



# POVERTY PROFILE OF ZIQITZA'S CLIENTS

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## ABSTRACT

A report commissioned by Acumen to understand the poverty profile of ZHL's clients in the states of Odisha and Punjab using Progress out of Poverty Index® using a call centre setting

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## CONTRIBUTIONS AND ACKNOWLEDGEMENTS

*We are deeply appreciative of Ziqitza Healthcare Private Limited's foresight and leadership in seeing that poverty measurement is an important part of understanding whether or not they are fulfilling their mission. They have been willing and helpful partners at every step along the five-month long effort behind the study. To the credit of all the stakeholders at Ziqitza that we worked with, and in particular, the persevering and zealous staff from ZHL's Punjab and Odisha offices, we at Acumen and GFI are grateful for your time and energy in engaging in very forthright discussions with us and teaching us all along the journey.*

*We would also like to thank Jayesh Jain, GFI's consultant for this project for his valuable contributions towards the project objectives.*



# Executive Summary

Healthcare is one of the most critical areas of concern for any developing country. India currently ranks among the bottom five countries with the lowest public health spending by percentage of GDP, though spending has increased in recent years at the state level, especially in areas such as emergency medical transportation, the subject of this study. Subsidized transportation services with trained medical staff on board are a key link in the health system in India: 69% of the population in India lives below the \$2 a day per person World Bank poverty line, and the majority of the poor are living in rural areas without convenient access to adequate emergency medical facilities.

Ziqitza Health Care Pvt Ltd (ZHL) provides free-of-cost emergency transportation and medical services through state government partnerships across India, as well as private emergency transport services in eight cities. Acumen, a non-profit social investing fund and early investor in ZHL, commissioned this report, conducted by Grameen Foundation India. The objectives were to measure poverty rates among ZHL's callers base, better understand what factors might drive the company's outreach to the poor (particularly poor women), and test a more cost-efficient method of measuring poverty levels through phone surveys.

The methodology for the study was built around the Progress out of Poverty Index- a simple, inexpensive, lean and statistically relevant tool developed by Grameen Foundation to help pro poor organizations measure poverty and gather other valuable customer-level insights. A dynamic sample of 1000 callers was surveyed in two of the states under which ZHL operates a 108 service: Punjab and Orissa, allowing an 85-95% confidence level in the results. These insights are further mapped against globally accepted international poverty lines as well as the National Tendulkar Line in India. This study also supported the testing of alternative methods of PPI data collection through a call centre set-up. The methodology was found to be successful with a marginal error rate of 2-3%.<sup>1</sup>

The study results show that the poor are using 108 in emergencies. The study profiled ZHL's client outreach levels at the National Tendulkar (NPL) at 200%<sup>2</sup> and \$2.50 World Bank poverty lines. In Punjab, 65% of ZHL's callers fall under NPL and 77% under \$2.50 line. In Orissa, 65% of the caller group falls under NPL and 78% under \$2.5 poverty line in Odisha.

While ZHL's performance in Punjab exceeds average poverty rates in the underlying population, performance in rural Odisha falls short of the underlying poverty incidence in the state. This has been attributed to the phased operational launch in the state where rural districts have only recently been covered by the company. With the commitment and focus of the ZHL management, positive changes are expected in ZHL outreach for rural Odisha in near future. In both urban Punjab and urban Orissa, ZHL's performance exceeds geographic averages by 5-14%. Reasons may be that in urban areas, wealthier populations tend to use private, fee based ambulance services. Even including the rural Orissa results, ZHL also has an impressive reach in harder-to-reach, rural areas of India, where state government marketing efforts such as village-level demos and radio advertisements are educating people about calling 108.

The study also aimed to explore relationships between poverty and gender, poverty and registered medical complaints and other additional client level insights. Of the total sample, 71% of the patients were female and for Punjab, poverty levels of female patients were significantly higher than that of

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<sup>1</sup> Refer to validation results for more detail



their male counterparts. In the same vein, of the total medical complaints registered, 43% of cases were pregnancy-related or related to maternal and child health. Of the 22 types of medical complaints captured in the sample for both states, the highest poverty concentrations were recorded for pregnancy and post natal cases. . Coordination efforts between ZHL and government schemes that support maternal and child health are the likely contributor to poorer women accessing 108 in higher numbers, demonstrating the potential for impact when successful partnerships are forged among several public and private players.<sup>3</sup>

This report is one of the first of its kind in the Indian healthcare sector that attempts to benchmark poverty for a provider like ZHL. While the company has proved that it has significant outreach to the poor, it would be great to see ZHL replicate this exercise for its operations in other states while also factoring in local challenges. Factors such as differences between how women and men access healthcare; lack of access to safe drinking water and sanitation (higher poverty rates were recorded for patients calling with diarrhoea); and how poverty levels correlate with other reasons for calling all warrant a much deeper dive into the social and economic dynamics at play among ZHL's callers.

The study team sincerely urges the ZHL team to carry on with its commitment to reach out to the underserved and to further its business intelligence with insights gathered through such undertakings.

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<sup>3</sup> Such as JSSK in Punjab (Janani Shishu Suraksha Yojna)<sup>3</sup> and JSY in Odisha (Janani Suraksha Yojna)<sup>3</sup>, government schemes targeted specifically towards pre/post natal care and pregnancy cases.

## Table of Contents

S No	CONTENTS	Page Number
1	<b>Introduction</b>	<b>5</b>
2	<b>Study Objectives</b>	<b>7</b>
3	<b>Sampling and methodology for the study</b>	<b>8</b>
4	<b>Validation exercise: Confirming accuracy of survey</b>	<b>13</b>
5	<b>Selection of Poverty Lines for the study</b>	<b>15</b>
6	<b>Poverty Profile Punjab- State and ZHL</b>	<b>16</b>
7	<b>Poverty Profile Odisha- State and ZHL</b>	<b>20</b>
8	<b>Why are people dialling 108?- An analysis of medical complaints</b>	<b>24</b>
9	<b>Gender analysis of the ZHL caller base</b>	<b>27</b>
10	<b>Female patients in ZHL caller base- An attempt to profile</b>	<b>30</b>
11	<b>Recommendations from the study</b>	<b>33</b>
12	<b>Specific guidelines for future PPI studies/implementation at ZHL</b>	<b>36</b>
<b>ANNEXURES</b>		
1	<b>ANNEX I: About the Progress out of Poverty Index</b>	<b>37</b>
2	<b>ANNEX II: What are the rupee values for Global Poverty Lines?</b>	<b>38</b>
3	<b>ANNEX III: International governments' expenditure on Healthcare</b>	<b>39</b>
4	<b>ANNEX IV: What is Universal Health Coverage?</b>	<b>40</b>
5	<b>ANNEX V: Poverty Lines for PPI in India</b>	<b>41</b>
6	<b>ANNEX VI: Mother and Child Healthcare indicators- Punjab and Odisha</b>	<b>42</b>
7	<b>ANNEX VII: List of complaints registered with sample sizes</b>	<b>43</b>

# Introduction

Healthcare in India has been a matter of great concern and a high priority issue for both the government and for the development sector alike. The health of the general population has been a key distinct issue for all of the five-year plans designed by the Planning Commission for India. This extended to the setting up of a High Level Expert Group (HLEG) to ensure Universal Health Coverage (UHC)<sup>4</sup> in October 2010.<sup>5</sup> The HLEG recommended that given the current funds available for healthcare, India will be able to provide equitable, accessible, and affordable health services to its citizens only through a strong Public-Private Partnership (PPP) model where delivery of certain services can be made available by contracted-in private medical facilities. While the focus has been on strengthening healthcare-related infrastructure, it is also very important for the sector to focus on productivity through effective and innovative interventions to improve the healthcare ecosystem and achieve global standards.<sup>6</sup>

The last decade has seen a shift in the way the government addresses the issue of healthcare in that the government has become more market-driven and has advocated for compressing public expenditure to reduce fiscal deficits. People have therefore been forced to choose between weak and efficient public services and expensive private care, or often forego care entirely except for in life-threatening situations—in such cases sliding into debt. Therefore, to increase the population’s resilience, it is very important for Public-Private Partnerships in healthcare to thrive where the private sector can help achieve shared public health outcomes.

Globally, health is a major development issue for every country, albeit around different issues. While developing countries are still struggling with high infant and Maternal Mortality Rates, developed countries on the other hand are looking to ensure access to affordable health insurance and medical plans irrespective of different citizen income groups. The fact that the UN Millenium Development Goals have 3 of the 8 MDGs dedicated exclusively to health shows the pertinence of this issue and its relevance globally.

An ideal healthcare system should look to fulfil the following four criteria (Srinivasan, 2013)<sup>7</sup>:

- a. Universal access to healthcare at an adequate level and without excessive burden
- b. Fair distribution of financial costs for access
- c. Training providers for competitively delivering healthcare—especially through PPP models
- d. Special attention to vulnerable groups such as women, children, disabled and aged

Keeping the above in view, organizations like Ziqitza Health care Private Limited (ZHL) address a very important problem in the healthcare framework in India: access to quality medical services.

EMERGENCY  
MEDICAL  
SERVICES  
ARE A  
CRITICAL  
NEED

... because  
currently 30% of  
emergency patients  
in India die before  
they reach a  
hospital, and 80% do  
not receive medical  
care within one hour  
of the incident

<sup>4</sup> Refer to Annex IV for definition

<sup>5</sup> Purpose of setting up the HLEG- Ensuring equitable access for all Indian citizens, resident in any part of the country, regardless of income level, social status, gender, caste, or religion, to affordable, accountable, appropriate health services of assured quality (promotive, preventive, curative, and rehabilitative) as well as public health services addressing the wider determinants of health delivered to individuals and populations, with the government being the guarantor and enabler, although not necessarily the only provider, of health and related services

<sup>6</sup> Please refer to Annex III for global comparison on healthcare spending by governments

<sup>7</sup> Healthcare in India- Vision 2020, Planning Commission



**ZHL** provides free-of-cost emergency transportation and emergency medical services (EMS) across five states in India through partnerships with state governments, as well as private services in five states. The PPP model is operated through the 108 service (free) and the private service model through 1298 (cost to customer)<sup>8</sup>. The company's vision is to assist in saving human lives by providing a leading network of fully equipped Advanced and Basic Life Support Ambulances across the developing world. Their vision reflects in their commitment to meet international standards for quality in EMS and be accessible to everyone regardless of income. ZHL's values lie in being ethical, being transparent, and fostering teamwork.

Over the past five years, the company has received 2.5 million phone calls for its services and averages 3,52,524 calls per month across the country. The high demand for the 108 service studied in Punjab and Odisha as part of this paper shows the impact the organization is having in making sure that patients reach medical services as a matter of right and not as a result of economic status.

While many schemes have been introduced by the government of India to close the gap in services for the poor especially, access still remains an important issue.

The following report is an endeavour to understand how a Public Private Partnership model such as the one that exists between ZHL and state governments like those of Punjab and Odisha help provide quick and quality services to the poor where financial costs are fairly distributed to ensure sustainability for all stakeholders involved.

**Acumen** has been an investor in ZHL since 2008 and commissioned the study to understand who is accessing ZHL's services – in particular, they wanted to understand the poverty rates among ZHL's callers and whether the free-of-cost service is able to provide EMT care where poor people likely had no quality options prior to 108. Acumen chose Grameen Foundation (GF) to run the study given GF's experience in using simplified surveys to study poverty levels. The study was funded through a grant from the Aspen Network for Development Entrepreneurs for the Lean Data Initiative, an Acumen-led effort to test more cost-efficient means of collecting impact data.

**Grameen Foundation India** is a social business and a wholly owned subsidiary of Grameen Foundation that catalyses double bottom line approaches to serving the poor and the poorest. Its mission is to enable the poor, especially the poorest, to move out of poverty by strengthening institutions and businesses that serve them. Grameen Foundation India aims to achieve this by enabling the growth of truly double bottom line entities that use quantitative and verifiable measures of social results and by demonstrating new business models for serving the Index<sup>®</sup> that can assist a pro-poor organization in understanding their poverty outreach at a given point in time, as well as measure change in poverty levels of their clients/beneficiaries between different periods of time.<sup>9</sup> The PPI is a lean way of collecting statistically relevant data that provides insights into the poverty status of a population. For India, the tool has been derived from the NSSO consumption expenditure survey that is conducted every 4-5 years. With every new round of NSSO survey, PPI is also updated. The current version of the tool used for this report is based on Round 66 of the NSSO survey.<sup>10</sup>

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<sup>8</sup> Patients and their families dial these toll free numbers to avail ambulance services. The numbers connect them to a ZHL call center that uses state of art technology to provide services in the shortest time possible.

<sup>9</sup> This is possible only in cases where the portfolio is constant. For ZHL the portfolio is dynamic and therefore it is possible for us to only profile clients with respect to their poverty levels at a given point of time

<sup>10</sup> Please refer to Annex I for details around the PPI. Visit [progressoutofpoverty.org](http://progressoutofpoverty.org) for more details.

## Study Objectives

Keeping in mind the interest of the participating organizations in poverty measurement of ZHL's clients, the project looked at achieving the following objectives:

1. Understanding ZHL's poverty outreach in the states of Punjab and Odisha. This involved the administration of the PPI to determine the poverty profile for selected poverty lines for the project.
2. Examine the relationship between the household poverty level and healthcare needs.
3. Examine the relationship between the regional poverty level and concentration of 108 calls.
4. Generate a report that helps ZHL to advocate its work and outreach to the poor. Use of a statistically sound tool like the PPI will not only measure poverty levels at the caller base for different regions but also help benchmark performance in the future.
5. Train ZHL staff to administer the PPI independently in the future and produce relevant reports that can be shared with external stakeholders like the state governments.
6. Administer the PPI through an alternative channel, such as a call center, and record the accuracy of the methodology. The PPI has been conventionally administered physically at the doorstep of the respondent. This will be the first time the PPI will be applied in a call center setting and tested for accuracy.

### POVERTY OUTREACH

...is the outreach of a program to the poor in a given portfolio and/or region. It can be measured in different ways using dimensions such as poverty concentration (poverty rate), scale (absolute number of poor) and penetration (percentage of poor reached in the underlying population).



## Sampling and methodology for the study

The Indian examples of PPI use have mostly seen the tool administered physically where the enumerators interact with the clients at their households to collect responses for the 10 PPI questions. Such interactions allow for verification of responses and therefore the accuracy levels are very high.

ZHL presented us with a very unique case. Not only were we looking at administering the PPI in a call center setting, the dynamic nature of ZHL’s client base<sup>11</sup> warranted a customized sampling methodology. This is a new methodology that we tested using an out-of-home PPI administration process. GFI ensured that the data collection exercise is followed by a strong validation exercise.

The following steps were taken to arrive at the best sample for the study:

1. For each of the regions of Punjab and Odisha, GFI studied the November 2013 call records. Sample selection for the study was basis the following observations:
  - a. For Odisha, 82% of the calls were from rural areas.
  - b. For Punjab, 60% of calls were from urban areas and 40% from rural.
2. With the above in mind, 3 populations were considered for the study
  - a. Punjab urban
  - b. Punjab rural
  - c. Odisha; we did not split rural and urban under the assumption both client bases would be similar given the overwhelming number of rural calls.
3. In order to keep the findings as statistically relevant as possible (95% confidence level with +/-5% error rate), it was suggested that the sample size should be as follows:

Population	Punjab sample	Odisha sample
○ Punjab Rural	550	275
○ Punjab Urban		
○ Odisha All		

4. The PPI was administered to clients as part of the feedback calls made by ZHL call center executives in the week following the date when the service was availed. The feedback calls are part of regular ZHL practice and involve questions around client satisfaction and checking for possible cases of fraud and corruption among ZHL employees. The PPI questions were strategically added to the client satisfaction survey to ensure that familiarity with ZHL’s services leads to a congenial situation for them to engage in a longer survey. After the first week, each call averaged at 4 to 5 minutes in all.

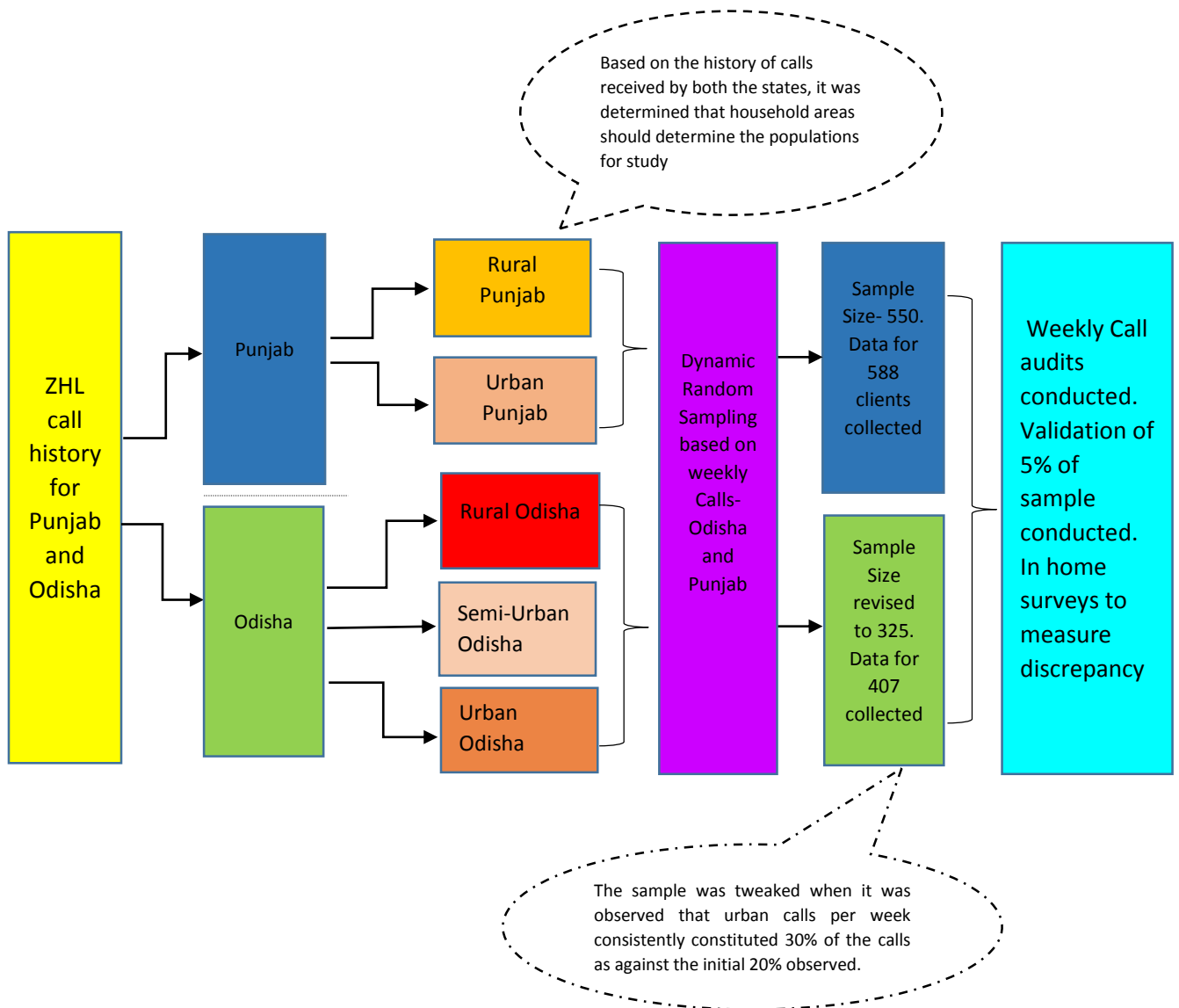
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<sup>11</sup> ZHL client base consists of patients who have used the 108 service. This client base is recorded as part of the internal MIS developed by ZHL and the only repeat contact is through the feedback calls. With the caller base changing every day, the methodology had to factor in a sampling technique that would fit in well with ZHL’s operations.

5. A **dynamic sampling methodology** was adopted using the following process:
  - a. Based on the experience of the call center executives and GFI staff members, it was determined that the entire data collection exercise would take roughly 6 weeks.
  - b. Every week the call logs for the preceding seven days were sent to GFI. This data was cleaned and segregated by household area: rural, semi-urban, and urban for both the states. Clients were randomly selected for each of the states from the cohort of calls and sent to ZHL staff in a customized format with 100 client details.<sup>12</sup> If within the week the data for 100 calls was exhausted, a new set was sent from the same cohort of calls.
6. The completed PPI questionnaires from each week were sent back to GFI. A quick bootstrap analysis was performed on the data collected by the 4<sup>th</sup> week to understand the poverty profile of clients. It was seen that the poverty profile of urban areas in Odisha was distinctly different from rural areas and the number of calls consistently constituted 30% of the total call logs unlike the initial cohort studied before data collection commenced. This difference can be attributed to phase wise expansion of ZHL's operations in Odisha. ***We therefore increased the sample size to 325 from the original 275 for Odisha to treat urban as a separate population. The final sample distribution and confidence levels are as follows:***

Population	Sample Size	Confidence Interval
○ Punjab Rural	295	95%
○ Punjab Urban	293	95%
○ Odisha Rural	203	95%
○ Odisha Semi Urban	103	85%
○ Odisha Urban	101	85%

<sup>12</sup> The template was created as an addition to the existing client satisfaction survey conducted by ZHL. The PPI questions followed the client feedback survey and were collected in an excel based survey questionnaire.



### Extrapolation:

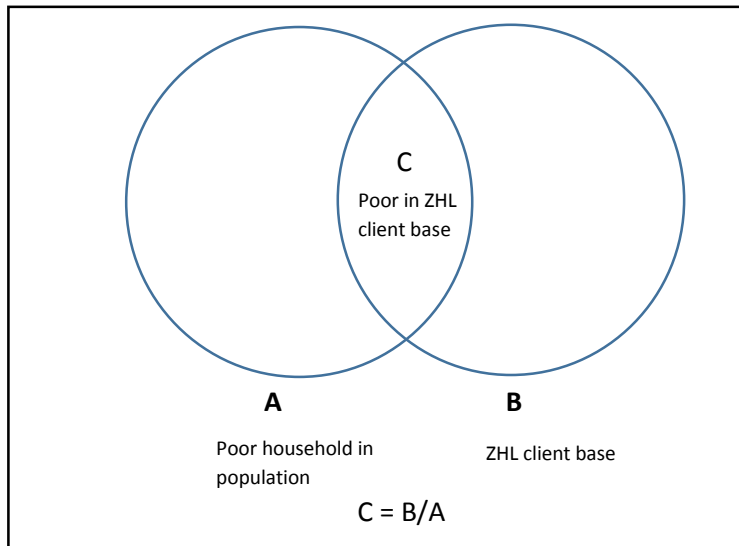
The findings from the study are representative of all ZHL clients from rural Punjab, urban Punjab, rural Odisha, urban Odisha and both Punjab & Odisha together. It will not be representative of ZHL's national client base.

### Measurement techniques:

Alongside the PPI, other variables that have been included in the study are: reasons for which the client is using the 108 service, the client's gender, and household area (rural vs. urban).

### Poverty Concentration:

This is an important terminology with respect to poverty measurement. The term refers to the concentration of the poor for a given poverty line in a portfolio as illustrated in the following diagram:



### Training:

GFI trained ZHL staff at both the locations on using the PPI, administering the survey over calls, and conducting analyses of the collected data. The training also included modules on field pilot exercises and troubleshooting where challenges arise.

### Data Analysis:

A data entry template was developed for the study and allowed the user to derive the following:

1. Calculation of poverty likelihood for selected poverty lines
2. Concentration of poverty for different poverty lines for Odisha and Punjab
3. Dashboards for poverty outreach

The overall analysis will compare poverty concentrations among ZHL's callers with the prevailing poverty rate for the two regions. Following are the prevailing poverty rates for Odisha and Punjab<sup>13</sup>.

<sup>13</sup> Derived from the PPI design document



### Odisha:

Household Area	National Tendulkar @200%	\$1.25	\$1.88	\$2.5
Urban	53.8%	24.5%	47.8%	66.6%
Rural	84.1%	50.7%	79.7%	91%

### Punjab:

Household Area	National Tendulkar @200%	\$1.25	\$1.88	\$2.5
Urban	48.6%	18%	41.4%	61.3%
Rural	61.1%	20%	52.8%	73%

Auditing the data helped GFI analyze the effectiveness of the methodology in accurately collecting PPI data in a call center setting. The validation exercise was defined by the following outcomes:

1. A data validation template was developed that allowed re-administration of PPI questions, capturing discrepancies in responses recorded and reasons for those discrepancies.
2. The error rate captured during the validation process and its effect on the overall data analysis for the project was reported.
3. A conclusion on the effectiveness of the methodology to capture PPI data and relevance for future use was written.

### Ethical considerations:

It is in the interest of ethics that the study will be well-designed. Due care has been taken while developing the survey questionnaire to reflect sensitivity to respondent's privacy and willingness to participate in the exercise. The study design will also integrate checks and balances to ensure that personal details of the respondents are not shared with the wider audience.

A robust audit framework was developed to ensure the accuracy of data collected and capture error rate, if found.

## Validation Exercise: Confirming accuracy of the survey

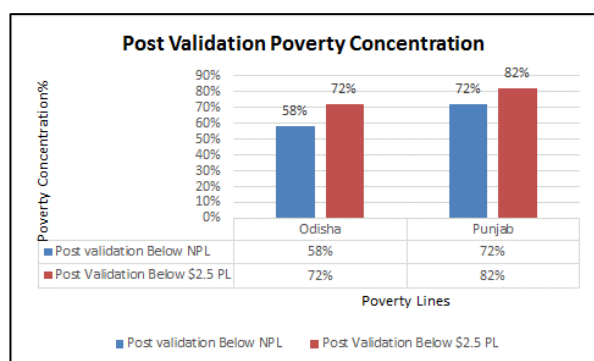
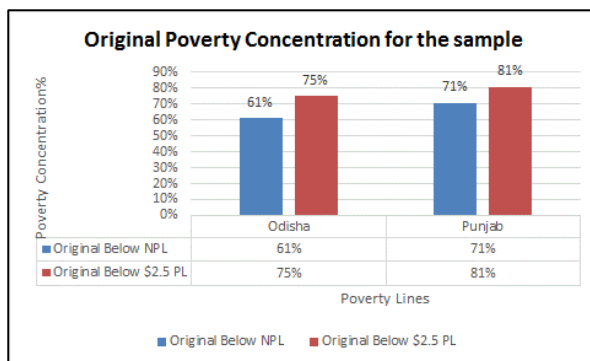
To ensure the accuracy of collecting the PPI through a call centre setting, it was decided that 5% of the total sample size would be validated by GFI staff by conducting in-person surveys.

The following table shows how the sample size for the validation exercise was determined:

State	Total Sample	5% of sample	Actual data collected
Odisha	407	20	18
Punjab	588	29	27
<b>Total</b>	<b>995</b>	<b>49</b>	<b>45</b>

The following are the results from the validation exercise and the margin of error found:

States	Original Below NPL	Original Below \$2.5 PL	Post validation Below NPL	Post Validation Below \$2.5 PL
Odisha	61%	75%	58%	72%
Punjab	71%	81%	72%	82%



As shown in the above figures the difference between the poverty concentrations for the validation sample before field audit (original) and post audit (post validation) is marginal for both the poverty lines, ranging between one and three percentage points. The absolute number of errors are shown in the following table:

States	Number of individual cases with error	Number of correct surveys (complete without a single error)	Number of surveys with error (complete but with error)
Odisha	27	9	8
Punjab	27	10	17
<b>TOTAL</b>	<b>54</b>	<b>19</b>	<b>25</b>

<b>PPI questions (Break up of errors):</b>	<b>Number of errors</b>
PPI Q1: Number of family members below the age of 17	12
PPI Q2: General education level of male head	6
PPI Q3: Household type	8
PPI Q4: Primary source of energy for cooking	2
PPI Q5: Availability of casserole/thermoware	3
PPI Q6: Possession of TV/VCD/DVD player	4
PPI Q7: Possession of mobile handset/landline	2
PPI Q8: Possession of sewing machine	4
PPI Q9: Possession of almirah/dressing table	5
PPI Q10: Possession of bicycle/motorcycle/car	8

As seen above, the maximum number of errors occurred in the first three PPI questions. These questions often need deep probing and the survey allowed the ZHL executive that by breaking down the questions objectively for gathering more accurate responses. However, some questions were not resolved easily. For example, it was not clear how to record the number of family members living in a household with ZHL's medical services facilitated the birth of a child- especially when additional number of family members were recorded during the validation survey. It is important for us to take note of these errors. Future PPI surveys should be preceded by a robust training for ZHL employees around the practical administration of the survey over the phone, with emphasis on collecting the data accurately.

## Selection of poverty lines for the study

The study compares ZHL's poverty outreach in the two states using the national poverty line (NPL) at 200% and with the global \$2.5 poverty line. The PPI also allows comparisons with other poverty lines such as \$1.25 and \$1.88<sup>14</sup> Acumen and ZHL chose the poverty lines that best meet their needs:

1. **National Poverty Line (NPL):** The planning commission of India has accepted the Tendulkar Committee report on which the current National Poverty Line has been estimated. This poverty line is set at just above subsistence level. This may not always be the best estimate of poverty outreach as only 18% of Indian population falls below this line. This certainly does not mean that those falling above are not poor. Hence, *the study looks at NPL at 200% to ensure greater coverage of the population (70% of the population falls under this poverty line) while keeping the NPL as the point of reference.*
2. **\$2.5 poverty line:** The International poverty line based on \$1.25 estimates can often be conservative as it tends to exclude the poor in the middle income countries. Therefore, the World Bank came up with \$2.5 line to increase the scope of poverty measurement. This poverty line is defined as the percentage of the population living in households below the international poverty line where the average daily consumption (or income) per person is less than \$2.50 (PPP) a day.  
For the study, the \$2.5 PL provides us with an upper cap within which the universe of ZHL client base is aptly captured. As per NSSO R66 data, 80% of Indian population falls below this poverty line.

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<sup>14</sup> Refer to annexures I, II and V



# Poverty Profile Punjab- State and ZHL

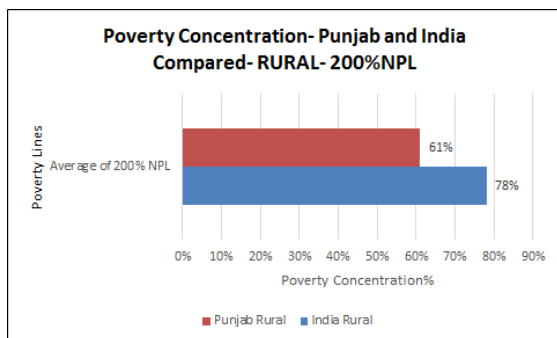
Since the study covers only the two states of Punjab and Odisha, the comparisons for poverty outreach will be done against the state averages and not the national average.

## Punjab:

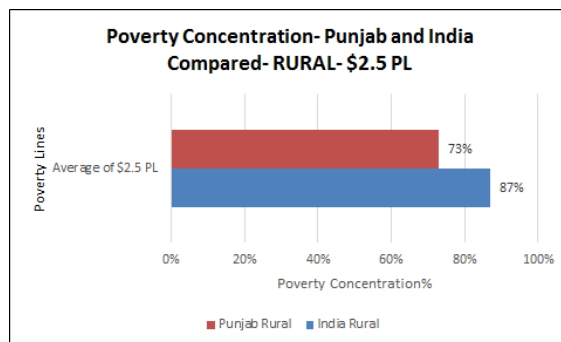
The following narrative will show the poverty concentration for Punjab and all India. Comparing the country and the state provides perspective on how the region fares in terms of poverty vis a vis the country. This will also later provide context to compare different health indicators between Punjab, Odisha, and all India. The tables have been divided for rural and urban to show differences between the two populations that also form an intrinsic part of our study in terms of comparison for poverty outreach and other healthcare parameters.

### Punjab Rural:

**Figure 1:**



**Figure 2:**

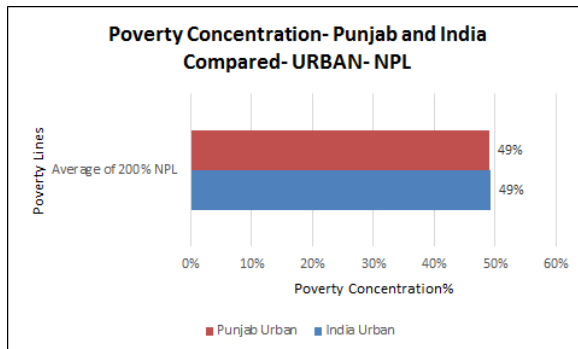


As Figure 1 shows, the Punjab population in rural areas is much better off than all of rural India, with only 61% of the population falling below 200% of the NPL compared to 78% for India.

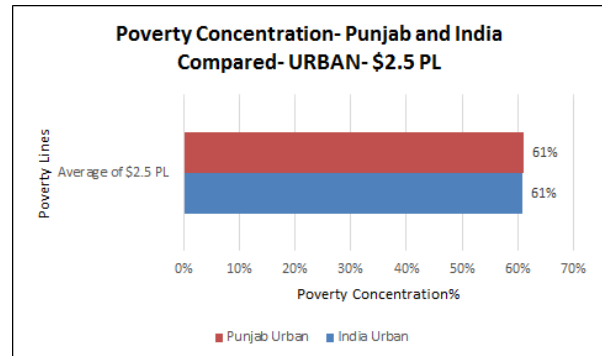
Similarly, for the \$2.5 poverty line, rural Punjab fares better than the rural India by 14 percentage points. This is also a reflection of how Punjab as a region and state fares much better than some of its other counterparts in India in terms of general wealth and prosperity. Being a highly agrarian region, it has well developed infrastructure to support agriculture and is one of the few states in India that still boasts of large land-owning families.

## Punjab Urban:

**Figure 3:**



**Figure 4:**



The urban poverty story for Punjab is quite interesting and very different from its rural counterpart. The urban poverty is as high as the India average for both poverty lines as shown in Figure 3 and Figure 4. Popular literature and research attributes poverty in urban Punjab to high rates of migration of those living at the bottom of the economic pyramid in search of work and rapid urbanization.

### Poverty Comparisons for ZHL in Punjab

#### Sample and overview for Punjab:

As seen in the following table, the sample size for Punjab was determined to ensure coverage of both rural and urban areas. This division was important to draw out nuances in poverty outreach for ZHL and to also study factors influencing outreach. The poverty concentrations mentioned in the table are for ZHL's caller base studied as part of the exercise.

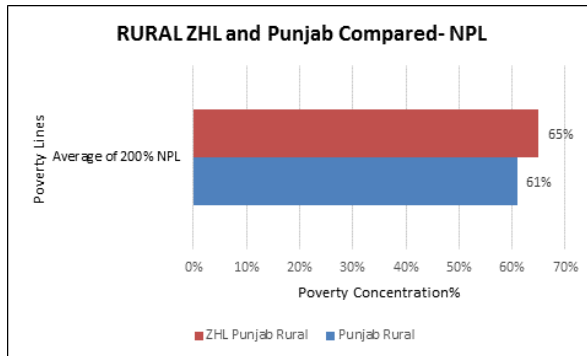
**Table 1:**

Row Labels	Sample Size	Average of 200% NPL	Average of \$2.5 PL
Rural	295	65%	78%
Urban	293	63%	76%
<b>Punjab</b>	<b>588</b>	<b>64%</b>	<b>77%</b>

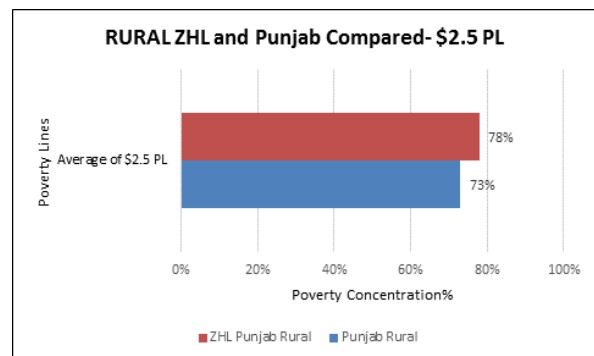
With some perspective on poverty in Punjab, it will be useful to see how the poverty calculated for the ZHL sample in the state compares against the regional poverty statistics.

**ZHL caller base and Punjab Compared- RURAL:**

**Figure 4:**



**Figure 5:**



As seen in the figures above, for both the NPL at 200% and the \$2.5 poverty line, ZHL’s client outreach in rural areas shows higher concentration than the state averages. These findings reflect the following:

- ZHL outreach is primarily to the poor with the poverty concentration higher than the state averages.
- The organization has reached a greater number of poor people through various means of communication, including village-level demos.
- The poor likely view this service as accessible and the ambulance service serves as a primary choice for transport in case of emergencies. The trust in this service was also echoed by the clients during the validation exercise conducted by GFI staff.<sup>15</sup>
- Given that ZHL has been working in the state since 2010, penetration into remote areas and visibility has likely ensured that it reaches out to greater numbers of poor people.

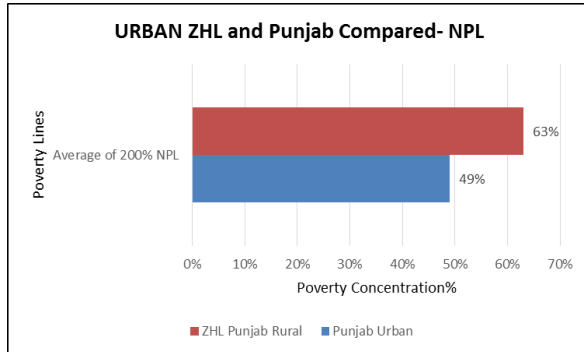
While we will be exploring further the nuances of the kind of healthcare needs ZHL is able to meet for both the states, the service delivery to the poor in rural Punjab is definitely satisfactory.

The ZHL outreach story in urban Punjab is not very different. As can be seen in the following figures, for both NPL at 200% and the \$2.5 poverty line, the outreach to the poor is much higher in concentration than the state averages. For both the poverty lines, the ZHL poverty concentration exceeds the state averages by 14 percentage points.

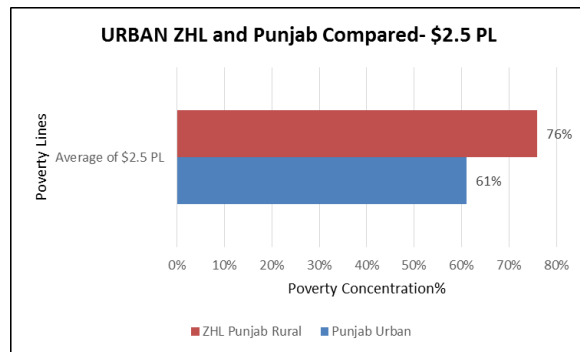
<sup>15</sup> Please refer to the validation exercise in the earlier section

**ZHL caller base and Punjab Compared- URBAN:**

**Figure 6:**



**Figure 7:**



The concentration of poor is quite high, especially considering the number of migrant workers that reside in the urban pockets. For a segment that is primarily looking for economic gain through migration<sup>16</sup>, ZHL’s 108 service definitely makes them less vulnerable to financial shocks. One reason why ZHL may be serving an even poorer population in urban areas of Punjab is that wealthier populations in cities may be more likely to opt for private ambulance services, which are more prevalent in urban areas. It could also be the case that 108 is seen as a service that is “for the poor” in urban areas.

While the current study has not addressed the correlation between the provision of free or subsidized services, such as 108 ambulance service, and changes in financial vulnerability among the poor, ZHL can look to explore this topic in the future.

<sup>16</sup> According to Census 2001 data, 67% of workforce in Urban Punjab consists of migrant labourers.

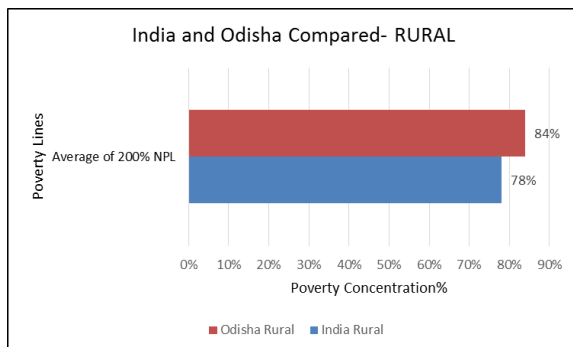
# Poverty Profile Odisha- State and ZHL

If Punjab is one of the beacons of development in India, Odisha sits on the other end of the spectrum. The state has been recognized as one of the least developed states in India and has been the focus of a lot of development activity for both the government and private initiatives in this space. According to a new panel set up by Government of India headed by the RBI <sup>17</sup>governor Raghuram Rajan, Odisha tops the list of the least-developed states in India. From the healthcare perspective, Odisha lags behind the rest of India; it has higher than normal rates of Crude Death Rate, Infant Mortality Rate and Maternal Mortality Rate and has seen concerted efforts on part of the government to ensure better access to medical facilities. The PPP between the government of Odisha and ZHL is one such initiative that should ensure better universal health coverage for the state.

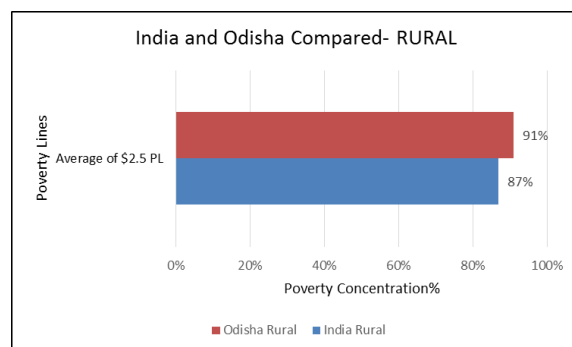
Like for Punjab, the following narrative uses PPI data for NPL@ 200% and \$2.5 Poverty lines for both Odisha and All India in rural and urban areas to explore how Odisha compares with rest of India and whether there are any noteworthy differences between rural and urban populations.

## Odisha vs Rest of India- RURAL:

**Figure 8:**



**Figure 9:**

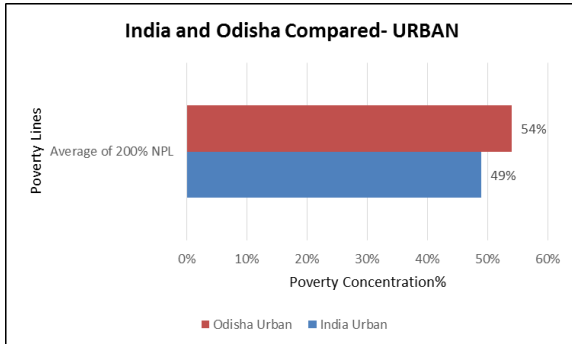


As can be seen in both the figures, Rural Odisha poverty concentrations exceed those for rural India. This confirms findings from popular research and literature that show Odisha as one of the least developed states in India when assessed using various development indices, including those related to health. Ninety-one percent of the state's population falls under the \$2.5 poverty line, making this state that with the highest concentration of poverty in India.

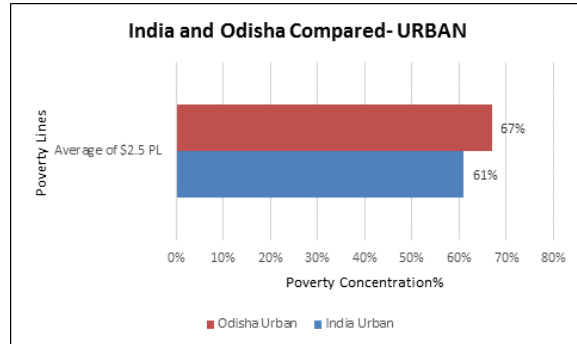
<sup>17</sup> Reserve Bank of India- Apex banking institution for India

**Odisha Vs Rest of India- URBAN:**

**Figure 10:**



**Figure 11:**



A similar trend is also seen for urban areas in Odisha where the poverty levels far exceed those of the country. This perspective is important to keep in mind as it speaks volumes about the vulnerability of the low income segment in this region as poverty is not simply lack of economic gain but also stunted access to healthcare, education, employment that constitutes standard of living for a population.

**Poverty Comparisons for ZHL in Odisha**

**Sample and overview:**

As seen in the following table, the sample size for Odisha was determined to ensure coverage of both rural and urban areas. This division was important to draw out nuances in poverty outreach for ZHL and to also study factors influencing outreach. The poverty concentrations mentioned in the table are for ZHL’s caller base studied as part of the exercise.

For Odisha, ZHL observes a third group called “semi-urban”. The PPI provides insight into only rural and urban divisions at state level and hence the initial hypothesis based on discussions with ZHL management was to include semi-urban as part of the urban sample. However, post data collection analysis as well as the in-person validation exercise shows a very close correlation between rural and semi urban areas. The final analysis presented in the report therefore clubs together semi-urban and rural areas as one population. Please refer to the section on sampling methodology on how this affects the confidence levels.

**Table 2:**

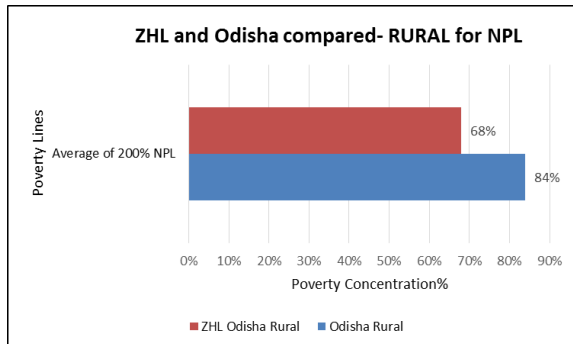
Row Labels	Sample Size	Average of 200% NPL	Average of \$2.5 PL
Rural	203	67%	79%
Semi Urban	103	69%	80%
Urban	101	59%	73%
<b>Odisha</b>	<b>407</b>	<b>65%</b>	<b>78%</b>

Similarity in poverty concentration

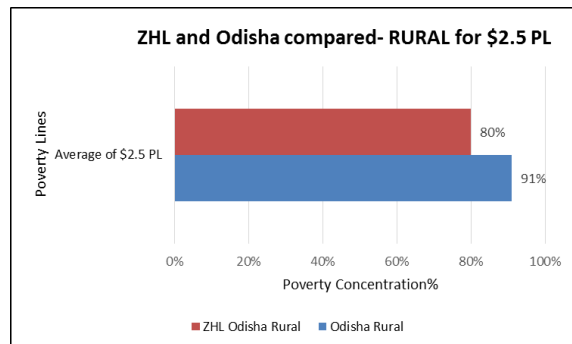
Average for the state

**ZHL caller base and Odisha Compared- RURAL:**

**Figure 12:**



**Figure 13:**

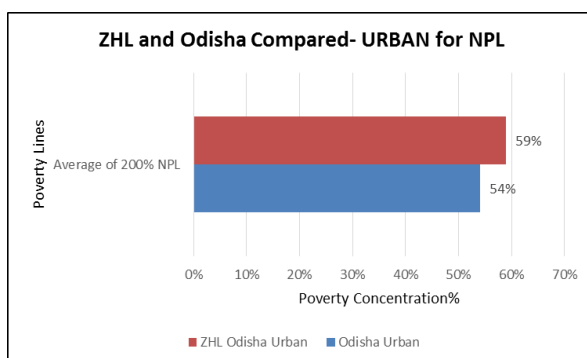


As seen in figure 12, ZHL poverty averages for NPL at 200% is lower than the state averages. Similarly for \$2.5 PL, the outreach is lower than the incidence in the state population. This can be attributed to the following reasons:

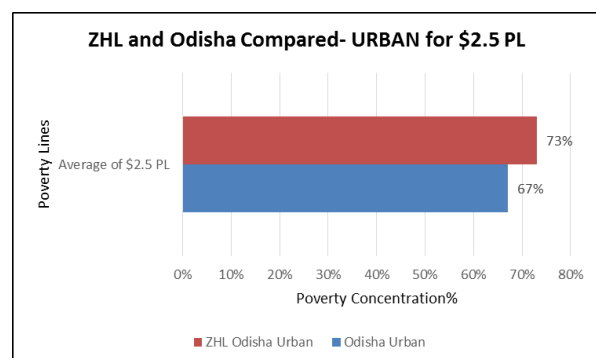
- ZHL has launched the 108 service in Odisha in phases starting in March 2013. The service was launched in just 19 of 30 districts in 2013 and early 2014. The second phase has been initiated only in January 2014, where the rest of the 11 districts have also been covered. It would be useful to see how the outreach statistics change in a year's time when the entire state will be fully operationalized.<sup>18</sup>
- Channels of communication are not as strong in rural areas. With the addition of more ambulances in rural areas, ZHL will be able to service clients even in remote locations. However, it would require concerted efforts to make the ambulance service visible and easily accessible.

**ZHL caller base and Odisha Compared- URBAN:**

**Figure 14:**



**Figure 15:**



The argument presented in the case of rural outreach for ZHL in Odisha also confirms its better outreach in urban areas as the ambulance services were first launched in primarily urban locations.

<sup>18</sup> An additional 102 ambulance service to cater to post and pre natal care has also been launched in early 2014. It would be useful to see whether this service leads to better outreach to poor, especially female members of low income households



Within a year of its operations, ZHL has managed to exceed its outreach to the urban poor when compared with state averages for both NPL at 200% and the \$2.5 poverty lines.

With the poverty profile of ZHL's caller base established for both states, it would be useful now to examine client characteristics covered in the survey and how they relate to poverty dimensions. For example, the survey design allowed us to make comparisons across regions, rural vs. Urban areas, gender of patients, profile of medical complaints for which ambulance services were availed, and qualitative insights from the validation exercise. The following sections of the report will be dedicated to different aspects of client insights matched against poverty data to understand relationships between access to healthcare and poverty.



# Why are people dialling 108? An analysis of medical complaints registered at ZHL

It would be interesting to see how the medical complaints of patients correlate with their poverty profiles. It is interesting because it helps us form a hypothesis: Do the poor call for medical help only in cases where the situation cannot be averted with home remedies and lack of attention would result in death or worsening of health? The following narrative will help us gain an insight into what kind of health issues draw attention of the low income segment enough for them to seek medical aid. It also helps us draw conclusions on how the 108 ambulance service helps them with better access to medical facilities and increased attention to their personal health.<sup>19</sup>

## Punjab:

Figure 22:

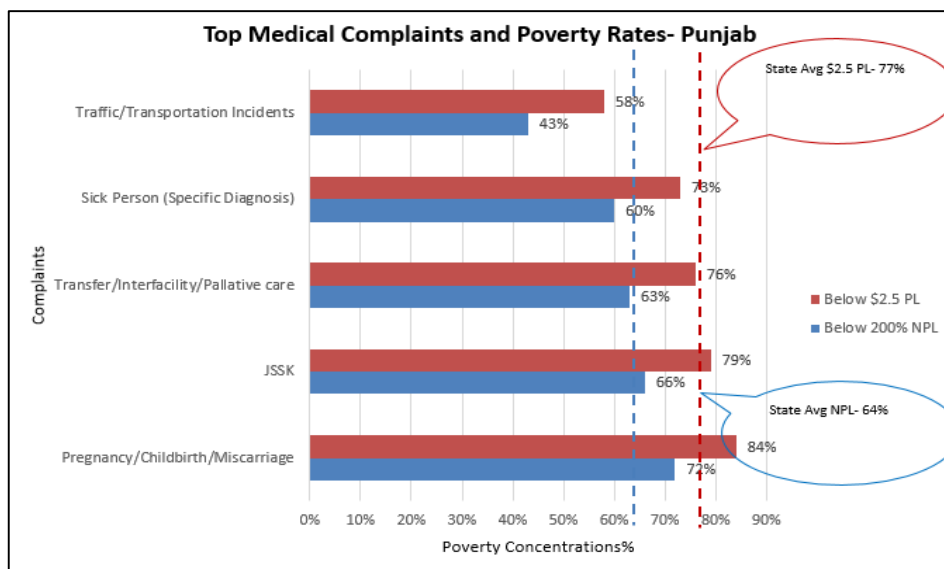
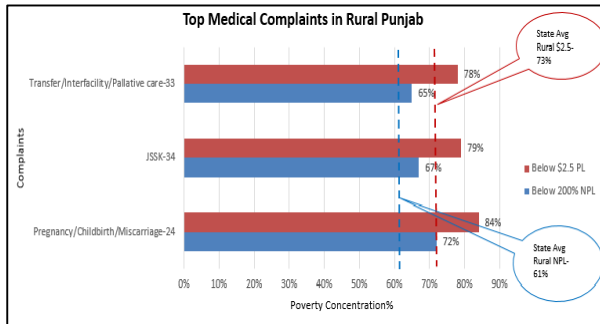


Figure 22 depicts the top medical complaints for the state of Punjab. Interestingly, there is a very telling variation in the poverty concentration for the different complaints registered. While the poverty concentration for both poverty lines is lowest for traffic and transportation related incidents, the highest poverty concentration has been recorded for JSSK related cases, pregnancy/childbirth, and miscarriage. Inter-facility transfers, where patients are transported to facilities with more advanced medical services, also show a higher poverty outreach. These are cases where patients are transferred from smaller medical set ups to bigger hospitals in case of serious patients, or when patients are transferred from medical facilities to their residences for different kind of ailments.

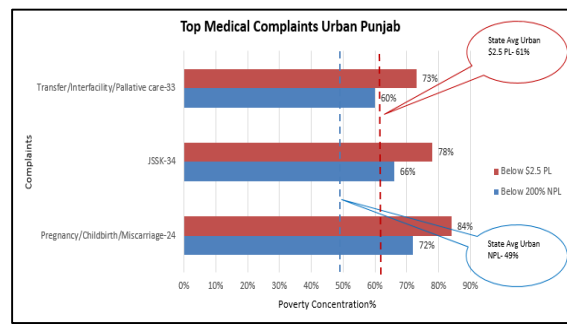
<sup>19</sup> The following charts cover only medical complaints where the number of cases registered is higher than 30. Statistical accuracy for complaints with lower number of cases is not high and cannot be used for comparison. For a complete list of state wise cases segregated by medical complaints, please refer to Annex VII

We may be tempted to draw conclusions, such as that accident cases are more common among the relatively lesser poor, and that most of the pregnancy cases routed through the ZHL services are for the low income segment. However, these details warrant a deeper look with larger sample sizes for each “reason for calling” and should be an interesting subject of further study.

**Figure 23:**



**Figure 24:**

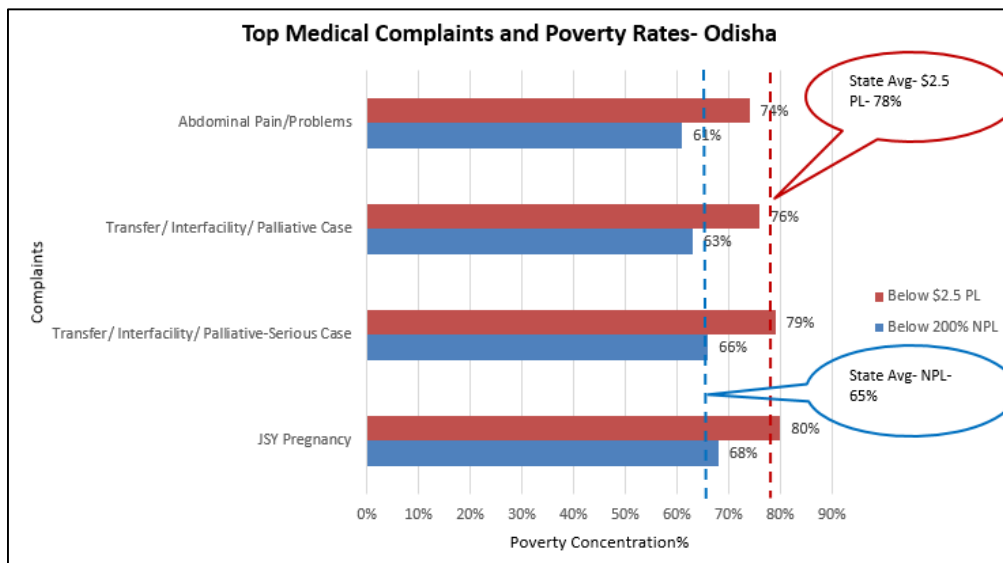


Once broken down for urban and rural areas, the top complaints registered are JSSK and pregnancy cases along with inter-facility cases. Within these, poverty concentration is the highest for pregnancy cases.

For future research work, ZHL could consider doing a study where other medical complaints are significantly represented in the sample and conclusions can be drawn about the medical emergencies for which the poor patients avail the 108 service.

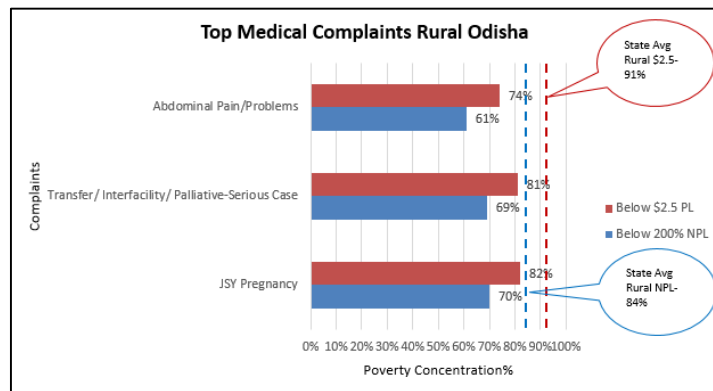
**Odisha:**

**Figure 25:**



As can be seen in Figure 25, the poverty concentration for Odisha as for Punjab is the highest for JSY<sup>20</sup> pregnancy cases. These figures also exceed the state averages for both the poverty lines showing a deeper penetration of ZHL operations into cases associated with pregnancy. This is a direct reflection of the focus of both the state government and ZHL to ensure greater outreach to women for pre/post natal care and for child deliveries. Another interesting observation for Odisha is the high number of abdominal pains and problems. This correlates with the fact that Odisha is one of the states in India with very low access to clean drinking potable water and sanitation.<sup>21</sup> Even during the validation exercise, 25% of the cases covered for Odisha were suffering from severe cases of diarrhoea. Clearly this is a pertinent healthcare issue in the state and needs adequate redress.

**Figure 26:**



As seen in Figure 26, the top 3 medical complaints for Rural Odisha have been recorded for abdominal pains, inter-facility transfer cases, and pregnancy cases under the government mandated JSY scheme. The poverty concentration has been recorded the highest for pregnancy cases for both the poverty lines. For all the cases recorded, the poverty incidence is lower than the state averages for both the NPL and the \$2.5 poverty line. These figures may look differently in a year once ZHL is able to penetrate deeper into the region with its new phase of operations.

For semi-urban and urban areas in Odisha, the sample sizes were too insignificant to be presented as part of the report. However, for both semi-urban and urban areas, the highest number of cases recorded was for inter-facility transfers. While for semi-urban areas the poverty concentration was similar to the rural profile, the urban poverty incidence on the other hand exceeded state averages, showing better penetration of the 108 service in urban areas.

<sup>20</sup> Janani Suraksha Yojana (JSY) is a safe motherhood intervention under the National Rural Health Mission (NRHM) being implemented with the objective of reducing maternal and neo-natal mortality by promoting institutional delivery among the poor pregnant women. JSY was implemented in Orissa in June 2006. Both the women and the ASHAs are given cash assistance for ensuring a safe institutional delivery.

<sup>21</sup> Census of India 2011

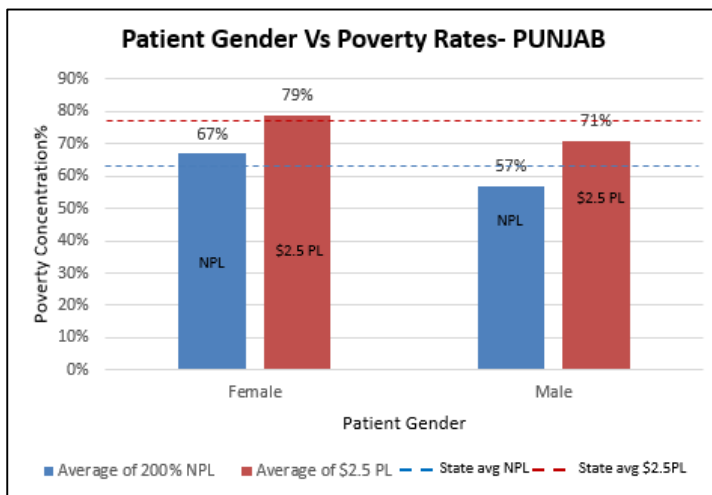
# Gender analysis of ZHL caller base

Gender in the context of health has usually meant a discussion on women’s health only. However, inclusive healthcare should attend to the needs of men, women, and children alike and focus on filling service gaps. Within the healthcare framework, Government Of India and the private sector have been focusing on developing systems that ensure affordable and accessible services for the poor. Through effective private-public partnerships, private hospitals will be motivated to champion the cause of poor patients and to make quality judgements on the kind of services offered. This extends to gender in healthcare where special schemes such as JSSK in Punjab (Janani Shishu Suraksha Yojna)<sup>22</sup> and JSY in Odisha (Janani Suraksha Yojna) targeted pre/post natal care and pregnancy cases.

As ZHL clearly helps bridge the distance between the patient and medical facility, it would be interesting to see how this has meant better access for female patients. The following figures help establish the profile of female patients for both Punjab and Odisha.

## Punjab:

**Figure 16:**



**Table 3:**

Gender	Number of respondents
Female	450
Male	138
<b>Punjab</b>	<b>588</b>

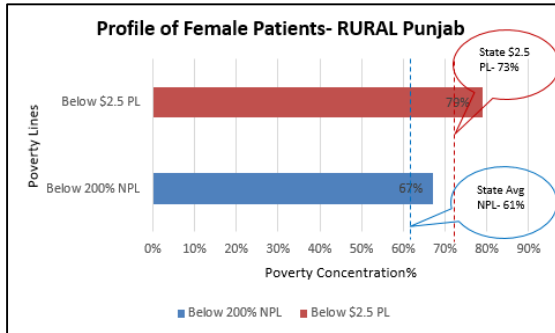
Table 3 shows the high number of female patients the 108 service in Punjab is reaching out to. Out of 450 cases registered, 82% are for female patients for different categories of medical complaints. One of the reasons for the high number of female callers could be due to the concentration of JSSK cases registered. When segregated gender wise (figure 16), the poverty profile of female patients is higher than those of male patients and exceeds or meets the state averages<sup>23</sup> for both the NPL and \$2.5 poverty line. For example, for the NPL, the poverty concentration for female patients is 67% and exceeds that of male patients by ten percentage points. In addition, the poverty levels of female

<sup>22</sup> Ministry of health and Family Welfare (MoHFW) launched the JSSY scheme in June 2011 to evolve a consensus on the part of all States to provide completely free and cashless services to pregnant women including normal deliveries and caesarean operations and sick new born (up to 30 days after birth) in Government health institutions in both rural & urban areas.

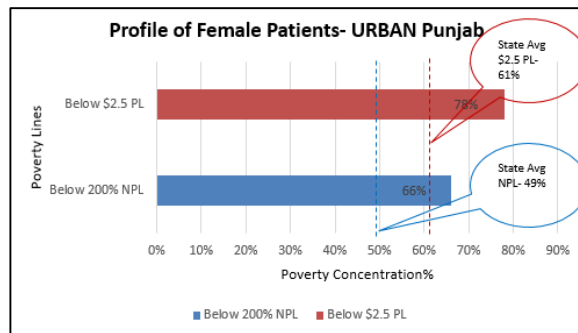
<sup>23</sup> All the state averages mentioned are for the ZHL portfolio except where mentioned otherwise

patients for NPL exceeds the state average by three percentage points while the profile for male patients for the same poverty line is lesser than the state average by six percentage points.

**Figure 17:**



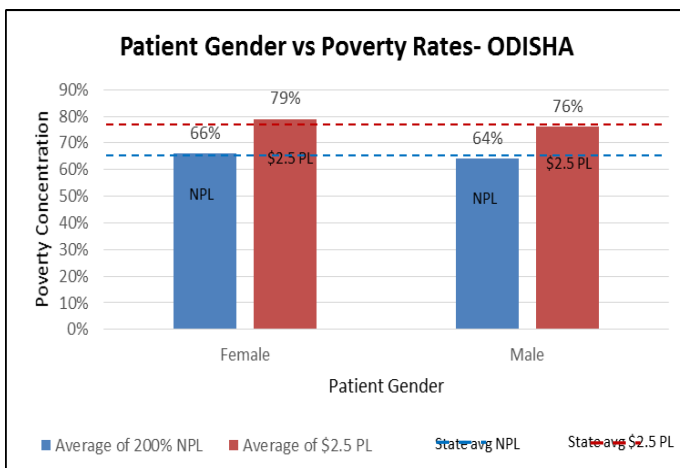
**Figure 18:**



The poverty concentration for both the poverty lines for both rural and urban for ZHL female patients exceeds the state averages. The difference is of course greater for urban areas where the concentration for both the NPL and the \$2.5 poverty line exceeds the state average by 17 percentage points. It would be interesting to further explore what drives deeper penetration for ZHL services in urban Punjab for female patients. While this has not formed the core subject for our study it would be interesting nonetheless to research how urban poverty and healthcare priorities are affected by free and subsidized services such as the one offered by ZHL.

**Odisha:**

**Figure 19:**

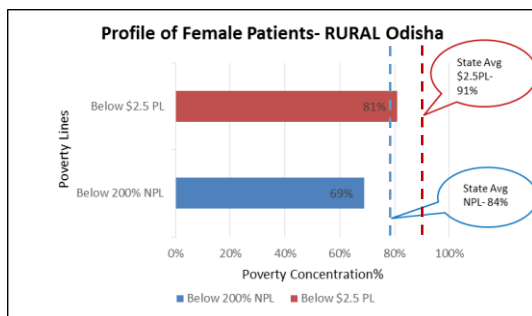


**Table 4:**

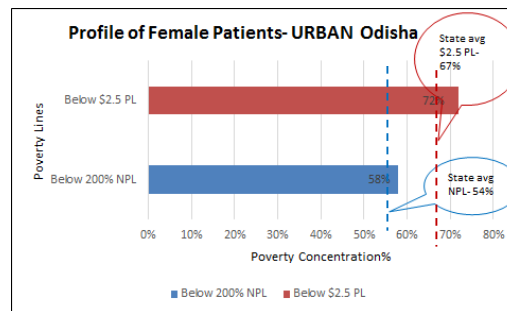
Gender	Number of respondents
Female	256
Male	151
<b>Odisha</b>	<b>407</b>

As in the case of Punjab, the number of female patients catered by ZHL ambulance services is much higher when compared to male patients. Of the total cases catered to, female patients form 60% of the sample. Again while comparing the poverty profile of male and female patients, it can clearly be seen that the poverty concentration for both female and male patients is almost the same for both the poverty lines. The difference is marginal and not as high as the case in Punjab.

**Figure 20:**



**Figure 21:**



However, when we break up the poverty profile by rural and urban we can clearly see a difference for the Odisha female clients. As for the total ZHL caller base (Figure 12 and 13), the outreach to female patients is lower than the state average for rural areas as reflected in Figure 20. The concentration for Urban areas on the other hand exceeds state averages by a good margin considering that the ZHL 108 operations are just one year old in the state.

As discussed with the ZHL management, the outreach for rural areas will improve in the coming months as the organization has launched its operations in 11 additional districts which are primarily rural.

One of the primary reasons for higher outreach to female patients and also a deeper poverty concentration for this segment is the way schemes like JSSK and JSY are being run in both Punjab and Odisha. There is a great drive from the state governments to ensure that health indicators such as MMR (Maternal Mortality Rate) and IMR (Infant Mortality Rate) are improved and their MDG commitments are met with. Interaction with ZHL management provided insights into how the PPP partnerships such as the one developed by ZHL with various state governments also ensure that extension services such as ambulance is focused on reaching out to women. The following sections on the analysis of different medical complaints will provide more clarity on how poverty and healthcare needs are related, even from a gender perspective.

## Female patients in ZHL caller base: an attempt to profile

We have been able to clearly see that the ZHL 108 service has made concerted efforts to reach out to female patients to improve their access to quality medical services. For both Punjab and Odisha we have seen a deeper poverty concentration for JSSK, JSY, pregnancy/childbirth and miscarriage cases. This is an important insight as this also reflects the government mandate to reach out to the vulnerable poor, especially women through specially crafted schemes such as JSY. This is also a reflection of how the healthcare system is driving its commitment towards improving health indicators such as MMR and IMR through a well-developed PPP model.

At this point, it would be worthwhile to take a look into the aforementioned health indicators for Punjab and Odisha.

**Table 5:**

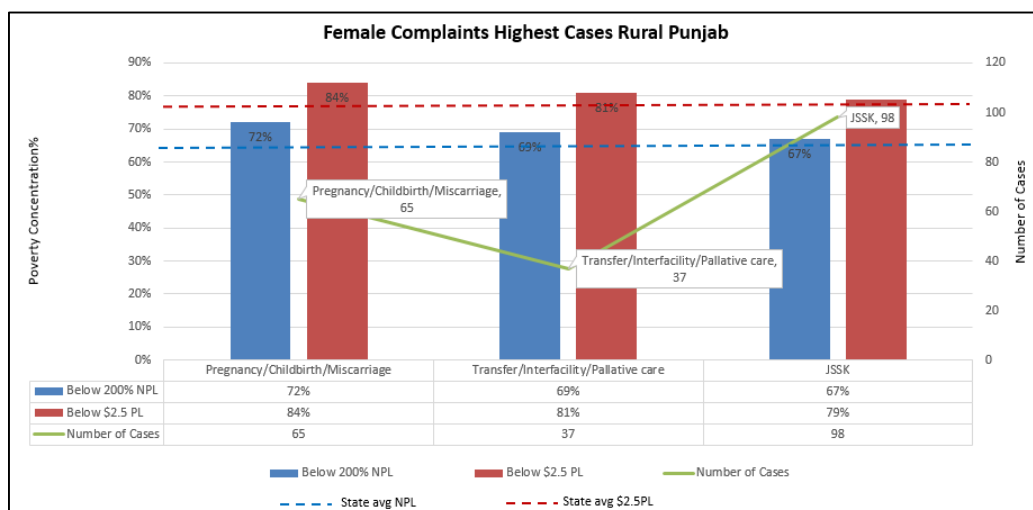
State	Case Type	Count of cases	Rural	Urban	Percentage of cases	MMR
Odisha	JSY Pregnancy	93	79	14	23%	258
Punjab	JSSK	222	99	123	38%	192
Punjab	Pregnancy/Childbirth/Miscarriage	116	65	57	18%	192

The current MMR average for India is 212 with a countrywide commitment to bring down this average to 109 by 2015 as part of its MDG goals. Therefore, Odisha and Punjab lie at two opposite ends of the spectrum where Odisha clearly needs to make concerted efforts to bring down MMR and Punjab is already on its way to achieve the MDG goal.

### Punjab:

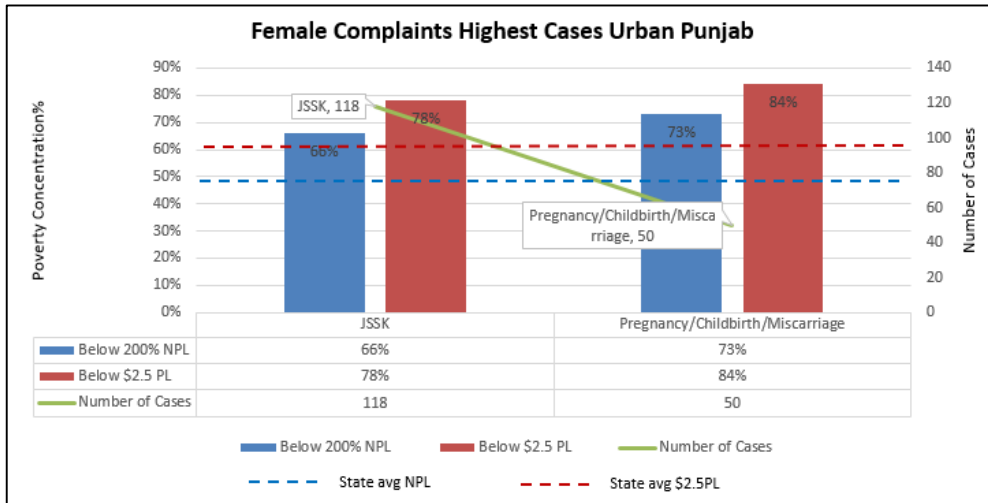
With the above background in mind it would be worthwhile to see the highest cases registered and their poverty concentrations for both rural and urban areas for female patients.

**Figure 27:**



As seen in figure 27, the highest number of cases recorded for rural Punjab were under the government-driven JSSK scheme that provides pre/post natal care for women. The poverty concentration is also the highest for pregnancy related cases in rural Punjab. For all the cases, poverty concentration exceeds the state averages.

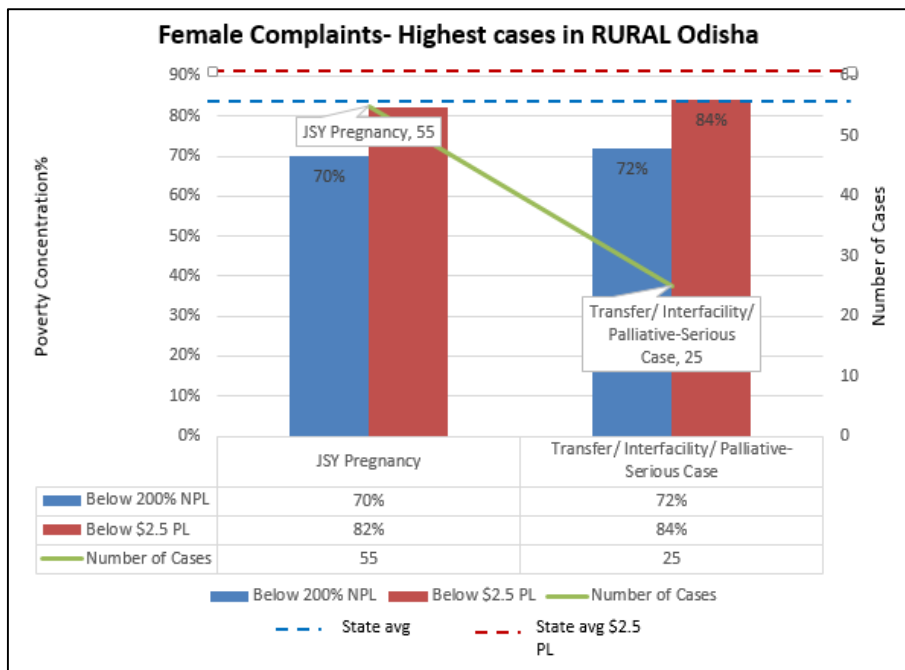
**Figure 28:**



In urban areas of Punjab again it is the JSSK cases are most common. However, poverty concentration is higher for pregnancy cases as in the case of rural areas. For both the cases, the poverty concentration is higher than that of the ZHL state averages for NPL and \$2.5 PL

**Odisha:**

**Figure 29:**







In rural areas of Odisha the highest number of cases where women are patients has been recorded for JSY pregnancy and for inter-facility transfers for serious cases. This echoes with ZHL focus on the government mandated JSY scheme as well as the lack of access to quality healthcare services in rural areas due to which frequent transfers from smaller medical centres to better equipped hospitals is a norm. Poverty profile of patients for both the cases is similar but is lower than state averages.

For both semi-urban and urban areas in Odisha, the sample sizes were too small against the registered medical complaints for us to draw any conclusions. We recommend a medical complaint focused survey where each is adequately represented in the sample to ensure comparison with statistical accuracy. This will be important to draw out nuances from the poverty profiles of clients and the kind of healthcare needs they have.

# Recommendations from the study

## Poverty Outreach:

- a. Ziqitza is meeting its mission of serving the poor, outperforming state averages with all populations studied with the exception of rural Orissa, where the results are still preliminary. Post study discussions with ZHL management revealed that operations in Odisha are just a year old. Moreover, the 108 service has been launched in phases and just recently operations have been launched in 11 additional districts that are primarily rural. The next round of PPI surveying in rural Orissa is expected to yield a very different picture. We recommend repeating the exercise in rural Orissa in a year's time.
- b. Even though the results reflect a focused effort to reach the poor through the 108 service, improving outreach is a constant endeavour. As of now we have been able to compare ZHL outreach only with state level outreach. However, access to healthcare is very delicately balanced even within largely homogenous regions. This has been proven by the difference in poverty concentrations when compared across the rural and urban divide. It would be a useful endeavour to also study ZHL outreach in sparsely served and conflict regions such as those affected by Maoists and Naxals in states like Bihar and Odisha. ZHL operates in both.
- c. It will also be useful to re-administer the survey in Punjab and Odisha in a year's time to examine changes in poverty outreach. For Odisha, the change is expected since the expansion of operations in 11 new districts may lead to changes in poverty concentrations. For Punjab, where the operations are stable, it would be useful to explore further the depth of poverty concentration for different schemes that ZHL runs under. For example, for the JSSK scheme how do ZHL's future efforts ensure deeper poverty penetration for clients below NPL at 200% (currently at 67% for urban and rural combined). Do additional efforts made by the government and ZHL through effective communication ensure even access to better medical services to even poorer patients?
- d. Considering ZHL's outlook and mandate to reach out to the poor and underserved population, the company might consider adopting the PPI as part of their mainstream operations even in states other than Punjab and Odisha. Every region has its own battle to fight when it comes to access to healthcare and the PPI will help bring out those nuances by positioning them against poverty data. This can be a very useful database to communicate with government agencies, determine where more ground-level marketing might be conducted, and to also showcase outreach.

### Gender based outreach:

- e. ZHL's impact on health indicators such as MMR merits further study. In a study of maternal deaths in Orissa, in 38% of deaths the families had trouble arranging transportation and it took 1-8 hours for them to find a vehicle. Sixty-five percent of the families reached a hospital within an hour, while 35% reached between 1-8 hours.<sup>24</sup> The difference that ZHL has been able to bring by providing a free ambulance service has actually put a dent on traditional systems of child birth such as employing the services of midwives and local unqualified doctors. The service makes sure that even in adverse situations where the household may not be keen on bearing financial costs towards their female members' health, the free ambulance becomes a point of positive reinforcement. It is no wonder that interactions with ZHL staff revealed that a substantial number of deliveries take place in the ambulance itself where the ZHL paramedic helps in the process. Could this be because of delay in decision making on behalf of the household to avail proper medical services for pre/post natal care for their women? This is worth a deeper investigation.
- f. For rural Odisha, where MMR is very high, the outreach can be improved even further through effective communication mechanisms especially for the newer districts, and may be accomplished through ZHL's new 102 service focusing on maternal and women's health cases. Focus should particularly be on reaching out to tribal areas where MMR has been known to be the highest in Odisha.<sup>25</sup>
- g. While JSSY and JSK are important government mandated programs that ZHL is driving through its services, there are other issues like sexual assault, abdominal pain/diarrhoea cases and such that need redress by taking palliative measures. For example, ZHL organizes health camps regularly.

### Focus on other vulnerable groups/communities:

- h. The current study allowed a very basic insight into the poverty outreach of ZHL. Gender based focus has been made evident by both the scale and poverty concentration of maternal healthcare services driven by schemes like JSSK and JSY. However, with the inroads that ZHL has been able to create into the underserved areas in the regions it operates in, focus on other vulnerable groups such as children, senior citizens and conflict affected population would be a great value add.
- i. Regular tracking of poverty outreach can help ZHL track its operations across geographies to help maintain its focus on the poor and to also create very important insights into the healthcare sector through a poverty lens. From the universal health coverage perspective,

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<sup>24</sup> Planning Commission of India. "Maternal Mortality in Orissa: An Epidemiological Study"

<sup>25</sup> Ibid.



ZHL is addressing a key issue related to access. Tools such as the PPI, when combined with other significantly represented health indicators in a study, can produce very rich insights into the life of the beneficiaries often leading to new service innovations. We would highly recommend ZHL to make poverty outreach study a part of their reporting DNA



## Specific guidelines for future PPI studies and/or implementation at ZHL

If ZHL chooses to integrate the PPI into its regular social performance tracking, we'd recommend the following:

- a. Integrate the PPI as part of their feedback calling mechanism in the regions which they may want to study with respect to their poverty outreach. This will also require placement of trained staff at the state offices.
  - a. Host a robust training with all the call center executives who will be involved, focusing in particular on the nuances in the first several questions of the PPI questionnaire where we found the greatest discrepancies between answers given by phone and those observed in person.
- b. Differentiate the populations again along rural and urban lines to draw out geographic distinctions within states. In certain states where populations may be very heterogeneous even in rural and urban areas, consider sampling certain populations more directly, such as tribal areas in Orissa.
  - a. Conduct the PPI on an annual basis to track how new marketing approaches or service offerings may have altered the populations whom you serve over time.
- c. Reuse the templates we provided for the recording of survey results.
- d. Appoint a team member who will be responsible for the execution of the PPI, and can be the champion for poverty measurement within the organization. Apart from data collection, the PPI champion should also monitor the quality of data being collected through processes such as weekly call log monitoring.
- e. Efforts should also be made to institutionalize a PPI validation process along with the regular audit process. At least 5% of the total sample must be validated in the field. The ambulance auditor can be trained to carry out this function.



# ANNEX I

## WHAT IS PPI?

The Progress Out of Poverty Index® (PPI®) is a poverty measurement tool for organizations and businesses with a mission to serve the poor. With the PPI, organizations can identify the clients, customers, or employees who are most likely to be poor or vulnerable to poverty and integrate objective poverty data into their assessments and strategic decision-making.

## HOW DOES PPI WORK?

Unlike other poverty measurement methods, the PPI was designed with the budgets and operations of real organizations in mind; its simplicity means that it requires fewer resources to use. The PPI is a set of 10 easy-to-answer questions that a household member can answer in 5 to 10 minutes. A scoring system provides the likelihood that the survey respondent's household is living below the national poverty line and internationally-recognized poverty lines.

The PPI is country-specific. There are PPIs for 45 countries, and a similar poverty scorecard with a different creation methodology exists for use in China. All together, Grameen Foundation has developed poverty measurement tools for the countries that are home to 90 percent of the people in the world who fall under \$1.25/day 2005 PPP.



## ANNEX II

### What are the rupee values for the global poverty lines?

For the purposes of the PPI, dollar-based poverty lines defined by the World Bank are used. Poverty measures based on an international poverty line attempt to hold the real value of the poverty line constant across countries, as is done when making comparisons over time. The internationally comparable lines are useful for producing global aggregates of poverty. In principle, they test for the ability to purchase a basket of commodities that is roughly similar across the world.

#### What is ICP?

The International Comparison Program, which estimates PPP coordinates the collection of price data for a basket of goods and services in countries outside the jurisdiction of Eurostat (Statistical Office of the European Union) and OECD (Organization for Economic Cooperation and Development), used for comparison purposes. The data collected are combined with other economic variables to calculate **Purchasing Power Parities (PPPs)**.

#### What is PPP?

Purchasing Power Parity (PPP) is an economic theory and a technique used to determine the relative value of currencies, estimating the amount of adjustment needed on the exchange rate between countries in order for the exchange to be equivalent to each currency's purchasing power. It asks how much money would be needed to purchase the same goods and services in two countries. The PPP-based exchange rate is entirely different from market exchange rates. Market based exchange rates should not be used while defining national currency equivalent for dollar based poverty lines.

## ANNEX III<sup>26</sup>

An interesting infographic to show the government expenditure on healthcare in different countries across the world. The graphic also shows per capita expenditure and percentage of out of pocket expenditure for these countries. As clearly seen, percentage of out of pocket expenditure is the highest for India reflecting the inadequacy of its healthcare system.

	% OF GDP SPENT ON HEALTH CARE	PER CAPITA HEALTH EXPENDITURE	GOVT SHARE IN HEALTH CARE SPENDING (IN %)	HEALTH EXPENDITURE AS % OF TOTAL GOVERNMENT EXPENDITURE	% OF PRIVATE OUT-OF-POCKET EXPENDITURE
<b>USA</b>	18	\$8,608	46	20	11
<b>UK</b>	9	\$3,609	83	16	9
<b>INDIA</b>	4	\$60	31	8	60
<b>CHINA</b>	5	\$278	56	12	35
<b>BRAZIL</b>	9	\$1,121	46	9	31
<b>GERMANY</b>	11	\$4,875	76	19	12
<b>RUSSIA</b>	6	\$807	60	10	35
<b>NIGERIA</b>	5	\$80	37	8	60

- 54% of US health spending is private, out of which insurance spend accounts for 59%, one of the highest in the world.
- With 95% of its total GDP spend on health care, Cuba has the highest government health spending globally. It also logs 67 physicians per 10,000 people, the most in the world.
- Oil-rich Qatar spends the least on health care, 1.9% of its GDP, next only to 1.6% of South Sudan, the youngest nation.
- At 60%, India has one of the highest out-of-pocket health care expenditures. Besides, the country has only 6.49 doctors per 10,000 people, lower than even Pakistan, which spends just 2.5% of its GDP on health care.

<sup>26</sup> Read more: <http://forbesindia.com/article/world-watch/what-govts-spend-on-health-care/36443/1#ixzz2zgpNVKbO>



## ANNEX IV

### What is universal health coverage?<sup>27</sup>

The goal of universal health coverage is to ensure that all people obtain the health services they need without suffering financial hardship when paying for them.

For a community or country to achieve universal health coverage, several factors must be in place, including:

1. A strong, efficient, well-run health system that meets priority health needs through people-centred integrated care (including services for HIV, tuberculosis, malaria, non-communicable diseases, maternal and child health) by:
  - a. Informing and encouraging people to stay healthy and prevent illness;
  - b. Detecting health conditions early;
  - c. Having the capacity to treat disease; and
  - d. Helping patients with rehabilitation.
2. Affordability – a system for financing health services so people do not suffer financial hardship when using them. This can be achieved in a variety of ways.
3. Access to essential medicines and technologies to diagnose and treat medical problems.
4. A sufficient capacity of well-trained, motivated health workers to provide the services to meet patients' needs based on the best available evidence.

It also requires recognition of the critical role played by all sectors in assuring human health, including transport, education and urban planning.

Universal health coverage has a direct impact on a population's health. Access to health services enables people to be more productive and active contributors to their families and communities. It also ensures that children can go to school and learn. At the same time, financial risk protection prevents people from being pushed into poverty when they have to pay for health services out of their own pockets. Universal health coverage is thus a critical component of sustainable development and poverty reduction, and a key element of any effort to reduce social inequities. Universal coverage is the hallmark of a government's commitment to improve the wellbeing of all its citizens.

Universal coverage is firmly based on the WHO constitution of 1948 declaring health a fundamental human right and on the Health for All agenda set by the Alma-Ata declaration in 1978. Equity is paramount. This means that countries need to track progress not just across the national population but within different groups (e.g. by income level, sex, age, place of residence, migrant status and ethnic origin).

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<sup>27</sup> Reference: WHO website

## ANNEX V:

### Poverty Lines used in the report:

Poverty lines are cut-off points separating the poor from the non-poor. They can be monetary (e.g. a certain level of consumption) or non-monetary (e.g. a certain level of literacy). The use of multiple lines can help in distinguishing different levels of poverty. There are two main ways of setting poverty lines—in a relative or absolute way.

**Relative poverty lines:** These are defined in relation to the overall distribution of income or consumption in a country; for example, the poverty line could be set at 50 percent of the country's mean income or consumption.

**Absolute poverty lines:** These are anchored in some absolute standard of what households should be able to count on in order to meet their basic needs. For monetary measures, these absolute poverty lines are often based on estimates of the cost of basic food needs (i.e., the cost a nutritional basket considered minimal for the healthy survival of a typical family), to which a provision is added for non-food needs.

This report examines MFI performance for the following absolute poverty lines:

3. **National Poverty Line (NPL):** The planning commission of India has accepted the Tendulkar Committee report based on which the current National Poverty Line has been estimated. This poverty line argues for setting the poverty line at just above subsistence level. The Tendulkar Committee Report has arrived at INR 26 for rural and INR 32 for all India as the minimum household spend required to access/buy a basket of goods required for a standard of living that ensures above subsistence living.

The following are dollar based global poverty lines based on the PPP based exchange rates that makes them possible to be applied to the local context of a country.

4. **\$1.25 poverty line:** In 2008, the World Bank came out with a revised figure of \$1.25 (succeeding the erstwhile \$1.08 poverty line) at 2005 Purchasing-Power Parity (PPP). This is the World Bank defined extreme poverty line that defines extreme poverty as average daily consumption of \$1.25 or less for a household that is living on the edge of subsistence.
5. **\$2.5 poverty line:** International poverty line based on \$1.25 estimates can often prove to be conservative as it tends to exclude the poor in the middle income countries. Therefore, the World Bank came up with \$2.5 line to increase scope of poverty measurement. This poverty line is defined as the percentage of the population living in households below the international poverty line where the average daily consumption (or income) per person is less than \$2.50 (PPP) a day.
6. **\$1.88 poverty line:** This poverty line has been developed as part of the PPI toolkit in order to increase the robustness of the tool to track that segment of the poor which falls between \$1.25 and \$2.5 poverty lines. This cross segmental comparison of a caller base enables a pro poor's organization's capacity to understand its outreach better.

## ANNEX VI:

### Mother and childcare related healthcare Indicators for Punjab and Odisha (compared to India):

Reference Period	2011-2015 (projected)	2011-2015 (projected)	2007-2009 (SRS based calculation)
Region	Crude Death Rate	Infant Mortality Rate	Maternal Mortality Rate
India	7.2	49.2	212
Punjab	7.2	39.7	172
Odisha	8.5	67.6	258

Crude Death Rate is defined as the number of deaths occurring during the year per 1,000 population estimated at mid-year.<sup>28</sup>

Infant Mortality Rate is defined as the probability of dying between birth and exactly one year of age expressed per 1,000 live births.<sup>29</sup>

Maternal Mortality Rate is defined as the number of maternal deaths to women in the age bracket of 14-59 per lakh of women in that age group.

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<sup>28</sup> World Bank website

<sup>29</sup> UNICEF website

# ANNEX VII

List of complaints recorded for the sample with their poverty concentrations and number of cases.

## PUNJAB:

S NO	Row Labels	Number of Cases	Below 200% NPL	Below \$2.5 PL
1	JSSK-34	222	66	79
2	Pregnancy/Childbirth/Miscarriage-24	116	72	84
3	Transfer/Interfacility/Palliative care-33	104	63	76
4	Sick Person (Specific Diagnosis)-26	46	60	73
5	Traffic/Transportation Incidents-29	39	43	58
6	Breathing Problems-06	11	53	66
7	Assault/Sexual Assault-04	10	79	89
8	Abdominal Pain/Problems-1	8	71	81
9	Heart Problem/A.I.C.D-19	8	58	72
10	Falls-17	6	67	79
11	Traumatic Injuries (Specific)-30	5	50	62
12	Burns(Scald)/Explosion (Blast)-07	2	74	86
13	Convulsion/Seizures-12	2	70	83
14	Diabetic Problems-13	2	37	55
15	Inaccessibles Incident/Other Entrapments (Non- Vehicle)-22	2	82	92
16	Unconscious/Fainting (Near)-31	2	27	44
17	Chest Pain (Nin-Traumatic)-10	1	24	40
18	Headache-18	1	16	31
19	Neotant served-35	1	98	100
20	<b>Punjab</b>	<b>588</b>	<b>64</b>	<b>77</b>

## ODISHA:

S NO	Medical Complaints	Number of Cases	Below NPL	Below \$2.5 PL
1	Transfer/ Interfacility/ Palliative-Serious Case	131	66%	79%
2	JSY Pregnancy	93	68%	80%
3	Abdominal Pain/Problems	56	61%	74%
4	Transfer/ Interfacility/ Palliative Case	47	63%	76%
5	Stroke (CVA)	15	63%	76%
6	High Fever	10	55%	70%
7	Sick Person (Specific Diagnosis)	10	72%	83%
8	Unconscious/Fainting	9	72%	83%
9	Breathing Problems	8	70%	82%
10	Traffic/Transportation Incidents	6	58%	71%
11	Chest pain	3	56%	69%
12	Heart Problem/A.I.C.D	3	65%	76%
13	Overdose/Poisoning Ingestions)	3	68%	80%
14	Assault	2	96%	99%
15	Convulsion/Seizures	2	74%	86%
16	Falls	2	79%	89%
17	Traumatic Injuries (Specific)	2	66%	80%
18	Back Pain(Non Traumatic or Non recent Traumatic)	1	16%	31%
19	Diabetic problem	1	67%	81%
20	Minor Burn <5%	1	46%	64%
21	Psychiatric/Abnormal Behaviour	1	3%	8%
22	Sexual assault	1	82%	92%
23	<b>Odisha</b>	<b>407</b>	<b>65%</b>	<b>78%</b>