delhi**

- Encouraging holistic healthcare through lifestyle modifications and an integrated effort to reduce tobacco consumption. Dry days for tobacco-related products being observed on the last day of every month.
- Sunday Clinics offering for specialised geriatric care in designated hospitals; introduction of the Senior Citizen Health Cards as a part of the health screening of the elderly at dispensaries.
- Allowing a wider basket of choices—the cafeteria approach—of health service types; most of the ISMH dispensaries now function at buildings of allopathic dispensaries.
- Address public health emergencies such as risks of dengue through a multi-disciplinary, public health approach involving system-wide actors (such as the Dengue Task Force) and the use of government hospitals as sentinel surveillance centres. Strengthening of disease surveillance systems in hospitals and across communities.
- Introduction of a number of measures to control and treat tuberculosis (TB) such as free diagnosis and treatment for MDR-TB, TB control services in night shelters for the homeless, and empowering widows of TB patients to serve as community DOTS providers.
- Stress on behaviour change communication to contain the spread of non-communicable diseases (NCDs); setting up of a dedicated diabetes care unit at the Guru Tegh Bahadur Hospital and augmentation of dialysis facilities through the public-private-partnership (PPP) mode.
- Provision of quality 'home to hospital care' in an equitable way whereby the Centralised Accident Trauma Services (CATS) already run 151 ambulances across Delhi free of cost, and 100 more ambulances are slated to be added during the current financial year.

Source: Communications and awareness/publicity documents of the Department of Health and Family Welfare, Government of NCT of Delhi.

and hospitals. However, the inferences that can be drawn from the existing policy documents (such as the Directorate of Health Services Annual Reports), and the available official statistics do not allow assessments about the scale of coverage, or a disaggregated view of the benefits accruing across socio-economic groups. One of the major limitations in this sphere is the paucity of empirical studies for assessing the impact of equitable service access resulting from these policy measures. Clearly, it is imperative to conduct further research on these issues.

Thus, in Delhi, the movement towards universal coverage continues to be a formidable challenge, primarily due to supply side imbalances (the scale of physical infrastructure and health manpower), and the burgeoning demand. Nevertheless, the State Government has launched a number of sector-specific, issue-based programmes and interventions to address the specific needs of certain population groups or to cater to unique disease or service delivery requirements. Some of the recent measures among these are summarised in Box 4.4. The impact of the recent measures in terms of improving service delivery, increasing the quantum of health facilities for addressing shortages in service availability, compensating for the deficit of human resources through alternative means, is discussed in the following sections. These measures have helped improve reliance on public health facilities and benefited vulnerable groups through increased utilisation levels. The consolidation of these gains, and the continued commitment to achieve universal coverage necessitate a significant scaling-up of the existing services, backed by key policy measures such as the easy availability of drugs and diagnostic services for ensuring risk protection.

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and a transparent development process with several rounds of review (see "The Concept of Essential Medicines", Government of Delhi, Available at: <http://delhi.gov.in/wps/wcm/connect/bde05d8041c46b66ab43fb08d0e5d97a/THE+CONCEPT+OF+ESSENTIAL+MEDICINES.pdf?MOD=AJPERES&CACHEID=bde05d8041c46b66ab43fb08d0e5d97a>, Accessed on 8 April 2013). At present, the EML in Delhi is based on 2010 recommendations put forward by the expert committee, which involves a selected range of medicines to be procured by the Central Drug Procurement Agency, for consumption at both the levels of government dispensaries and hospitals.

#### 4.3.3 Service Utilisation Patterns and Barriers to Access

The usage patterns of healthcare services constitute a core aspect of any health system. An assessment of the different barriers to service access is necessary for identifying the optimal pathways needed for extending universal coverage. The health service utilisation for in-patient and out-patient care in Delhi has been studied here by using data from the NSS 60<sup>th</sup> Round on morbidity (2004-05) and three household surveys conducted by the Institute of Human Development (IHD), in Delhi over the period 2011-2013. In 2004-05, the morbidity prevalence in Delhi was about 1727 per 1 lakh persons (1.6 per cent ailing within a 15-day reference period), with an estimated 2.53 lakh hospitalised cases. As compared to national averages, it reflected a relatively better health profile for the residents of Delhi (DES, 2006). The NSS 60<sup>th</sup> Round data (2004-05) brings forth another important observation with regard to the public/private service mix in the state. The hospitalised care sought by patients from public institutions in both rural and urban Delhi—46 per cent and 59 per cent, respectively—was higher than the corresponding national figures of 42 per cent and 38 per cent, respectively. However, the service utilisation for non-hospitalised ailments reverses the above pattern, with only 23 per cent of the residents in urban Delhi reportedly seeking treatment from public facilities, which is marginally better than the corresponding figure of 19 per cent for India overall (NSSO, 2006).

However, recent household surveys conducted by IHD indicate a growing reliance by a majority of Delhi's population on the public sector for their healthcare needs. This has also been brought out in the findings of the IHD-SDTT Survey (2011) and the recent Perceptions Survey (2013).<sup>34</sup> Some of the main findings of these surveys conducted by IHD are as follows:

First, independent of the type of services (inpatient or outpatient) used, there is a growing reliance on government health facilities, as the 'most preferred option' or 'habitual choice', which is a probable testimony to the State Government's efforts to

facilitate better access to and utilisation of public health facilities, especially during the last decade. Nearly 60 per cent of the respondents reported seeking treatment from government institutions during their most recent use (Table 4.3). In order to elicit household preferences on the utilisation of health facilities, during the second survey, respondents were also asked about their usual or habitual preference for health services, irrespective of actual usage. Two-thirds of the respondents indicated their preference for public health facilities (hospitals, clinics and dispensaries), while only 58 per cent preferred private physicians and clinics.<sup>35</sup>

Second, the scenario is more positive in terms of the socio-economic gradient in service utilisation patterns. The IHD-SDTT survey, focusing primarily on the low-income population groups with vulnerable livelihoods, reports a strong reliance of the poor households on public hospitals, and to some extent, on informal providers. Amongst the households reporting illness (of any members during the year preceding the survey), 51 per cent sought treatment (both ambulatory and hospitalisation services) from public health facilities, while only 27 per cent sought the services of qualified private providers (Kumar *et al.*, 2012). The Perceptions Survey also clearly brings forth the socio-economic gradient in the treatment-seeking behaviour of households in Delhi (Table 4.3). The poor and vulnerable households identified using multiple yardsticks (that is, household income categories, household asset ownership, low-paid occupations, education of the household head, locality and an aggregate vulnerability index),<sup>36</sup> which demonstrate a much higher utilisation of public health services (based on their last experience of health services usage). In contrast, a majority of the households having lower scores as per the aggregate

34. The IHD-PPS survey refers to a Public Perceptions Survey conducted by IHD in 2013 specifically for preparing the Second Delhi Human Development Report (DHDR). The survey, details of which are provided in Chapter 1 has also collected information on a few parameters pertaining to health service access, use, quality and financing. The IHD-SDTT survey conducted during 2011 by the Institute for Human Development (IHD) with support from Sir Dorabji Tata Trust (SDTT) had collected data from about 3000 households, which were mostly poor.

35. Note that both of the 'preference' questions elicited multiple provider preference. Taking account of the multiple responses, the 'relative' preference pattern indicates that 47 per cent of the respondent-households usually rely on public health facilities, 38 per cent on private physicians, clinics, or private hospitals, 7 per cent on unqualified medical practitioners or quacks, 3 per cent on different facilities provided by charitable organisations, and another 5 per cent generally use employer-provided, or otherwise mandatory health facilities (such as the CGHS or ESIC facilities).

36. The aggregate vulnerability index is based on a simple, equally-weighted additive combination of 5 variables: income classes, asset ownership terciles-groups, educational level of the respondent, major occupation of the household, and type of locality. The aggregate score thus derived was divided into three equal size classes—low, medium and high, wherein a low score denoted higher 'aggregate' vulnerability, and vice versa.

vulnerability index, and denoting the economically well-off households, sought health treatment from private sources.

Taken together with the continued expansion of public healthcare facilities in Delhi, the findings from the Perceptions Survey indicate the positive impact of such changes in terms of the equitable usage of government health facilities among the weaker economic sections, and their growing reliance on the public health system. While such trends bode well for universal coverage, the health system still continues to face the major challenges of consolidating the equity gains through supply side interventions and ensuring the responsiveness of service delivery.

#### Utilisation of Maternal and Child Health Services

A crucial determinant for improving the survival prospects of both pregnant women and newborn infants is the coverage offered by maternal and child healthcare services, including ante-natal care, risk reduction during pregnancies, institutional deliveries and full immunisation coverage. These issues are discussed here with a particular emphasis on socio-economic differentials for the purpose of understanding equity in coverage and service delivery.

According to the NFHS-III (2005-06) and DLHS-RCH III (2007-08) Rounds, Delhi shows satisfactory coverage in terms of mothers receiving institutional care during the last pregnancy, especially in comparison to the national level scenario. Data accessed from the Office of the Directorate of Family Welfare for 2011 shows that about 84 per cent of the deliveries in Delhi were conducted in health facilities, of which about two-thirds took place in government hospitals. In addition, around 66 per cent of the domiciliary births were also found to be assisted by doctors, and trained nurses/midwives, which made those births safe.

Research on the subject of maternal healthcare has highlighted notable socio-economic differentials in ante-natal care coverage with regard to women residing in the non-slum areas. It has been found that those with secondary level education are more likely to receive ANC services from health professionals (Gupta, *et al.* 2009, cited in Mazumdar and Mazumdar, 2013). Disaggregated data from the DLHS-RCH III (2007-08) also reveals socio-economic differentials in delivery care and continued inequalities in the use of maternal health services in Delhi (Mazumdar and Mazumdar, 2013). The inequities in institutional care during delivery partly arise due to the inadequate

**Table 4.3**

#### Socio-economic Differentials in the Type of Health Services Utilisation: Delhi, 2012-13

Attributes	Government	Private
<b>Income Groups</b>		
Low income	75.4	20.5
Lower-middle income	63.7	32.0
Upper-middle income	54.9	39.6
High-income	44.9	53.5
<b>Household Asset Index</b>		
Low	71.9	23.6
Medium	62.8	32.4
High	41.2	55.3
<b>Education Levels</b>		
Primary	68	26.2
Higher secondary	62.2	33.6
Graduation and above	44.9	52.8
<b>Type of Occupation</b>		
Lower paid-occupations	66.0	28.8
Service workers	62.3	34.1
Semi-professionals	50.6	43.8
Professionals	44.6	53.2
<b>Locality</b>		
JJ cluster/colony	72.6	21.9
Unauthorised colony	63.2	32.7
Urban village	73.7	23.9
Approved colony	51.8	43.1
Walled City	66.9	29.7
Posh locality	44.7	55.3
<b>Aggregated Vulnerability Index</b>		
High	71.0	24.8
Medium	59.9	34.2
Low	43.1	53.8
Aggregate Split	61.5	34.8
Total (N)	4,941	2,792

Source: Perceptions Survey, 2013.

coverage of the basic preventive services. These include ante-natal screening facilities, particularly for those belonging to the weaker sections, who also constitute the potentially high-risk pregnancies. This

necessitates according high priority to ante-natal care through interventions such as early screening and home-based counselling and monitoring of pregnant women. The Government of Delhi has taken several initiatives in this sphere, including the Delhi Initiative for Safeguarding Health of Adolescents (DISHA),<sup>37</sup> which is being conducted through the JSY, the JSSK and the *Mamta* schemes, and provision of free transport to the pregnant women from the home to the hospital and back home in order to promote institutional deliveries. The state has also planned stricter implementation of the Janani Shishu Suraksha Karyakram in all its 32 hospitals and 31 maternity homes by launching mass awareness generation programmes. A fleet of 120 new ambulances has been added to be used for facilitating the free transportation of pregnant women, merely by dialling the toll-free number 102.<sup>38</sup> Under the JSSK, further efforts are being planned to tie up with the Jan Ahaar scheme to provide nutritious food for pregnant women. Reductions in maternal mortality are also planned through multi-faceted operations including the linking of primary healthcare facilities to secondary hospitals and first referral units (FRUs), strengthening blood bank services that are equipped to provide essential blood to patients/referral units for handling ante-partum and post-partum haemorrhage cases, making contraceptive services accessible to everyone, and making the MTP service provisioning easily available.

In Delhi, approximately two-thirds (63 per cent) of the children aged 12-23 months received complete immunisation coverage against six major killer diseases, as compared to the corresponding average figure of 44 per cent for India as a whole (NFHS III, 2005-06). Meanwhile, the corresponding DLHS-RCH III (2007-08) figure is 67 per cent. The district-wise vaccination coverage was found to range around the 50 per cent mark for children residing in the northern (in both the North-east and North-west districts) parts of the state, pointing towards a clear spatial zone in urgent need of a massive scaling-up of immunisation coverage. Recent estimates from the

UNICEF's Coverage Evaluation Survey (2009) indicate the level of immunisation coverage in Delhi to be 72 per cent. However, despite these improvements, inequities continue to persist. According to the DLHS-RCH III state report for Delhi (IIPS and MoHFW, 2010, cited in Mazumdar and Mazumdar, 2013), child immunisation levels are found to vary with the mother's education levels. While close to half of children of illiterate mothers received full immunisation, more than three-fourths of those with mothers who had completed matriculate level of education were found to be fully immunised.

Recent policy measures appear to be aimed towards ensuring universal immunisation coverage, and in fact expanding the vaccination schedules by consistently incorporating new vaccines such as MMR (1999), hepatitis B (2001), typhoid (2004) and the pentavalent *Haemophilus influenzae* type B (HiB) vaccine (2013).<sup>39</sup> The Pulse Polio Programme in Delhi is considered as a model, as it provides a template for convergent intervention strategies aimed at ensuring universal coverage by reaching out to children from the under-served, vulnerable communities and families.

In a nutshell, while both maternal and child health coverage indicators are likely to have improved in recent years in Delhi,<sup>40</sup> issues of inequity in access to these basic but crucial preventive services persist and need to be addressed. A few recent initiatives indicate that the State Government has been taking positive steps to address issues related to equitable and quality MCH service coverage.<sup>41</sup>

37. The State has created 162 adolescents' reproductive and sexual health clinics named as DISHA, which provide comprehensive services for the adolescents for preventive, promotive, curative and referral services on growth and development, sexual and reproductive health, nutrition, contraception and behavioural issues. Provision of nutritional counselling and iron and folic acid tablets to the adolescent are targeted for this age group, to alleviate anaemia and its intergenerational effects.

38. Briefing notes from the Department of Health and Family Welfare, Government of NCT of Delhi.

39. Communication from the Directorate of Family Welfare (DFW), Government of NCT of Delhi.

40. A recent survey conducted by the Government of India and WHO in the North-east district has confirmed that the state has achieved a Maternal Neonatal Tetanus Elimination status in early 2013, which is an indirect substantiation of improved coverage, which now needs to be consolidated further by the state. Source: DFW, Government of NCT of Delhi.

41. In order to increase the coverage and reach to the hitherto unreached women and children, the areas have been mapped for the ANMs, with each ANM being accountable for all the pregnant women and children residing in her earmarked area. In addition to this, around 3800 ASHAs cover a population of around seven million, and have been selected and trained to mobilise the beneficiaries from the community to avail of the available health services, provide information and advice on basic health issues, and offer basic health aid like distribution of ORS/Paracetamol tablets before referring the patient to the health centre. She is also being trained for counselling the mothers on care during the post-partum period and basic home based new born. The Mother and Child Tracking System (MCTS), which is being implemented in Delhi, constitutes another

#### 4.3.4 Quality of Care for Services Offered at Healthcare Facilities in Delhi—Insights from the People's Perceptions Survey

The fundamental aims of UHC are to reduce barriers to access to services and promote equitable use by ensuring that the services offered are in synchronisation with the users' needs and expectations, and incorporate attributes of both technical and interpersonal dimensions of quality of care in delivering services. However, since studies on users' perspectives demand data and necessitate specific study designs, they are usually rare. In Delhi, a few studies, such as those undertaken by Jishnu Das and Jefferey Hammer (Das and Hammer, 2007; 2005; 2004) provide some interesting facts about how the quality of healthcare varies according to localities, providers' motivations, and between the public and the private sector. For example, they find that the poor tend to visit providers who are less knowledgeable, with both the public and private providers in poor neighbourhoods having lower competence. More importantly, the studies highlight that motivations and incentives often influence the quality of medical advice and services: public providers are apparently less reluctant to perform in keeping with their competence, while those in private practice tend to over-exert themselves through additional diagnostics, over-medication, etc. The studies indicate that private physicians, even those with lower competence levels, provide 'better care on an average' than their better-qualified counterparts from public hospitals.

As part of the Perceptions Survey, 2013, the respondents were asked about the three aspects of health services accessed by them during their recent visits which they have liked best. The responses included cost of treatment (58 per cent), effectiveness of the treatment and medicines prescribed (57 per cent), and the skill and competency of the physician/staff (50 per cent). These three attributes also conform with the three aspects of publicly-provided services, viz., lower costs or affordability, technical competence, and the effectiveness of medication. These findings indicate that public health services score reasonably well in Delhi in terms of the technical aspects of service quality. However, as regards the two interpersonal dimensions of

the quality of care: friendliness and courtesy of the physicians/staff, and the ease with which they administered the treatment and the medicines, the responses obtained during the Perceptions Survey, 2013, showed that a much lesser proportion of the respondents (32 per cent and 23 per cent, respectively) rated them as satisfactory. Only a small proportion of the respondents (17 per cent) found the overall cleanliness of the public health facilities conforming to their liking.

On the other hand, two-thirds of the respondents rated 'overall cleanliness' as the most popular aspect of private health facilities. The interpersonal quality of care, that is, the friendliness and clarity of communication of the health personnel in private facilities was also rated highly (48 per cent) as compared to public facilities. With regard to the two technical aspects, that is the competence of the service provider and efficacy of treatment, private health facilities were rated as marginally better than the public facilities (by 61 per cent and 55 per cent of the respondents, respectively). However, it must be noted that, as illustrated in Table 4.3, the users of private and public health facilities are distinctly different in terms of their background characteristics—income, education, occupation and overall vulnerability. Hence, these differentials are not directly comparable but are at best indicators of the aspects of the service quality found to be satisfactory by their respective users.

The Perceptions Survey, 2013, also tried to identify what the respondents disliked most about the public/private health services accessed by them. A significant proportion of users of public health facilities cited long waiting times (89 per cent) and lack of privacy during consultations/or overcrowding (49 per cent) as the factors most disliked by them. About a quarter (24 per cent) reported that cleanliness levels and the environment at the health facility were below their expectations. Lastly, 41 per cent of the respondents cited the long distances they had to travel to reach public health facilities as a factor they disliked, which indicates that geographical accessibility of the health facilities continues to be a significant issue at least for part of the population. On the other hand, a very small proportion (13 per cent) considered treatment costs in public facilities to be higher than expected. The responses of the users of private facilities for the same clearly brought out an indicative divide. While about 6 respondents in 10 considered waiting time to be a hindrance in private facilities as well, more than 56 per cent considered the costs of

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important initiative for tracking all pregnant women and children to ensure the delivery of appropriate care. As on 14 August 2013, around 4 lakh women and 3.9 lakh children have been registered on the MCTS portal over the last two years. Efforts are being made to universalise the utilisation of MCTS system by all MCH care providers. Source: DFW, Government of NCT of Delhi.

treatment to be high, something they disliked the most. Approximately one-third (37 per cent) of the respondents also felt that private facilities were not available close by and rated distance as one of the factors they disliked.

The Perceptions Survey, 2013, brings to the fore a few interesting dimensions of the quality of healthcare services in Delhi. While people rate both the public and private health sectors on a near-equal footing with respect to the technical aspects of care, the users of public facilities appear to be attracted more by the lower costs of treatment, which is understandable because a larger proportion of the respondents belong to households from the lower socio-economic strata. This alone is indicative of the fact that the public health facilities have achieved effective outreach towards the priority sections of the population. Also, the fact that the users of public facilities rate the effectiveness of treatment and the perceived competence of the providers quite high, speaks well of the overall quality of these services. The users' responses also highlight the various areas of concern, including cleanliness, the environment at the facilities, overcrowding and lack of privacy, and long waiting times. The private sector, on the other hand, fares well in terms of the aspects of cleanliness and bedside manners of the physicians towards their patients, but it is still considered a costly option by a major share of the respondents. While the users of the private sector mostly belong to the economically better-off households with lower socio-economic vulnerability, their cost concerns make a strong case for better coverage and greater efficiency of public sector health services to ensure that low-cost, effective, and patient-sensitive options are available for the masses in Delhi.

#### 4.4. Financial Risk Protection

Along with equitable access to quality healthcare services, the other core tenets of universal coverage are a reduction in barriers to financial accessibility and extension of adequate, effective risk-protection against the financial impact arising out of illness. The Indian scenario is characterised by private, out-of-pocket expenditures incurred on treatment and related expenses, with the impacts often being catastrophic and leading to impoverishment, particularly among those with limited means and vulnerable livelihoods (Shiva Kumar, *et al.*, 2011). In this section, the existent patterns of healthcare financing in Delhi are assessed. An attempt has also been made to identify the major issues plaguing the health system with regard to adequate financial risk protection.

#### 4.4.1 Public Spending on Health and Healthcare Services

Public spending on health and related services in Delhi accrues from three major sources—directly from the State Government, as support from the Central Government for Centrally-sponsored schemes or national programmes, and from the local bodies, viz., the New Delhi Municipal Corporation (NDMC), Municipal Corporation of Delhi (MCD) and the Delhi Cantonment Board. Multiple public financing sources make any study of flow of finances, in both absolute and sectoral terms, difficult. Also, the amounts collated from different sources do not always match, primarily due to different definitions and accounting principles. However, the broad picture emerging from most of the available sources suggests that public spending on health services in Delhi has been consistently on the rise. According to the budgetary analysis reports of the State Government, spending in absolute terms has increased, more than doubling from about Rs. 11 billion in 2006-07 to about Rs. 28 billion in 2012-13.<sup>42</sup> Although subject to certain qualifications (see Footnote 42), the increase in public spending seems impressive. It is, however, lesser so, when the growth in outlays is observed in proportion to the total budgetary outlays—it has increased from about 8.1 per cent in 2006-07 to about 9.9 per cent in 2012-13. A publication of the Reserve Bank of India—*State Finances: A Study of Budgets of 2010-1*—reveals the positive aspect of public health spending in Delhi, including family welfare and other allied expenditures (Reserve Bank of India, 2011). The statement (Statement 42, p.186) puts the expenditure on health services as a ratio of aggregate expenditure in Delhi at about 8 per cent in 2010-11, the highest in the country and almost double of the national average (4.3 per cent). The 2012-13 edition of the report is even more promising—it revises the estimate to 9.3 per cent, and pegs the figures for the two subsequent financial years at a phenomenal 9.9 per cent. Thus, Delhi is probably the first state in the country to spend almost 10 per cent of its budget on health. The recently published *Economic Survey*

42. The figures are taken from different years of the publication, *Analysis of the Budgetary Transactions of State Government*, published annually by the Directorate of Economics and Statistics, Government of Delhi. The reported values are for the expenditure under the head, "Medical and Public Health". The figure for 2006-07 also includes expenditures of the local bodies, but that for 2012-13 is only for the state government's budgeted estimates. The figures given here can be considered as a partial estimate of the total public spending on health and allied services in the state, as it excludes contributions from the Central Government, and does not include expenditure incurred on family welfare services, contributions to ESIC and Delhi Arogya Nidhi, and medical education and training.

of Delhi, 2012-13, highlights the share of health in development plans—an additional indicator of the ‘fiscal priority’ accorded to this sector. It shows that the proportion of Plan expenditure on health in Delhi has hovered around 12 per cent since 2004, but was worth almost Rs. 16 billion, that is, 12.2 per cent in 2011-12. As in the earlier instance, this figure too suggests a better public financing pattern in Delhi as compared to the other larger Indian states.

Generally, in India, the dearth of a regular system of national health accounts plagues any assessments of trends in public spending on healthcare across states, on the one hand, and more importantly comparisons of the relative role of public financing vis-à-vis private, mostly out-of-pocket spending on health and healthcare services, on the other. The most recent National Health Accounts (NHA), published in 2009, pertains to data till 2004-05, when the last National Health Survey (containing private health expenditure data) was conducted by the NSSO (60<sup>th</sup> Round). According to the NHA 2004-05 (MOHFW 2009), Delhi with a per capita public health spending of Rs 560 is ranked 6<sup>th</sup> nationally (with the average at Rs 242). A crucial gap in the available NHA estimates is the lack of comparative estimates for the post 2008-09 period, which, as the budgetary estimates for Delhi (and also for a few other states) indicate, public spending on healthcare and health services received a fillip, and have started to climb up remarkably with significant support from the Central Government under the National Rural Health Mission (NRHM). Such a positive turnaround in the levels of public spending was mooted in the report of the National Commission on Macroeconomics of Health report (MOHFW, 2005), though it fell short of the avowed goal of raising national levels of public spending to 2-3 per cent of the GDP.<sup>43</sup> More recently, the Ministry of Health and Family Welfare, Government of India, had provided some estimates of the per capita ‘health expenditure’, following which in 2008-09, the same for Delhi stands at Rs. 840; by this estimate—wherein the national average is put at Rs. 503 – Delhi is ranked ninth among all the states and UTs in India.<sup>44</sup>

43. Interestingly, in the recently published High-level Expert Group Report on UHC (HLEG, 2011), a ‘normative expenditure’ threshold of ₹ 2000 per capita was conceived to be required for UHC goals in the ‘special-category’ states (as defined by the NRHM), which includes Delhi. Assuming the current levels of public outlays on health (as a proportion of the state GDPs), the report estimates Delhi’s public spending in 2019-20 to rise to Rs. 2855, thereby significantly exceeding the ‘normative threshold’ and in fact, making it the only state (with a population of 10 million or above) to do so (HLEG, 2011, pp. 108-09).

44. See Response to the Lok Sabha Question—MoH&FW,

#### 4.4.2 Private Spending on Health and Healthcare Services

It is now well-acknowledged that in India, a large part of the health expenditure is private and largely borne out-of-the-pocket. From the perspectives of universal coverage and economic welfare, it is important to understand the gaps in health financing mechanisms. The patterns and composition of private spending help in ascertaining the economic impact of health shocks on the vulnerable sections, who have little access to formal risk-protection mechanisms. The NHA (2010) estimates for India reveal that a whopping 71 per cent of the private health expenditures are borne by households, of which a major proportion is out-of-pocket, with little coverage from formal risk-pooling mechanisms. In Delhi too, private expenditure accounts for more than two-thirds (77 per cent) of the total health expenditure, which is relatively better as compared to most other states with the exception of Himachal Pradesh (58 per cent), Karnataka (72 per cent) and Rajasthan (76 per cent), which report lower proportions of the total health expenditure accounted for by private sources.

An analysis of the recent consumption expenditure surveys of the NSSO, for example, the 55<sup>th</sup> (1999-2000), 60<sup>th</sup> (2004-05) and 66<sup>th</sup> (2009-10) Rounds for Delhi indicate that households spend about 3 per cent of their total non-food expenditures and around 2 per cent of their total consumption expenditures on medical care, with the levels remaining virtually unchanged over the five years covered by the NSSO rounds (Mazumdar and Mazumdar, 2013). A comparison of household outlays on medical care in Delhi with that of the rest of urban India reveals that households in Delhi spend significantly lesser proportions of their consumption expenditures on medical care. The NSS 66<sup>th</sup> Round (2009-10)<sup>45</sup> data shows that medical care expenditures as a proportion of the non-food and total consumption expenditures work out to be 5 per cent and 8.5 per cent, on an average. There could be three possible reasons for explaining such an expenditure pattern in Delhi: *first*, lower morbidity (and hospitalisation) experienced by the population vis-à-vis their counterparts from other urban centres across India; *second*, lower average cost of treatment/medical expenses borne by the households, probably due to higher coverage and utilisation of government health services; and *third*, a markedly different consumption pattern in

18 December 2009. ‘State-wise per capita Expenditure on Health’, Available at: <http://pib.nic.in/newsite/erelease.aspx?relid=56240>, Accessed on 18 December 2009.

45. Table 6A, NSSO 66th Round Report on Consumption Expenditure

Delhi that is biased more towards the non-medical care components of non-food expenditures (such as education and entertainment).

At the aggregate level, the proportion of medical care expenses in the household's aggregate consumption expenditure masks socio-economic differentials and inequalities in financing medical care. The IHD-SDTT survey allows for some useful disaggregated analyses. The survey results suggest that households with higher education levels spend significantly more on healthcare. The average expenses on medical care were found to be highest amongst high-income households and the least for families in the lowest income bracket. Notably, while households relying on formal, qualified private physicians spent the most, treatment from public sources was also found to be costly enough. However, it was actually the informal providers, which about one-fifth of the households subscribed to, who were reported to be the least expensive, which clearly explains why they were found to constitute the most attractive healthcare option by the lowest income category households (Kumar et al., 2012).

Another study which provides useful information on the dimensions of health financing in Delhi was conducted by IHD-IRMA (2010-11),<sup>46</sup> and covered a larger sample with better representation of the population of Delhi. The findings from this survey also indicate that the economically better-off pay more for medical care (by a multiple of about 9), and that treatment in government hospitals is no less costlier than seeking treatment from private physicians or hospitals (Mazumdar and Mazumdar, 2013), which is a cause for concern. If the results of both the above mentioned surveys are taken together, it appears that the poor and the vulnerable households appear to be cushioned somewhat, most likely due to the fact that they settle for less costly options (such as local government clinics, rather than government hospitals or unqualified/semi-qualified private physicians rather than bigger hospitals or more qualified physicians).

A related concept, and one which is employed extensively in the health financing literature, is

that of catastrophic expenditure on healthcare, and the consequent impoverishment it causes. Any household spending on healthcare is considered to be catastrophic when it is required to reduce its basic expenditure in order to cope with healthcare costs (Xu et al., 2003), though there is little consensus on the threshold to be used. However, the convention is to either use a higher threshold, for example, 40 per cent of the household's capacity to pay (that is, non-food consumption expenditure) (op. cit.), or a combination of thresholds, such as 10 per cent, 20 per cent, 30 per cent and 40 per cent. An analysis of the IHD-IRMA data shows that a significant proportion of the households in urban Delhi did experience financial catastrophe situations when paying for the treatment of their ailing family members. The proportion of households experiencing catastrophic situations following the heavy expenditure incurred ranged from about 9 per cent to about 3 per cent, on an average. In absolute numbers, out of an estimated number of 23,06,903 (23 lakh plus) households in urban Delhi, 2.16 lakh households spent 10 per cent or more of their *capacity to pay* (non-food consumption expenditure) on medical care; At subsequent higher thresholds of 20 per cent, 30 per cent and 40 per cent, it amounted to about 1,27,000, 88,000, and 65,000 households, respectively.<sup>47</sup> The evidence, however, is not clear that catastrophic expenses are more likely to be experienced by the poor, in terms of household consumption expenditure classes. Nevertheless, households relying more on informal means of occupation/employment show more than three times the incidence of experiencing financial catastrophe (at the lowest threshold), which then tapers off to twice the incidence at the highest threshold of the households' capacity to pay for health services, indicating some amount of socio-economic gradient in the risks of financial catastrophe due to healthcare-related costs.<sup>48</sup>

The results from the household surveys studied in this section indicate a diverse picture of private healthcare financing in Delhi. Although the poor and socio-economically vulnerable families spend less on health services as a proportion of their incomes, they are at higher risks of experiencing catastrophic

46. The study (2010-11) conducted by Institute for Human Development (IHD) and Institute for Rural Management - Anand (IRMA) was primarily related to informal employment, migration and social protection in urban India, and involved a detailed household survey in two Indian cities, Delhi and Ranchi. The urban Delhi sample of about 2000 households were drawn with a sampling design similar to that of NSSO and is representative of urban Delhi.

47. The population level estimates were worked out by applying the multipliers calculated through a detailed technique closely resembling that followed by the NSSO CES surveys.

48. Detailed discussions and results are available from the background paper to this chapter. See Mazumdar and Mazumdar (2013) for a detailed analysis on health financing aspects reported in this section by using the IHD household surveys.



expenses leading to further impoverishment. The poor, in the absence of formal risk-pooling safety nets, insure their costs of illness by accessing the services of low-cost informal practitioners, or government clinics. This highlights the issue of financial risk protection as a key corrective action against the inequity-encouraging private out-of-pocket health expenditures.

#### 4.4.3 Financing Healthcare—Role of Risk Protection and Equitable Coverage

The analysis presented in the previous sections clearly points towards a predominance of private, out-of-pocket spending on medical services by households, and socio-economic differentials in household budgetary outlays on medical care. These findings for Delhi are comparable to those for the rest of the country too. However, what makes the case of Delhi different is that it exhibits one of the highest (higher than the national average too) levels of public expenditures on healthcare and medical services. Nevertheless, the fact that a considerable proportion of the households spend a significant part of their incomes on availing of treatment for their ailing family members, raises important issues with regard to financial risk protection, universalisation of coverage and insuring against unanticipated health shocks.

Irrespective of the source of data used, and indicating a near-constant pattern over much of the past decade, the financing pattern of healthcare-related expenses by the households indicates a common thread—the unanimous predominance of out-of-pocket spending, drawn out of current income or past savings, with very little support extended by formal insurance mechanisms. Disaggregated data for total healthcare-related expenses by different financing sources from the NSSO 60<sup>th</sup> Round data (2005-06) shows that 92 per cent of the expenses incurred by households in Delhi on non-hospitalised ailments, and 89 per cent of the expenses incurred for hospitalised ailments were financed out of the incomes of households and/or their past savings. About 7 per cent of the hospitalisation expenditures and about 4 per cent of the expenses on other ailments were supported through borrowings, while friends and relatives helped contribute about 2 per cent of the hospitalisation expenses. About 2 per cent of the total medical expenses for non-hospitalised ailments were also financed out of the sale of assets and mortgages (NSSO, 2006). The IHD-SDTT Survey (referred to earlier) finds that nearly one-fifth of the households faced risks of indebtedness likely to

arise from the loans they raised to finance health treatment costs. Data obtained from the more recent Perceptions Survey, 2013, also shows that only a small proportion of the households were able to support their medical expenses via alternative insurance and risk protection mechanisms (such as employer-supported healthcare). In the case of major illnesses, requiring hospitalisation or surgeries, the proportion of households tapping into their savings (69 per cent) was the highest, followed by those using their current income (59 per cent) and social network-based informal risk-sharing through financial help received from friends and neighbours (47 per cent).

The financing pattern for medical expenses in Delhi also shows a distinct socio-economic gradient, reflecting inequities in the same. Households belonging to low-income classes and high vulnerability groups were found to fall back more on informal sources of risk-sharing via borrowings from relatives/neighbours to finance their medical expenses. On the other hand, most of the households reportedly benefiting from formal sources of risk-sharing (mainly employer-provided or subsidised government health schemes) belonged to the economically better-off sections. Such formal means of social safety nets against health shocks, mostly available to those holding organised, formal sector jobs, eludes the poor and vulnerable, who tend to be concentrated in informal, unorganised sector jobs. Clearly, there is a pressing need for targeted social health insurance alternatives.

Pronounced gaps in financial risk protection amongst priority groups have also been found from other household surveys. The IHD-IRMA survey found that households/persons predominantly relying on work in the informal sector were spending more than twice (4.3 per cent) of their capacity to pay<sup>49</sup> on healthcare. In comparison, those engaged in formal sector jobs (1.6 per cent), and thus having better incomes and lower vulnerability, were spending much lesser proportions of their household non-food expenditures on healthcare. Such inequities in risk protection were also evident from the Perceptions Survey, 2013, which reports that low-income, vulnerable households preferring to use public hospitals and health facilities could manage to cover only about 6 per cent of their medical expenses through any form of risk protection (formal or informal). On the other hand, those with higher incomes and lower vulnerability disproportionately

49. Defined as per capita household non-food consumption expenditure.

enjoyed coverage of about 20 per cent of their medical expenses from formal sources (mostly extended by their employers). In the case of major illnesses, the disparity in financial risk coverage becomes quite stark. While the better-off households manage to get almost a quarter of their medical expenses covered through formal sources, for the highly vulnerable households, the formal safety nets account for less than 2 per cent of their expenses. Besides intra-community or intra-family informal credit support (accounting for about 27 per cent of the expenses), these households have no option but to rely on their own finances or resort to other sources of credit to finance their healthcare needs. With such a skewed pattern of formal safety nets and risk protection mechanisms in play, it is implicit that the poor and vulnerable households, with informal means of livelihoods and incomes, continue to face high financial risks in the face of health shocks, which has wider implications for human development and welfare outcomes.

#### 4.4.4 Assessing Institutional Mechanisms Towards Financial Risk Protection

Delhi, being the national capital and a thriving metro city, has one of the best networks of healthcare facilities and service providers in the country. As the statistics reported in the previous sections on the spread and growth of government health infrastructure indicate, the state has also been largely responsive in catering to the needs of the vulnerable populations and poor communities and localities by providing a wide array of urban health centres, dispensaries, secondary and tertiary care hospitals, and mobile health clinics, among other facilities. While this augurs well in terms of the desirable steps towards ensuring equitable access and universalising healthcare coverage, the scenario of healthcare financing viewed in terms of the coverage of formal risk protection instruments does not seem to echo these positive developments. In fact, as the subsequent discussion in this section indicates, such coverage remains very low with the risks of perpetuating inequities in financing, which goes against the basic foundations of universal coverage.

The strategies adopted by the State Government to ensure equity in healthcare financing, and extension of financial safety nets to the vulnerable families is largely indirect and follows from the Government's initiatives and interventions to ensure equity in access to healthcare and to reduce the different barriers towards 'effective coverage'. As illustrated by the seminal work by Tanahashi (1978), ensuring

effective coverage through supply side interventions facilitating better accessibility and network of health facilities; making drugs, equipments and health workforce available at easily accessible locations; and having specific interventions such as the Mobile Health Scheme for hard-to-reach populations is consistent with the concepts of universal coverage. However, care must be taken to ensure that the utilisation patterns justify a positive benefit incidence of the government's expenditure. If the poor enjoy a greater share of the public health services, which appears to be the fact as evident from the Perceptions Survey, 2013 (Table 4.3)—suggesting benefit incidence to be progressive in nature, equity in access to healthcare facilities and services can encourage equity in financing as well, and help extend financial risk protection through such intervening pathways. In the absence of detailed, disaggregated household survey data linking utilisation and financing behaviour, it is difficult to comment conclusively on such linkages and the success of the health system to ensure overall equity and on-track towards universal coverage. However, relying solely on a positive benefit incidence of the 'in-situ' strengthening of the healthcare infrastructure and service delivery mechanisms may not be adequate as those households, particularly from the low-income, vulnerable segments, who continue to remain outside the coverage of publicly-provided healthcare services can be disproportionately exposed to risks of further impoverishment, resulting from high out-of-pocket expenditure incurred in receiving treatment from sources other than the free, public services.

Nevertheless, the State Government has also been proactively pursuing the agenda of financial risk protection through a number of equity-sensitive programmes and interventions. These include the twin schemes—*Delhi Arogya Nidhi* (DAN, the State Illness Assistance Fund) and the *Delhi Arogya Kosh* (DAK), apart from schemes such as the Delhi Government Employees Health Scheme (DGEHS), and other national health insurance programmes such as the Employee's State Health Insurance Scheme (ESIC) and the *Rashtriya Swasthya Bima Yojana* (RSBY). The DAN and DAK schemes are designed to provide cash assistance to patients from the economically weaker sections (and having the relevant entitlement cards) for treatments involving high financial costs. The DAK is specifically aimed at supporting dialysis-related expenses, in government and empanelled private hospitals. Both the DGEHS, which caters to government employees and the ESIC, which caters

to other organised sector employees, cover the relevant population segments and offer the risk-pooling support only to a miniscule proportion of the population, which indicates that they are against the basic principles of equity by supporting the better-off instead of those with lower economic capacities. Adding to these, a number of measures such as the facility of free beds in the 44 designated private hospitals mentioned earlier, or offering free treatment for low-income families in specialty hospitals are appropriate steps towards attaining equity in financing patterns and safeguard vulnerable families against health expenses-induced shocks.

The only other scheme, prioritised towards targeting the poor is the RSBY. A nationwide scheme, and billed as the world's largest targeted national health insurance programme, the RSBY generated a lot of promise when it was launched. Under this scheme, cashless hospitalisation facilities are provided in designated hospitals (with about 70 per cent in the private sector) for a maximum amount of Rs. 30,000 per year for five members in the eligible poor households identified from a roster of below the poverty line (BPL) families. Using strong technology support via smart cards and stringent norms of identifying health facilities, insurance providers and administrators, the RSBY allows the tracking of each enrolled beneficiary household, thus keeping a tab on the functioning of the scheme. By providing adequate financial cover to poor households against severe illnesses and facilitating a broader choice of quality healthcare providers, the RSBY aims to ensure equity in financing and delivery of healthcare. However, since the RSBY is still in its early years, it may be a little premature to comment on its effectiveness in terms of financial risk protection and as a key vehicle to achieve universal and inclusive service coverage. The scheme's performance varies considerably across the country and mixed results have been obtained. However, inequities persist even in terms of enrolling the 'eligible' beneficiaries, and consequently in disbursing the benefits. A few studies have identified structural barriers that permeate information gaps in terms of the awareness of the schemes, which, in turn, keeps enrolment rates down. More often, families outside the 'enrolment coverage' are those that are in most need of insurance support (for a review, see Palacios, *et al.*, 2011). Such information asymmetries can be equally responsible for the low awareness relating to other equity-sensitive interventions and initiatives of the Government, such as free beds in private hospitals or the illness assistance funds, and may not always guarantee

coverage to the most needy, particularly with a clear demand-based orientation.

Estimates suggest considerable gains by enhancing the coverage of schemes such as RSBY (Mazumdar and Mazumdar, 2013), as a collateral initiative to reap increasing returns and leverage efficiently from the already pro-public sector tilt in the service mix and utilisation patterns evident in Delhi. In fact, we argue for universalising a RSBY-type of health entitlement system, covering all types of healthcare services—hospitalisation as well as outpatient, clinic-based consultation services with cashless service usage options through suitable platforms, independent of whether the poor opt to use the services of the public sector (which are already cashless at the point of care) or designated private sector 'outlets'. Delhi could probably take a leaf out of recent pilots under the RSBY to engage community-based groups and other non-government entities to provide cashless outpatient services to the beneficiaries, and to introduce such schemes in the coming days.

However, in view of the fact that at present, the bulk of the state's budgetary outlay on health services, as discussed above, is committed towards strengthening service delivery and further bolstering the health infrastructure—physical and health workforce—introducing a large-scale financial protection mechanism or a 'scaled-up' version of the RSBY might not sound feasible, from the viewpoint of both operational as well as fiscal prudence. Nevertheless, and as this chapter had identified, the policy-makers need to take into cognizance the fact that notwithstanding the impressive network of health facilities and growing public reliance, more so among the poor, relying solely on a purely supply-side driven system to ensure universal coverage with equitable outcomes may not be the best idea. Demand side barriers arising out of low awareness and other information asymmetries, coupled with imperfections in service delivery mechanisms, can crowd out the poor and vulnerable people from the service nets, and skew the benefit incidence. Further research evidence could greatly aid the policy-makers in drawing up suitable roadmaps for such integrated strategies that draw the best from present arrangements, and simultaneously repair the lacunae in effective coverage through appropriate social safety nets.

It is evident that the health system in Delhi presents a mixed bag of performances, and has some commendable achievements to its credit. At the same time, however, it faces strong challenges

arising out of its commitments to its citizens in terms of ensuring that they enjoy long, healthy, productive lives and that they have easy access to reliable, effective medical care. Glimpses of the spirit of universal coverage can be seen in the health service delivery system and in prioritisation of interventions for the vulnerable populations. In view of the challenges that Delhi faces on the healthcare front, and building on its recent achievements, the next section puts forth a set of measures aimed at informing future strategies for health system reforms in order to achieve universal, effective coverage.

#### 4.5. The Way Forward

This chapter reviews the current status and future prospects of the health system in Delhi, from the perspective of universal coverage and its significance in ensuring human development outcomes. It is quite apparent that the health system in Delhi is faced with multiple challenges, some unique to the city-state. These include steady streams of ‘floating’ populations from the neighbouring states who come to the capital to seek treatment for emergencies and for general healthcare needs; vulnerable groups such as the homeless, or those engaged in high-risk livelihoods; and a growing share of the aged populace requiring assistance amidst fragmenting social support systems. The new and emerging concerns in healthcare, which Delhi shares with most of the urban health systems in the transitional economies across the developing world, include balancing environmental concerns with development pursuits, addressing wider health and well-being concerns of the swelling ranks of adolescents, and ensuring preparedness for medical emergencies such as sudden epidemics or acts of violence. All these require careful consideration and synergistic action involving a wider array of stakeholders. Some of the major findings highlighted in this chapter are as follows:

- There is need to meet the persistent challenge of improving the survival prospects of newborns while ensuring that all births take place under institutional care, and are followed by proper care of the newborn.
- The burden of disease scenario only reaffirms the emergence of the ‘double burden’ of persisting communicable diseases and the growing predominance of chronic diseases. More often, it is the poor and socio-economically vulnerable population groups that are unequally exposed to both disease

and premature mortality risks. Clearly, the interventions and policies need to be more pro-active and inclusive and should aim to extend effective coverage to the under-served as a development priority.

- The high reliance of the poor on public health facilities points towards the need for expansion of health infrastructure and the provisioning of free medicines to encourage desirable service usage patterns. On the other hand it is imperative to address the various drawbacks in the system pertaining to the quality of services, and a highly stretched out health workforce, which prevents optimal utilisation of potential and equitable service coverage.
- Financial protection remains inadequate—it seems that weak convergence and the lack of an integrated approach prevent the State from ensuring the optimal implementation of the various programmes available (including national schemes such as the RSBY and the state’s own illness assistance funds). Several barriers exist, hampering adequate financial risk protection for those most in need of such safety nets. Low awareness amongst the poor, weak efforts by the government to reduce information gaps, stringent eligibility criteria and long-drawn out processes for availing of the benefits often leave the poor with inadequate and ineffective financial coverage. What is needed instead is increased broadbasing of social insurance measures such as the RSBY by extending their coverage to outpatient services as well, with the State providing the additional budgetary support. The government needs to recognise that universal coverage calls not for multiple, overlapping schemes, but for a single, integrated and effective financial risk protection measure that can be availed of by the poor, without any barriers.

In an attempt to put Delhi’s health system in perspective, five major achievements of the state’s growing health system and five major challenges, termed as the ‘5\*5 dashboard’ (Box 4.4) have been delineated here. However, this is neither an exclusive nor an exhaustive list, and necessitates debate and consultative processes involving the major stakeholders in the healthcare domain of Delhi.

**Box 4.5**

**Key Challenges and Achievements of the Health System in Delhi: THE 5\*5 DASHBOARD**

**The Five Challenges**

1. A slower-than required decline in infant mortality rate, with higher deaths concentrated in the neonatal period. Inequities in providing preventive maternal and child health services, including lower levels of institutional deliveries.
2. Growing burden of noncommunicable diseases, with mortality risks disproportionately concentrated in economically active ages. Continued threat of infectious conditions especially respiratory ailments possibly linked to ambient air quality.
3. Severe shortages of manpower well below recommended levels, including both physicians and paramedics.
4. Persistent concerns about interpersonal aspects of quality including communication, privacy and long waiting times in public health facilities even as lower costs, effectiveness of treatment and provider competence continues to attract patients to public facilities.
5. Inadequate financial risk-protection, particularly amongst those with informal livelihoods with a considerable number of households still facing risks of very high medical expenses.

**The Five Achievements**

1. Impressive network of primary health care facilities, propelled with dispensaries, mobile clinics, school health clinics and PUHCs and a strategic approach to reduce IMR and MMR through integrated approaches.
2. Phenomenal increase in reliance on public health facilities, with desired coverage among lower socioeconomic and vulnerable groups and localities, and marked decline in the use of unqualified medical practitioners.
3. Commendable efforts in facilitating equitable access to essential medicines distributed through primary and secondary facilities. Likely contribution in reducing average medical expenses, and improving equity in financing.
4. Significant developments in health information systems, particularly related to Medical Causes of Institutional Deaths, aided by a fast-improving Civil registration system
5. Strong commitment to a holistic, public health approach to the health system, marked by 'Mission Convergence' according due policy-importance to the wider, social determinants of health

In order to ensure universal coverage with equity and quality, six major policy recommendations may be made for prioritising policy interventions to ensure maximum benefits for all sections of the state's citizens, irrespective of their social, economic, locational, and cultural affiliations.

- *Ensure universalisation of in-health facility childbirths along with integrated maternal and neo-natal care facilities (IMNCF). For potentially high-risk pockets, such as slums and localities with predominantly vulnerable populations, a set of 24\*7 maternity centres should be provided with the recommended basic and emergency obstetric care facilities, and provisions for Sick Neo-natal Care Units (SNCU).*
- *Institute an integrated, population-based screening mechanism involving ASHAs/ANMs and voluntary organisations for early screening of high-risk*

*pregnancies, likely cases for domiciliary deliveries, non-adherent cases for communicable diseases therapies and NCDs. For the latter, innovations in screening could involve sensitisation of lifestyle education and Sunday camps involving the RWAs. These platforms can also be used to screen and counsel the growing elderly population of Delhi for emerging health risks such as mental health conditions and degenerative disorders.*

- *Invest in human resources for health to match the growing demand for qualified manpower to deliver a scaled-up primary health service sector. As an option, the state can consider developing a cadre of Public Health Technical Officers (PHTOs) with an intensive six-semester training programme on basic epidemiology, public health, social and preventive medicine, pharmacology and health management. The PHTO cadre will be health facility managers,*

incentivised to build individual PUHCs as Centres for Service Excellence.

- Address the growing demand for public primary health facilities through a streamlined system of matching efficiency indicators with the available manpower planning. Explore additional options of service delivery including an accountable system of contracting-in private practitioners on standardised incentive structures and starting evening clinics in popular service locations. A maximum threshold of patients, preferably 200 per 6-hour working-shift, can be set to assess and identify centres with regular patient overloads. For these 'priority popular' centres, local private practitioners may be contracted in for certain days on a standard incentive schedule. Another option is to consider starting 'Evening Clinics' in these locations, with options for specialist consultations on certain days of the week. In popular locations, special day-long weekend clinics could be run, with a compensatory week-day off for the manpower involved.
- Ensure the universal coverage of financial risk protection schemes and avoid duplication of

coverage. Scale-up enrolment and coverage of the RSBY through sustained information campaigns, while building on innovative measures such as using the Gender Resource Centres (GRCs) or dedicated drives focusing on vulnerable livelihood sectors. Consider extending RSBY coverage to out-patient consultations for rationalising out-patient loads in clinics.

- Develop a strong facility-based disease surveillance system with an integrated electronic backbone. The system would be instrumental in capturing surveillance data from community level screening, dispensaries, mobile health/school health clinics and hospitals based on a real-time software platform enabled by user-friendly data entry devices. There is need to develop brief, standardised data entry protocols suitable for different platforms (mobiles, smartphones, tablets, PCs, etc.) and data flow that can be coordinated through the DPMUs. A committed data user community could be identified, involving interested sections of the health administration, academia and civil society for aiding evidence-based decision-making.

Annex Table 4.1

Organization of Health Service Delivery in Delhi

District	Type of Facility									
	Dispensaries/ health posts (Allopathic) run by DHS	Dispensaries/ health posts (Allopathic) run by NDMC/ MCD/Delhi	Dispensaries (AYUSH) run by	Primary Urban Health Centres (Under (NRHM)	School Health Clinics	Maternal and Child Welfare Centres (MCD)	Hospitals		Super- Speciality hospitals	Teaching Hospitals
1	2	3	4	5	6	7	8	9	10	11
Central	15	18	40	57	6	23	19	50	3	10
East	27	2	45	66	15	13	10	95	0	1
West	34	12	58	35	18	28	11	195	1	2
North	18	7	31	27	4	13	8	41	1	3
South West	39	5	30	19	10	6	10	82	2	4
North East	36	2	32	85	12	16	12	56	3	3
North West	54	11	77	77	17	29	23	173	0	0
South	33	4	41	64	22	30	18	165	3	4
Total	256	61	354	430	104	158	111	857	13	26

Note: 1. Figures in col 3 include 57 seed PUHCs.

2. Col 7: these are the locations served by mobile clinics, at present 90 vans are deployed.

Source: Communication from DoH&FW, GNCTD, dated: July 3, 2013.