

# **Access to reproductive health services in urban slums of Rajkot City, Gujarat**

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Dissertation submitted in partial fulfillment of the requirement for the award of the degree  
of Master of Public Health



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Kerala, India

**October 2008**

# Declaration

I hereby declare that this dissertation work titled “**Access to reproductive health services in urban slums of Rajkot City, Gujarat**” is the result of Original research and it has not been submitted for the award of any degree in any other institution.

Thiruvananthapuram, Kerala

October 2008

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# Certificate

Certified that the dissertation titled "**Access to reproductive health services in urban slums of Rajkot City, Gujarat**" is a bonafide record of original research work undertaken by Dr Miteshkumar N Bhanderi in partial fulfillment of the requirement for the award of the degree of Master of Public Health under my guidance and supervision.

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## Abbreviations

ANC	Anti natal checkup
ANM	Auxiliary Nurse Midwifery
CV	<i>‘Cheeranjivi Yojna’</i>
DHS	Demographic Health Survey
ICDS	Integrated Child Development Scheme
ICPD	International Conference on Population and Development
ID	Institutional delivery
JSY	<i>‘Janani Surksha Yojna’</i>
MDG	Millennium development goals
NFHS	National Family Health Survey
NGO	Non- governmental organization
PNC	Post natal checkup
OBC	Other Backward Caste
OPD	Out-Door Patient
RH	Reproductive Health
RTIs	Reproductive Tract Infections
SBA	Skilled birth attendant
SC/ST	Schedule caste and Schedule tribe
SLI	Standard of Living Index
STIs	Sexually Transmitted Infections
WHO	World Health Organization
UTRM	Untreated Reproductive Morbidity
UNICEF	United Nation International Children Emergency Fund

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# *Abstract*

## **Background**

Access to reproductive health services is a major public health problem in urban slums. The objective of our study was to assess the reproductive health of women in 15-49 years age group in the slums of Rajkot City.

## **Methods**

We have selected 1046 women of reproductive age group (15-49) using two stage cluster sampling for this community based cross sectional study. Information on demographics, socioeconomic status, self reported reproductive morbidity, treatment seeking pattern, utilization of skilled delivery services and reasons for not using health services, was collected using a pre-tested, structured interview schedule. Univariate and multivariate analysis were performed using SPSS 15.0 version.

## **Results**

In our sample, 57 percent of women had at least one reproductive morbidity, out of them only one third sought health care. 81percent of pregnant woman received skilled delivery care. Less felt need, cost and societal barriers were the reasons for not seeking care, whereas poor provider's attitude, poor quality of services and long waiting time were the reasons for not utilizing public health facilities. Women from low SES, minority group and distance of health facility more than two km, had lesser access to reproductive health services compare to their counterparts. Use of ANC care and low parity women were determined the skilled delivery care.

## **Conclusion**

Household level resources, societal factors, availability of health services and health related behavior, were the determinants of access to reproductive health care. Government sectors were found to be generally underutilized.

# **Chapter 1- Access to reproductive health services**

## **1.1 Introduction**

### **1.1.1 Reproductive Health**

Reproductive health is *“a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its function and processes”* (ICPD 1994)<sup>1</sup>. After ICPD in Cairo, developing countries shifted their focus on women’s health from fragmented to a holistic approach. This focus of women shifted the orientation from fertility reduction and population approach to a comprehensive health approach, which addresses the socio-cultural factors affecting reproductive health<sup>1</sup>. This led to a paradigm shift in India. In India, the first phase of ‘Reproductive and Child Health (RCH) Program’ was launched in 1997 with the focus on comprehensive reproductive health care approach<sup>2</sup>. Population policy of Gujarat 2002 also emphasized about wide range of reproductive health services to delivery<sup>3</sup>.

### **1.1.2 Reproductive Health Services**

Similarly, reproductive health care is defined as the collection of services that contribute to reproductive health and well-being by preventing and solving reproductive health problems<sup>1</sup>. The concentration of reproductive health services were confined only to rural area until the launch of the second phase of RCH program. RCH-2 launched in 2005, had an integrated approach addressing the reproductive health in both rural & urban area<sup>4</sup>.

### **1.1.3 Urbanization and Reproductive Health in India**

According to 2001 census of India, 27.8 percent of the total population living in urban area<sup>5</sup> and by 2025 it will become more than half of the total population<sup>6</sup>. In last decade

(1991-2001), India grew at an average growth rate of two percent urban India grew at three percents, mega cities grew at four percent and slum populations increased by five percents, and this phenomenon is called 2-3-4-5 syndrome<sup>7</sup>. The fight in achieving the MDG's would have to be waged in the slums because developing world becomes more urban and the place of poverty shifts to cities<sup>8</sup>. Rapid urbanization had considerable consequences for the health of urban citizens<sup>9</sup>. Because it aggravated inequalities in health and access to services, and created increasing problems of exclusion<sup>10</sup>. That urban poor were more disadvantages compared with other city dwellers<sup>10</sup>. The NFHS-3 confirmed it<sup>11, 20</sup>. The situation with respect to women's health in the urban slum was no different from rural; rather there was neglected the most. Studies show that the maternal health situations of women in urban slum were similar to their rural counter parts<sup>11-14</sup>. In fact, some aspects were worse than the rural women. The utilization and primary health services delivery were also poor among urban slum women in spite of the fact that they were proximate to tertiary care<sup>11</sup>.

In spite of importance given to universal access to reproductive health care, there are many women bear reproductive illnesses silently without seeking any care<sup>15</sup>. This was due to effect of non-health related influences on the access to reproductive health services<sup>16</sup>. This is very important to explore the conditions of reproductive health of women in urban slum and the reasons that determine the access to reproductive health care.

## **1.2 Reproductive Morbidity**

### **1.2.1 Reproductive Morbidities in the world**

According to WHO's 2001 estimates, sexual and reproductive health problems account for 18percent of the total global burden of disease and 32percent of the burden among women in reproductive age group (15–44 years) worldwide<sup>17</sup>. WHO had estimated, 340

million new cases of four common sexually transmitted bacterial and protozoal infections acquired every year, more than half of them affect women at younger reproductive age group<sup>18</sup>. Such infections will lead to infertility among more than 180 million couples in the developing world<sup>19</sup>.

Reproductive morbidities, including RTI/STIs and other related gynecological illnesses are wide spread in the developing world. Without early diagnosis and appropriate therapy complicates the women health, affects fertility, productivity, infant health and survival.

The reproductive tract infections, and myriad of gynecological problems, make life a misery for many women. Prevalence of RTIs is ranging from 6.64 to 68 percents in the world<sup>20-25</sup>. Most RTIs/STIs affect both men and women, although the consequences for women are more severe than for men. In fact, RTIs/STIs and their complications lead to severe illnesses and death of women among poor<sup>26</sup>.

The prevalence of uterine prolapse, one of the most common and nastiest gynecological morbidity affects 10 to 60 percent women in reproductive age group<sup>27-32</sup>.

A systematic review of WHO on chronic pelvic pain<sup>32</sup>, reported dysmenorrhoea in 59 percent of women, and chronic pelvic pain in 6.2 percent among general population. Walraven G et al reported that every third women had a menstrual dysfunction in Gambia<sup>33</sup>. The study of Pakistan reported menstrual disorders were found in 45.3 percent in ever married women of slums<sup>28</sup>.

For many couples, inability to bear child is a tragedy, bringing a sense of loss, failure and exclusion. In most societies women are blamed for infertility. The DHS Comparative Reports series reported three percent of sexually active women have not had a child<sup>34</sup>. Another multi-centric survey estimated nine percent of women are currently infertile<sup>35</sup>. In

addition a community<sup>33</sup> and facility based<sup>30</sup> studies reported infertility among 9.8 percent and 14.2 percent of women respectively. This draws the attention on the importance of infertility in reproductive health matters.

### **1.2.2 Reproductive Morbidity in India**

In earlier sections of this chapter, we have discussed different scenario of reproductive morbidities in the world. Now let us discuss reproductive health scenario of India.

Murray and Lopez estimated, burden of reproductive ill health was highest in India (12.5 percent of total burden)<sup>17</sup>. A community based cross sectional study in the rural villages of Maharashtra by Bang et al reported that more than 90 percent had at least one gynecological morbidity<sup>36</sup>. A community based study conducted by Bhatia et al reported 39.8 percent participants were clinically diagnosed with at least one reproductive morbidity<sup>37</sup>. The prevalence of RTIs reported by different studies is ranging from 35 to 66 percents<sup>38-44</sup>. A population based survey by Patel V et al reported more than half of women had dysmenorrhoea<sup>45</sup>. Bhalla P et al study reported found highest prevalence of bacterial vaginosis in urban slum of Delhi<sup>46</sup>. A large scale community based cross sectional study conducted in rural India found 24.4 percent women mentioned had one or more gynecological problem in preceding six months the study<sup>47</sup>. A study conducted in rural area of Rajasthan highlighted that 55 percents of ever married rural women of reproductive age group, reported at least one reproductive morbidity<sup>38</sup>. A community based study in North India reported 7.6 percent prevalence of uterine prolapse among married women<sup>48</sup>. Study by Garg S et al reported every fourth women had complained menstrual problem in slums of India<sup>49</sup>. Another study by Kumar D reported every tenth woman was infertile<sup>50</sup>.

### **1.2.3 Reproductive morbidity in Gujarat**

A study conducted by Das NP et al in Gujarat reported 17 percent of women had any RTI\STI and 4.9 of women had contraception related morbidity among reproductive age group<sup>51</sup>. National survey reported every tenth women of reproductive age group had vaginal discharge<sup>52</sup>. District level household survey conducted in Gujarat, reported 14.9 percent of women had any RTI\STI symptom, 17 percent had menstrual complain, 30 percent had pregnancy related complication and 17 percent had contraception related side effect among reproductive age group respondents in Rajkot district<sup>53</sup>.

### **1.2.4 Factors responsible for Reproductive Morbidity**

The above paragraph emphasizes the burden of reproductive illnesses in India and the world among women. This necessitates an inquiry in to the problem. Let us look at the factors which are responsible for reproductive health in different regions and communities. The transmission of infection and prevalence are influenced by social, economic, biological and behavioral factors. High prevalence of reproductive morbidity are attributed to many factors such as child bearing pattern, utilization of health services, health related behavior, and background characteristics such as personal, standard of living, community affiliation and social institutional factors. It was reported multiple pregnancies had significant association with reproductive morbidity<sup>38</sup>. Women with four or more pregnancy were significantly more likely to report menstrual problems and genital prolapse compared to who had fewer children<sup>25, 27</sup>. It has been reported by Patel V et al that odds of having dysmenorrhoea was half in those who had at least one pregnancy than who did not have<sup>45</sup>. Higher the age more the reproductive illnesses reported by many studies<sup>21, 23, 37</sup>. Education too had significant effect on incidence of reproductive illness among women<sup>45</sup>. Higher the education better the reproductive health reported by

many studies<sup>21, 39, 54</sup>. Lower socioeconomic status or lower standard of living, on the other hand is poverty with low level of resources and high level of exposure. It encompasses low levels of health in women, especially reproductive health<sup>55</sup>. It was also reported reproductive illnesses were significantly higher among women in low socioeconomic strata<sup>28</sup>. Slum dwellers who had limited access to basic amenities, were more prone to have reproductive illness. Also in slum because of overcrowding, women were more prone to have reproductive illness. Study conducted by Bhalla et al reported highest prevalence of bacterial vaginosis among slum dwellers in compared to others<sup>46</sup>. Good number of evidences shows that economically poor women had more reproductive health problems due to early and unintended childbearing<sup>56</sup>. Many a times this becomes a cause for poverty in developing countries<sup>56</sup>.

Many of the above mentioned problems are preventable. Due to poor access to reproductive health care they remained undiagnosed and untreated. The present study is an inquiry to address this problem. Next section discusses these in detail.

### **1.2.5 Factors for access to reproductive health services**

Many countries adopted reforms to address the issue of reproductive health service and have increased service delivery points and integrated with primary health care. In spite that, access to reproductive health care is poor due to many non-health factors influence the access<sup>57</sup>. Untreated reproductive illness among women with any reproductive illnesses varies from 27 percents to 89 percents. More than half of the women were not seeking treatment for their reproductive illness<sup>39, 47</sup> for various reasons like gender inequality, financial constraint, lack of felt need, psychosocial constraints including stigma. It was told 'reproductive illnesses have not paid adequate attention because sexual problems are looked as shame, blame, embarrassment, and so hid in a culture of silence<sup>58</sup>. In general

perception of women, symptoms like vaginal discharge are to be considered as ‘normal’ and therefore not in need for care. A qualitative study conducted in Peru reported, stigma associated with RTIs/STIs had kept the women away from seeking care or obtaining information about gynecological symptoms<sup>59</sup>. A study conducted by Rehman MM et al, reported younger age, having autonomy in treatment, working status, joint or extended family had positive influence on reproductive treatment seeking behavior among adolescent women<sup>24</sup>. A study conducted in Tamilnadu highlighted two-thirds of symptomatic women had not sought any treatment; the reasons cited were absence of a female provider in the nearby health care center, lack of privacy, distance from home, cost of treatment and they perceived their symptoms as normal<sup>42</sup>. A study in China reported probability of using health services for reproductive illness increased by 1.89 times when family’s socioeconomic status changed from low to high<sup>60</sup>. Most of the time, women had almost apathetic attitude towards their own health and its management during illnesses. Women sought treatment only when their health problem causes great physical discomfort or when it affects their work performance. However some women delay or forego seeking treatment because of household duties, but they seek care promptly when their condition prevents them from forming household tasks<sup>61</sup>. The women’s self decisions to seek care are often influenced by the perception that women would be able to access culturally appropriate, safe and secure health care services<sup>62</sup>. Access is also determined by affordability, because pay for services restrict women where gender inequalities to access to resources have been there<sup>63</sup>. Availability of health services plays an important role in access<sup>42</sup>. We have discussed reproductive morbidities and factors responsible for morbidities and access to care. Maternity care is also part of reproductive health services. Next section discusses access to maternal health services.

## **1.3 Maternal Health**

### **1.3.1 Access to Maternal Health Services**

Over half a million women die each year during pregnancy or delivery or shortly thereafter<sup>64</sup>; MGDs call for reducing maternal mortality 75 percent of current rate by 2015<sup>65</sup>. Professional attendance at delivery is assumed to reduce maternal mortality<sup>66</sup>; hence proportion of deliveries by professional or skilled attendant is used as a progress indicator<sup>65</sup>. Slow progress towards the MDGs had led to calls for accelerated progress in scaling up professional delivery care<sup>67</sup>. In the developing world, a third of all pregnant women receive no health care during pregnancy, 60 percent of deliveries take place outside health facilities, and only about 60 percent of all deliveries are attended by trained staff<sup>68</sup>.

Even though, India and also Gujarat has been investing in better access to reproductive health care, still only 52 percent and 65 percent of pregnant women had at least three ANC and only 38 percent and 54 percent of deliveries took place in health facilities respectively, reported by National Family Health Survey of Indian<sup>52</sup>. In urban areas of India, only half of the poor women received three or more ANC visits while non poor received more than three fourth<sup>11</sup>. About half of the urban poor women are delivering at home<sup>11</sup>. Home deliveries with an absence of professional skilled attendant have resulted in adverse infant and maternal outcomes. It is crucial to explore the reasons for inaccessibility. Next section is about the factors that affect the accessibility for maternity care.

### **1.3.2 Factors responsible for access to maternal health services**

However, home deliveries without skilled attendants were chosen or occurred for variety of reasons. Many factors are affecting the decision, like availability and accessibility of

health care services<sup>69</sup>. The cultural factors are more important determinants of uptake of maternity care because pregnancy and childbirth view as natural process not require for facility care in many communities. National survey of India reported half of the Scheduled Tribe women delivered by '*dai*'<sup>52</sup>. Poor women prefer traditional birth attendants because of socio-cultural proximity<sup>70</sup>, particularly where the childbirth is seen as a non-illness event where modern medicine has little to contribute<sup>72</sup>. Many times, women have experience on seeking care for themselves if relatives, particularly husbands or mothers-in-law, are heavily involved in the decision-making process; members of these poorer households favor home-based delivery care<sup>73</sup>. It was reported by Mrisho M et al women who lived in male-headed households were less likely to deliver in a health facility compare to women in female-headed households<sup>74</sup>.

Study in Tanzania reported lesser distance, more years of schooling, number of antenatal care received, woman who have self autonomy and knowledge of risk factors had higher odds of having skilled attendants at birth<sup>74</sup>. Similar findings were reported by Anwer I et al<sup>75</sup>. It was reported that women being of higher age, having high parity, having low socioeconomic status and educational status were more prone to delivering outside health facility<sup>76, 77</sup>. Low socioeconomic status reflects low affordability in uptake of skilled delivery care, because cost of delivery care is to be an important barrier<sup>78</sup>. Even where this service is officially free, hidden costs add up to a substantial part of monthly income, or even several times of monthly income<sup>79</sup>. Moreover, costs of facility-based delivery can be unpredictable; this restricts the usage<sup>80, 61</sup>. However, the choice of place of delivery is not only determined by income or cost, but quality of services as perceived by user plays an important role<sup>73</sup>.

To achieve the various goals\targets of India and specifically Gujarat, one has to inquire women's health specifically who live in urban slums. With above literatures, this study aims at addressing some of the research questions (a) what are the reproductive health conditions of women living in urban slums? (b) Where do they seek care? (c) What are the reasons for not seeking care? (d) How many of the women delivered in hospital? (e) What are the reasons for home delivery? (f) What are the factors influencing the access to care? The present study proposes to address the above questions. Next successive sessions discuss methodology, analysis, discussion and conclusion.

## **Chapter 2 Methodology**

### **2.1 Statement of the problem**

Statement of problem - Access to reproductive health services in urban slum of Rajkot city, Gujarat. It is a study to understand the reproductive morbidities and treatment seeking for reproductive health.

### **2.2 Rationale for Study**

In 1992 with the assistance of World Bank and UNICEF, in India, Maternal and Child Health (MCH) program was strengthened and new program 'Child Survival and Safe Motherhood' was initiated<sup>81</sup>. In spite of that, the woman health component was addressing the pregnancy and childbirth. Following the ICPD conference, there was a paradigm shift and the first phase of "Reproductive and Child Health (RCH) Program" was launched in 1997 with the focus on women health. This was a widened approach from maternal health to reproductive health. With a view to realizing the outcomes envisioned in the MDGs, the second phase of RCH program i.e. RCH-II and NRHM have been commenced in 2005<sup>82</sup>. First time, the health of urban poor was addressed in any programme.

This rapid urbanization and fast slum growth have deleterious repercussions on health of the urban poor, while the health status and access to reproductive and child health services of slum dwellers was poorer than their rural counterparts<sup>83</sup>. This gives birth to 'National Urban Health Mission'. In cities, women in slums live in unhygienic and unsanitary conditions without basic amenities such as safe drinking water and toilet facilities. Many times, there are the breeding grounds for diseases. These lead women to expose to reproductive illnesses. Significant amount of research has been done in rural area; however there has been paucity of evidences about reproductive health status and

access to health services among slum dwellers in urban. The community-based studies on women's reproductive health have been independent efforts to measure and describe untreated reproductive morbidity, and unmet need for skilled delivery care. Being the 22<sup>nd</sup> fastest growing city in the world<sup>84</sup>, Rajkot has huge migration that is likely to translate into larger slum formation, so it is very crucial to explore the factors that determine the access for reproductive health services among the slum dwellers, which would be essential insight for urban health policy.

### **2.3 Study Objectives**

- To assess the reproductive health of women in 15-49 years age group in the slums of Rajkot City
- To measure the level of untreated reproductive morbidities in the reproductive age group of women and unmet need for skilled delivery care
- To identify the factors that determine untreated reproductive morbidity and delivery care

### **2.4 Concept Note**

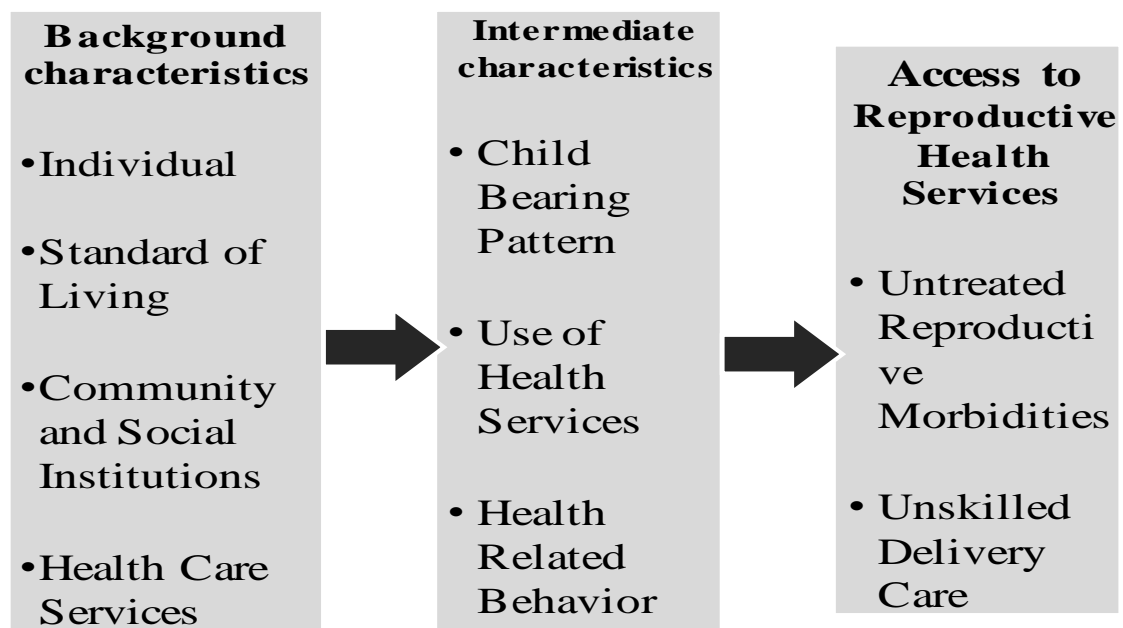
The block of intermediate variables include a woman's childbearing pattern, her use of health services and her health-related practices that affect treatment seeking and using skilled delivery care. Here, women's childbearing pattern is related to the number of pregnancies and births. It has been reported, that increase in parity and short birth intervals has higher untreated reproductive morbidities and unskilled delivery care<sup>25, 76</sup>.

A woman's use of health services for reproductive illnesses and during pregnancy is an essential factor for preventing long term morbidities. Here, seeking care for reproductive illness and ANC care were considered as use of health services. However it will depend on her perception of need, as well as on availability, accessibility and especially, on quality of these services. This reflects health related behavior. Due to perceived severity

of reproductive illnesses and importance of skilled delivery care will intensify the access to reproductive health care services.

A last backwards step takes to the background variables which include the personal resources of the women, such as her education, occupation and her marital status, which have significant role in accessing the health services. Standard of Living represents household resources, as well as housing conditions and amenities available. Community and social institutions resources includes caste and religion, the support network that women can resort to in health-related matters, and represented by the dominant values related to reproductive health care and child bearing in the community.

**Concept note**



The health care services, includes availability, adequate standards, and with culturally appropriateness. This study considers the directions of influence from the determinants to access to reproductive health services. Intermediate characteristics may have mediation effect, but this study has not looked for it.

## 2.5 Study Site

This study was conducted in the slums of Rajkot city, situated in the middle of the peninsular Saurashtra in central plains of Gujarat State of Western India. As per census 2001 the population of city was around one million with average annual growth rate of 3.29 percent. The last decadal annual growth was 8percent of which 9.4percent was due to in-migration. The population of Rajkot city is spread over an area of 104.86 sq.kms, with population density 9556 persons/sq.kms. This city has 84 notified slum areas having population of about 202371(47.3percent are females). The caste structure is found to be 33.3 percent SC, 2.5 percent ST, 45.2 percent OBC and 10 percent general population. The literacy rate of slum area was 63.7 percent. However, in current knowledge, almost 122 un-notified scattered slums are there in this city. According to BPL survey conducted in 2002 14percent of total population are below poverty line in this city, however 10percent population of city are migrants from other states of India or from other districts of Gujarat. They are living mostly in slum and slum like area which are not notified. In employment profile, there are 32.46 percent of total population can be considered as eligible working population (67.54 percent categories as described above), of which 11.70 percent are unemployed. 18.04 percent are unskilled casual laborers, 5.40 percent are semi-skilled workers and 3.5 percent are self-employed categories. The maximum people are employed as Industrial laborers (22.percent), followed by casual laborers (17.63percent) and driver (9.44percent). 8.25 percent of the total working population is employed as construction laborers. 8 percent of slum population has '*kachha*' houses, more than 10 percent people have no access to water within 500 yards, and only 13 percent household is having individual toilet<sup>85</sup>.

## **2.6 Study Design**

Design chose for the study was a cross sectional design. Quantitative research methods were employed in the study which involved interviews by using a structured interview schedule. The schedule was pre-tested in a similar population to test for clarity, validity and reliability of the questions after which the tool was revised accordingly and finalized for use. Key respondents were ever married women of reproductive age (15-49) group. Though there is always variation by culture and setting which affects reports of perceived symptoms of ill-health in various ways, interview schedule-based information on reproductive morbidity is equally most useful for ascertaining perceived ill health as counter part of medical diagnosis<sup>86</sup>.

## **2.7 Sample size and Sampling**

For adequate sample size, it was calculated using StatCalc, Epi-Info Version 6, keeping expected proportion of untreated reproductive morbidity as 38 percent, though proportion of untreated reproductive morbidity in Das et al 1999 study<sup>87</sup> was 25.7percent, with an assumption that it would be one and half times more in this study area. By keeping worst expected result as 42.20percent, for 95 percent confidence interval, sample size came to 513. As cluster-sampling method was used, keeping the design effect two, the sample size was doubled and data was collected from 1026. Also to minimize the cluster effect, 45 clusters were selected. Sampling unit of this study was a household, and an average woman to household ratio was nearly about 1.25 in slum area of Rajkot Corporation. In total 826 households were interviewed. From these houses, 100 percent response rate was received. 1046 eligible women were selected for interview. Demographic and other characteristics are described in next analysis section.

## **2.8 Sample Selection**

Two stage sampling procedure was adopted. In first stage, 45 clusters out of 232 enlisted notified and un-notified slum pockets were randomly selected. Second stage selection included probability proportional to size (PPS) sampling method from randomly selected clusters. So those slums which had large population size were representing more in number. Within each selected cluster, houses were selected by systematic random sampling method using the interval that obtained by total size of cluster divided by sample size which required from that particular cluster. In corporation limits pulse polio campaign enlisted houses with mapping of each ward was used as sample frame. An eligibility criterion for household selection was; a house having at least one ever married woman of 15-24 years of age group.

## **2.9 Data collection tools**

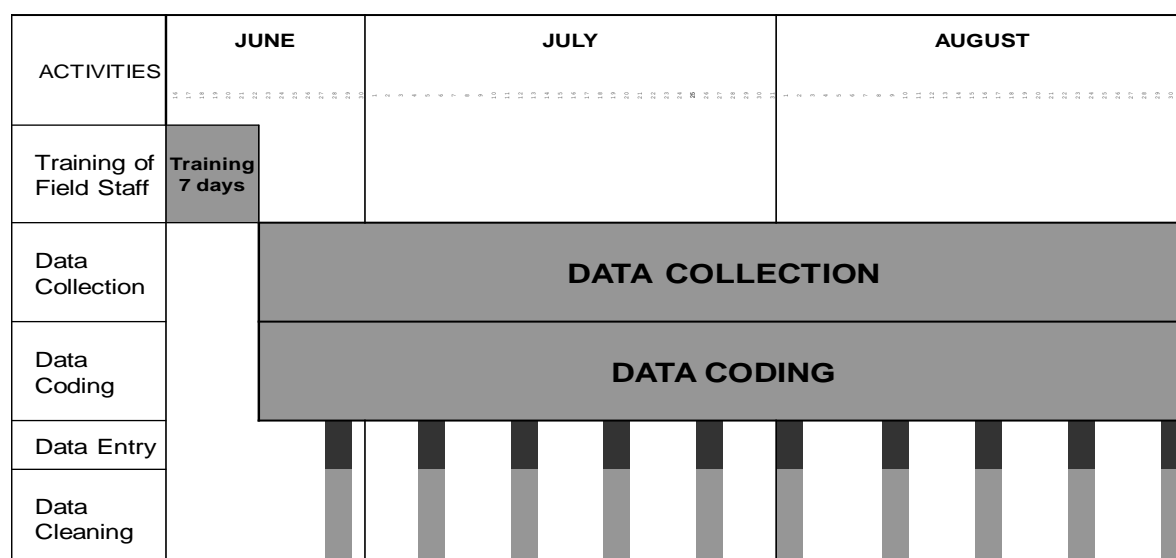
This study employed face to face interview method, using pre-tested structured interview schedule adopted from UNICEF<sup>88</sup>, National Family Health Survey -3 of India<sup>52</sup>, and Dr. Bhojar's study<sup>89</sup>. Translation in Gujarati and back translation to English was done to maintain consistency of interview schedule. Tool had four different parts. First part was about demographic characteristics. Second portion was about household details consisting socioeconomic variables, religion and caste. Third part had details about self reported reproductive morbidity, duration of suffering, health care seeking and various reasons for not seeking care, and fourth part contained information about maternity care received in last pregnancy. Secondary data, regarding the ward wise list of health facilities and maps, were collected from health department of Rajkot Municipal Corporation.

## **2.10 Process of Data Collections**

Field activity was carried out from 15<sup>th</sup> June to 31<sup>st</sup> August. First seven days were allotted for training the field workers by whom data was collected. Training was given by the

principal investigator. To complete one household; the average time was one hour including traveling time, formal talk and interview. Considering this estimated time, holidays and festivals, data collection was estimated to complete in 70 days, and was completed. Every activity was supervised by principal investigator. Data coding was done simultaneously. Data entry and data cleaning were done during weekends.

## Time frame for field activities



### 2.11 Data Analysis

Data entry and cleaning was done using EPI-Data version 3.1 programme. Data analysis was done using SPSS 15.0 version. A modified composite socio-economic status indicator from NFHS-2<sup>14</sup> “Standard of Living Index” (SLI) was created using information on type of house, ownership of house, source of drinking water, type of toilet facilities used, type of fuels used for cooking, source of light, number of earning members, family size, separate room for kitchen and number of persons sleeping per room. Data Reduction using the principal components and factor analysis was used to generate weighted scores from the above variables and normalized with a mean of zero and standard deviation of

one. The resulting scores were then summed up within the households, and score was used as continuous variable. First descriptive analysis was done to know the sample characteristics, after which statistical test was applied.

For purpose of statistical analysis, women were untreated for reproductive illness according to the operational definition and had skilled delivery care were compared with women who did not. Comparison within each group for background characteristics (individual, household, societal and health service) and intermediate characteristics (use of health services, child bearing pattern and health related behavior) was done and tested for statistical significance using  $\chi^2$  analysis, and *t* test was applied to compare continuous variables. As per concept note mediation effect of intermediate variables were also tested individually and significant results were highlighted in analysis. Finally logistic regression model was developed for background resources and intermediate resource variables, to assess the relationship. Binary logistic regression – stepwise enter method was applied. This study had interest in identifying the contribution, if any, of each set of factors to untreated reproductive morbidity and skilled delivery care. P value of less than 0.05 was considered significant association.

## **2.12 Quality Control**

For data collection, twelve community based volunteers (ASHA) were selected out of 262, according to their educational qualification, work experience in ‘Urban RCH-II Project’, familiarity about the area and scores gained in interview and written test. To avoid misunderstandings and omission of important population groups, close interaction with the community was necessary for which ASHA, from this project were recruited. After selection, seven days of indoor and outdoor training was given to them as per NFHS-3 training guideline for data collection<sup>52</sup>. Field manual was prepared for field

activities. To attain quality and high response rate, prior appointment was sought, and interview was conducted in respondent's place of residence. In a maximum of two households were visited. The interviewers were supervised by the researcher to ensure that they understood the purpose and order of the questions. During the interview, regular reports of interview to supervisor were established. All the interview schedule were checked every day, and errors were corrected promptly.

### **2.13 Ethical Consideration**

After obtaining clearance from Institutional Ethical Committee of Sree Chitra Tirunal Institute for Medical Sciences and Technology, Thiruvananthapuram, data collection was started. Simultaneously, permissions were taken from Department of Health, Rajkot Municipal Corporation and Department of Health, Government of Gujarat. Confidentiality of the study participants was maintained. Study subjects were included in the study only after taking written informed consent from them. Participation was totally voluntary, and women were permitted to withdraw from the interview at any time. All the quantitative data was coded and the coded data were entered into the data entry sheet and identities of the individuals were kept completely confidential.

### **2.14 Construction of Variables and operational definitions**

**Reproductive Morbidity:** - This study considered self reported reproductive morbidity status to measure the level of reproductive morbidity. As per WHO guideline and definitions<sup>90</sup>, symptoms were divided in five major groups; RTIs/STIs related, menstruation related, pregnancy related, contraception related and infertility. Name of symptoms was translated into the local language and given to participants or read out it during interview. Among the symptoms, if participant was reported any symptoms, was suffering from last two weeks preceding the time of survey, it considered as reproductive morbidity.

**Untreated Reproductive Morbidity:** - For given reproductive morbidity, treatment taken from any qualified medical practitioner and treatment not completed, **or** treatment taken from any unqualified practitioner, **or** did home remedy **or not** taking any treatment was considered as untreated reproductive morbidity.

**Skilled delivery care:** – Proportion of births attended by a skilled health worker in a health facility was considered as skilled delivery care.

**Skilled health worker :-** According to WHO definition “*an accredited health professional - such as a midwife, doctor or nurse - who has been educated and trained to proficiency in the skills needed to manage normal (uncomplicated) pregnancies, childbirth and the immediate postnatal period, and in the identification, management and referral of complications in women and newborns*”<sup>68</sup>.

**Unmet need for skilled delivery care:** - Percent of women, who did not use any health facility during delivery or delivered at home, was called unmet need for skilled delivery care.

**Qualified medical practitioner :-** Any medical practitioner who have registration of Allopathic System of Medicine or Indian System of Medicine, and OPD base family medicine practice in Rajkot City.

**Maternity health facility:** - Health facility which provides preventive, curative and rehabilitative services for any reproductive health problem of woman, considered as maternity health facility. It included Government hospitals, Urban Health Centres, NGO’s Hospitals, Private Maternity Home and Gynaecological Hospitals.

**Availability of health facility:** - Distance from household to nearest health facility, was measured using maps, and was calculated in meters.

### **2.15 Strength and limitations**

Limited time and resources restricted to adopt different designs. Self reported illnesses were considered as morbidity without any clinical diagnosis, might not be a strong estimation of morbidity. For socioeconomic conditions, SLI, a proxy indicator, was used; it might not give exact income level. All the information collected was self reported, and was assumed to be truthful. Though multiple interviewers lead inter-observer variations, it was minimized by dynamic training and field manual. All limitations of cross sectional designs were applicable.

Vigorous sampling procedure was adopted to enhance randomness. As interviewers were a part of their communities, so almost 100 percent responses were received even though, the information was sensitive. Slum scenario, in terms of migration, standard of living and illegality was almost same for every major city of this region, so result can be generalized. Personal perceptions and specific reasons cited for not utilization of health services can be weighted as some qualitative findings. Resonant frame of ICPD can work.

## Chapter – 3 Analysis

### 3.0 Introduction

With using methodology discussed in previous session, there were 1046 ever married women belong to reproductive age group (15-49 years) present in 826 households included in the study (kindly refer chapt -2 page on sample size). This session talks about different level of analysis.

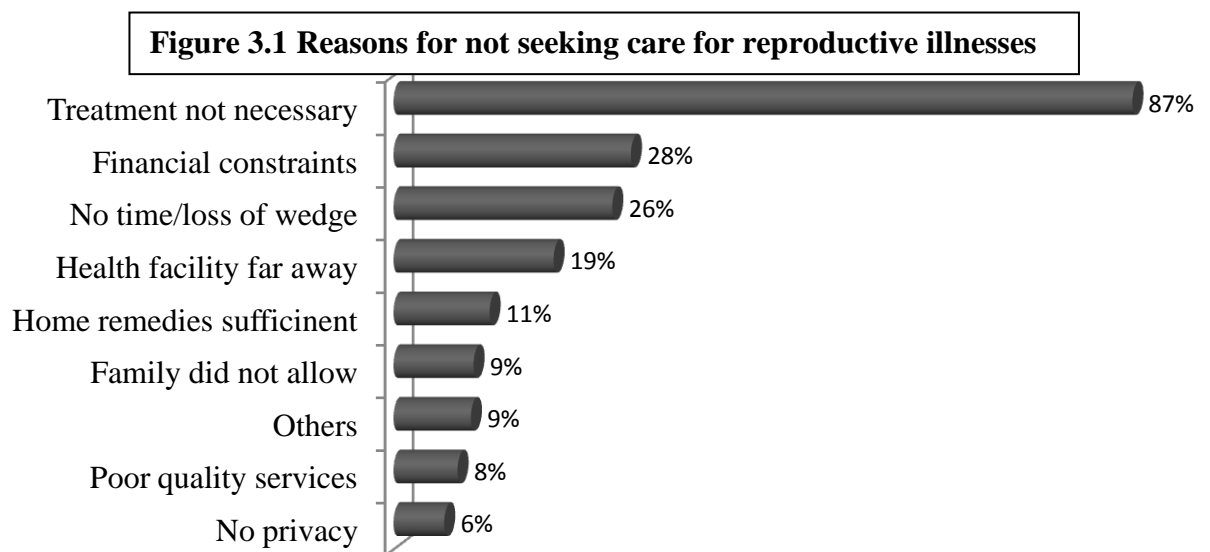
### 3.1 Participant Characteristics

The mean age of all respondents was 28 ( $\pm 7$ ) years and median age was 26 years. In all, 97 percent of the respondents were currently married and three percent were either divorced, separated or widow. In all, about 24 percent of the respondents were illiterates, while as 12 percent were able to read or write, 30 percent had completed primary education, 24 percent had completed secondary education, seven percent completed higher secondary education and three percent of the participants were either graduation or post graduates. 77 percent respondents were housewives (unpaid work), while nine percent did small business, four percent worked as servant maid, nine percent were private employee and two of them were government employee, which all were paid works. When data on religious affiliation was analyzed Majority of respondents were Hindus (77percent) followed by Muslims (22percent) and a few belonged to Christianity. The caste distribution showed 51 percent respondents belonged to OBCs, while 18 percent belonged to SCs\STs and 30 percent were from general caste. The Standard of Living Index, a proxy indicator of socioeconomic status, mean score was 23 ( $\pm 6$ ) ranging from 2 to 32, whereas median was 25.

Present study had two outcome variables, one was untreated reproductive morbidity and the other was skilled delivery care. Late us discuss about untreated reproductive morbidity.

### 3.2 Reproductive Morbidity

Among all the respondents, 57 percent were suffering from at least one reproductive morbidity in last fifteen days prior to the day of the data collection. Among them, majority (99 percent) were suffering from RTIs\STIs related symptoms, while two third (68 percent) of them had menstrual related problems. 11 percent of them reported pregnancy related problems while two percent reported infertility and contraception related problems. Among the respondents who had RTIs\STIs, the commonly reported symptoms included vaginal discharge, low backache and lower abdominal pain. Among the menstrual problems painful period was commonly reported. In the respondents, prevalence of RTIs\STIs morbidity was 56 percent, menstrual morbidity was 38 percent, pregnancy related morbidity was six percent and infertility was 0.9 percent.



It was also found that 46 percent women had these more than one year, eight percent reported the period between six to twelve month, one fourth reported one to six months and one fifth reported less than one month. On the all reported illness, 46 percent sought treatment from any health facility, 47 percent did not seek any treatment, while five percent took home remedies and two percent took self medication from a pharmacy.

There were multiple reasons cited for not seeking medical care from health facilities. There were presented in fig no. 3.1. Majority (87 percent) felt that ‘treatment was not necessary’, 28 percent mentioned financial constraints and six percent mentioned lack of time. According some respondents one head not seek treatment, because either ‘it was a discharge of dirt from the body’ or ‘it was heat inside the body’. They had also mentioned that ‘it is the destiny of women and they have to live with it’. Some mentioned about fear of medicine’s side effects.

Among those who sought treatment, 65 percent went to private sector, rest used government system. Among the women sought delayed care, 48 percent reported that they have waited more than one month before treatment while 52 percent sought within one month. When we explored the reasons for not using government facility, 68 percent mentioned long waiting time, 52 percent mentioned distance, 48 percent mentioned poor quality of services, 36 percent mentioned poor provider’s attitude, 17 percent said expensive, ten percent mentioned non-availability of doctors, seven percent mentioned non-availability of drugs, seven percent mentioned no privacy in care and five percent mentioned they did not know about the facilities. Even among those who received treatment, only one fourth of them had completed the treatment. The reasons mentioned for not completing mentioned were the treatment was not effective, fear of side effects, feeling better. More than one third were currently continuing the treatment and are expected to complete it.

The operational definition of untreated reproductive morbidity comprised of women did not seek any treatment, and women sought treatment but did not complete the course. As per data, 54 percent women of having any reproductive illness in last fifteen days did not seek any treatment. Among who sought 12 percent did not complete. This works out to be

66 percent of UTRM among the women having any illness in last fifteen days. This is about 37.19 percent of all interviewed.

### **3.3 Determinants of untreated reproductive morbidities**

Table 1 shows that mean age was lower in untreated reproductive morbidity group compared to treated reproductive morbidity group, so lower age had more untreated reproductive morbidity, and this difference was statistically significant. Proportion of untreated reproductive morbidity was higher in separated\widow\divorced women than married women. There was negligible difference in proportion of untreated reproductive morbidity among Hindu women and Muslim women. Caste affiliation showed a significant difference ( $P<0.001$ ) with proportion of untreated reproductive morbidity, SCs\STs had highest (83percent) proportion of untreated reproductive morbidity, compared to Other Backward Caste women (68percent) and general caste women (46percent). Mean SLI score was lower in those who have untreated morbidity than the treated morbidity group. This difference in mean SLI score was also statistically significant ( $P<0.001$ ). Women who were engaged in paid work had significant lower proportion of untreated reproductive morbidity than other counterpart ( $P<0.001$ ). Level of education also had a significant difference with seeking reproductive care. Women who had a higher level of education had lower untreated reproductive morbidity compare to those who were illiterate or just literate. Those who had been suffering from longer duration of reproductive illnesses had significant higher proportion of untreated reproductive morbidity than the shorter duration reproductive illnesses ( $P<0.001$ ). The untreated morbidity was higher (33 percent) among women who delayed in seeking care than who sought treatment in time (19 percent). It was also found that the untreated reproductive morbidity was higher among the women who are located farther than either

**Table 3.1 sample characteristics & untreated reproductive morbidity bivariate and**

Reproductive morbidity		Frequency (%)	UTRM (%)	Un-adjusted OR (95%CI)	Adjusted OR (95% CI)
<b>AGE</b>		28 (±6)	<b>27.8 (± 6.2)</b>	0.97* (0.94 - 0.99)	0.99 (0.94 - 1.05)
<b>MARITAL STATUS</b>	Married	1015 (97)	<b>374 (65.0)</b>	1	
	Others	31 (3.0)	<b>14 (82.4)</b>	2.50 (0.71 - 8.80)	
<b>RELEGION</b>	Hindu	804 (77.2)	<b>294 (64.8)</b>	1	
	Muslim	237 (22.7)	<b>94 (68.6)</b>	1.18 (0.78 - 1.78)	
<b>CASTE</b>	General	316 (30.2)	<b>71 (46.1)</b>	1	1
	Schedule Caste\Tribe	189 (18.1)	<b>107 (82.9)</b>	5.68*** (3.25 - 9.93)	3.92** (1.44 - 10.68)
	OBC	541 (51.7)	<b>211 (68.0)</b>	2.49*** (1.67 - 3.70)	1.15 (0.49 - 2.66)
<b>Standard of Living Index</b>		23 (±6)	<b>21.3 (± 7.4)</b>	0.89*** (0.87 - 0.92)	0.84*** (0.80 - 0.90)
<b>Occupation</b>	Unpaid work	811 (77.5)	<b>313 (70.4)</b>	1	1
	Paid work	235 (22.5)	<b>76 (51.0)</b>	2.29*** (1.56 - 3.35)	1.58 (0.69 - 3.59)
<b>Education</b>	Not able to read or write	255 (24.4)	<b>116 (77.3)</b>	1	1
	Able to read or write (Just literate)	125 (12.0)	<b>40 (66.7)</b>	0.58 (0.30 - 1.13)	0.47 (0.12 - 1.77)
	Primary (1-7)	311 (29.7)	<b>124 (65.6)</b>	0.55* (0.34 - 0.90)	0.68 (0.26 - 1.76)
	Secondary (8-10)	253 (24.2)	<b>85 (63.4)</b>	0.50* (0.30 - 0.85)	0.86 (0.29 - 2.52)
	Higher Secondary (11-12) and plus	102 (9.8)	<b>24 (40.0)</b>	0.19*** (0.10 - 0.37)	0.66 (0.17 - 2.48)
<b>Duration of Illness</b>	Less than one month	117 (19.7)	<b>62 (53.0)</b>	1	1
	One to six month	154 (26.0)	<b>89 (57.8)</b>	1.21 (0.74 - 1.97)	1.60 (0.49 - 5.23)
	Six month to one year	49 (8.3)	<b>32 (65.3)</b>	1.67 (0.83 - 3.33)	5.16* (1.00 - 26.60)
	More than one year	273 (46.0)	<b>206 (75.5)</b>	2.72*** (1.72 - 4.30)	14.44*** (3.66 - 56.87)
<b>Delayed seeking care</b>	Less than one month	142 (51.6)	<b>27 (19.0)</b>	1	1
	More than one month	133 (48.4)	<b>45 (33.8)</b>	2.17*** (1.25 - 3.78)	0.73 (0.25 - 2.08)
<b>Place of Last Delivery</b>	Institutional	457 (81.3)	<b>163 (64.7)</b>	1	
	Non institutional	105 (18.7)	<b>53 (82.8)</b>	2.63** (1.30 - 5.29)	
<b>Qualified Medical Practitioner</b>	Less than one kilometer	807 (77.2)	<b>333 (64.2)</b>	1	
	More than one kilometer	154 (16.0)	<b>51 (75.0)</b>	1.67 (0.94 - 2.98)	
<b>Maternity Health Facility</b>	Within two kilometers	569 (56.4)	<b>187 (55.7)</b>	1	1
	More than two kilometers	439 (43.6)	<b>199 (78.7)</b>	2.99*** (2.06 - 4.33)	2.67** (1.28 - 5.58)

P<0.05 \*, p<0.01 \*\*, p<0.001 \*\*\* UTRM- untreated reproductive morbidity, CI- confidence

maternity health services or qualified medical practitioner. It is also interesting to note that, the untreated reproductive morbidity was low among the women delivered in institution than home delivery.

Untreated reproductive morbidity was higher in those who have longer duration between onset of illnesses and first visit to health facility (33percent) than those who sought care early (19percent,  $P < 0.001$ ). The proportion of women with untreated morbidity was decreasing with decreasing distance to the health facility, and this difference was significant with distance of maternity health facility than distance of qualified medical practitioner. However, women with last delivery being conducted in health facility had lower proportion of untreated reproductive morbidity compare to those who had last delivery at home ( $p < 0.01$ ).

In table 1, the variables, which reflect background characteristics (age, occupation, education, SLI, caste and distance from maternity health facility) and intermediate characteristics (duration of illness and duration of delayed in seeking care), were put in a multiple logistic regression model to assess the effect of individual variables on untreated reproductive morbidity. This model, when adjusted with other variables, variables found to be significantly associated with an untreated reproductive morbidity were SLI, SC\ST caste group, distance of maternity health facility and duration of symptoms. The best predictor for untreated morbidity was the SLI score, followed by (strength of association) duration of illness, distance to nearest maternity health facility and caste. The SLI score had protective effect, i.e., lower untreated reproductive morbidity among women who had high SLI. Women from SC\ST groups had 3.9 times of having untreated reproductive morbidity compare to women from general caste. Women who live more than two km away from maternity health facility had 2.7 times of untreated reproductive morbidity than women who live less than two km away from maternity health facility. Women who

were suffering reproductive illness more than one year were 14 times more likely to be untreated than women who were suffering less than one month. The influence of age, occupation, education and delayed in seeking care upon untreated reproductive morbidities were attenuated and lost its significant association when effects of all covariates were controlled statistically.

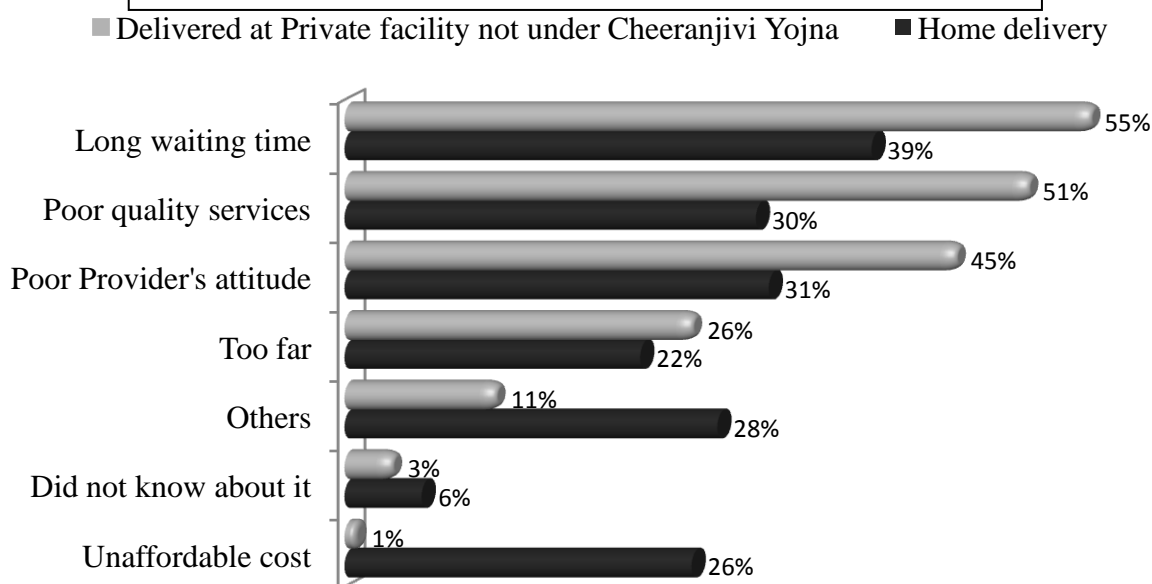
### **3.4 Extent of skilled delivery care**

The second outcome variable of the present study is extent of skilled delivery care. Among the total respondents (1046) 35 percent (562) women gave birth to children in last two years. The present section will include only 562 respondents for its analysis. Out of women delivered 30 percent had pregnancy for the first time, 36 percent had for second time, 17 percent had for third time and 17 percent women had for fourth or more than four times of pregnancy. Among them majority (92 percent) of them received at least one ANC care during their pregnancy. 81.5 percent had received three or more ANC care, while 7.7 percent had not received any ANC care. Those who received ANC care, 59 percent of them received it from private health care providers while 41 percent received from government health facility. Among the women who received three or more ANC care shifted from government facility to private health care providers either during second or third visit. About 25 percent of women delivered at government facility, while 46 percent delivered at private hospital. Among the women delivered in private hospital, 11 percent of women were availing the benefits of '*Cheeranjivi Yojna*' (a cashless delivery scheme of state government). 18 percent of women delivered at home. Among all women delivered last two years, 63 percent of last delivery assisted by doctors, and 19 percent by ANM\midwives. 18 percent delivery conducted by unskilled birth attendants. In that 14 percent were assisted by 'dai' and four percent by relatives, and two deliveries were not

assisted by anyone. When we inquired about the outcome of the last pregnancy, 95.6 percent were live births while 1.2 percent was still birth and 3.2 percent were aborted. Among the women delivered, half of them had normal delivery and one third required episiotomy, whereas 12 percent had caesarian section. After delivery or discharged from health facility about half of them not received PNC care, while only five percent received three or more PNC care. Among those who received PNC care, three fourth had received from private health care providers, while one fifth had received from government facility. There were also a few (four women) received care at home.

When we explored the reasons for delivery at home in last pregnancy not using government facility, 39 percent mentioned long waiting time, 30 percent said poor quality services, 31 percent reported poor provider’s attitude, 22 percent mentioned distance of health facility, 6 percent reported that they are not aware about government facility, 26 percent said unaffordable cost and 28 percent stated other reasons (Figure 3.2).

**Figure 3.2 Reasons for not using government health facility**



There were also other reasons mentioned by women related to cultural practices, norms and beliefs. Many reported that there was no time to go hospital because they were not

decided. Some perceived ‘child bearing is normal’ and no need to go to hospital. Few reported that the decision on delivery was not made by them but they were influenced by mother in-law. Availability of ‘dai’ was a reason for not using the facility. There was also perception about ‘children getting change in the hospital setting’.

Women, who delivered at private health facility and not availed the ‘Cheeranjivi Yojna’ benefits, stated a number of reasons for not using government health facilities. 55 percent of them cited long waiting time as a reason, 51 percent reported poor quality of services, 45 percent cited poor provider’s attitude as a reason, 26 percent distance as a reason, and few said they did not know about government facility and a few mentioned unaffordable cost as a reason. There were women who reported that they had more faith in private care, while one of them cited that relatives were not allowed in government hospital was a reason for preferring private hospital. A few women stated that usually women admitted in government hospital die during delivery. In some cases husband was not willing to deliver her in government hospital.

Questions on the social scheme were asked. Only one fourth of pregnant women were aware about the ‘Cheeranjivi Yojna’ at the time of delivery, but only 11 percent of pregnant women availed the benefit of the scheme. 16 percent of pregnant women availed supplementary nutrition from ‘*Anganwadi*’ centre under ICDS, scheme.

However unmet need for skilled delivery care was 18.68 percent (105) among the pregnant women.

### **3.5 Determinants of skilled delivery care**

In table – 2 mean age of women having skilled attendant during delivery was same as women without skilled attendant during delivery. On the other hand education showed a significant difference with seeking of skilled care during delivery. Women who had

**Table 2 sample characteristics & skilled care at delivery bivariate and multivariate**

Variables for Maternity care		Frequency (%)	Institutional Delivery (%)	Unadjusted OR(95%CI)	Adjusted OR(95% CI)
<b>AGE</b>		28 (±6)	<b>25.4 (± 3.9)</b>	1.00 (0.95 - 1.06)	0.95 (0.88- 1.03)
<b>RELIGION</b>	Hindu	804 (77.2)	<b>354 (80.4)</b>	1	
	Muslim	237 (22.7)	<b>111 (84.7)</b>	0.74 (0.43 - 1.26)	
<b>CASTE</b>	General	316 (30.2)	<b>160 (92.0)</b>	1	1
	Schedule Caste\Tribe	189 (18.1)	<b>77 (75.5)</b>	3.71*** (1.82 - 7.53)	2.18 (0.95 - 4.98)
	OBC	541 (51.7)	<b>220 (76.9)</b>	3.42*** (1.86 - 6.32)	2.11* (1.04 - 4.25)
<b>Standard of Living Index</b>		23 (±6)	<b>23.1 (± 6.5)</b>	0.88*** (0.86 - 0.91)	0.94*** (0.90 - 0.97)
<b>Occupation</b>	Unpaid work	811 (77.5)	<b>385 (81.2)</b>	1	1
	Paid work	235 (22.5)	<b>72 (81.8)</b>	1.04 (0.57 - 1.87)	1.33 (0.61 - 2.90)
<b>Education</b>	Not able to read or write	255 (24.4)	<b>82 (62.6)</b>	1	1
	Able to read or write (Just literate)	125 (12.0)	<b>58 (82.9)</b>	0.34** (0.16 - 0.70)	0.40* (0.16 - 0.96)
	Primary (1-7)	311 (29.7)	<b>141 (83.4)</b>	0.33*** (0.19 - 0.56)	0.55 (0.28 - 1.06)
	Secondary (8-10)	253 (24.2)	<b>122 (90.4)</b>	0.17*** (0.09 - 0.34)	0.44* (0.20 - 0.97)
	Higher Secondary (11-12) and Plus	102 (9.8)	<b>54 (94.7)</b>	0.09*** (0.02 - 0.31)	0.25* (0.04 - 0.82)
<b>Conceived:</b>	First	166 (29.5)	<b>151 (91.0)</b>	1	1
	Second	204 (36.3)	<b>164 (80.4)</b>	2.45** (1.30 - 4.62)	2.28* (1.08 - 4.84)
	Third	96 (17.1)	<b>76 (79.2)</b>	2.64** (1.28 - 5.46)	1.49 (0.61 - 3.67)
	Fourth or more	96 (17.1)	<b>66 (68.8)</b>	4.57*** (2.30 - 9.06)	1.32 (0.51 - 3.45)
	Not at all	43 (7.7)	<b>12 (27.9)</b>	1	1
<b>Antenatal Care Received</b>	Once	28 (5.0)	<b>17 (60.7)</b>	0.25*** (0.09 - 0.68)	0.22* (0.06 - 0.74)
	Twice	33 (5.9)	<b>21 (63.6)</b>	0.22*** (0.08 - 0.58)	0.20** (0.06 - 0.62)
	Thrice or more	458 (81.5)	<b>407 (88.9)</b>	0.04*** (0.02 - 0.10)	0.06*** (0.02 - 0.15)
<b>Place from ANC received</b>	Government Health Facility	215 (41.5)	<b>175 (81.4)</b>	1	
	Private Health Facility	304 (58.4)	<b>270 (88.8)</b>	0.55** (0.33 - 0.90)	
<b>Maternity Health Facility</b>	Less than two kilometers	569 (56.4)	<b>300 (88.2)</b>	1	1
	Two or more than two kilometers	439 (43.6)	<b>152 (70.0)</b>	3.20*** (2.06 - 4.97)	2.59*** (1.53 - 4.37)

P<0.05 \*, p<0.01 \*\*, p<0.001 \*\*\* CI- confidence Interval

Higher education had a higher proportion of deliveries attended by skilled personnel compared to those with illiterate (62percent) or those who just literate (82percent) ( $p < 0.001$ ).

Women from Muslim religion (84percent) had higher institutional delivery compared to women from Hindu religion (80percent), but it was not statistically significant. Women from general caste (92percent) had significant higher proportion of institutional delivery compared to women from SC\ST (75percent) and OBCs (77percent) ( $p < 0.001$ ). Mean score of SLI in women having institutional delivery was significantly higher than in women not having institutional delivery ( $p < 0.001$ ). The proportion of skilled delivery care and unskilled delivery care were almost same among women who were paid worker and unpaid workers. The proportion of women with skilled delivery care was also seen to decrease significantly with increasing parity which had institutional delivery care from 91percent among women with first delivery to 68percent among those with fourth or higher that fourth delivery ( $p < 0.001$ ). The proportion of institutional delivery was seen to increase significantly with increasing in number of ANC care received ( $p < 0.001$ ). Women who had their ANC care from private health facility were more likely to be delivered in institution compared to those who received ANC care from government facility ( $p < 0.05$ ). The proportion of women with institutional delivery was also seen to decrease significantly with increasing distance to the maternity health facility which provide delivery care from 88 percent among women residing within 2 km of a maternity health facility to 70 percent among those residing more than 2 km from a maternity health facility ( $p < 0.001$ ).

In table 2, the variables, which reflect background characteristics (age, occupation, education, SLI, caste and distance from maternity health facility) and intermediate

characteristics (number of ANC care received and number of pregnancy), were regressed to a multiple logistic regression model to assess the effects of individual variables on use of health facility for delivery care. Using this model, adjusted with other variables, the variables established significant association with health facility preference was SLI, OBC caste group, distance of maternity health facility, education, number of ANC care received and number of pregnancies. Among them, SLI, number of ANC care and nearer to maternity health facility were seen to have stronger influence on the choice of place of delivery care. However, education, caste and number of delivery were also seen to have some influence on choice of delivery care.

## Chapter – 4 Discussions

### 4.1 Unmet need for care

Previous chapter on analysis presented some interested findings. The results in the last chapter confirm the impact of background characteristics and intermediate characteristics on UTRM and skilled delivery care. This study investigated potentially modifiable factors like socioeconomic condition; health related behavior and health service related factors for treatment seeking for reproductive morbidity and skilled care at delivery (concept note chept 2). Since India has a high burden of reproductive morbidity and unskilled care at delivery, and also large proportion this morbidity has been untreated, however this have been documented as risk factors for adverse health outcomes of women<sup>91</sup>.

### 4.2 Untreated Reproductive Morbidities

The prevalence of reproductive morbidity in this sample, at 57 percent, was in the range of previous findings for other populations in India<sup>38, 36, 38, 39</sup>. Despite the fact that, reproductive morbidity has the social burdens which has an impact on the quality of the lives of women, 66 percent of women with reproductive morbidity in this sample were being untreated. This finding was in argument with many of the studies<sup>23, 39, 42, and 40</sup>. Therefore, it was worth exploring the reasons for not seeking care.

In bivariate analysis, higher age associated with seeking care in this study. It was documented that reproductive illnesses were more with higher age, could be a reason. The other way, as elder women have somewhat more independent and being aware of surrounding health facility, seek care. Widowed\divorced\separated had higher proportion of UTRM than married because they were socially excluded and stigmatized because reproductive illnesses more being labeled as sexual infection. However it was not statically significant due to small number of women responded in this category. Small

proportion of UTRM was higher in Muslim women, could be because of religiously it would be disgrace to discuss the reproductive illnesses with other 'male'.

The direction of the education effect was in the expected direction – increasing education leading to increased proportion of seeking care for reproductive illnesses. To some extent, education can improve the ability of women to produce health themselves through better lifestyles, more access to health knowledge, and as a result increasing in desire to seek care for illnesses<sup>92</sup>. Women with paid work had low UTRM, explanation might be that paid work gave women some control over financial resources and to some extent autonomy, gave them opportunity to seek care for their illnesses<sup>58</sup>.

One of the important finding of this study was that women from SC\ST and OBCs had more proportion of UTRM than general caste. Even after controlling for other determinants, being SC\ST had three and half time more possibility for not to treat their reproductive morbidity. In India social stratification is an important reason for inequality among different caste and tribal groups. This influences that SC\ST and OBCs were socially disadvantaged and marginalized, with overall low education and socioeconomic status that compromise the care seeking.

The standard of living index, a composite indicator of socioeconomic status of household developed by NFHS -II, even after adjusting for other factors, had a strong influence on access to health care services. Higher the score of SLI had low UTRM, and this was consistent with other studies<sup>60</sup>. It was very well established that that women with low socioeconomic status had high burden of reproductive illnesses<sup>28, 55</sup>, and due to low felt need, low recourses and cost component of care, women have also been lacking to use health services.

This study highlighted, duration of symptoms had significant association with seeking care for illnesses in this study. However, women with longer duration of symptoms, in

other way higher burden of illnesses, were more likely to be untreated; explanation might be less perception of these symptoms as ‘illnesses’<sup>42</sup>, also they might be habituated with them, or adapted as normalcy being as ‘woman’. However when controlled for other confounders, the influence of duration for seeking care with UTRM was lost its significant association, whereas duration of symptom had an association. Also women who sought care early due to their self perception of severity, were more likely to complete the treatment, whereas women who delayed in seeking care, were less likely to complete the treatment. The reasons for this were high cost of treatment or were feeling better or fear of side effect. In other way, because of delay in treatment, more pathological damaged had happened that require long time to heal.

It was documented that women who had unskilled attendant at delivery had high reproductive illness<sup>38, 41</sup>. The behavior of not using health facility was continuous in seeking care for reproductive illnesses; the women had significant high proportion of UTRM who delivered lastly by unskilled attendant in this study.

Physical accessibility has also been noted as a major influence on health-seeking behavior in many studies<sup>93, 94</sup>, because the distance involves cost, time, need someone to accompany, and also lost to follow-up. This study too found that health seeking behavior was high, where the distance of health facility from woman’s house was less. However it was significant by more marked in availability of maternity health facility than general health facility. Explanation, woman prefers female health providers for seeking care for reproductive illnesses and maternity health facilities more likely to have female providers than qualified health facilities. Even after adjusted with other variables, the influence of less distance from maternity health facility on seeking care for reproductive illnesses was substantial.

The present study also inquired the reasons for not seeking care. Overwhelming, majority of women reported ‘treatment not necessary’ could be concluded as ‘culture of silence’ prevents women for seeking care. The reasons like cost, physical accessibility, quality of health services and women’s autonomy are also important variables<sup>72</sup>. Moreover personal perceptions and health related behavior were overweighed than socioeconomic, societal and health service factors, when particular to seek care for reproductive illnesses.

A question on why services from government facilities were underutilized for reproductive illnesses compare to private facilities, in spite of that services are provided free of cost. Reasons given by respondent are categorized as (a) health service related that distance, long waiting time, unavailability of doctors and drug, and health service provider related that poor attitude and quality of services, (b) personal reasons that cost and knowledge about facility.

### **4.3 Maternal health care**

The present study found, high proportion of pregnant women received ANC care and institutional delivery compared to national level figures<sup>11</sup>. This could be due to high maternal education, low parity compare to national average, and availability of different types of health facilities like government, NGOs, private and corporation’s health facility in the study area.

It was reported, that younger women were more likely to deliver in institutions<sup>76, 77</sup>, explanation could be fear of first child bearing or it was also possible that the new generation with a higher proportion of women who have formal education have different perspectives on delivery care when compare to the older generations, however it was not significant in this study reasons could be skewed distribution of age in sample and even fertility pattern present in each age group.

The finding on an effect of education on maternal health care is conformity with the results of some of studies<sup>76, 77</sup>. Education is likely to enhance female autonomy so that women develop greater confidence and capabilities to make decisions regarding their own health and, which influence their health seeking behavior and make them to use health care<sup>95, 96</sup>.

Marginalized groups such as SC\ST\OBC tend to deliver at home compare to general caste. This may be due to low level of background resources compared to general caste. Further to tradition and culture prevent them from using health care facility. This influence was consistent even after controlling the other variables. Similar findings were reported by Thind A et al<sup>77</sup> and NFHS-3<sup>52</sup>. Other reason was in some area there were migrated laborers from these groups living in temporary settlements where the institutional care was not available. This study reported significant proportion of home delivery in OBCs compare to SCs\STs, possible explanation, OBCs require more documentary procedure to access the social schemes like CV, JSY compare to SCs\STs.

In this study, SLI, a composite indicator of socioeconomic status, found to be an important factor influencing women's decision on delivery. Higher SLI score reflects greater household wealth may enable women to seek care during pregnancy, with the costs of seeking care acting as a significant barrier to women from low SLI; this had been reported in several studies<sup>61, 78, 79, 96</sup>. Other way, also, low SLI group had lack of basic amenities, so their priority was to fulfill basic needs in which health, even women's health was came to last. Richer, often better-educated, women and their families may have a more modern world view, greater identification with the modern health care system, and greater ability and willingness to travel outside the community, all of which

may facilitate use of professional maternity care, and this rich-poor inequality in maternity care in urban area was reported<sup>97</sup>.

Women who had three or more than three ANC visits were more likely to deliver in institutions than those with fewer visits; this effect remained even after controlling the other factors. Similar findings were reported in other studies<sup>74, 75, and 98</sup>. This may be due to the fact that women with more ANC visits also show a higher satisfaction with the care quality and hence more likely to use health services for delivery, and it is also a fact that many ANC visits expose the women to more health education and counseling which both influence health service utilization. ANC could be first important entry point where women came into contact with health services, this experience received from health services was more likely to determine the place of delivery. However, seeking ANC care could be considered as positive health behavior which also reflected in delivery care. The present study suggested that more proportion of women, who had ANC from private health facility were delivered in institution than who had ANC from government health facility. It could be a reason that high SLI group had high preference of private health facility for ANC and similar group were ended their delivery at institution.

This study showed women with first pregnancy were more likely to deliver at health facility than women with more pregnancy; the result was consistent with other studies<sup>76, 77, 95, and 96</sup>. The possible explanation is that first delivery might be precious for them; the other way women who were pregnant with their first child were usually more likely to have difficulties during delivery compare to women of high parity. Also high parity women developed confidence and might tend to believe that modern health care was not as necessary due to the experience and knowledge accumulated from previous delivery;

this might be a result in low-parity women being more motivated to deliver in medical facilities than high-parity women.

Distance to the maternity health facility was another significant determinant for the delivery care. This was significant even after adjusted with other determinants. This was further worsened by non-availability of transport facilities and exorbitant transportation cost. Similar findings were reported by a number of researchers' previously<sup>73-75</sup>. With limited freedom of movement for women, the use of health services for delivery care was also compromised when distance was more.

Perception of quality of services is likely to contribute to the low rate of facility based delivery; this study also investigated some open-ended question for not using government health facility, to support quantitative analysis. Provider-client relationships had a major impact on the perception of the quality of services, and in turn the utilization of delivery services<sup>73</sup>. Rude and harassment behaviors of providers were known to be barriers to access and utilization<sup>93</sup>. However, cost, one of the most cited reasons, and also distance of health facility, reported by the women who had not delivered in institutions.

Cultural factors were also essential for health care seeking behavior for delivery in all communities<sup>99</sup>. In this study, especially the influence from decision-makers, self-perception and traditional views on delivery were highlighted to be also a dominant factors influence the place of delivery. Due to traditions elderly women prefer '*dai*' because of their familiarity with culture, norms and they are also located closely and comfortable to interact.

The social schemes, directed towards the better care and counseling without direct cost during pregnancy and delivery, had not reached to the women of slums. Under ICDS, supplementary nutrition and health check up was provided to pregnant women, and under '*Cheeranjivi Yojna*', women from below poverty line were benefitted for cashless

delivery at private institution. However, one could be a reason that functional capability of health services was deficient for targeting beneficiaries of these schemes. The other possible explanation was that many of them were migrant and living in illegal slums where administrative boundaries were likely to be.

## Chapter – 5 Conclusion and Recommendation

### 5.1 Conclusion

ICPD looked ‘reproductive health’ as a holistic concept and it was adopted by India. Even after fourteen years of ICPD, there are still untreated reproductive morbidity and non-institutional deliveries reported in urban area of the developed state of India. This made us to investigate the reasons for non utilization of reproductive health services. The present study had two outcome variables; untreated reproductive morbidity and skilled delivery care. Findings suggest that there is a still high untreated reproductive morbidity found among the half of the urban slum population. The highlight of the study show, even today there are substantial portion of women suffer from RTIs\STIs, menstrual related problems, pregnancy related problems and a small proportion had fertility and contraception related illnesses. When we studied the reasons for untreated reproductive morbidity, socioeconomic conditions, societal factors and some personal characteristics like age, occupation, and education have emerged as reasons. This proves that, the utilization of reproductive health services is purely dependent on non-health factors or social determinants. To address this problem, we need to focus much on the social determinants rather than concentrating on medical interventions. It is also important to note that the deprived sections for society had higher proportion of untreated reproductive morbidity. This is further emphasizing the need for addressing the requirements of underprivileged. In spite of the launch of different programs such as ‘*Cheeranjivi Yojna*’ and ‘*Janani Surksha Yojan*’ still not addressed the needs of the people who actually need them. All the programs are generally provider centric and not addressing the perceived needs. When the study tries to find the reasons for under utilization of government health services, they were either inaccessible or longer queues, drugs or doctors were not

available and poor attitude and poor quality of care were emerged as reasons. This shows the gap between what is assumed as reproductive health need and what is perceived need of the beneficiaries. Even after the adoption of concepts like 'reproductive health' have not still addressing perceived need and they are still provider centric.

The scenario in the skilled delivery care is not different from untreated reproductive morbidity. Even for delivery care, household resources, social determinants such as socioeconomic conditions, caste, and education are influencing institutional delivery. This further affected by personal perception and belief such as fear of death in government institutions, changing of children and so on.

All the above findings are suggesting that the reproductive health still remain as a dream for some of the weaker sections of the societies. There is still a gap between what the real need is and what is provided. Studies like this give an idea that a detailed investigation in each one of the findings will help the policy makers to formulate the health plans based on community perceived need rather than service provider perceived need. Some of the positive findings such as the younger generation seeking care may be taken advantage with better care by giving training to personal. Attitude of provider always remained as a problem. Factor such as distance needs to be addressed with an appropriate intervention.

## **5.2 Recommendations**

Based on study finding, I would like to give following recommendations for effective access of health services.

- First Health Administration should intensify the IEC\BCC activities related to reproductive health education. That may include messages sensitizing the reproductive illness, information about availability of free health care facilities,

social schemes for pregnancy and free transportation for emergency care with specific reference to delivery care. It should also launch advocacy programme at community level to change the perception on the delivery care.

- Next the quality of care in government institutions should improve. The quality of care may be improved by providing clean environment, a good system to minimize waiting, a training programme for improving the attitude of service personnel without compromising their wellbeing.
- The next step is to minimize the cost burden to beneficiaries. In case of BPL scheme, the procedure to avail the facility and scheme may be simplified.
- An effective outreach service with mobile health may be introduced. This may address the problem related to distance and time which were barriers for utilization of service.
- An integrated slum development policy may be developed which were to address the social, economic and other basic needs. This may also regulate the slums in the city. Some issues may be addressed with appropriate land reforms and town planning schemes.

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# Annexure

## 1. CONSENT FROM

### ENGLISH VERSION

I am \_\_\_\_\_ [name of data collector] conducting interviews of married women like you for the study purpose of ‘Access to Reproductive Health Services in urban slum in Rajkot City’. I am conducting the interview on behalf of Dr. Miteshkumar N Bhanderi, a postgraduate student of Master of Public Health studying at Achutha Menon Centre for Health Science Studies, Sree Chitra Tirunal Institute for Medical Sciences and Technology in Trivandrum, Kerala. As a part of his MPH course requirement, he is conducting this study. His study objectives are His study objectives are to know, what are the reproductive health problems in married women of 15-49 years age group in slums of Rajkot, what do they usually do for pregnancy and reproductive disease related care, whether they are seeking care or not, if yes then from where, and if not what are the reasons and factors for not seeking care?

I would like to get some of the information regarding you and your health problems and basic facilities for your household. I will ask you some questions about your reproductive health, treatment-seeking practices during illness and the basic services you use. This interview will take about 30 minutes of your time.

While there is no direct benefit for you individually by this interview, but if you want to have any health related information then I will be glad to provide it or I can refer you to some appropriate health facilities. It is possible that the findings of the study will enhance scientific knowledge and will help to develop better health polices to help people like you.

The information you give will not be disclosed to anyone under any circumstances anywhere in the public at any time and kept confidential and will be used for research purposes only. Participation in this study is purely voluntary. You can choose to answer or not to answer any of the questions and stop answering questions any time you like.

If you have any queries or doubt please feel free to clarify those. I will try my level best to answer to any of your queries right now or in future as well. Further if you have any

queries then contact Dr.Miteshkumar Bhanderi, his number is 09825592784. In case you need any clarifications about his credentials or the study, you can also contact Dr. Kannan Srinivasan, associate professor in Achuta Menon Centre for Health Science Study or Dr. Anoop Kumar Thekkuveetil, Member-Secretary of the Institutional Ethical Committee at Sree Chitra Tirunal Institute for Medical Science and Technology, Trivandrum, his phone no is 0471-2520259.

I agree to participate in interview.

\_\_\_\_\_

Signature or thumb impression of the participant

If participant is unwilling to sign/give thumb impression, but willing to be interviewed, signature of independent witness (to consent) is being taken:

\_\_\_\_\_

Signature of witness

If the participant is minor (below 18 year age) then ask her about her guardian (whose age above 18 years age) from whom the consent can be taken for her to participate in this study.

## II- Interview Schedule

Part 1A: Individual Information: 2008

Date:- \_\_\_\_\_

Ward No. - \_\_\_\_ Cluster No. \_\_\_\_

HH No.: \_\_\_\_

Address:- \_\_\_\_\_

Line No.	Please tell me the names of ever married women in age 15-49 group, not guest	AGE (completed)	What is the current marital status of [name]?	What is the highest-level of education; [name] has at present?	What has been [name]'s main occupation in last year?
1.1	1.2	1.4	1.5	1.6	1.7
01					
02					
03					
04					

Marital Status: - 1. Currently married 2. Widowed 3. Divorced 4. Separated 5. Unmarried 6. Any other

Education: - 1. Able to read or write (Just literate) 2. Not able to read or write 3. Preschool 4. Primary (1-7) 5. Secondary (8-10)

6. Higher Secondary (11-12) 7. Graduation and plus

Occupation: - 1. Government Employee 2. Private Employee 3. Own Business 4. Maid Services 5. Daily Wagers 6. Students 7. Unemployed 8. Housework 9. Other (specify)

### Form 1B: Household Information –

<b>2</b>	<p><b>2.1 What is the religion of head of the household?</b> 1. Hindu 2. Muslim 3. Others <input style="float: right;" type="text"/></p> <p><b>2.2 What is the caste of head of the household?</b> 1. General 2. Scheduled Caste <input style="float: right;" type="text"/> 2. Scheduled Tribe 3. OBC 9. Don't know</p> <p><b>2.3 How many family members currently living in this house?</b> <input style="float: right;" type="text"/></p> <p><b>2.4 How many earning members are in your house?</b> <input style="float: right;" type="text"/></p>
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<b>3</b>	<b>3.1 What is the type of house?</b> 1. Pucca    2. Semi Pucca    3. Kachha <b>3.2 Do you own this house?</b> 1. Yes    2. No    9. Don't know <b>3.3 Do you have a separate room, which is used as kitchen?</b> 1. Yes    2. NO <b>3.4 How many rooms do you have in your house using As sleeping room other then kitchen?</b>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
<b>4</b>	<b>What is the main source of drinking water for members of your HH?</b> 1. Tap connection to House    2. Public tap 3. Tanker/truck    4. Tube well /Hand Pump 5. Well    6. Bottled water 7. Others	<input type="text"/>
<b>5</b>	<b>What is the type of toilet facility used by your house?</b> 1. Flush toilet that have sewage system on septic tank toilet 2. Pour flush (water seal) type toilet 3. Improved pit (e.g. VIP) toilet 4. Simple pit toilet 5. Pay and Use(Sullabh Sauchalaya) 6. Others 7. No toilet	<input type="text"/>
<b>6</b>	<b>What fuel do you usually use for cooking?</b> 1 Gas (LPG)    2. Kerosene    3. Fuel Wood 4. Animal-dug    5. Electricity    6. Coal 7. Others	<input type="text"/>
<b>7</b>	<b>What is the source of lighting in your house?</b> 1. Electricity    2. Kerosene/ gas /Oil    3. Others	<input type="text"/>
<b>8</b>	<b>Do you have BPL card?</b> 1. Yes    2. No    3. Any other    9. Don't know	<input type="text"/>

**Availability of Health Services (Information From Corporation's health branch)**

<b>20</b>	<b>Availability of Qualified health Practitioner/health facilities</b> 1. Within 500 miter distance 2. Within 1 kilometer distance 3. Within 2 kilometer distance 4. Within 3 or more than 3 kilometer distance
<b>21</b>	<b>Availability of Gynecologist/Maternity home/Urban RCH center/Trust/ Government health facility</b> 1. Within 500 miter distance 2. Within 1 kilometer distance 3. Within 2 kilometer distance 4. Within 3 or more than 3 kilometer distance



<b>10.7</b>	<b>From Where did you seek treatment?</b> 1.Zanana/Padmakubarba/ESIS hospital      2.Urban RCH Center 3.Government/Corporation Mobile dispensary 4. NGO/Trust hospital/ clinics                      5. Private Hospital 6. Private clinic    7. Others (specify)...		
<b>10.8</b>	<b>If 1, 2, 3 in 10.5 then, what was reason for not seeking treatment? (Multiple answers)</b> 1. Treatment not necessary, illness not serious 2. Home remedies sufficient 3. Medical treatment not appropriate for the illness 4. Financial constraints 5. No time/loss of wage 6. Family did not allow 7. Health facility far away 8. Poor quality services 9. No privacy 10. Others (specify).....		
<b>10.9</b>	<b>If 4-6 in 10.7 then, what was reason for not going to govt. facility? (Multiple answers)</b> 1. Did not know about it 2. Unavailability of drugs 3. Too far 4. Poor provider attitude 5. Unaffordable cost 6. Long waiting time 7. Unavailability of doctor 8. Poor quality services 9. No privacy in care 10. Others (specify).....		
<b>10.10</b>	<b>Did you complete the treatment?</b> 1. Yes 2. No		
<b>10.11</b>	<b>What the reason was for not completed the treatment?</b> 1- Cost unaffordable                      2- Not effective 3- Fear of side effects                      4. Feel better 5-Others (specify)		

### 11. Maternal Health Services:-

<b>11.01</b>	<b>Did any woman in this house deliver in the last two year? ( July 2006 to June 2008)</b> 1.Yes                      2.No		
<b>11.02</b>	<b>Line no</b>		
<b>11.03</b>	<b>How many times did you conceive?</b>		
<b>11.04</b>	<b>What was the outcome of that last pregnancy?</b> 1. Live birth    2. Still birth                      3. Abortion		<b>11</b>
<b>11.05</b>	<b>How many antenatal check-up did you have during your last pregnancy?</b> 1. Not at all                      2. Once 3. Twice                              4. 3 times or more		

	<b>Where did you receive antenatal care for this pregnancy?</b> 1. Zanana Hospital/Padmakubarba Hospital/ESIS hospital 2. Urban RCH Center 3. Government/Corporation Mobile dispensary 3. Anganwadi/ICDS center 4. Vaccination sessions by ANM 5. NGO/Trust hospital/clinics 6. Private hospital/private maternity home 7. Private Clinic 8. Home 9. Others (specify).....		
	<b>11.06</b> <b>1<sup>st</sup> Antenatal care</b>		
	<b>11.07</b> <b>2<sup>nd</sup> Antenatal care</b>		
	<b>11.08</b> <b>3<sup>rd</sup> Antenatal care</b>		
<b>11.09</b>	<b>Did you receive any supplementary nutrition from the anganwadi/ICDS centre during pregnancy?</b> 1        Yes                    2        No		
<b>11.10</b>	<b>Did you know about ‘Cheeranjivi Yojna’ at the time of your pregnancy?</b> 1. Yes            2 No		
<b>11.11</b>	<b>Where did you have your last delivery?</b> 1. Zanana/Padmakubarba/ESIS hospital 2. NGO/Trust hospital/clinics 3. Under ‘Cheeranjivi Youna’ in Private hospital/Private Maternity Home 4. Not under ‘Cheeranjivi Youna’ in Private hospital/Private Maternity Home 5. Home 6. Others (Specify) .....		
<b>11.12</b>	<b>What was the reason for not choosing govt. facility? (Multiple answers)</b> 1. Did not know about it 2. Not available 3. Too far 4. Poor provider attitude 5. Unaffordable cost 6. Long waiting time 7. Poor quality services 8. Take benefit from ‘Cheeranjivi Yojna’ 9. Others (specify).....		
<b>11.13</b>	<b>Who assisted you during your last delivery?</b> 1. Doctor        2. ANM/Nurse/midwife        3. Dai 4. Relatives/Friends    5. Other (specify) .....		
<b>11.14</b>	<b>What was the type of delivery?</b> 1. Normal                    2. Caesarian section 3. Blood transfusion was given 4. Other interventions        5. Episiotomy		

<b>11.15</b>	<b>How many postnatal checkups did you have?</b> 1. Not any    2. Once    3. Twice    4. Three or more		
	<b>Where did you receive post-natal care for this pregnancy?</b> 1. Zanana/Padmakuvarba/ESIS hospital 2. Urban RCH Center 3. Anganwadi/ICDS center 4. Government/Corporation Mobile dispensary 5. Vaccination sessions by ANM 6. NGO/Trust hospital/clinics 7. Private hospital/private maternity home 8. Private Clinic 9. Home 10. Others (specify) .....		
	<b>11.16</b> <b>1<sup>st</sup> Post-natal care</b> <b>11.17</b> <b>2<sup>nd</sup> Post-natal care</b> <b>11.18</b> <b>3<sup>rd</sup> Antenatal care</b>		
<b>11.19</b>	<b>Did you receive any benefit from ‘Cheeranjivi Yojna’?</b> 1. Yes            2. No            3. Any other (specify) .....	<b>1</b>	<b>1</b>

### Reproductive Morbidities

<p><b>1. RTI/STDs Morbidities</b></p> <p>1.1 Vaginal discharge</p> <p>1.2 Itching over vulva.</p> <p>1.3 Pain in lower Abdomen</p> <p>1.4 Low backache</p> <p>1.5 Boils, warts and ulcers.</p> <p>1.6 Pain during sexual intercourse</p> <p>1.7 Bleeding after sexual intercourse</p> <p>1.8 Swelling in the groin</p> <p>1.9 Frequent painful passage of urine.</p>	<p><b>2. Menstruation related</b></p> <p>2.1 No period</p> <p>2.2 Painful Periods</p> <p>2.3 Frequent periods</p> <p>2.4 Delayed Periods</p> <p>2.5 Prolonged bleeding</p> <p>2.6 Excessive Bleeding</p> <p>2.7 Continuous Bleeding</p> <p>2.8 Scanty bleeding</p> <p>2.9 Inter menstrual Bleeding</p> <p>2.10 Any other menstrual problem</p>
<p><b>3 Pregnancy/Delivery/Abortion related</b></p> <p>3.1 Fever</p> <p>3.2 Excessive vomiting, Breathlessness</p> <p>3.3 Convulsion</p> <p>3.4 Swelling of the legs, face and body</p> <p>3.5 Diabetes</p> <p>3.6 Hypertension</p> <p>3.7 Excessive fatigue</p> <p>3.8 Any vaginal bleeding</p> <p>3.9 After delivery massive vaginal bleeding</p> <p>3.10 After delivery very high fever</p> <p>3.11 Uterine Prolepses</p>	<p><b>4. Contraception Related</b></p> <p>4.1 Nausea/Vomiting</p> <p>4.2 Weight gain</p> <p>4.3 Failure</p> <p>4.4 Spotting</p> <p>4.5 Expulsion</p> <p>4.6 Bleeding</p> <p>4.7 Others</p>
<p><b>5. Infertility</b></p>	<p><b>6. Others(specify)</b></p>