POVERTY PROFILE OF ZIQITZA'S CLIENTS

2014

ABSTRACT

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

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GRAMEEN FOUNDATION INDIA

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PROGRESS out of POVERTY™

CONTRIBUTIONS AND ACKNOWLEDGEMENTS

This study was funded by a Data Innovations grant from the Aspen Network for Development Entrepreneurs as part of Acumen's Lean Data Initiative. We are deeply grateful for ANDE's support for and interest in collecting stronger evidence of impact.

We also thank Ziqitza Healthcare Private Limited for their leadership in asking forthright and candid questions on whether they are serving the poor. 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 staff from ZHL's Punjab and Odisha offices, we at Acumen and Grameen Foundation India (GFI) are grateful for your time and energy in engaging in very forthright discussions and teaching us all along the journey.

Jayesh Jain, GFI's consultant for this project, made valuable contributions throughout this study.

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[1] with the current government announcing an increase of 31% over the previous health budget. There has been a rising interest 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: 79.5 percent of the households in India lives below the $2.5 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 (GFI). 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 (PPI) - 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 Odisha, allowing an 85-95 percent 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 be to be successful with a marginal error rate of 2-3 percent.[2]

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 percent and $2.50 World Bank poverty lines. In Punjab, 65 percent of ZHL's callers fall under NPL and 77 percent under $2.50 line. In Odisha, 65 percent of the caller group falls under NPL and 78 percent 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 rates 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 Odisha, ZHL's performance exceeds geographic averages by 5-14 percent. Reasons may be that in urban areas, wealthier populations tend to use private, fee based ambulance services. Even including the rural Odisha 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 percent of the patients were female and for Punjab, poverty levels of female patients were significantly higher than that of their male counterparts. In the same vein, of the total medical complaints registered, 43

[1] The present government has further announced a budgetary increase of 31% to the health sector in the 2014 budget

[2] Refer to validation results for more detail

percent 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.[3]

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.

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

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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. All of the five-year plans designed by the Planning Commission for India incorporate health as a key issue. This extended to the setting up of a High Level Expert Group (HLEG) to ensure Universal Health Coverage (UHC)[4] in October 2010.[5] 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, in which 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.[6]

The last decade has seen a shift in the way the government addresses the issue of healthcare with more market-driven approaches, which decrease public expenditure and reduce fiscal deficits. People have therefore been forced to choose between weak and efficient public services and expensive private care, or they often forego healthcare entirely except 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 ideally play an intermediate role, bridging the gap where government and markets are not able to provide quality care.

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 Millennium Development Goals (MDGs) 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)[7]:

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 basic challenge in the healthcare framework in India: access to quality medical services.

[4] Refer to Annex IV for definition

[5] 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

[6] Please refer to Annex III for global comparison on healthcare spending by governments

[7] Healthcare in India- Vision 2020, Planning Commission

ZHL

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)[8]. 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 352,524 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

Acumen has been an investor in ZHL since 2008 and commissioned this study to understand who is accessing ZHL and how poverty levels may affect usage of emergency transport services. Acumen is a non-profit organization that invests in socially-focused companies, leaders, and ideas to create a world beyond poverty. Acumen has approved nearly $90 million in investments across India, Pakistan, East and West Africa, and Latin America that have served over 100 million lives. This study is a part of Acumen's Lean Data Initiative, funded by the Aspen Network for Development Entrepreneurs to test leaner ways to collect impact data.

Grameen Foundation India (GFI)

Grameen Foundation India (GFI) 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® 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. [9] 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.[10]

[8] 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.

[9] 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 in time.

[10] Please refer to Annex I for details around the PPI. Visit progressoutofpoverty.org for more details.

Study Objectives

The project sought to achieve the following objectives:

1. Understand ZHL's poverty outreach in the states of Punjab and Odisha. This involved the administration of the Progress out of Poverty Index to determine the poverty profile for selected poverty lines for the project.
2. Examine the relationship between the household poverty levels and healthcare needs.
3. Examine the relationship between the regional poverty levels 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 present 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 state governments.
6. Test an out-of-home survey method for collecting PPI responses – in ZHL's case, 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

In India, the Progress out of Poverty Index has almost always been administered in-person, in which enumerators interact with clients at clients' households to collect responses for the ten 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[11] warranted a customized sampling methodology. The PPI has been administered in out-of-home contexts before, as documented in Grameen Foundation USA's "Alternative PPI Data Collection Methodologies" report.[12] However this was the first time– to our knowledge – that the PPI was administered over the phone through a centralized call center. GFI ensured that the data collection exercise was followed by a strong validation exercise.

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

1. For both Punjab and Odisha, GFI studied the November 2013 call records. Sample selection for the study was based on the following observations:
    a. For Odisha, 82 percent of the calls were from rural areas.
    b. For Punjab, 60 percent of calls were from urban areas and 40 percent from rural.
2. With the above in mind, 3 populations were delineated 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 significant as possible (95 percent confidence level with +/-5 percent margin of error), we proceeded with the following sample sizes:

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

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 include questions on 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 in which to engage in a longer survey. After the first week, each call averaged four to five minutes.
5. A ***dynamic sampling methodology*** was adopted using the following process:

[11] 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.

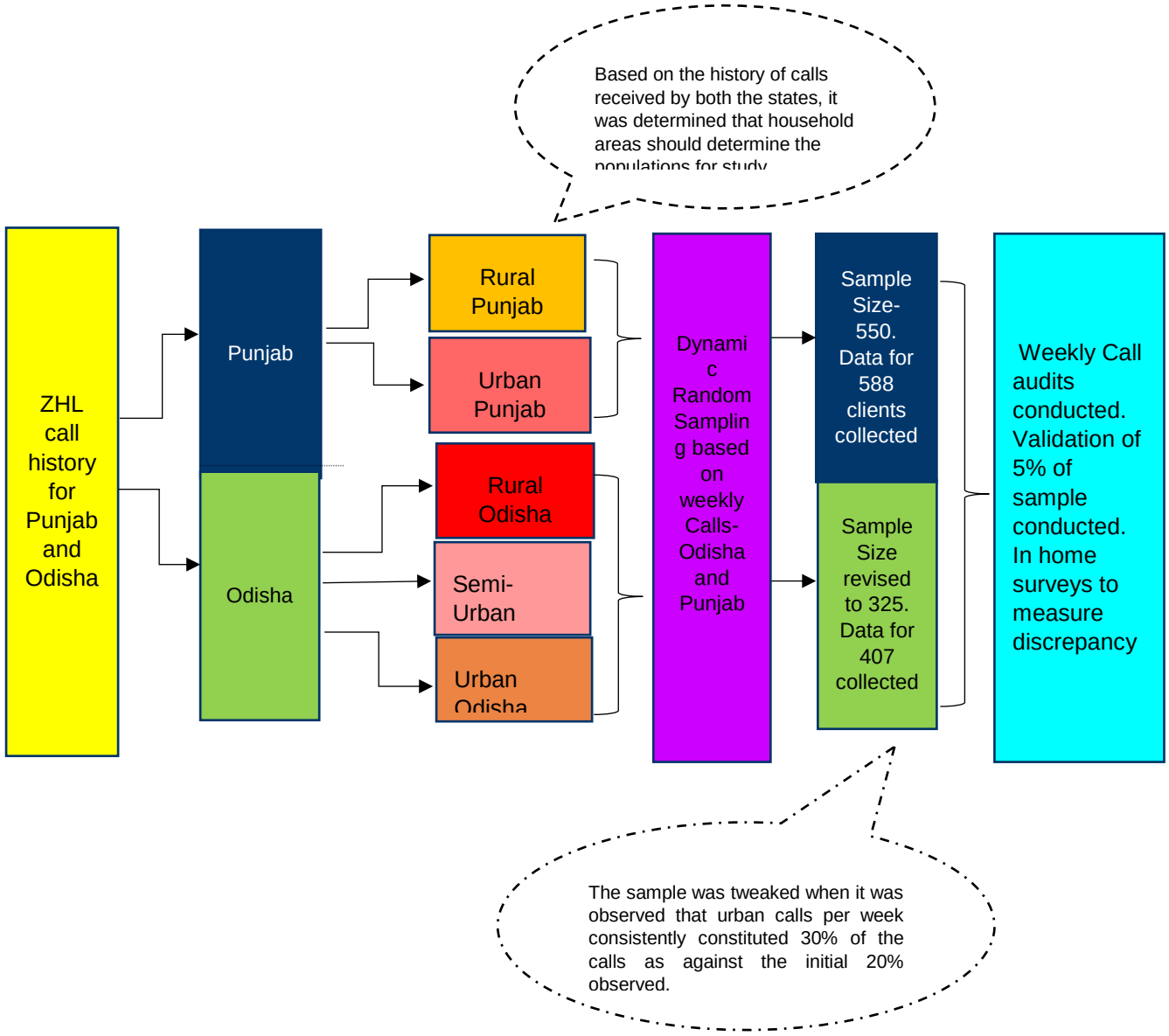
[12] Grameen Foundation, "Alternative PPI Data Collection Methodologies." September 2013. Accessed May 2014 at http://www.progressoutofpoverty.org/sites/default/files/GF_Report_Out_of_Home_Data_Collection_v1.0.pdf

a. Based on the experience of the call center executives and GFI staff members, the timeline for the entire data collection exercise was determined as 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 each state. Clients were randomly selected for each of the states from the cohort of calls and sent to ZHL staff in a customized format with contact information for 100 clients.[13] 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 responses were sent back to GFI each week. A quick bootstrap analysis was performed on the cumulative data collected by week four understand the poverty profile of clients. From these preliminary results we saw that the poverty profile of urban areas in Odisha was distinctly different from rural areas and that the number of calls consistently constituted 30 percent of the total call logs, unlike the initial cohort studied before data collection commenced. This difference could 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 "Odisha 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%**

[13] 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:

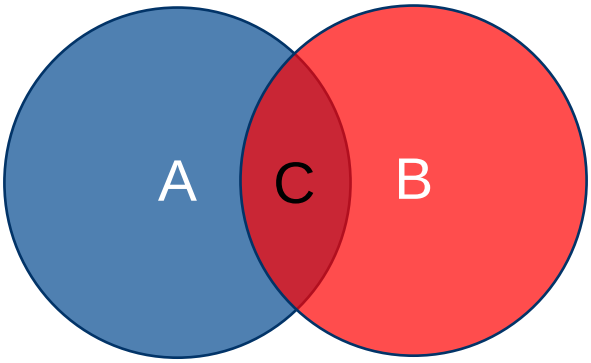
The findings from the study are representative of all ZHL clients from rural Punjab, urban Punjab, rural Odisha, urban Odisha and both Punjab & Odisha together. They are not representative of ZHL's national client base.

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 patient'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.



A= Poor household in population
B= ZHL client base
C= Poor in ZHL client base
C= B/A

Training:

GFI trained ZHL staff at both the locations on the PPI, administering the survey over a phone call, and conducting analyses of the collected data. The training also included modules on field pilot exercises and troubleshooting.

Data Analysis:

A data entry template was developed for the study that made it straightforward 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 compared 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.[14]

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%

[14] Derived from the PPI design document

Auditing a proportion of the call data in-person helped GFI analyze the effectiveness of collecting PPI data in a call center setting. The validation exercise consisted of the following steps:

1. A data validation template was developed that facilitated re-administration of PPI questions in-person, captured discrepancies in responses recorded, and possible 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.

Ethical considerations:

Due care was taken while developing the survey questionnaire to reflect sensitivity to respondent's privacy and willingness to participate in the exercise. The study design also integrated checks and balances to ensure that personal details of the respondents were not shared with a wider audience.

Validation Exercise: Confirming accuracy of the survey

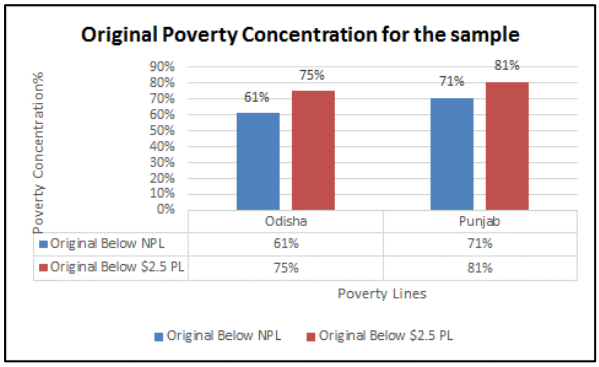
We validated 5 percent of the total sample size in Punjab and Odisha through in-person surveys.

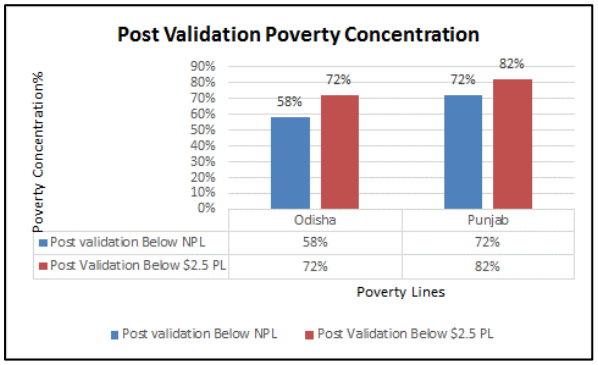
Validation sample sizes and actual surveys collected:

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

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

States	Original Below NPL	Post validation Below NPL	Original Below $2.5 PL	Post Validation Below $2.5 PL
Odisha	61%	58%	75%	72%
Punjab	71%	72%	81%	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 is below.

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
TOTAL	***54***	***19***	***25***

PPI questions (Break up of errors):	Number of errors
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 (of employment)	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 and the final question. The first three questions in particular often need deep probing. The script for the ZHL surveyors broke down the first three questions into component pieces to help drive 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 when ZHL's medical services helped facilitate the birth of a child. It is important for us to take note of these errors. Similarly, a high error rate has been recorded for the question related to possession of bicycle/motorcycle/car. The reason for high level of discrepancy for this question is due to a flaw in the validated spreadsheet which did not factor in non-possession of any of the above. While one of the call center executives created a separate column for such cases, the other recorded 'bicycle' even for cases which did not possess any of the modes of conveyance. 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 Punjab and Odisha using the national poverty line (NPL) at 200 percent and with the global $2.5 poverty line. The PPI also allows comparisons with other poverty lines such as the $1.25 and $1.88 lines.[15] Acumen and ZHL chose the following lines of reference:

1. **National Poverty Line (NPL):** The planning commission of India has accepted the Tendulkar Committee report from which the current National Poverty Line is 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 percent 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 percent of the NPL to ensure greater coverage of the population (70 percent 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 percent of Indian population falls below this poverty line.

[15] 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 here are shown against the state averages and not the national average.

Punjab:

The following narrative describes 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, provides context for interpretation of the PPI results. The tables have been divided between rural and urban to show the differences between the two populations.

Punjab Rural:

Figure 1:

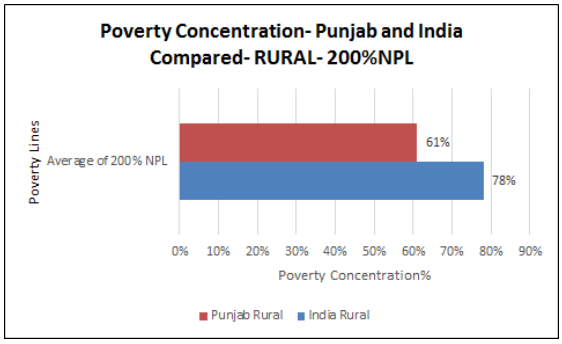
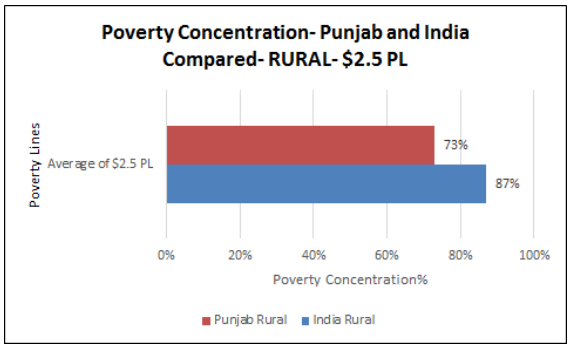


Figure 2:



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

Similarly, for the $2.5 poverty line, rural Punjab fares better than the rest of 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. Punjab 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:

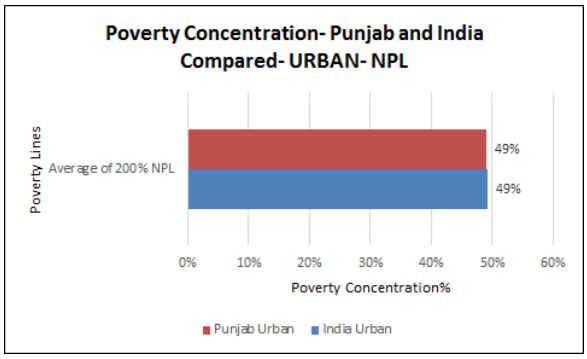
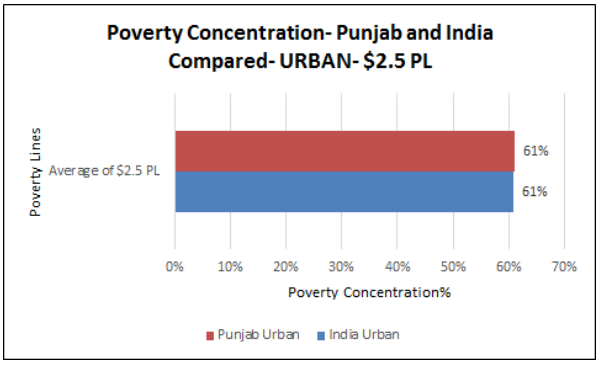


Figure 4:



The urban poverty story for Punjab is quite interesting and very different from the rural story. Punjab's urban poverty rates are as high as India's averages for both poverty lines as shown in Figure 3 and Figure 4. This may be due to high rates of migration from rural areas to cities in search of work and rapid urbanization within the state.

Poverty Comparisons for ZHL in Punjab

Sample and overview for Punjab:

As seen in the following table, the division between rural and urban populations was important in drawing out nuances in poverty outreach for ZHL and also in studying varying factors influencing outreach. The results of the PPI survey for ZHL's caller base in Punjab are in the table below.

Table 1:

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

To place these averages in context, the bar charts below show how ZHL averages compare to Punjab averages as a whole. For an organization like Ziqitza with a free-of-cost service aiming to serve the poor, poverty levels among its caller base would ideally be at or above the geographic average.

ZHL caller base and Punjab Compared- RURAL:

Figure 5:

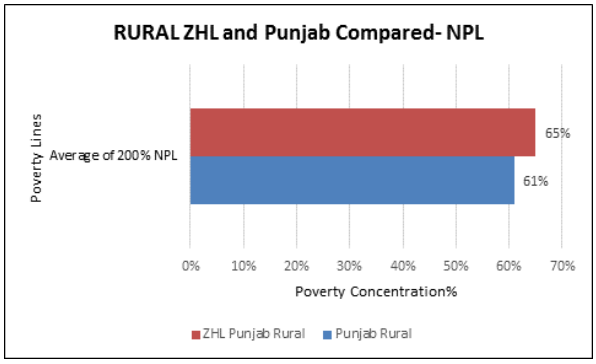
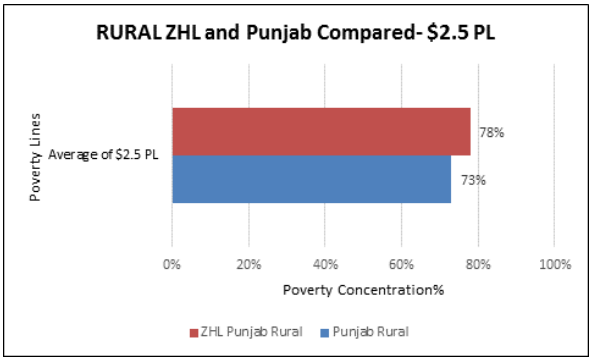


Figure 6:



As seen in the figures above, for both the NPL at 200 percent and the $2.5 poverty line, poverty rates among Ziqitza's callers are higher than the state averages. Ziqitza's management team has pointed out that reasons for its success in Punjab may be:

a. Regular marketing of 108 across Punjab, including village-level demos that raise customer awareness of emergency transportation services
b. Given that ZHL has been working in the state since 2010, penetration into remote areas and visibility has likely ensured that greater number of people know about the service
c. Seeing that 108 works and has been reliable over several years has built trust with communities. Callers interviewed during the validation exercise conducted by GFI staff confirmed this view.[16]

The ZHL outreach story in urban Punjab is even more positive. As can be seen in the following figures, for both NPL at 200 percent and the $2.5 poverty line, ZHL's averages are much higher than the state averages. For both poverty lines, ZHL's poverty concentration exceeds the state averages by 14 percentage points.

[16] Please refer to the validation exercise in the earlier section

ZHL caller base and Punjab Compared- URBAN:

Figure 7:

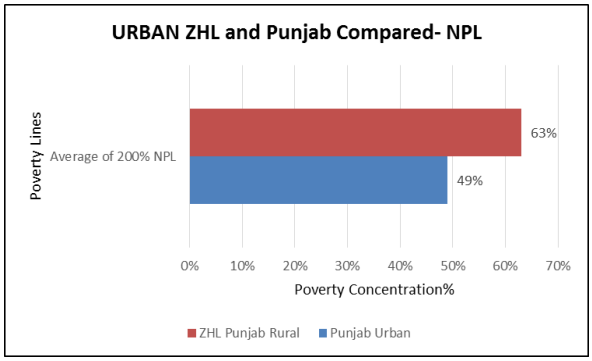
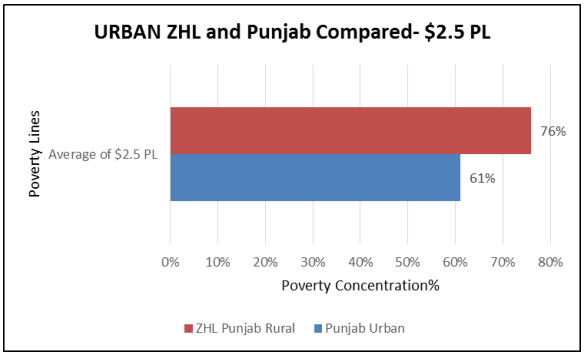


Figure 8:



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.

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. According to a new panel set up by the Government of India, headed by the RBI [17]governor Raghuram Rajan, Odisha tops the list of the least-developed states in India. On healthcare indicators, Odisha also lags behind the rest of India; it has a higher than average Crude Death Rate, Infant Mortality Rate and Maternal Mortality Rate,[18] and has seen concerted efforts on the 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 at the NPL at 200 percent 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 9:

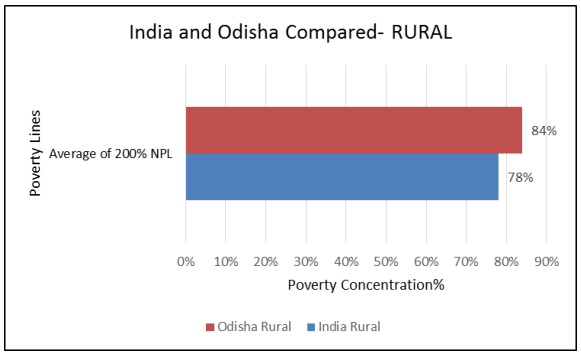
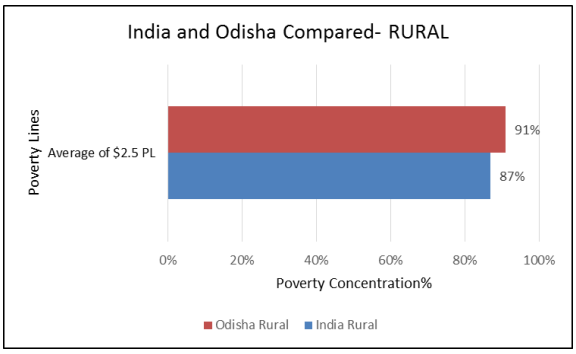


Figure 10:



As can be seen in both figures, rural Odisha poverty concentrations exceed those for rural India. Odisha is one of the least developed states in India when assessed using various development indices. Ninety-one percent of the state's population falls under the $2.5 poverty line, making this state with the highest concentration of poverty in India.

Odisha Vs Rest of India- URBAN:

Figure 11:

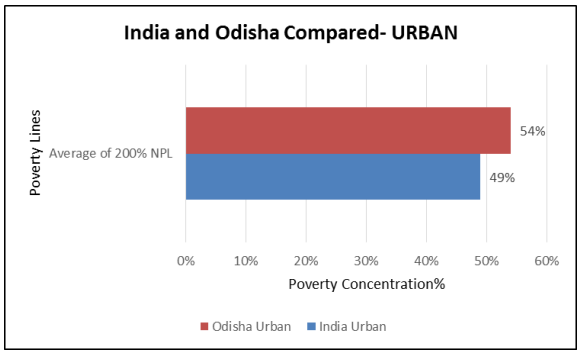
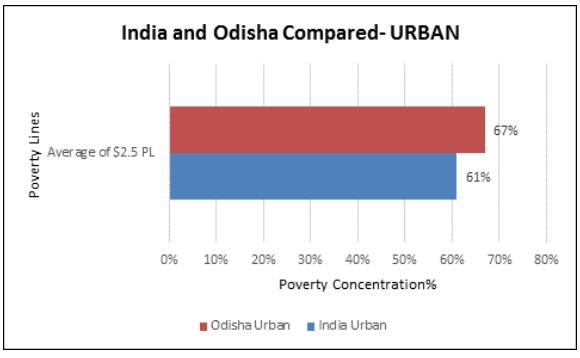


Figure 12:



[17] Reserve Bank of India- Apex banking institution for India

[18] Please refer to Annex VI for details around state performance on the mentioned health indicators

Poverty levels in urban Odisha also exceed those of urban areas across 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 towards financial shocks arising out of emergency needs such as healthcare.

Poverty Comparisons for ZHL in Odisha

Sample and overview:

In Odisha, we studied three different populations to compare ZHL to state averages and align our results with ZHL's classifications.

For Odisha, ZHL uses a third classification they refer to as "semi-urban". The PPI provides insight into only rural and urban divisions at state level. 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 revealed semi-urban areas were more similar to rural areas in average poverty levels than 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 the inclusion of this additional population affected 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%
Odisha	**407**	**65%**	**78%**

Similarity in poverty concentration

Average for the state

ZHL caller base and Odisha Compared- RURAL:

Figure 13:

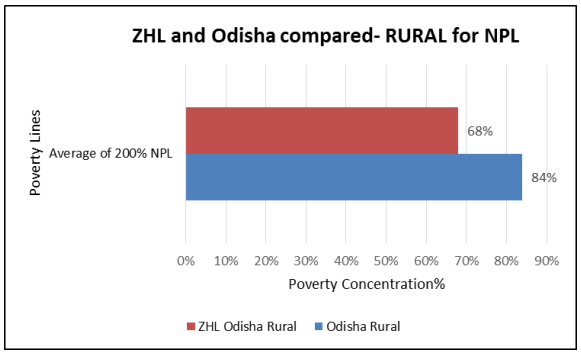
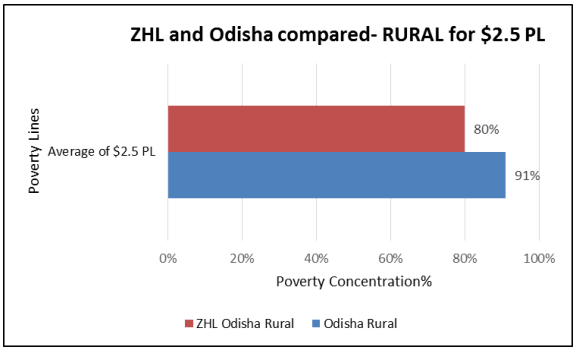


Figure 14:



As seen in figure 13 and 14, for rural Odisha at both the 200 percent NPL line and the $2.5 line, ZHL's poverty averages are lower than state averages. After discussing with ZHL's management team, lower outreach than desired in rural Odisha is likely due to several factors:

a. ZHL's presence in Odisha is a relatively recent development. It launched the 108 service in Odisha in phases starting in March 2013 in 19 of 30 districts in 2013 and early 2014. The second phase was initiated only in January 2014, when 108 also began servicing the

remaining 11 districts in Odisha, many of which are among the state's poorer districts. In our final section on recommendations, we suggest that ZHL repeat the PPI in a year's time in Odisha to see whether these results change.[19]

b. Channels of communication and infrastructure are not as strong in rural areas, especially in a state as poor as Odisha. There could also be cultural factors at play in tribal areas of the state. 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 15:

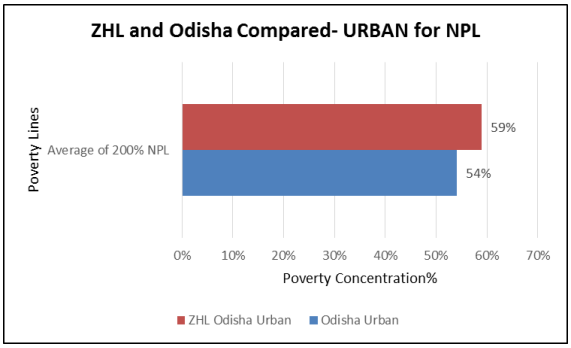
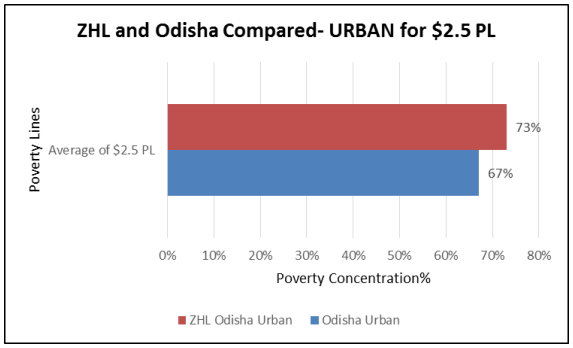


Figure 16:



Within a year of its operations, ZHL exceeded state averages in its outreach to the urban poor, for both the NPL at 200 percent and the $2.5 poverty lines. 108 in Odisha was first launched in urban areas in 2013, so one reason for ZHL's success in urban Odisha could be its longer tenure in those areas (versus in rural Odisha).

With the poverty profile of ZHL's caller base established for both states, we'll now examine client characteristics and how they relate to the PPI results. 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 gain qualitative insights from the validation exercise. The following sections of the report will be highlight different aspects of client insights correlated to poverty data to understand relationships between access to healthcare and poverty.

[19] An additional 102 ambulance service to cater to post and pre natal care was also launched in early 2014. It will also be interesting to study whether this new service leads to better outreach to female members of low income households.

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

Do medical complaints of ZHL's callers correlate with their poverty profiles? Do the poor call for medical help only in the most severe situations where the situation cannot be averted with home remedies and lack of attention would result in death or worsening of health? While our sample sizes were not large enough to draw firm conclusions on a complaint-by-complaint basis, the preliminary results we show here may merit further study to draw statistically significant trends in how the poor are using emergency medical services.[20]

Punjab:

Figure 17:

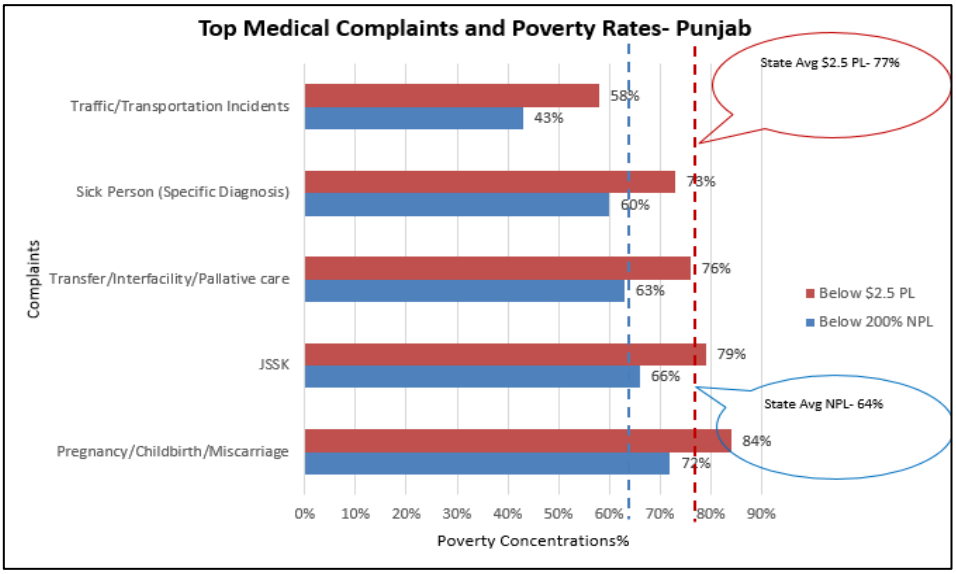


Figure17 depicts the top medical complaints for the state of Punjab. Interestingly, there is some variation in the poverty concentrations for the different complaints registered. While the poverty concentration for both poverty lines is lowest for traffic and transportation-related incidents, JSSK related cases, pregnancy/childbirth, and miscarriage carry the highest poverty rates. 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.

[20] 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.

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 18:

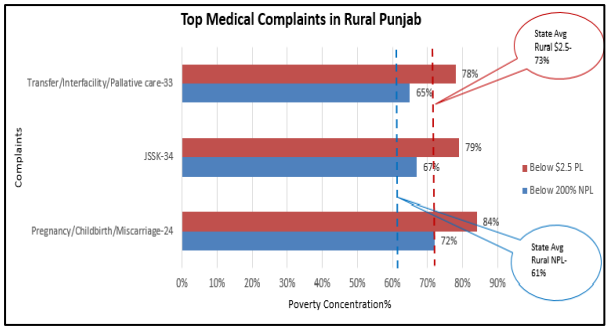
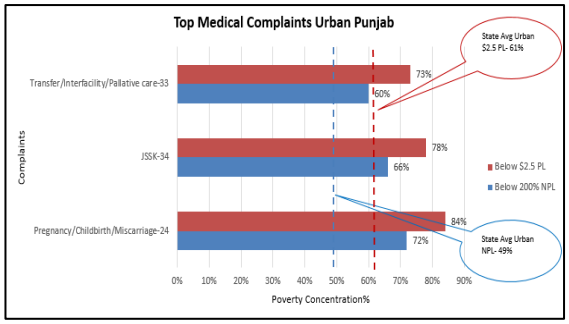


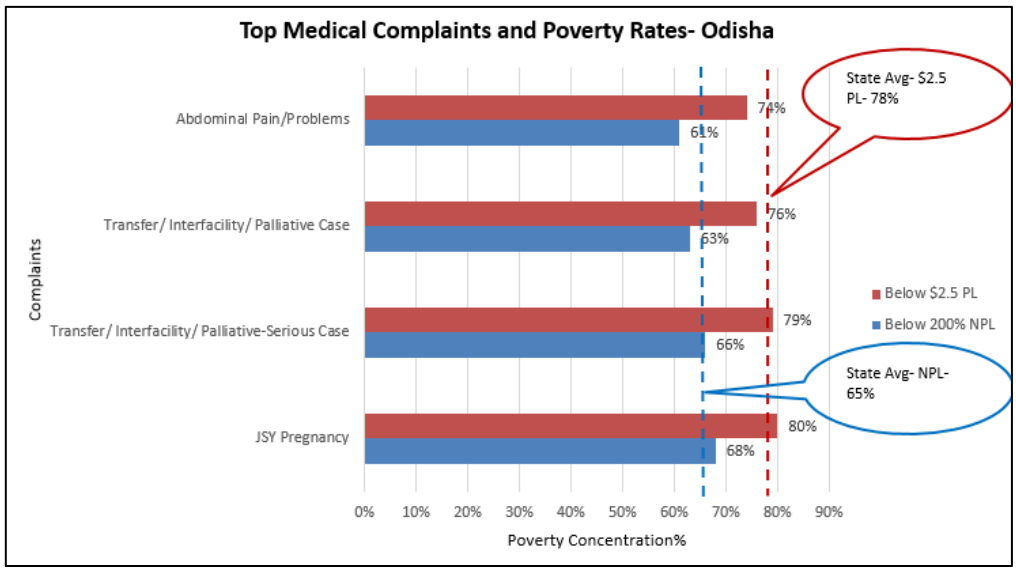
Figure 19:



Broken down by 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.

Odisha:

Figure 20:



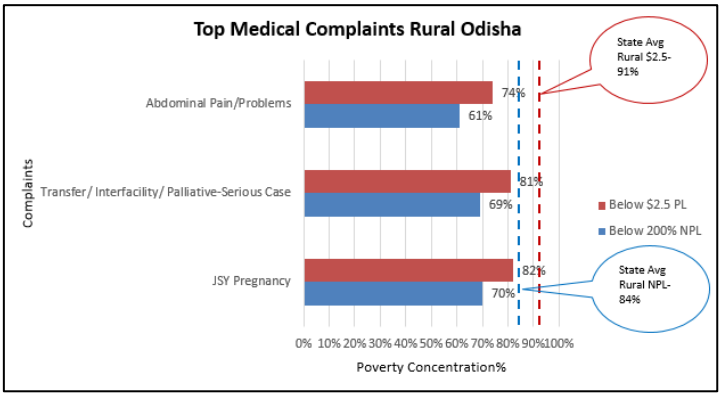
Here, the poverty concentration for Odisha, as it was for Punjab, is the highest for JSY[21] pregnancy cases. These figures also exceed the state averages for both poverty lines, showing a deeper penetration of ZHL operations into cases associated with pregnancy. This is a direct reflection of the focus 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 could be related to the fact that Odisha is one of the states in

[21] 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 Odisha in June 2006. Both the women and the ASHAs are given cash assistance for ensuring a safe institutional

delivery.

India without goodto clean drinking potable water and sanitation.[22]Even during the validation exercise, 25 percent of the cases for Odisha could be traced back to severe cases of diarrhoea. Clearly this is a pertinent healthcare issue in the state and needs adequate redress.

Figure 21:



As seen in Figure 21, the top 3 medical complaints for Rural Odisha were for abdominal pains, inter-facility transfer cases, and pregnancy cases under the government-mandated JSY scheme. The poverty concentration is 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 different in a year once ZHL is able to penetrate deeper into rural areas under its second phase of rollout.

For semi-urban and urban areas in Odisha, the sample sizes were too small to draw any trends, much less conclusions, for the report.

[22] 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, the Government of India and the private sector have been focusing on developing systems that ensure affordable and accessible services for the poor, and women in particular. Special schemes such as JSSK in Punjab (Janani Shishu Suraksha Karyakram)[23] and JSY in Odisha (Janani Suraksha Yojna) are targeted towards pre/post natal care and pregnancy cases.

As part of the study, we gathered information on the gender of patients to understand how gender and poverty might affect usage of ZHL's services. The following figures show our findings.

Punjab:

Figure 22:

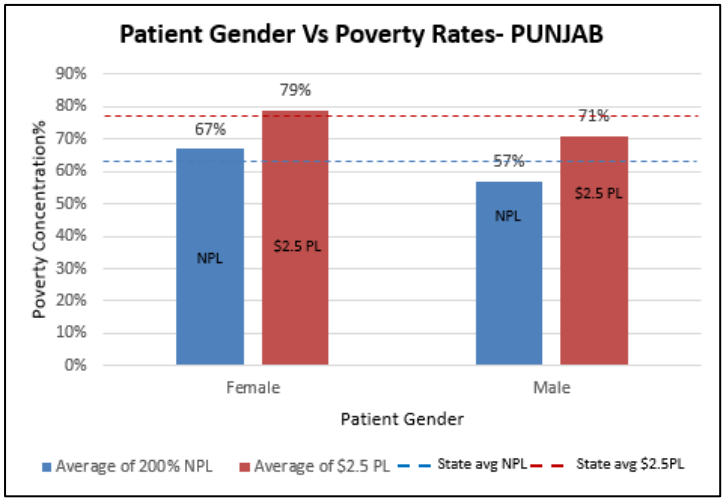


Table 3:

Gender	Number of respondents
Female	450
Male	138
Punjab	**588**

[23] Ministry of health and Family Welfare (MoHFW) launched the JSSK scheme in June 2011 to create consensus among all States to provide completely free and cashless services to pregnant women including normal deliveries and caesarean operations and sick newborns (up to 30 days after birth) in Government health institutions in both rural & urban areas.

Table 3 shows the high number of female patients using the 108 service in Punjab. Out of 588 cases registered, 77 percent were female patients for different categories of medical complaints, mostly calling 108 under the JSSK scheme. When segregated by gender (Figure 22), the poverty levels among female patients are 8-10 percent higher than that of male patients and exceeds or meets the state averages[24] for both the NPL and $2.5 poverty line.

Figure 23:

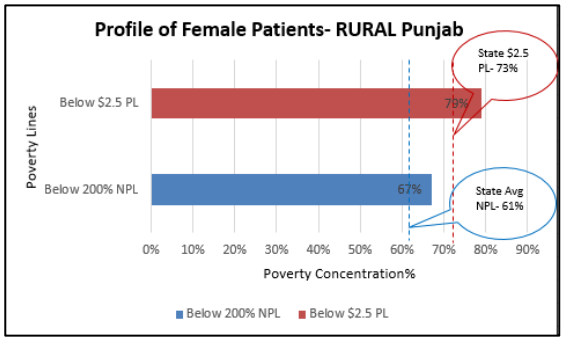
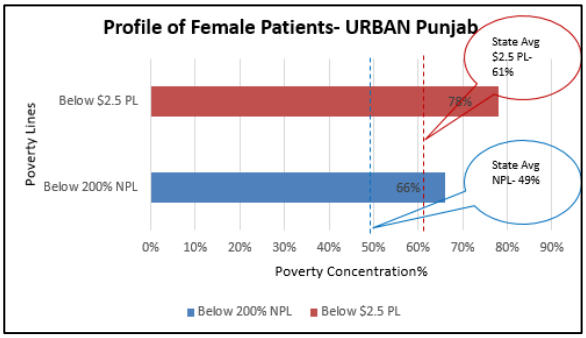


Figure 24:



The poverty concentration for both the poverty lines for both rural and urban for ZHL female patients exceeds the state averages. The difference is greater for urban areas where the concentration in both the NPL and the $2.5 poverty line exceeds the state average by 17 percentage points. Another potential area for further study is what drives deeper penetration for ZHL services in urban Punjab for female patients.

Odisha:

Figure 25:

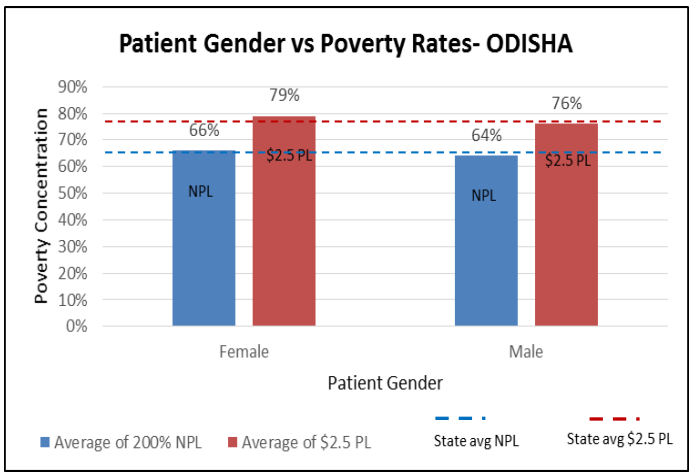


Table 4:

Gender	Number of respondents
Female	256
Male	151
Odisha	**407**

As in the case of Punjab, the absolute number of female patients using ZHL ambulance services is much higher than to the number of male patients. Of the total cases, female patients form 60 percent of the sample. The poverty concentration for both female and male patients is almost the same for both the poverty lines, unlike in Punjab where the female patients were poorer than the male patients.

[24] All the state averages mentioned are for ZHL's caller base except where mentioned otherwise

Figure 26:

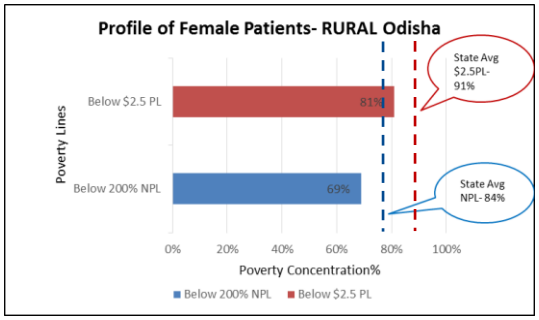
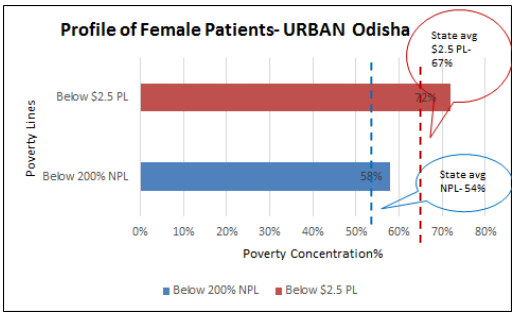


Figure 27:



When we break up the poverty profile by rural and urban, we can see a bigger difference for the Odisha female clients. As for the total ZHL caller base (Figures 12 and 13), the outreach to female patients is lower than the state average for rural areas as reflected in Figure 26. 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 launches its operations in 11 additional, primarily rural districts.

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 improving and MDG commitments are met. 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 from a gender perspective.

Female patients in ZHL caller base: an attempt to profile

In Punjab and Odisha, women calling ZHL under the JSSK[25] and JSY[26] government schemes, and for pregnancy/childbirth and miscarriage cases tend to be among their poorest callers overall. This is an important insight as this also reflects the success of the state government mandates in reaching 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.

The following table looks at the total number of maternal and pregnancy-related cases in Punjab and Odisha. The next table is drawn from the latest statistics on MMR.

Table 5:

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

State	MMR (per 100,000 live births)
Odisha	258
Punjab	192
India average	212
MDG goal by 2015	109

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. Odisha and Punjab lie at two opposite ends of the spectrum, where Odisha clearly needs to make concerted efforts to bring down MMR rates, whereas Punjab is somewhat further along, though still not close to the end goal of 109 per 100,000 cases.

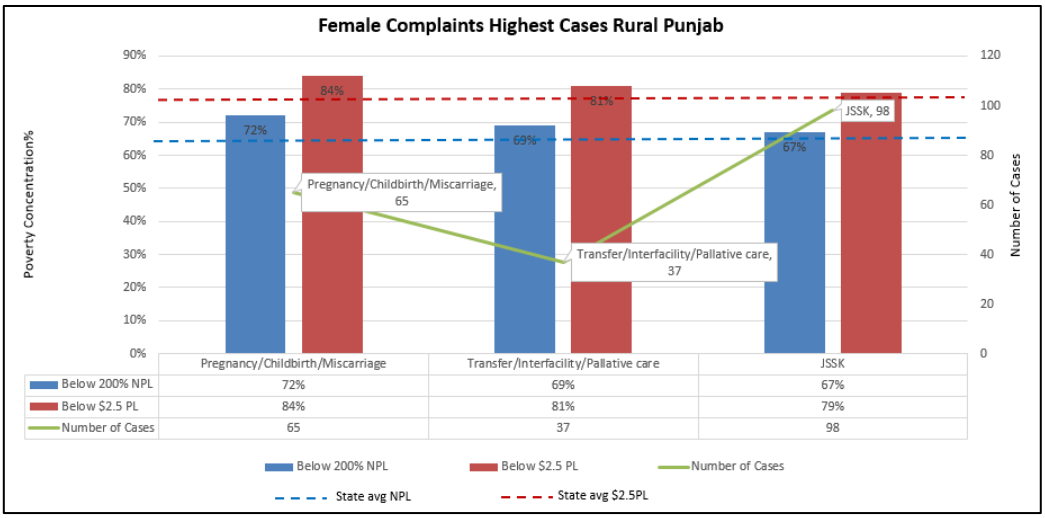
[25] Ministry of health and Family Welfare (MoHFW) launched the JSSK scheme in June 2011 to create consensus among all States to provide completely free and cashless services to pregnant women including normal deliveries and caesarean operations and sick newborns (up to 30 days after birth) in Government health institutions in both rural & urban areas.

[26] 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 Odisha in June 2006. Both the women and the ASHAs are given cash assistance for ensuring a safe institutional

delivery.

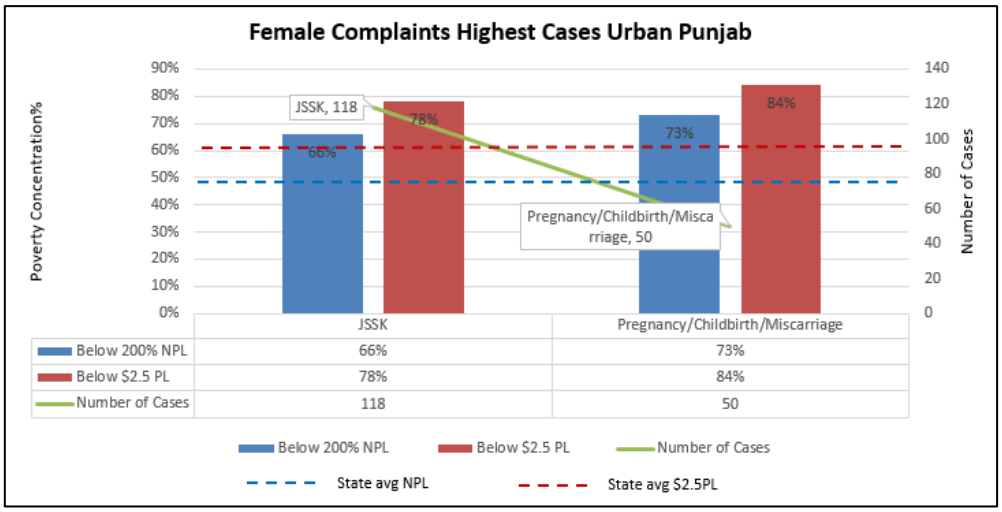
Punjab:

Figure 28:



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.

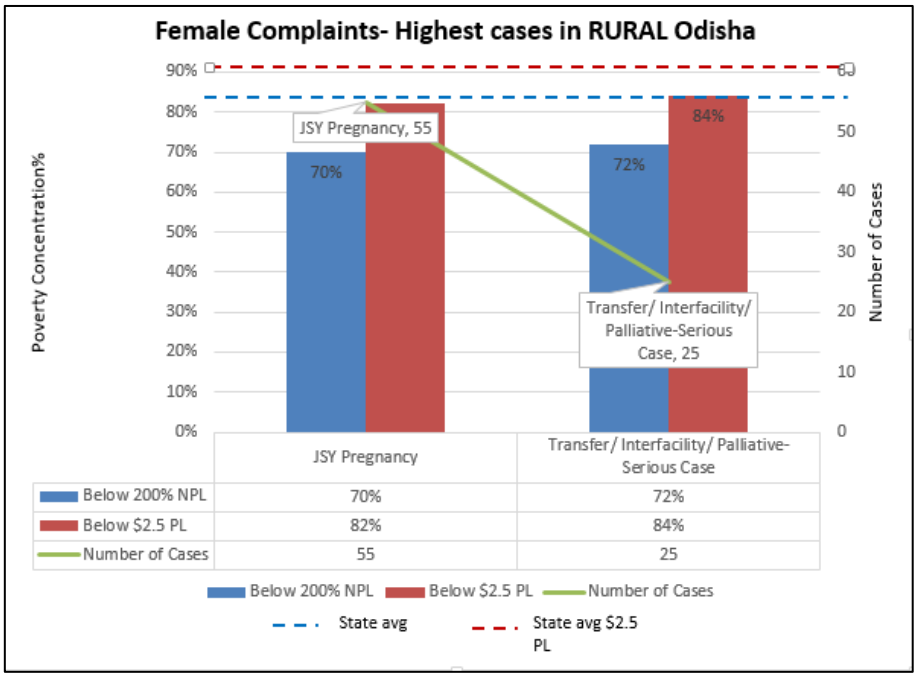
Figure 29:



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 30:



In rural areas of Odisha, JSY pregnancy and for inter-facility transfers for serious cases are the most frequently cited reasons for calling by women. This echoes ZHL's coordination with 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. The poverty profile of patients in both cases is similarly high but lower than state averages, likely for the same reasons cited in prior sections

For both semi-urban and urban areas in Odisha, the sample sizes were too small to draw conclusions. We recommend a medical complaint focused survey where each reason for calling is adequately represented in the sample to ensure statistical accuracy. This will be important in drawing out potential nuances in the relationship between poverty levels and healthcare needs.

Recommendations from the study

Poverty Outreach:

a. ZHL is meeting its mission of serving the poor, outperforming state averages with all populations studied with the exception of rural Odisha, 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 Odisha is expected to yield a different picture. We recommend repeating the exercise in rural Odisha 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 might ZHL's future efforts ensure deeper poverty penetration for clients below NPL at 200 percent (currently at 67 percent for urban and rural combined). Do additional efforts made by the government and ZHL through effective communication & marketing 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 Odisha, in 38 percent of deaths the families had trouble arranging transportation and it took 1-8 hours for them to find a vehicle. Sixty-five percent percent of the families reached a hospital within an hour, while 35 percent reached between 1-8 hours.[27] 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 employing the services of midwives and local unqualified doctors. The service makes sure that even in adverse

[27] Planning Commission of India. "Maternal Mortality in Orissa: An Epidemiological Study"

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.[28]

g. While JSSK and JSY 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 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 make into underserved areas of the regions in which it operates, 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 also to understand who they are serving. From the universal health coverage perspective, 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 highly recommend ZHL making the study of poverty outreach a part of their DNA.

[28] Ibid.

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 Odisha.

    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 percent 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 THE 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 designated with the cost constraints 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?

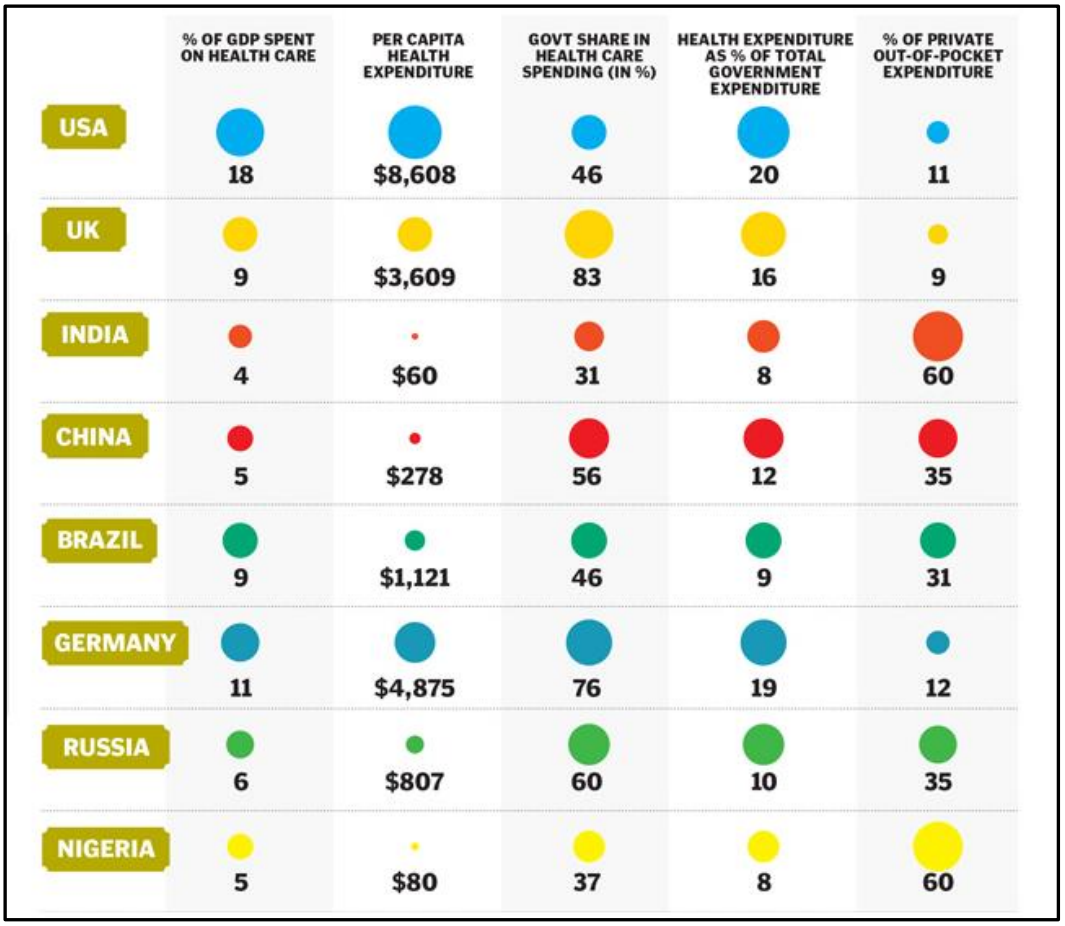
The International Comparison Program, which estimates PPP coordinates the collection of price data for a basket of goods and services in countries outside the jurisdiction of Eurostat (Statistical Office of the European Union) and OECD (Organization for Economic Cooperation and Development), used for 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[29]

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.



- 54 percent of US health spending is private, out of which insurance spend accounts for 59 percent, one of the highest in the world.
- With 95 percent 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 percent of its GDP, next only to 1.6 percent of South Sudan, the youngest nation.
- At 60 percent, 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 percent of its GDP on health care.

[29] Read more: http://forbesindia.com/article/world-watch/what-govts-spend-on-health-care/36443/1#ixzz2zgpNVKbO

ANNEX IV

What is universal health coverage?[30]

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).

[30] 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.[31]

Infant Mortality Rate is defined as the probability of dying between birth and exactly one year of age expressed per 1,000 live births.[32]

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.

[31] World Bank website

[32] 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/Pallative 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	***Punjab***	***588***	***64***	***77***

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	**Odisha**	**407**	**65%**	**78%**