

**A STUDY ON NEED FOR PUBLIC HEALTH CARE
SERVICES IN GREATER MUMBAI**

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Abstract

This study report is based on a need-assessment survey conducted in connection with the BMC's plan to set up a municipal general hospital in one of its ward. The study area is unique in the sense that it is the most populous ward in Greater Mumbai, and yet, it does not have a single public hospital within its limits. Data was collected from 1,035 households spread across three health-post areas around the proposed hospital.

The study was able to bring out the utility of public health care services in the area, and to find out how the population copes with their health care needs when public health care services are not available in their locality. It is to be noted that this is a predominantly lower middle class and lower class population, which resides in the study area. In spite of not having a public hospital, for ailments reported during the reference period, about 30 per cent of the population had sought inpatient care services from the public sector outside the locality, and about 15 per cent had sought outpatient care services from BMC facilities. Though travel time and travel costs were higher, because of financial reasons the public were still seeking health care from public health care outlets outside their locality.

Analysis shows that non-availability of a public hospital was forcing about 44 per cent of the households to seek inpatient care services from the private sector, even if they were interested in seeking care from the public sector. Even the outpatient care services that were currently available in the area seemed to be inadequate, as 67 per cent of the households were having their need for outpatient care services unmet. When the poorest of the poor were left with no alternative but to seek care from public health care facility in other wards, others were "managing" with the services in the private sector where out-of-pocket expenses of treating an ailment was several times higher than that in the public sector. A majority of those who were currently "managing" their inpatient care needs through private hospitals, were willing to shift to the public health care system if made available in the locality.

The study shows the need to strengthen the public health care system in order to maintain equilibrium in the country's health outcomes across different subgroups of population. The situation of the poor in rural areas will be even worse, as unlike in the case of their urban counterparts, which has been studied here (the poorest of the poor manage care from public hospitals in surrounding wards), they don't have an option to seek care from facilities of nearby localities.

Thus, it is recommend that the BMC must go ahead and set up the proposed hospital at the specified site. Further, given the high, unmet need of the people for outpatient care services, we recommend that the number of dispensaries available in the locality should be increased-- from one dispensary per 73,000 population to at least one per 40,000. In fact, it would be extremely cost-effective to strengthen the existing Health Posts (11 of them) in the locality to provide curative services (dispensary services), apart from the preventive health care services they presently provide. Such changes will help strengthen the public health infrastructure in the area and improve the image and credibility of the public health system run by the BMC.

Contents

	Page No
1. Introduction	
2. Background of the study	
3. Objectives	
4. Study design	4
5. Fieldwork	4
6. Ethical issues in the study	4
7. Sample	5
8. Characteristics of sample population	6
9. Morbidity level	9
10. Utilisation of health care services	10
10.1 Source of health care	10
10.2 Accessing health care services	12
10.3 Reasons for seeking care from public/private facility	13
10.4 Cost of medical care in public and private sector	13
10.5 Differentials in utilisation of public health care service	15
11. Households preference for health care services	16
11.1 Source of health care	16
11.2 Reasons for preferring public/private sources of treatment	17
11.3 Source for Reproductive and Child Health Care services	18
11.4 Choice of health care	18
11.5 Unmet need for public health care facilities	19
11.6 Utilisation level and unmet need for public facility by income level	21
12. Public opinion about a new BMC hospital in the locality	22
13. Willingness to pay for health care	23
14. Presence of health insurance schemes	25
15. Public's expectations about the proposed hospital	26
16. Summary	27
References	29
<i>Appendix-I Study Team</i>	31
<i>Appendix-II Detailed list of suggestions from public for effective functioning of the proposed hospital in the locality</i>	32
<i>Appendix-II Questionnaire used for survey</i>	33

A STUDY ON NEED FOR PUBLIC HEALTH CARE SERVICES IN GREATER MUMBAI

1. Introduction

Health and health conditions in urban areas are different from the average Indian scenario. Statistics clearly show that the bed-population ratio is higher in urban areas than in rural areas and that there has not been any significant decline in these disparities over time (Duggal *et al*, 1995). This regional imbalance is there in the public sector and in the private sector as well. Further, the public spending on health care is also disproportionately higher in urban areas. However, it has been scrutinised while critiquing the regional bias whether the urban areas in India have the required number of public health care facilities. This, keeping in mind that the urban poverty level touches 24 per cent and 22 per cent of the population resides in slums (GOI, 2002a). The high rate of growth of the urban population, and the consequent increase in the number of people residing in the slums, has led to an over-straining of the infrastructure, and deterioration in public health (Gupta and Mitra, 2002). This makes the slum community more vulnerable to diseases afflicting the poor. Though urban areas are comparatively much better than rural areas in terms of health indicators, surveys show wide disparities in the accessing of services within the urban context (IIPS and ORC Macro, 2000; Sundar and Sharma, 2002).

Here, one also needs to make a note of the changes in the health care sector during the last two decades; an increasing role of the private sector has enabled it to become a major provider of both inpatient and outpatient treatment. Decline in utilisation of public health care services during the same period is mainly a function of the decline in public health investment (Duggal, 1997; GOI, 2002b). Researchers have noted that the privatisation of health care could result in a decline in access to health care among the poorer sections, the poorer regions, and the poorer states of India (Krishnan, 1999). It has been pointed out that the utilisation of services of the private sector has not been restricted to the upper and middle classes but is used by even the poorer classes. Still, a majority of the poor depend on the public sector for inpatient care services. However, large-scale utilisation of the private sector by the poor is not likely to materialize in the near future due to the absence of cost-sharing schemes in the country. According to Mahal *et al* (2000), the percentage utilising inpatient care services in the public sector declined from 62 per cent in the population below the poverty line to 42 per cent for the population above it. The report also shows the hospitalisation rate per lakh population to be 925 in the case of population below the poverty line, and 2,056 for population above it. In fact, this shows the extent of the disparity in accessing health care services, with the poor, who are more susceptible to illness, reporting low levels of hospitalisations than the rich. Apart from this, the overall level of untreated ailments is higher among the poor than among the rich. This makes us rethink whether India is lacking in public health care facilities. Here we have tried to study the need for public health care services, mainly using information on regular/usual source of health care for the household. Studies which have used information on the regular source of health care (IIPS and ORC Macro, 2000; Merzel and Howard, 2002)

show that socio-economic factors play an important role in gaining entry into the health care system.

Greater Mumbai, the commercial capital of India, is the largest city in the country having a population of 11.9 million (DCO, 2001). The high density of population (21,190 persons per sq km) has put tremendous pressure on its infrastructure and amenities. About 49 per cent of the population reside in slums characterised by shortage of living space, water supply, and sanitation facilities. Slums in Mumbai are unique in the sense that only 4 per cent are *kacha* hutments, while 45 per cent are semi-*pucca* houses and 51 per cent *pucca* houses (IIPS and ORC Macro, 2000).

Brihan Mumbai Municipal Corporation (BMC), the largest municipal corporation in India, is the major provider of public health care services in Mumbai. It has a network of 3 teaching hospitals, 16 general hospitals, and 26 maternity homes across Mumbai. Apart from this, there are 185 dispensaries, and 176 health posts to provide outpatient care and promote public health services in the city. The state government, in addition, has one medical college hospital, three general hospitals, and two health units, all of which combined have a capacity of 2,871 beds (GOM, 2001a). Though there is an urban bias in the location of public health care infrastructure in India, delivery of these services, especially in metropolitan cities like Mumbai, is again plagued by uneven public preferences. For example, the tertiary care units like medical colleges and general hospitals were relatively closer to many households, and because of that, the latter used these facilities for minor ailments which could be treated in dispensaries. This is cited as one of the reason why major health care establishments are better utilized than minor ones like dispensaries and maternity homes (Yesudian, 1988). This is an outcome of an inadequate referral system, leading to overcrowding at out patient departments (OPD's) of major hospitals with patients having minor ailments.

In spite of having better health care services as compared to the rest of the country, residents of Mumbai do not have proper access to health care services as 32 per cent of the ailments remain untreated (Nandraj et al, 2001). This also reflects the absence of purchasing power of the people to buy health care from the market. A sizeable proportion of deliveries in Mumbai are still home deliveries (NFHS-II -9 per cent; RCH survey -7 per cent). All these surveys show that the public sector in Mumbai was providing health care to less than 20 per cent of the population. Inconvenient location and timing were cited as the main reasons (CORT, 2000; Nandraj *et al*, 2001) for not utilising these services. However, a majority of the ailments recorded in these surveys were minor ones that could be treated in public OPDs.

The role of public sector in providing hospitalisation services is quite high. Service statistics clearly show that public hospitals are overloaded with patients. These public hospitals are not only the principal service providers for major sections of the urban population, but are also used by persons from rural areas of nearby districts as well. The public sector in Greater Mumbai is mainly the BMC, which is also a major health care provider for women and children in the city. The district-level RCH Survey (CORT, 2000) has shown that the public sector is the major provider of immunization and family planning services, and that a sizeable proportion of the population were depending on it for antenatal care (40 per cent) and childbirth (48 per cent). An analysis of BMC dispensaries in two wards showed that an average of 85 patients were treated every day (Duggal, 2000), clearly indicating a high level of utilisation of the existing facilities.

Most of these surveys have not looked into the role of the public sector in providing inpatient services, which is likely to be much higher than that of outpatient services. Hospitalisation is a relatively uncommon event and the cost involved is high enough to push the ailing person's family into poverty. Figures for urban India indicate that in almost 25 per cent of the cases the patients had to sell assets or borrow money for financing their inpatient treatment (Dilip and Duggal, 2002). In fact, 30 per cent of the total out-of-pocket expenditure incurred on the treatment of an ailment in inpatient care units had to be raised through borrowings/sale of assets. Such type of burden of treatment more likely in Mumbai, which has a higher concentration of poor. Data on Mumbai show that a majority of the patients in the city had gone in for inpatient care services in public sector and the lower income groups mainly utilised the public health care services (Yesudian, 1988, Garg, 1994). Service statistics indicate that public hospitals in Maharashtra are over loaded with patients (GOM, 2001b). Over crowding of patients in public hospitals is much higher in Mumbai, which has a number of well equipped public hospitals. These public hospitals are not only utilized by Mumbai residents but also by persons from towns and rural areas in nearby districts.

2. Background of the study

The study was conducted in K/East ward coming under the Brihan Mumbai Municipal Corporation. This ward occupies an area of 24.5 sq km. According to the 2001 Census (DCO, 2002), it is the most populous ward in Greater Mumbai having a population of 8,06,360, and has had a high growth rate of about 47 per cent during 1991-2001. The study area has a high literacy rate of 90 per cent (males- 94 per cent, females- 85 per cent), but a low sex ratio of 839 females per thousand males.

Though this ward is the most populous of all BMC wards having a population of over eight lakhs, it has no public hospital. The public health care facilities available here are 3 municipal maternity homes, 11 municipal dispensaries, and 11 health posts. Due to this reason the BMC, the major provider of public health care services in Mumbai, has a proposal to construct a municipal general hospital in this locality. BMC has identified a space for the hospital at Ajgaonkar plot, Jogeshwari (East). It is a 4-5 acre plot facing the Western Express Highway. The BMC had constructed a post-partum centre in the same plot in the early 1990s, which had to be closed down because of alleged 'low response' from the community. Because of this reason, the BMC decided to conduct a demand survey to find out the response of the community to the proposed hospital in the locality.

Trying to find out the reasons for the closure of the post-partum centre a decade back, is impractical. It is not certain that the earlier hospital was closed down because of 'low response' from the community. It could also be due to poor targeting of services (only post-partum facilities were available and there was already a BMC-owned maternity home adjacent to it), or even because of a poor start given to that post-partum unit. All these could not be investigated because of the 'time factor', as almost ten years have elapsed after the closure of that facility. Therefore, a rapid household survey was designed to study the current health-seeking behaviour of the target population, and thereby arrive at an understanding of the demand for public health care services in this locality, and their attitude towards the proposed municipal hospital.

3. Objectives

The main objectives of this study were:

1. To analyse the existing pattern of health-seeking behaviour in the locality
2. To find out the demand for public health care services in the locality, and
3. To examine the community's response towards the proposed municipal hospital in the locality.

4. Study design

The study was conducted in three health-post areas, which surround the proposed hospital plot. A rapid survey of 1,080 households was undertaken in the study area using a two-stage systematic sampling procedure. The first stage was the random selection of three sections (health-post areas are divided into different sections for administrative convenience) from each of the three health-post areas selected for the study. The second stage involved a systematic selection of 120 households from each of these nine sections. Information on the total number of households in each of these sections, available from the respective BMC health-posts, was used for arriving at the household selection interval (number of households in the section/120). Respondents were head of the household or adult women members in the household in their absence.

5. Fieldwork

Fieldwork was carried out by a team of 18 female community health visitors (CHVs) provided by the BMC (six CHVs from each of the selected health-posts). A one-day joint training of the investigators was conducted during which they were given an orientation about the study and in canvassing the schedules. They were given one more day's training at their respective areas, a day before the survey began. The fieldwork was conducted between 21st December 2001, and 15th January 2002.

6. Ethical Issues in the Study

The major ethical issues concerning CEHAT as an institution participating in this study with the BMC, and for respondents involved in the study were:

- 1 This study being a needs assessment survey, to what extent the findings would be used by the BMC for setting up of a hospital in the study area, was the crucial question. Here the demand for conducting the survey had come from the public health department of the BMC, which realised the necessity of a public hospital in that area, but had to face opposition from other departments. These departments expressed concern over starting a hospital in a locality where a public medical institution had to be closed down because of financial reasons. CEHAT, as an institution, is working on rights-based approach to health care, and which can be attained only if public health care systems are strengthened. The BMC request was felt to be genuine and was seen as an opportunity for CEHAT to work in collaboration with public sector (BMC) for

strengthening the public sector. The aim of the study was to find out the demand for public health care services in the area; but to what extent the findings of the study would be used by BMC in setting up of a hospital was altogether a different issue as the public sector itself is under severe constraints. History shows that budgetary outlays in annual plans are diverted, or even cancelled because of changes in power structure, or political uncertainty, or financial crisis, etc. These things are beyond the control of a research organisation, or even that of the public health department of the BMC itself. Nevertheless, the findings have the potential of being used as a tool for advocating the setting up of a public hospital, and CEHAT was committed to using this for the benefit of the study population.

- 2 Secondly, the issue was that the study being a demand survey, what would happen to the hospital, if the results of the survey showed lack of demand for it. In principle, the researchers agreed that the hospital should not be constructed in the area if the results were negative. However, before agreeing to undertake the survey, a preliminary investigation of the class of people residing in that locality and the nature of public health care services available to them was undertaken by both the BMC and researchers from CEHAT. This investigation showed that one could expect considerable demand for public health care services and that one's task was to measure it through a field survey of the area. The ethical issue got sorted out automatically as the results of the survey showed a high demand for public health care services.
- 3 Informed consent was taken from the participants (respondents in selected households) to ensure that participation in the survey was purely on a voluntary basis. The respondents were briefed about the objectives of the study and about the role of CEHAT, which was undertaking the study for the BMC. During the training session, the investigators were sensitised about the rights of the respondents to know about the background of this survey, the identity of the organisation involved in it, and their right to withdraw from the study without giving reasons. The supervisors ensured that the investigators complied with this before the start of the interview. This was done through a letter of consent supplied along with the questionnaire (see Appendix III).
- 4 Another issue involved the confidentiality of the information provided by the respondents as the fieldwork was carried out by investigators (CHVs) supplied by the BMC. The chance of CHVs undertaking the survey in their own area was limited. The sample units selected for the survey, and the area of work of the investigators did not match except in two places, and where they were restrained from doing the survey.

7. Sample

A total of 1071 households were interviewed and the response rate was 99 per cent. Investigators were denied entry in pucca housing societies, which constituted only a small proportion of dwellings in the selected areas. About 36 improperly canvassed schedules were rejected. Therefore, the results of this report are based on the information from 1,035 households, covering 5,610 people. A majority of the respondents were spouses of the head of the household (55 per cent), as the household head was not available at the time of the interview (see Table 1). Out of the remaining, 24 per cent were the heads themselves, 14 per cent were their off springs and the remaining were siblings, parents, or other relatives.

Table 1: Percentage distribution of respondents by their relationship to the head of the household

Relationship	Per cent
Head of the household	23.8
Spouse of the head of the household	55.1
Offspring of the head of the household	13.9
Siblings of the head of the household	1.4
Parents of the head of the household	1.9
Other relatives	3.9
Total	100
N	1035

8. Characteristics of sample population

The characteristics of the sample households are presented in Table 2. A majority of the households had 4-6 members and the average family size was 5.4 members per household. About 48 per cent reported Marathi as their mother tongue, while Hindi and Urdu were also spoken in a sizeable number of the families. Households mainly belonged to the Hindu (73 per cent) and Muslim (24 per cent) communities.

Majority of the households had regular income from jobs/business (67 per cent), while 28 per cent drew their income from daily wage labour/ petty business/ low salaried jobs. The average monthly income was reported to be Rs 3,644, with the majority falling in the Rs 2,000-Rs 4,000 income group. The type of dwelling was mostly chawls (92 per cent). Only about 5 per cent were residing in apartments, while the remaining 3 per cent were residents of slum/*kacha* structures. It was found that 75 per cent of the dwellings were occupied by the owners themselves, while the remaining were occupied by tenants. The dwelling pattern showed that the majority (75 per cent) were staying there for more than 10 years, with the average number of years of residence being as high as 23 years.

Table 2: Background characteristics of the sample households

	Percentage	N#
1. Number of members		
0-3	14.4	149
4-6	64.2	664
7+	21.4	222
Average household size (members)	5.4	1035
2. Language spoken		
Marathi	48.2	499
Hindi	17.6	182
Urdu	16.6	172
Gujarati	7.0	72
Others	9.0	93
3. Religion		
Hindu	73.1	757
Muslim	23.9	247
Buddhist	0.7	7
Christian	1.3	13
Others	0.3	3
4. Major source of household income		
Daily wage labour	7.0	70
Petty business/ low salaried jobs	21.0	211
Regular income (business/jobs)	66.8	672
Others	5.3	53
5. Monthly Household Income (in Rs)		
< 2000	23.5	237
2000-4000	51.5	519
4000+	25.0	252
Average monthly income (in Rs)	3644	1008
6. Type of dwelling		
Slum (<i>katcha</i> structure)	2.6	27
Chawl (semi <i>pucca</i> and <i>pucca</i>)	91.8	950
Apartment	4.8	50
7. Ownership of dwelling		
Owner	74.6	772
Tenant	24.3	251
8. Years of stay in the dwelling		
0-5	11.6	120
5-10	13.6	141
10+	74.6	774
Average number of years resident	23.3	1035
Total	100.0	1035

N may not add up to 1,035 in all cases because of missing values

Table 3 gives characteristics of individuals residing in the sample households. The age distribution shows the population to be relatively younger, having a mean age of 28 years. Around 66 per cent of the population above 18 years were married. The literacy rate (for population aged 15 years and above) was 90 per cent among males and 82 per cent among females. The level of educational attainment was relatively low, as only 26 per cent of the males and 17 per cent of the females had completed high school education. A sizeable number of the males were employed as skilled workers in the service sector. About 73 per cent of the females were homemakers.

Table 3: Background Characteristics of Individuals in the Sample Households

	Males	Females	Total
Age			
0-14	25.3	25.4	25.4
15-39	49.9	49.1	49.5
40-59	18.7	18.9	18.8
60+	6.1	6.5	6.3
Mean age (in years)	27.6	27.7	27.6
Marital status (for 18 years and above)			
Married	65.4	66.2	65.8
Never Married	33.4	21.7	27.8
Widowed	1.0	11.7	6.2
Divorced/Separated	0.2	0.4	0.3
Educational level (for 15 years and above)			
Illiterate	9.8	17.6	13.5
Literate but primary incomplete	23.5	27.2	25.2
Middle school but high school incomplete	40.9	38.1	39.6
High School complete and above	25.7	17.1	21.6
Literacy rate	90.2	82.4	86.5
Occupation (for 16 years and above)			
Student	12.1	10.4	11.4
Homemaker	--	73.2	(35.4)
Retired persons	8.2	0.7	4.5
Home-based business/industry	8.1	5.5	6.8
Unskilled worker/hawker	6.7	1.6	4.2
Skilled worker/service sector	42.4	6.0	24.8
Professionals/business	9.0	0.3	4.8
Others	0.8	0.2	1.0
Unemployed	11.8	2.0	7.1
Total	100.0	100.0	100.0
N	2909	2701	5610

Note: Figures are in per cent

To be precise, the study area is predominantly a lower middle class locality characterised by low levels of educational and occupational attainment. The type of housing points that these are essentially slums that were transformed into chawls with extended years of stay, a phenomenon that is common in urban areas. Moreover, housing and occupational characteristics show this to be a settled community, and this is important from the access perspective because the community has a stake in the city.

9. Morbidity Level

Information on whether any person had suffered from an ailment during the 30 days prior to the survey was collected. Ailments prevailed at the rate of 86 per thousand population during this 30 days reference period. Figures indicate that the risk of having an ailment or morbidity was highest in the age group of over 60 years, followed by those in the age groups 40-59 years, 0-14 years and 15-39 years, respectively. Health problems were reported to be much higher among females than males. High morbidity in the reproductive ages and postmenopausal period (age groups 15-39 years and 40-59 years respectively) contribute substantially to higher levels of morbidity among females. The Table also gives the prevalence of ailments on the day of the survey. The trends were almost similar in the case of the monthly morbidity rate.

Table 4: Morbidity and hospitalisation rates in the population

Age group	Prevalence of (rate per 1000 population)								
	Ailments in last 30 days			Ailments on survey date			Hospitalisation in one year		
	M	F	T	M	F	T	M	F	T
0-14	102	102	102	19	15	17	16	12	14
15-39	41	70	55	14	22	18	17	31	23
40-59	81	155	117	28	35	31	55	49	52
60+	175	189	182	62	57	59	68	74	71
All ages	72	102	86	21	25	23	27	32	29

Note: M- Males, F- Females, T- Total

Data on whether any person had been hospitalised during the last one year, prior to the survey, was canvassed in the survey. It was unlikely that this information would go under-reported, as could be in the case of ailments in the last 30 days, because the respondent was not likely to forget an event like hospitalisation in the household. This annual hospitalisation rate was 29 per thousand population. Gender differentials showed the risk of hospitalisation to be higher in females than in males. The hospitalisation rate was much higher among females in the age groups of 15-39 years (reproductive ages) and 60 + years, while males were more likely to be hospitalised in the age groups of 0-14 years and 40-59 years.

Table 5: Prevalence of ailments during the last 30 days, prior to the survey, and hospitalisation during last one year in the population by household income category

	Prevalence of (rate per 1000 population)	
	ailments	hospitalisation
Major source of household income		
Daily wage	96	18
Petty business/ low salaried	93	30
Regular income (business/jobs)	84	30
Others	89	53
Monthly income of household (in Rs)		
Less than 2,000	86	24
2000-4000	92	29
4000 and above	74	36
Total	86	29

Table 5 shows that the relationship between morbidity and the income level of household as a mixed one, and differentials were not clear. However, prevalence of hospitalisation during the last one-year, or the annual hospitalisation rate, was reported to be higher in subgroups higher potential to earn than those with a lower potential to earn. Such differences in utilisation of hospitalisation services could be pegged to income disparities. Even in the public sector, hospitalisation requires substantial resources, and hence the poor are likely to avoid or postpone it.

10. Utilisation of health care services

10.1 Source of health care

The source of health care for those who had fallen ill during the last 30 days prior to the survey (outpatient treatment), and for those who had been hospitalised during the last one year prior to the survey (inpatient care treatment), is presented in Table 6. The table shows the private sector to be a major health care provider as 56 per cent had availed inpatient care services from them. Even though the area does not have a hospital owned by the BMC, as much as 30 per cent had availed of inpatient care services from a BMC facility. Among the rest, 2 per cent had sought treatment from other public (non-BMC) facilities, 8 per cent from charitable institutions, and 4 per cent from ESI/other insurance related schemes.

Table 6: Percentage distribution of source for health care for those who received inpatient treatment or outpatient treatment during the reference period.

Type of health facility	Inpatient treatment	Outpatient treatment
BMC facility	29.8	15.3
Other public facility	1.8	0.6
ESI/Insurance related	4.2	2.5
Private sector	56.0	78.7
Charitable institutions	8.3	2.4
Others	--	0.4
Total	100	100
N	168	478

The role of the private sector in delivery of outpatient care services was much higher than inpatient care services as about 79 per cent of the ailments reported in the 30-day reference period had been treated in hospitals/dispensaries/doctors in the private sector. About 15 per cent of the ailments were treated in BMC facilities located in and around the locality. This figure of 15 per cent is quite high considering the number of public health facilities in the locality. This reflects a reasonable utilisation of the existing OPD facilities like dispensaries, and the need for a much larger health care provision by the BMC.

10.2 Accessing health care services

Distance to health care facility plays a major role in the level of utilisation of a health care facility. Here it is measured in terms of the time taken, and mode of transport availed to reach that health care facility. Table 7 clearly shows that the time taken to reach a public facility was much higher than that for a private one. More than an hour of travel time was spent by 61 per cent of the inpatient care service users in the public sector, while only 19 per cent of their counterparts who sought treatment from private sector had spent that much of time to reach their sources of treatment. It is obvious that in an area which is lacking public health care services, the time taken to reach a health facility will be higher for patients treated in public sector than in private sector one. Travel time was less than 15 minutes for 33 per cent who sought inpatient treatment from the private sector.

The scenario does not change for outpatient treatment. Travel time was reported as less than 15 minutes by 69 per cent who took treatment from the private sector, while the same was only 31 per cent for those who sought treatment from public sector. A very high proportion, of 47 per cent, of those who availed services from public sector reported to have spent more than an hour on travel to reach the corresponding outpatient care facility.

Table 7: Mode of transport and time taken to reach the health facility

(Figures in per cent)

	Inpatient care		Outpatient care	
	Public facility	Private facility	Public facility	Private facility
(a) Time taken (in minutes)				
1-15	13.6	32.7	30.7	69.3
15-30	11.9	29.0	15.9	17.8
30-60	13.6	19.6	6.8	4.9
60+	61.0	18.7	46.6	8.0
Total	100	100	100	100
N	59	107	88	388
(b) Mode of transport				
Walk	15.0	27.8	30.7	75.5
Bus/train	20.0	7.4	28.4	5.7
Autorichshaw	46.7	56.5	31.8	18.3
Taxi	16.7	8.3	5.7	0.3
Others	1.7	--	2.3	0.3
Total	100	100	100	100
N	60	108	87	387

Mode of transport used while seeking health care from public sector and private sector is presented in Table 7, which also gives an indirect idea about the travel cost incurred to seek treatment from public/private sector. Here also the travel cost was relatively lower in the private sector, where a large section had availed it by walking in to the facility. These differentials were marked in the case of outpatient care services.

Results indicate that a person has to travel a longer time, or has to spend more on travel if he/she has to seek treatment from a public facility. In spite of this, a sizeable proportion of the population are availing services in the public sector. This reflects the importance given to public health care service by the people.

10.3 Reasons for seeking care from public/private facility

The reasons reported for seeking health care from that particular source of treatment was asked for those who had availed inpatient and outpatient treatment during the reference period. Results presented in Table 8 show an interesting picture having definitive policy implications.

The table shows that the major reason for seeking care from the public sector was the 'cost is affordable' factor (48 per cent for inpatient care treatment and 51 per cent for outpatient care treatment), and for the private sector it was the 'nearest facility' factor (40 per cent for inpatient treatment and 64 per cent for outpatient treatment). This indicates that financial reasons make public services preferable while the private sector gets preferred for its proximity. It has to be noted that sector wise differentials were limited in percentage reporting 'good quality service' as a reason for seeking care from a particular source of treatment for inpatient treatment.

Table 8: Percentage distribution of reason reported for seeking care from a particular source of treatment

Reason reported	Inpatient care		Outpatient care	
	Public sector	Private sector	Public sector	Private sector
Nearest facility	10.0	40.3	6.7	64.3
Convenient timing	3.3	8.3	3.4	6.2
Offers good quality service	30.0	32.4	32.9	22.8
Cost is affordable	48.4	7.5	51.1	5.3
Availability of medicines	5.0	3.6	6.8	3.5
No other option	16.7	29.7	12.5	12.4
Others	1.7	-	1.1	1.1
Total	100	100	100	100
N	60	107	88	388

It is evident from this table that cost, quality, and access (resources) are critical variables for the people to decide on which facility they would use. This is a clear pointer that if access is improved, and quality and cost become amenable the demand for public health care services will grow substantially. Hence, the expansion of the public health care sector in the vicinity of this community, for both inpatient and outpatient care, will help in improving access to public health services and restore the faith of the people in the public health care system.

10.4 Cost of medical care in public and private sector

The relative advantage in terms of cost incurred while treating an ailment in a public hospital can be observed from Table 9 given below. The average medical expenditure includes amount paid to the health care provider, and other medical expenses like medicine, amount for diagnostic tests, etc.

For inpatient care services in a public sector hospital the average expenditure for treating an ailment was Rs 4,830, while in the private sector it was a whopping Rs 13,206. The overall mean expenditure works out to Rs 10,214 per hospitalisation and this amounts to Rs 306 per capita annual expenditure on inpatient care services in this population. Since expenditure on medical care depends on the nature of the ailment, there is wide variation in the reported out-of-pocket expenditure on medical treatment. Hence, median expenditure is a better indicator of relative cost of medical treatment in the population. The economic benefits of seeking health care services from public facilities is evident from the table as inpatient services in the private sector are about eight times costlier than in the public sector.

Table 9 Mean and median of medical expenditure incurred during treatment of ailments in inpatient care and outpatient care units by source of treatment

Source of treatment	Inpatient treatment				Outpatient treatment			
	Mean Exp. (in Rs)	Median Exp (in Rs)	S.D.	N	Mean Exp. (in Rs)	Median Exp (in Rs)	S.D.	N
Public sector	4830	600	9754	60	1084	150	2361	88
Private sector	13206	5000	28990	108	1356	300	2661	388
Combined	10214	4000	24254	168	1306	280	2601	476

In contrast to inpatient care services, the sector-wise differentials in average medical expenditure were relatively lower for outpatient care services. The mean medical expenditure for treating an ailment in an outpatient care unit was Rs 1,306. This works out to a monthly per capita expenditure on outpatient care treatment to Rs 24. The median expenditure shows the cost of outpatient care treatment in the private sector (Rs 300) to be double that of the public sector (Rs150).

Table 9a: Median number of days hospitalised/ill and median expense per day

	Inpatient treatment		Outpatient treatment	
	Median days hospitalised	Median exp. per day	Median days ill	Median exp. per day
Public sector	6.5	133	15.0	6.5
Private sector	6.0	1000	8.0	37.5
Total	6.0	683	8.0	30.0
N	168	168	436	436

Further analysis of the days of hospitalisation or illness, and the average cost of treatment per day is performed, in order to get a more in-depth picture of sector-wise differentials in the cost of medical care. The median number of days hospitalised was higher in the public sector than in the private sector. Median days ill for outpatient care services also shows the public sector (15 days) is preferred for long-duration ailments, and private sector (8 days) is largely preferred for short-duration ailments. Table 9a shows median expenditure per day in hospital to be Rs 683. Median expenditure was only Rs 133 in public sector while the same was Rs 1,000 in the private sector. For outpatient care treatment the median expenditure per day was Rs 30, with the median expenditure value varying from

Rs 7 per day in the public sector to over 5 times more at Rs 38 per day in the private sector.

Overall tables 9 and 9a show that there exists huge differentials in the cost of medical treatment to the user between public sector and private sector and this is one major reason that prompted a sizeable share of health care seekers in this area to use services in the public sector despite higher travel and time costs involved.

10.5 Differentials in utilisation of public health care service

Table 10 presented below gives percentage of population utilising health care services in the public sector by age, sex and income sub groups. Sex differentials showed that the proportion utilising health care services from the public sector to be marginally higher among females than males, for both inpatient and outpatient treatment. The level of utilisation of inpatient care services from the public sector was higher for the 15-39 age group and lowest for the 60+, and 0-14 age groups, respectively. For outpatient care services a relatively low percentage in the 0-14 age group sought treatment from the public sector, while for other age groups it was around 20 per cent. Differentials by source of household income and average monthly income showed a relatively higher level of utilisation of the public sector among the daily wage category and less than Rs 2,000 income category when compared to others. This underscores the significance of the public health care system in meeting health care needs of the poor, especially for outpatient care services.

Table 10: Differentials in level of utilisation of health care services from public sector by age, sex and income level of the household

	Percentage utilising public health care facilities for	
	Inpatient care	Outpatient care
Sex		
Male	34.2	17.1
Female	37.1	19.5
Age group (in years)		
0-14	25.5	12.4
15-39	47.7	20.3
40-59	30.9	21.5
60+	24.0	21.9
Major source of household income		
Daily wage labour	42.9	25.0
Petty business/ low salaried jobs	28.1	19.0
Regular income (business/jobs)	36.4	18.0
Others	38.5	14.3
Monthly income of household (inRs)		
Less than 2000	37.1	21.6
2000-4000	38.3	19.6
4000 and above	19.0	14.0
Total	35.8	18.4

11. Households preference for health care services

An examination of health-seeking preferences of the household is undertaken in this section. This is done because in the previous section we were able to find the source of health care for only those households, which reported of illness during the reference period, and not for all households surveyed.

11.1 Source of health care

The respondents were asked about the major source of health care for the household for ailments requiring inpatient and outpatient care treatment. About 54 per cent (Table 11) reported that they generally take inpatient treatment (if required) from the private sector. Another 40 per cent reported that their household members mainly utilize inpatient services provided by the BMC. This, in fact, is quite high considering the fact that the study area or the nearby locality does not have a full-fledged BMC hospital.

Table 11: Percentage distribution of major source of health care reported for each of the household

Type of health facility	For ailments requiring	
	Inpatient care	Outpatient care
BMC facility	40.3	14.4
Other public facility	2.3	2.0
ESI/Insurance related	2.2	0.5
Private sector	53.8	82.4
Charitable institutions	1.4	0.6
Others	--	0.1
Total	100	100
N	1029	1033

The preference for outpatient care services was very low (14 per cent) when compared to inpatient care services. Here, the majority of the households reported of seeking treatment from the private sector (82 per cent). Perhaps the availability of outpatient care services, like public dispensaries, is grossly inadequate in the area. Hence, people are forced to seek services from private providers. Here the main worry is about the identity of the private providers in this low-income locality as many of the practising doctors here are likely to be non-qualified practitioners and /or doing cross practice.

11.2 Reasons for preferring public/private sources of treatment

The respondents who preferred the public/private sector were further queried about their preference. Results (Table 12) show that 'Cost is affordable' as the major reason (65 per cent) which made them prefer services in the public sector for inpatient treatment. This result corroborates with our earlier findings (Table 8). The reason for choosing private hospital was mainly because it was the 'nearest facility' (45 per cent). It has to be noted that another 30 per cent were seeking care from the private sector as they did not have any other option.

Table 12: Percentage distribution of reasons reported for preferring to take treatment from a particular source

Reason reported	Inpatient treatment		Outpatient treatment	
	Public sector	Private sector	Public sector	Private sector
Nearest facility	8.4	44.6	55.0	78.6
Convenient timing	5.1	17.4	14.9	11.0
Offers good quality service	32.6	23.3	24.6	13.6
Cost is affordable	64.5	10.8	31.5	1.4
Availability of medicines	1.4	1.8	1.2	1.6
No other option	6.8	29.6	6.3	15.6
Others/missing	1.5	3.2	2.9	2.4
Total#	100.0	100.0	100.0	100.0
N	463	569	175	858

percentages will not add up to hundred because of multiple response in some cases

For outpatient care services about 82 per cent (Table 11) preferred services in the private sector, and among them 78 per cent cited ‘nearest facility’ as the reason for doing so. Among those utilizing services in the public hospital it can be seen that reasons for seeking care were ‘nearest facility’ (55 per cent) ‘cost is affordable’, and ‘good quality service’. All these indirectly indicate that the outpatient care services in the public sector are mostly utilised by the population residing nearby, and those with constraints in paying for health care. This also means that if public access to OPD facility improves, then more users will shift to the public sector.

11.3 Preference for Reproductive and Child Health Care Services

An additional question was included in the survey to understand the preference for three major components of reproductive and child health (RCH) services, i.e., child immunisation, antenatal care, and family planning services. This question was canvassed in households with children below 5 years, as these services are mainly required by children, and women who have recently participated in the reproductive process.

Table 13: Percentage distribution of household’s preference for selected reproductive and child health care services

Type of health facility	Child immunization	Ante natal care	Family planning
BMC facility	77.9	60.1	65.8
Other public facility	0.3	1.0	0.8
ESI/Insurance related	1.4	2.6	2.3
Private sector	18.6	34.6	29.2
Charitable institutions	1.8	1.8	1.9
Total	100	100	100
N	628	506	479

It can be seen that BMC plays a significant role in providing these services in the locality. The percentage opting for child immunisation, antenatal care, and family planning services from a BMC facility were 78 per cent, 60 per cent and 66 per cent, respectively. Efforts made by the BMC health-posts, which deliver these services at the grass roots

level, have to be complimented. This is corroborated by data from the NFHS and the RCH surveys. The private sector was found to be playing a limited role in providing these services. There is also another dimension to this finding: whether the emphasis on RCH services results in neglect of other health care services, this requires further investigation.

11.4 Choice of health care

Earlier it has been noted that proximity/distance was the major reason for choosing services in the private sector (Table 8 & 12). Here the issue is the demand for a public hospital in this locality. Therefore, the respondents were asked about the choices they would make if both public and private health care facilities were made available to them. In such a situation, 83 per cent reported that they would prefer the public sector for outpatient care services and 88 per cent said they would prefer it for inpatient care services (Table 14).

Table 14: Type of facility preferred by the household if both public and private health facilities are available to them

	Percentage preferring		Total (N)
	Public facility	Private facility	
Outpatient care services	83.4	16.6	100 (1001)
Inpatient care services	88.1	11.9	100 (1008)

Table 15: Percentage distribution of reason reported for preferring to take treatment from public/private if both services are available to them

Reason reported	Inpatient treatment		Outpatient treatment	
	Public Facility	Private Facility	Public Facility	Private Facility
Nearest Facility	29.3	59.9	11.9	30.9
Convenient Timing	6.5	11.4	5.1	19.2
Offers good quality service	20.0	25.2	20.3	44.4
Cost is affordable	57.5	6.6	72.0	4.1
Availability of medicines	1.5	3.6	4.7	7.5
No other option	4.1	2.4	6.6	5.8
Others/missing	5.1	3.6	5.2	8.4
Total	100	100	100	100
N	841	167	882	119

The reasons for such a reversal in choice of health care are presented in Table 15. Here too affordability is coming out as a major reason for making such a reversal of decision. It hints at non-availability of public facility in the locality as a major factor that drives the community to the private health care sector. Also, a sizeable section of the population are not interested in seeking health care from the private sector but are forced to do so due to the lack of public health care services in the locality. This is a clear pointer to the need to strengthen public health care services. Further, enhancing user charges could prove fatal, since 'low cost to user' was cited as the major advantage that made people prefer the public health care system.

11.5 Unmet need for public health care facilities

In the previous section we have seen that a large portion of the population were seeking health care services from the private sector even when they were not interested in doing so. Here, an attempt has been made to find out the intensity of this problem in the study population. This was done through responses to two questions (see Appendix III);

Q21 What is the major source of health care for the household for treating ailments requiring IP/OPD care?

Q25 Given a choice of treatment from the public or private sector, which one you/your family members would prefer for OPD/IP care?

Here the need for a public/private facility is considered to have been met if the current source of health care for the household matches with the choice of treatment when both public and private sector facilities are made available to the household. If both these responses do not match then it is an unmet need for a public/private hospital in the population.

Need for Inpatient and out patient care services from public and private facility

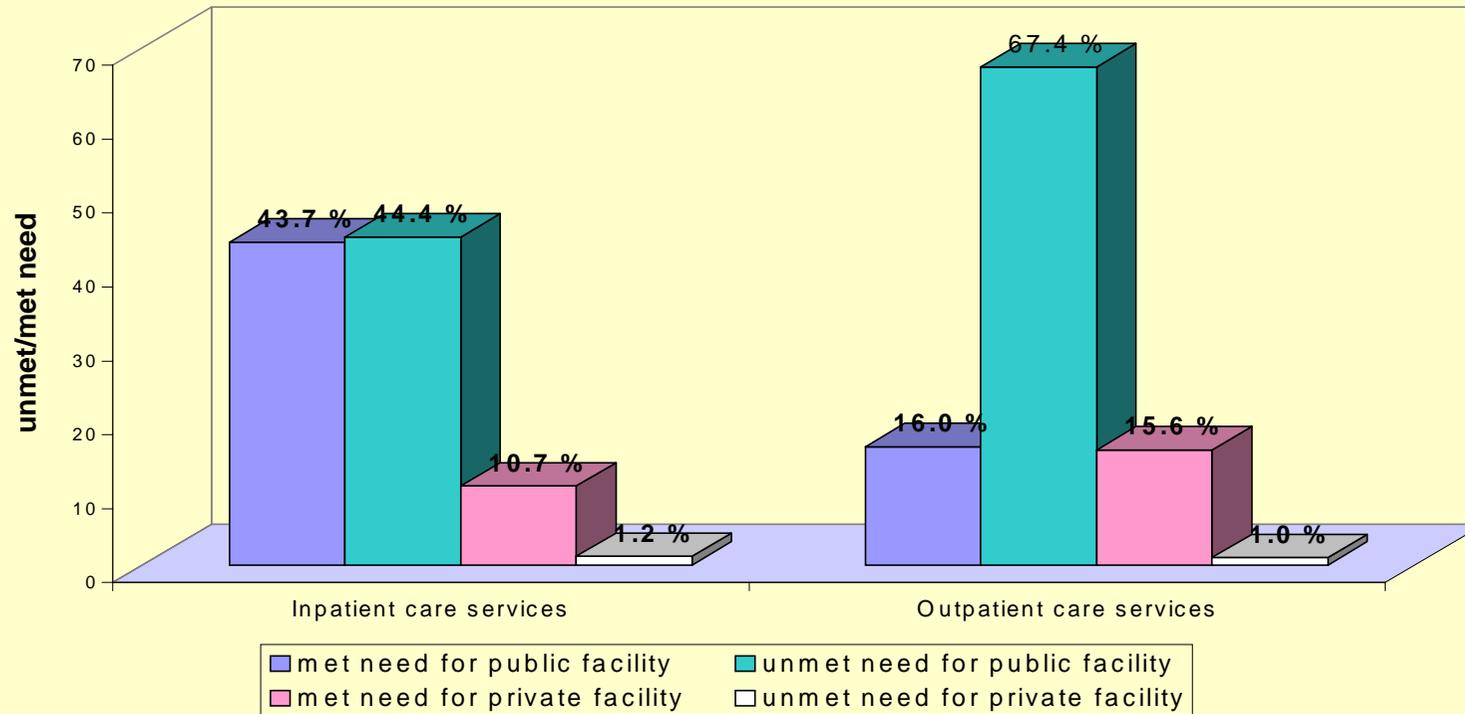


Table 16: Unmet need for public/private facility for inpatient and outpatient care services in the population
(Figures are in percentages)

	Inpatient care services	Outpatient care services
Currently using public and choice also public (met need for public health facility)	43.7	16.0
Currently using public but choice is private (unmet need for a private health facility)	1.2	1.0
Currently using private but choice is public (unmet need for a public health facility)	44.4	67.4
Currently using private and choice also private (met need for private health facility)	10.7	15.6
Total	100.0	100.0
N	999	1006

The above table indicates that the unmet need for inpatient care services from public facility is 44 per cent in the population, i.e. 44 per cent of the population are forced to seek inpatient care services from the private sector. For outpatient care services, the unmet need for public facility is as high as 67 per cent. At the same time, the unmet need for inpatient and outpatient care services from the private sector is negligible (only about 1 per cent) showing that the area does not need any more private health care facilities. Thus, if public health services, both hospitals and dispensaries, were adequately available to this population, the proportion of users for them would be as high as 88 per cent for inpatient and 83 per cent for outpatient care. This has policy implications for regulating the growth and functioning of the private health care sector on one hand, and considerably expanding the public health sector on the other.

11.6 Utilisation level and unmet need for public facility by income level

As in the case of any population in India, a relatively high proportion of the poorer sections of the population preferred to seek treatment from public health care services. More than 50 per cent of the population belonging to 'daily wage' category and 'less than Rs 2,000' income category sought inpatient care from the public sector. The household preference for outpatient care services also showed a similar picture.

Table 17: Per cent of households preferring treatment from public health care sector and per cent of households having unmet need for public health facility by level of household income.

	Preference for public sector		Unmet need for public facility	
	Outpatient care services	Inpatient care services	Outpatient care services	Inpatient care services
Major source of household income				
Daily wage	33.3	60.0	59.1	38.8
Petty business/ low salaried	20.4	48.8	62.0	36.3
Regular income (business/jobs)	14.9	42.0	68.4	47.0
Others	13.2	41.5	76.0	52.9
Monthly income of household (in Rs.)				
Less than 2000	22.8	56.5	63.2	37.1
2000-4000	18.3	46.3	66.1	42.7
4000 and above	10.0	32.5	72.0	53.3
Total	16.9	44.8	67.4	44.4

Going by income classes the unmet need for public health care services show that given a choice even the higher income groups would prefer public services. What also emerges is that the level of unmet need for public health care services depends on the household's potential to seek treatment from alternate sources of treatment. Poverty is driving households belonging to the lower economic strata to public health facilities located at far off places to meet their health care needs, because of the lack of purchasing power to seek treatment from the private sector.

Therefore it can be concluded that there is a huge demand for a public hospital in the locality and the percentage that will definitely utilise the services belong to the "currently using public and choice is also public" category (see Table 16), where the public sector is only affordable. In addition, a sizeable proportion from the "currently using private, but choice is public" category is also likely to shift to the proposed hospital, depending upon the nature and the quality of services in the proposed hospital.

12. Public opinion about a new BMC hospital in the locality

Response to the question on adequate number of public health care facilities in the locality confirms that the community also feels that the study area is not equipped with sufficient number of public health facilities. Around 89 per cent reported that there was a lack in provision for inpatient care facilities in the locality (Table 18). For outpatient care 85 per cent respondents said the fact that such services were inadequate in their area was not surprising, because the number of dispensaries available was only one per 73,000 population. What then becomes evident is that the existing number of public health care units are grossly inadequate for meeting the demand for even outpatient care services in the locality.

Table 18: Opinion about the number of public health care facilities in the locality

Opinion	Outpatient care facilities	Inpatient care facilities
Adequate	14.8	10.1
Not adequate	84.7	89.3
Don't Know	0.5	0.6
Total	100	100
N	1016	1016

Almost all (99 per cent) felt that setting up of a new hospital would be useful for the community (Table 19). Table 20 shows an overwhelming response to the question on willingness of households to utilise health facilities in the proposed municipal hospital. Here, 98 per cent of the respondents for outpatient and 95 per cent for inpatient services reported that they would avail of the health care facilities if BMC opened a new hospital in the locality. These observation indicate that the respondents had high hopes from the public health care system, and hence the BMC, the major provider of public health care services in Mumbai, needs to gear up to cater to their demands by setting up a full-fledged hospital.

Table 19: Percentage who reported that setting up of BMC hospital will be useful for the community

Usefulness	Percentage distribution.
Yes	98.9
No	0.4
Don't Know	0.7
Total	100
N	1017

Table 20: Willingness to utilise health care services in the proposed hospital

Willingness	Percentage willing to utilise the proposed hospital	
	Outpatient care services	Inpatient care services
Yes	97.7	94.7
No	0.8	1.2
Can't say	1.5	4.1
Total	100	100
N	1014	1010

Table 21: Ideal OPD timing convenient to the household

Timing	Percent distribution
Morning session	61.4
Afternoon session	16.8
Morning & evening	2.0
Full time	19.8
Total	100.0
N	969

The respondents were asked about the OPD timing that they felt was convenient for the family. Around 61 per cent reported that the morning session was the most convenient for their family. The afternoon session was reported to be convenient for another 17 per cent of the population, while around 20 per cent reported that OPD facility should be available for the 'full time' (Table 21).

13. "Willingness" to pay for health care

Question on willingness to pay for health care was canvassed in the survey as attempts have been made at the policy level to impose user charges in public health care units. It was found (Table 22) that 86 per cent still felt that user charges should not be imposed for outpatient facilities and 79 per cent felt the same for inpatient care services. Those who thought that the proposed hospital could collect user charges were only about 11 per cent for outpatient care services, and 16 per cent for inpatient care services.

Table 22: Opinion about user charges in the proposed BMC hospital

Whether services should be free?	OPD care services	IPD care services
Yes	85.6	79.0
No	10.9	16.3
Can't say	3.5	4.7
Total	100	100
N	1009	1005

Note: figures are in percentages

Differentials in opinion about user charges in the proposed hospital were also analysed (Table 23). Though the percentage of those feeling health care services in the proposed hospital should be free was slightly higher in the lower income category than in the higher income category, more than 80 per cent in all these income groups felt that health care services in the proposed hospital should be free of cost.

Table 23: Percentage feeling services in the proposed BMC hospital to be free of user charges by income level

Monthly income of household (in Rs.)	OPD care services	IPD care services
< 2000	87.9	81.8
2000-4000	86.9	79.7
4000+	81.2	76.8
Total	85.6	79.0
N	1009	1005

Whether the population would utilise health facilities if the hospital imposed minimal user charges was another related issue. The situation was quite paradoxical as only a small proportion said that they would not utilise the services in the proposed hospital if the authorities imposed user charges like registration fees, fees for diagnostic testing, and charges for medicines. More than 80 per cent reported that they would use services in the proposed hospital for inpatient and outpatient treatment, if minimal charges are levied

Table 24: Percentage distribution of respondents' opinion regarding utilisation of health care services if the hospital imposes user charges.

Willingness	Percentage willing to use services if user charges are imposed for					
	Registration		Diagnostic testing		Medicines	
	OP Care	IP Care	OP Care	IP Care	OP Care	IP Care
Yes	86.6	83.2	84.8	82.7	82.3	80.0
No	11.8	10.3	13.4	10.9	14.6	10.9
Can't say	1.4	6.5	1.8	6.4	3.1	9.1
Total	100	100	100	100	100	100
N	1016	1011	1015	1009	1016	1010

It is to be noted that registration charges and other charges already exist in the public health care set-up and this willingness to pay is in that context. The above analysis shows that the public expects the health care services to be free of cost. Further, when we look at reasons for preferring public health facilities (Tables 8, 11 & 15) it is clear that the low-cost of public services is what attracts people to this sector. This advantage should not be surrendered by

imposing further user charges. Here, the willingness to use health care in the public sector, despite user charges, is not because of their ability to pay for it, but because of their inability to pay for private health care services where treatment costs are several times higher. The ‘willingness to pay’ surveys in the country must take a note of this while suggesting user charges in the public sector.

14. Presence of health insurance schemes

Since a major burden of the health care expenditure was borne by the individuals/households, an attempt was made to understand the presence of health insurance schemes in the study population. It was found that only 10.5 per cent of the respondents were aware of the existence of health insurance schemes and a mere 7 per cent said that some members in their household came under the purview of health insurance schemes.

Table 25: Health insurance schemes and the study population

Item	Percentage (N)
Percentage of respondents aware about health insurance schemes	10.5 (1029)
Percentage of families where at least one member is covered under health insurance schemes	7.2 (1028)

The poor coverage of health insurance schemes further strengthens the claim for starting a public hospital in this low-income locality where a major portion of the workforce belongs to the unorganised sector. In addition, the population seems to be unwilling to pay large amounts as user charges, and they certainly require support from the public health care system to meet their health care needs.

15. Public’s expectations about the proposed hospital

An open ended question on respondents suggestion for the effective functioning of the proposed BMC hospital was asked in the survey. The response to this query is likely to throw more light on public expectations from a new municipal hospital if set up in the locality. The entire list of suggestions is listed in *Appendix-II*.

Table 26: Most commonly reported suggestions from respondents for effective functioning of a public hospital in the locality

Srl No.	Suggestions from respondents	Number reporting	Percentage reporting
1	Hospital premises should be clean & neat	423	42.9
2	Good behaviour from staff	355	36.0
3	Good doctors and nurses should be available	337	34.1
4	Good quality health care facilities	326	33.1
5	Hospital should be equipped with all health facilities	300	30.4
6	Emergency service	150	15.2
7	All types of medicine should be made available	147	14.9
8	Specialist doctors	135	13.7
9	Good quality treatment & medicine	134	13.6
10	Health Services/Medicines/bed facility should be free	125	12.5
11	Doctors & staff should be present in the hospital in time	103	10.4
12	Cost should be affordable	66	6.7
	Total no of respondents	987	
	Blank Schedules	48	
	N	1035	

Table 26 presented above gives the 12 most commonly suggestions of the respondents. The public's major concern seems to be cleanliness in the hospital, which has been suggested by 43 per cent of the respondents. The other important suggestions include good behaviour from the staff (36 per cent), availability of good nurses (34 per cent), and that hospital should be equipped with all health facilities (30 per cent). A sizeable number of respondents were concerned about the availability of medicines, and availability of health services at a free/affordable cost. The suggestions look like an offshoot of the problems currently faced by the public while utilising public health care services, which they do not want to have in the municipal hospital that is likely to come up in the locality.

16. Summary and Conclusions

The above analysis shows how a largely lower middle class population residing in a locality, which does not have a single public hospital, is currently meeting its health care needs. The non-availability of a public hospital in the locality has indeed worsened its woes. Investigations started with an initial inquiry into the levels of morbidity in the population. Health problems were more among women than men, and in the older age groups than the younger ones. Analysis of non-hospitalised ailments and hospitalised ailments recorded in the reference period enabled us to come to a useful understanding of the morbidity burden as well as the public-health-service-use profile of the study population.

About 32 percent reported that they accessed inpatient care services from the public sector. The time required, and the travel cost incurred to access a public facility was found to be higher in the public sector than in the private sector for both outpatient and inpatient treatment. This was obvious as the study area was not having a public hospital and the residents had to travel long distances to access a public facility resulting in an increase in travel time and travel costs. Thus, they were forced to depend on private health care services

to fulfil their needs. Data on current utilisation pattern and household's general source of health care confirm that the major reason for utilising services in the public sector was the 'cost is affordable' factor whereas the major reason for reporting utilisation of private facility was the 'nearest facility' factor. A higher proportion of users of private sector than public sector reported 'no other option' as a reason. All this shows due to inadequate availability of public health care services in the locality the people are being pushed to private providers.

Analysis of information on households' current health-seeking preferences and preferences if both public and private sector facilities are available in their locality, showed that a huge chunk of the population were not able to exercise their right to public health care in the population. In other words, a sizeable proportion of the population were forced to seek treatment from the private sector due to a shortage of public health care services. This unmet need was higher for relatively cheaper outpatient care services (67 per cent) than for inpatient care services (44 per cent), which was more expensive. This is because in order to avoid higher medical costs the people were already using public hospitals outside their locality for inpatient care services. A similar health seeking behaviour to meet the demand for a relatively cheaper outpatient care services would be uneconomical. This often drove them to locally available private health care units that might not offer appropriate services. Shortage of medicines and non-availability of diagnostic services in public health care units burdened households with out-of-pocket expenses, since they had to obtain these services from the market despite using public facilities.

Results show that the community was experiencing an acute shortage of health care services. There was no question of 'low response' towards the proposed hospital as more than 95 per cent felt that starting the hospital would be useful to the community and were eager to utilise its services. Coverage of health insurance schemes was inadequate, and which was unlikely to improve in the near future. People strongly perceived that public health care had to be free of user charges. In the present set-up, the health care seekers have mainly two options, either the public or the private sector. Therefore, the willingness to utilise services in the public hospital was more likely due to their desire to avoid seeking treatment from the private sector, where user charges were found to be several times higher.

To conclude, it is important to emphasize that the demand for public health care services are very high, even though the utilisation rates are lower than expected. The findings of the study clearly indicate that:

- Unmet need for public health care services is very high
- The higher utilisation of private health care services is due to inadequate access of public facilities in the locality
- There is an overwhelming demand not only for hospital services but also of dispensary services

Thus, we recommend that the BMC must go ahead and set up the proposed hospital. Further, given the high unmet-need expressed for outpatient care services we recommend that the number of dispensaries available in the locality be increased. The data on daily prevalence (Table 4) indicates a morbidity load, which is 2.3 per cent in the sample. If we extrapolate this rate to the population of the ward, we find that the total number of persons who are ill on any day in this ward will be 18,538. Given the usual pattern of treatment followed by doctors of 2 days at a time the load on local health care facilities would be 9,269. From another study of municipal dispensaries, we know that each dispensary on an average sees 85 patients a

day (Duggal, 2000). There are 11 dispensaries in the study population, which can treat about 935 patients or take about 10 per cent of the morbidity load. In fact, the actual utilisation is quite close to this, with BMC facilities (including hospitals) being utilised for 15.3 per cent of the OPD cases. This means that existing BMC facilities in the area are reasonably well utilised. It also shows that public health care services are in short supply.

In addition, this municipal ward has 11 health posts, each with a doctor, but the services of the health posts are restricted to preventive and promotive care. If health-posts can be strengthened to provide dispensary services (medical care), then OPD utilisation of the BMC services will double. This apart, there remains a large scope for expansion of municipal dispensary services from the present, one dispensary per 73,000 population to at least one per 40,000 population. Such changes will help strengthen the public health infrastructure in the area and improve the image and credibility of the public health system run by the BMC.

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Appendix-I Study Team

CEHAT STAFF

Research Team

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Natwar Nagar Health Post Area

Ms. Bharati Thorat
Ms. Pramila V Panchal
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Ms. Shubhangi Yelve
Ms. Suchitha Shinde
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Squatters Colony Health Post Area

Ms. Pragathi Rane
Ms. Shradha Sagvekar
Ms. Shobha Rane
Ms. Smitha Parulekar
Ms. Sunita Gaurav
Ms. Sunita Mathre

Appendix-II Detailed list of suggestions from public for effective functioning of the proposed hospital in the locality

SrlNo.	Suggestions made by the respondent	N	%
	Quality of serviced related		
1	Hospital premises should be clean & neat	423	42.9
2	Good quality health care facilities	192	19.5
3	Helpful & co operative staff	159	16.1
4	Good quality medicine should be available	141	14.3
5	Good quality treatment & medicine	134	13.6
6	Good behaviour with patients	127	12.9
7	Doctors & staff should be available in time	103	10.4
8	Ayah's/Moushi's should be co operative	69	7.0
9	Working hours should be convenient	38	3.9
10	Operation Theatre Good & Clean	4	0.4
11	Seating arrangement without much waiting time	3	0.3
12	Quality food including eggs & fruits should be served to the patient	2	0.2
13	There should be ICU room	1	0.1
14	Ambulance facilities should be available	1	0.1
15	Separate department for Older people	1	0.1
	Manpower availability related		
16	Good Doctors and Nurse should be available	337	34.1
17	Specialist Doctors	135	13.7
18	24 Hours medical attendee	38	3.9
19	There should be Lady Doctors	4	0.4
20	Adequate staff should be available	4	0.4
	Physical Infrastructure availability related		
21	Hospital should be equipped with all health facilities	300	30.4
22	Emergency service	150	15.2
23	All type of medicine available	147	14.9
24	All Modern equipment available	42	4.3
25	Large hospital premises	39	4.0
26	All Diagnostic test should available	38	3.9
27	There should be inquiry & information Desk	12	1.2
28	Separate department for Ear ,Nose ,Throat ,Teeth specialist should be available	12	1.2
29	Separate ward & department for Children	9	0.9
30	24 hours water facilities should be available	4	0.4
31	Immunization & Treatment of all type of disease	4	0.4
32	Centre of Maternity & Family Planning operation	3	0.3
33	Hospital should be open on Sunday	2	0.2
34	Blood Bank should be available	1	0.1
	User charges related		
35	Services/Medicine/bed facility should be free	125	12.5
36	Cost should be Affordable	66	6.7
37	Cheap medicine	35	3.5
38	Concession in various chares	20	2.0
39	Free service for poor people	3	0.3
40	Hospital charges should be minimum	2	0.2
	Others		
41	There should not any corruption	35	3.5
42	Hospital should be near	33	3.3
43	Before Police Panchanama treatment should be started	8	0.8
44	Government provide medicine but this medicine disappear on way	8	0.8
45	6 or 7 storeyed hospital available	5	0.5
46	Number of bed should be increase	4	0.4
47	Good Security force available	3	0.3
48	Facilities should be available all citizen including Uttar Pradesh people also.	3	0.3
49	Preference should n be given to the Maharashtrians while recruiting staff	3	0.3
50	Should not prescribe more medicines than actually required	3	0.3
51	Discharge should given after satisfactory treatment	2	0.2
52	Job Should be gave needed person	1	0.1
53	Eatable foods of patient should not be taken away by the staff	1	0.1
54	To open medical Store near the hospital	1	0.1
	Total no of respondents	987	
	Schedules with no suggestions/Blank	48	
	N	1035	

Appendix III

Date -----

Namasthe,

I am the community health visitor working in the ----- Health Post of BMC and today I have come to your household in connection with a survey on health seeking behavior and health care needs of population in this locality. This survey is designed by CEHAT, a secular non-governmental organisation on behalf of BMC. We would very much appreciate your participation in the survey.

I will be asking you about the health status of members of your household, nature of utilisation of health care services and perception regarding health care facilities available in the area. The information will help the BMC in future planning of health facilities in your area. The amount of time needed will be less than 20 minutes. Participation in this survey is voluntary. If you decide not to participate, you may stop answering questions at any time. What ever personal information you provide will be kept strictly confidential and will not be shown to others.

We hope you will participate in this survey since your views are very important. . Do you want to know anything more about the survey at this time?

If you need any further information please feel free to contact Mr. Dilip T. R. who is in charge of this study at the above address.

We thank you for participating in this study and we will inform you about the results of the study in next four months.

Name of the Investigator _____ Signature of the Investigator _____

Name of the respondent: _____ Form No: _____

Consent given verbally Yes/No

Signature of the Investigator _____

RAPID HOUSEHOLD SURVEY ON UTILISATION OF HEALTH CARE SERVICES AND POTENTIAL DEMAND FOR A PUBLIC HOSPITAL IN K EAST WARD, MUMBAI

A Study Undertaken by
Centre for Enquiry into Health and Allied Themes (CEHAT), 2nd Floor BMC Maternity Home, Lok Darshan, Military Road, Andheri East, Mumbai-400 059

for
Brihan Mumbai Municipal Corporation

Confidential
for Research
purpose only

(I) Identification

1. Household No.

2. No of visits 3. Date of Interview:

4. Name of Interviewer _____ 5 Name of Editor _____

(II) Household particulars

6. Respondents Name: _____

7 Address: _____

8. Relationship to the head of the household: _____

9. No of Members in the household: 10. Mother Tongue _____

11. Religion: 12. Caste:

13. How long you are staying there (in completed years)

14. Are you the owner/tenant of the dwelling?

15. Type of Dwelling

16. What is the major source of family income?

17. Average monthly income of the household (in rupees) _____

Codes

Q8: 1-head, 2- spouse, 3-offspring, 4-sibling, 5-parents, 6-others)

Q11: 1-Hindu, 2-Muslim, 3-Christian, 4-Buddhist, 5- Others

Q12: 1-SC/ST, 2-OBC, 3-Others

Q14: 1-owner, 2-tenant

Q15: 1-pavement/slum, 2-chawl, 3-apartment

Q16: 1- daily wage, 2-petty business & low salaried jobs, 3- regular income (business/jobs) 4-Other

Health Seeking Behaviour

19. Particulars of members who have reported to have fallen ill during last one month

(a) Srl No. (as in 18a)	(b) Age	(c) Sex (code)	(d) Type of ailment (code)	(e) Whether treated? (1-Yes, 2-No)	(f) If no in (e), the major reason (code)	(g) (if Yes, in (e)), Source of treatment (code)	(h) Time taken to reach there (in minutes)	(i) Mode of transport (code)	(j) Reason for choosing that source for treatment. (code)	(k) No of days ill	(l) Amount paid to provider (in Rs.)	(m) Other medical expenses (in Rs.)	(n) Are you satisfied with the treatment (1-Yes → (p) 2-No → (o))	(o) If no in (n), then reasons (code)	(p) No of days of inactivity because of that ailment

20. Particulars of members who have been hospitalised during last one year

(a) Srl No (as in 18a)	(b) Age	(c) Sex	(d) Type of ailment	(e) Source of treatment	(f) Time taken to reach there (in minutes)	(g) Mode of transport	(h) Reason for choosing that hospital	(i) No of days hospitalised	Did they undergo (1- No, 2-free, 3- partly free, 4-on payment)		(l) Amount paid to provider (in Rs.)	(m) Other medical expenses (in Rs.)	(n) Are you satisfied with the treatment (1-Yes → (m) 2-No → (l))	(o) If no in (n), then major reason
									(j) Diag. tests	(k) Surgery				

Codes: Q19 (e) 1- not serious, 2- cost too much, 3- too far/ no transport, 4- self medication, 5-others

Q19(g) & Q20 (d) 1- BMC dispensary, 2- other public dispensary 3-BMC hospital 4-other public hospital, 5-ESI/related schemes, 6-private doctor, 7-private dispensary, 8- private hospital, 9-charitable institutions, 10-others.

Q19 (h) & Q20 (f) 1- less than 15 minutes, 2- (15-30) minutes, 3- (30-60) minutes, 4-more than 60 minutes.

Q19 (i) and Q20 (g) 1- walk 2-bus/train., 3-autorickshaw, 4- Taxi 5- Others

Q19 (j) and Q20 (h) 1-nearest facility, 2-Convenient timing, 3-Offers good quality of service, 4- affordable (cost) 5- availability of medicines 5—no other option, 6- Others

Q19 (o) and Q20 (o) 1- treatment ineffective 2-poor infrastructure, 3-poor reception from staff, 4- treatment too costly, 5- non availability of specialist medicine/services, 6-others (specify)

Preference of health care services

		OPD care	IP Care
21.	Which is the major source of health care for the household for treating ailments requiring IP/OP Care (Codes as in Q19(g) & Q20 (d))		
22.	Major reason for choosing health care from that particular source of treatment (Code Q19 (j) and Q20 (h))		
23.	From where does the family generally seek the following services		
	(a) Diagnostic tests		
	(b) Immunization of Children (ask if household has children)		
	(c) Antenatal care “		
	(d) Family Planning “		
24.	Which is the most convenient source of health care in terms of (code Q19(g) & Q20 (d))		
	(a) Distance		
	(b) Timing		
	(c) Cost		
	(d) Quality of service		
25.	Given a choice for treatment from public and private source, which one will you/ your family members prefer (1- Public, 2-private)		
26.	Major reason for choosing that particular source (codes)		

Utilisation of public health care services

		BMC Dispens ary	BMC Maternity Home	Other Public Hospital
27.	Did any of your family members been to the following facilities during last one year (1-Yes →q28, 2-No →q32)			
28.	When was the last visit (in months)			
29.	Type of ailment for which treatment was sought			
30.	Were you satisfied with the treatment (1- not satisfied, 2- partially satisfied, 3-fully satisfied)			
31.	Reasons for satisfaction/ dissatisfaction in (q30)	(a) Satisfaction		
		(b) Dissatisfaction		
32.	Reason for not going to that particular source of treatment			

Codes: 31a: 1-treatment effective, 2-good quality of service, 3- treatment affordable, 4- Others specify

Q31b : 1-treatment ineffective, 2-poor infrastructure, 3- poor reception from staff, 4- non availability medicines, 5-no cost benefit, 6-others specify

Q32. 1- need for health care did not arise 2-no public facility in nearby area, 3-treatment ineffective, 4-poor infrastructure, 5- poor reception from staff, 6-non availability medicines, 7-no cost benefit, 8-no specialist doctor 9-others specify

Expectations from a new public hospital

		OPD Care	IP Care
33.	Do you think that there is adequate number of public health care facilities in this locality (1- Yes, 2- No, 3- Don't Know)		
34.	Do you think that setting up of a BMC hospital in the locality will be useful for the community? (1- Yes. 2- No 3-Don't Know:)		
35.	Will family members use these services if the hospital for IP/OP care (1- Yes, 2- No, 3- Can't say)		
36.	Should that hospital provide health care services at a free cost? (1- Yes, 2-No, 3-can't say)		
37.	Will family members use these services if the hospital impose nominal user charges for? (1-Yes, 2-No, 3-Can't say)		
	(a) Registration charges		
	(b) Diagnostic testing		
	(c) Medicines		
38.	What will be the ideal OPD timing for hospital which will be convenient for the family		

39. Are you aware of existing health insurance schemes in India (1- Yes, 2-No)

40. If yes, could you list the type of insurance schemes which you have heard of
(*put tick (✓) mark Record all mentioned; no probing*)

- (a) Mediciam Health Insurance plan
- (b) Central government Health Insurance Scheme
- (c) Employees State Insurance Scheme
- (d) Other Schemes _____

41. Is your family coming under the purview of any health insurance scheme
(1-Yes, 2-No)

42. Your valuable suggestions for effective functioning of a BMC hospital if sanctioned in the locality.

1. 3.
2. 4.

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