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PROTECTING THE WORKING POOR

International Labour Office
Geneva

INTEGRATED HEALTH INSURANCE FOR THE URBAN WORKING POOR

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EXECUTIVE SUMMARY

The objective of this study was to conduct a community-based retrospective analysis of primary, secondary and tertiary care utilization over a 12 month period by 5000 urban slum dwellers in the context of an integrated health insurance plan (outpatient + inpatient) that was introduced by NAYA JEEVAN into Sultanabad (an urban slum in Karachi) during the 2013 calendar year.

Primary care utilization was significantly impacted by age, gender and insurance status with insured females between 18-24 years old having the highest rates of utilization in the community.

Cumulative primary, secondary and tertiary health insurance expenditures amounted to USD $32.2/person/year, suggesting that an integrated health plan priced at USD $42/year (USD $3.50/life/month) would be viable and potentially sustainable for this urban slum community.

1. STUDY GOALS AND OBJECTIVES

Study Goal: The results of this study will be used to: (i) optimally price primary care service co-payments for clinical operations sustainability, (ii) estimate secondary and tertiary care utilization in a hub-and-spoke referral model and (iii) compare and contrast primary care utilization based upon age, gender, family size and insured versus uninsured status.

Project objectives: The study has the following objectives:

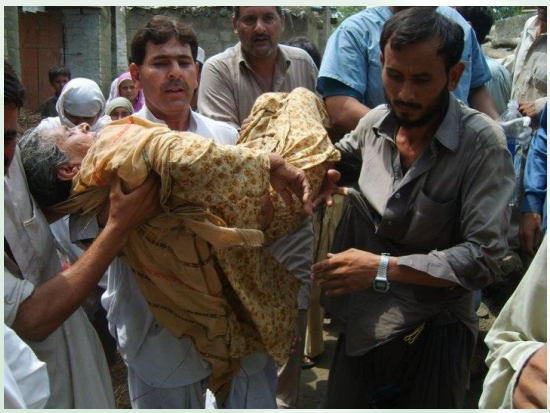
- Compare projected versus actual utilization costs of 5000 lives enrolled in a community health insurance plan during 2013 (primary, secondary and tertiary care)
- Identify groups with specific characteristics/risk factors that may predict trends in healthcare utilization
- Analyze cost drivers within the Sultanabad Community Health Plan and provide recommendations for optimal pricing of plan

2. BUSINESS MODEL

Through a unique health microinsurance (HMI) model, Naya Jeevan provides access to affordable, quality healthcare in Pakistan to a subset of the low-income population that is neither served by traditional insurance underwriters nor by microfinance institutions (MFIs).

Naya Jeevan purchases a basic, inpatient (hospitalization) group health insurance plan from one of various underwriters at volume-discounted rates of about USD $16/person/year. (Naya Jeevan currently buys from Allianz-EFU, Pak-Qatar Takaful, Jubilee Life Insurance, IGI-Metlife Alico Insurance and Saudi-Pak Insurance.

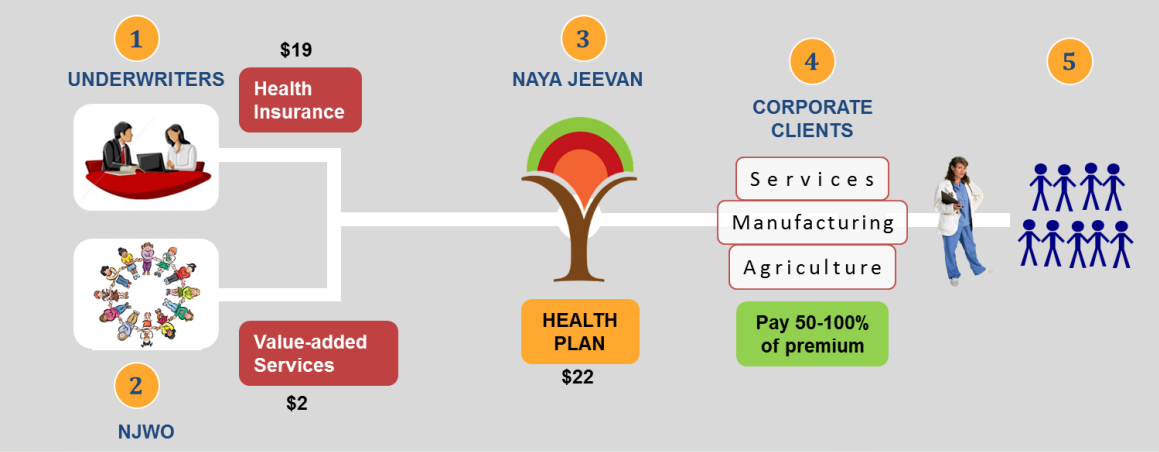
By expanding access to a previously untapped low-income population, Naya Jeevan is creating significant value for insurance underwriters who are able to increase revenues without investing in associated sales/marketing/business development expenses while leveraging Naya Jeevan's unique health services delivery platform. Consequently, insurance underwriters are able to offer Naya Jeevan the health insurance plan at heavily discounted rates of ~USD $16/person/year.



Naya Jeevan delivers a package of Core Medical Services (CMS), which is uniquely tailored towards this customer segment. At USD $2/person/year, the CMS (described in greater detail in the next section) provides a critical function of creating tangible value for the beneficiary.

Naya Jeevan sells the health plan package to clients, including both international and local businesses and other institutions that employ low-income workers or contractors. Naya Jeevan targets clients with access to a large number of low-income workers, either as employees or through supplier/contractor relationships and sells the health insurance plan at an average of US$24/person/year[1].

Naya Jeevan currently has 80+ clients through which health insurance is being distributed to its low-income members. Examples of current clients include: Unilever, Espresso, Cafe Flo, Sanofi, Philips, etc.



Clients typically finance 50-100% of the total health plan cost (USD $24/person/year), with the remaining balance paid by the workers directly through payroll, representing 0.33 – 1.48% of the employee's monthly income(of USD $50-250 per month).

Corporate clients purchase the health plan for three primary reasons:

i. as a tool to encourage worker productivity

ii. as an incentive/loyalty program to boost business/sales performance and

iii. as part of their corporate social responsibility (CSR)

Since 2010, Naya Jeevan has been experimenting with different sales and services strategies while refining its business model. Institutional client growth rates were deliberately decelerated in 2012 and 2013 in comparison to beneficiary/member growth rates as Naya Jeevan focused on higher-margin, flagship customers that could send a more robust, competitive market signal to other large prospective corporate customers[2]. For a more in-depth analysis of Naya Jeevan's key learnings over the past four years, please refer to its Learning Journey on the ILO Microinsurance Innovation Facility web portal: http://www.microinsurancefacility.org/projects/lessons/managed-health-solutions

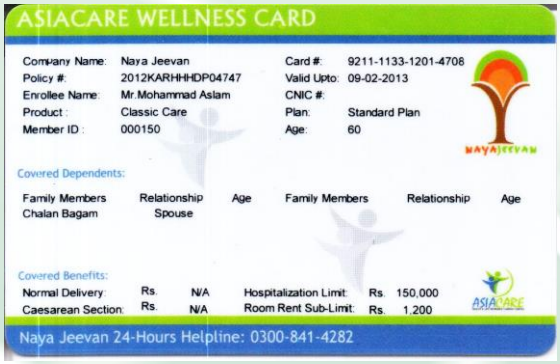
A description of the approach that has enabled Naya Jeevan to access and provide services to the low-income market is provided in this video: http://www.microinsurancefacility.org/videos/delivering-microhealth-pakistan

	2010	2011	2012	2013
Corporate Clients	14	54	61	65
% growth		*285%*	*13%*	*6.6%*
Corporate Beneficiaries	1,297	4,243	7,240	8868
% growth		*227%*	*71%*	*22.5%*
Underwriters	3	*4*	*4*	*5*

3. METHODOLOGY

The Naya Jeevan integrated health plan that was offered in the Sultanabad Pilot Project (SPP) consisted of a inpatient hospitalization-insurance plan, wrapped in a shell of tangible, value-enriched primary care services. The health plan provided annual in-patient health coverage of up to USD $1,500, benchmarked to cover the cost of heart bypass surgery at a nationwide network of 200+ quality, private hospitals in Pakistan.

In the SPP, members were predominantly referred from the Sultanabad Community Health Center (primary care) to two hospitals for secondary and tertiary care. A sample of a typical health card issued to Sultanabad beneficiaries is shown below[3].



The SPP was funded by a grant from USAID. This included a $100,000 allocation for the establishment and operational expenses of the SCHC primary care clinic for a period of 12 months, inclusive of all staff salaries. Clinic staff included 2 doctors, 2 nurses, 2 medical assistants, 1 clerk, 1 janitor and 1 guard. An additional allocation of $150,000 was made to cover the health insurance of 5000 lives (@$30/life/year), inclusive of all projected secondary and tertiary care expenses.

SULTANABAD'S INTEGRATED HEALTH PLAN: PRIMARY, SECONDARY & TERTIARY CARE IN AN URBAN SLUM

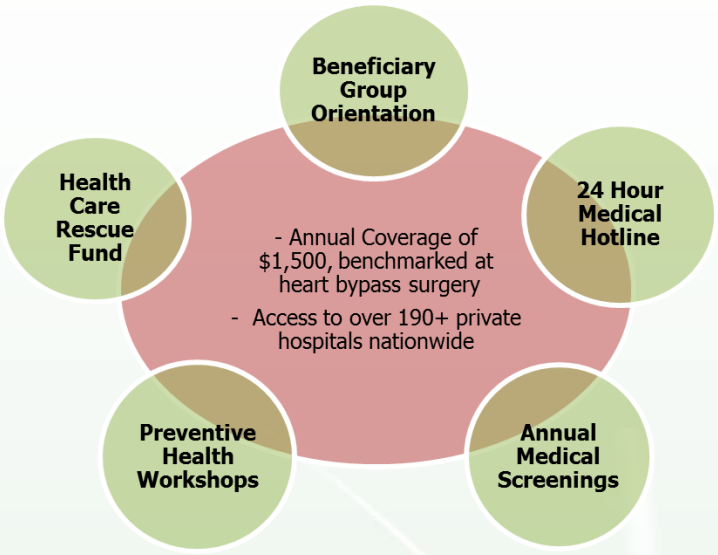
The design of the Naya Jeevan health plan for Sultanabad reflects an evolution of the Naya Jeevan core business model to include a focus on primary care and is captured in this video: http://www.microinsurancefacility.org/videos/pursuing-primary-care. In addition to the primary care provided at the SCHC, outpatient coverage associated with a hospitalization event (consultation, medicines, physiotherapy and lab tests, etc.) was covered for up to 30 days before and after hospitalization as part of the core insurance plan. The age limit for primary insured and spouses was 60 years, for sons until 25 and daughters until marriage. Parents above the age of 60 were included in the family health plan if they lived in the primary insured's household. Pre-existing conditions (PEC's) were covered while dental coverage was not. Emergency ambulance transport hospitals was also covered, and beneficiaries could go to any of the 250+ private, network hospitals across Pakistan (or to the thousands of non-network public and private hospitals if they encountered an emergency). In the absence of an emergency, insured members were required to see their Primary Care Physician (PCP) at the Sultanabad Community Health Center (SCHC) operated by NAYA JEEVAN. If specialized consultation was needed, insured members were referred by their PCP to consultants at 2 pre-designated hospitals (Ziauddin Keamari Hospital & Burhani General Hospital) for cashless, outpatient secondary care. These two hospitals were selected for their proximity to the community (they were the nearest network hospitals to Sultanabad and within a 3km radius of the community) and for their reputation as quality secondary/tertiary treatment centers. All non-emergency tertiary care was also provided at these two hospitals through the health insurance plan.

VALUE-ADDED SERVICES

NAYA JEEVAN provided the following client-focused, Value-Added Services (VAS) to its beneficiaries in Sultanabad over a 12-month calendar period (January 2013 to December 2013):

Access to discounted primary care

Using a classic Primary Care Physician (PCP)-gatekeeper model, NAYA JEEVAN established a community health center in Sultanabad that served as both a base for the study's field operations as well as a venue to provide quality primary care to the entire Sultanabad community. Both Insured and non-insured community members were required to make a co-payment of PKR 30/visit ($0.30/visit; however, some ultra-poor members and non-members were exempted



from this co-payment). Additional services provided at the clinic included antenatal ultrasound (1 session/week), and point-of-care haemoglobin testing and blood glucose monitoring.

24-7 mobile phone access to Naya Jeevan medical doctors

Many insurance underwriters offer 24/7 medical helplines; however, these are primarily used for insurance claims assistance. In the SPP, Naya Jeevan actively marketed its medical teledoctor 'HealthLine' for out-patient consultations via community mobilizers, for problems ranging from routine colds to more serious conditions that required physical examination at the SCHC. This service was supported by four full-time doctors, with an average of 3,600 phone-based consultations conducted by phone during the 12 month study period.

Customized group orientation sessions

Low-income beneficiaries are often semi-literate and do not understand health insurance or the processes involved in claim processing. It is critical for the success of health insurance programs that such workers comprehend the product's utility and value. Customized group orientation sessions help beneficiaries understand the product, allowing them to optimize the use of their health benefits, make and receive claims expeditiously, and share this information with other low-income employees to build word-of-mouth enabled consumer demand in the market.

The beneficiary orientation Sessions offered through NAYA JEEVAN consisted of a live trainer supplemented by an animated, educational training video that employed illustrated story-telling devices to educate semi-literate beneficiaries about the NAYA JEEVAN health plan, the insurance claims process and other benefits offered to beneficiaries under the health plan. Each training session lasted approximately

1 hour and was conducted at the Sultanabad Community Health Center (SCHC) within the first month of enrolment. Beneficiaries were encouraged to ask questions in person to ensure that they fully comprehended the product.

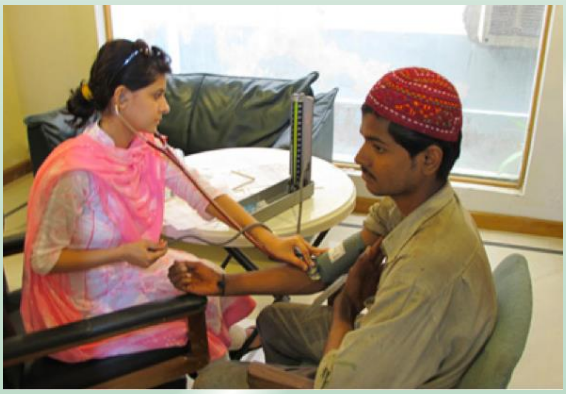
Annual medical screenings/health risk assessments

Every Naya Jeevan beneficiary is entitled to a free medical screening/health risk assessment within the first 90 days of enrolment, a facility which is used by ~30% of its beneficiaries. The medical screening conducted in Sultanabad was a prerequisite for insurance activation (100% of families were screened), took place at the SCHC and was performed by Naya Jeevan's in-house medical doctors and nurses. The screening served as an important preventive strategy to detect and manage diseases before they escalated and triggered a hospitalization incident. Naya Jeevan doctors captured the beneficiary's (and their family's) health history, and conducted an extensive physical examination. Pressing health problems were diagnosed or could not be treated on site in 232 cases (of 5037 lives screened). These 232 beneficiaries were referred to an external consultant physician or diagnostic center for relevant blood work/imaging studies (all covered within the health insurance plan).

Workshops related to primary health issues

The workshops offered by Naya Jeevan in Sultanabad included:

- The Healthy Heart
- Mother-Child Care
- Hand Hygiene
- Kill a Cigarette
- Diabetes Prevention & Management
- Infectious Disease Control



Target population profile

The target primary insured beneficiaries in the SPP were employed in both service and manufacturing sectors as construction workers, drivers, chefs, waiters, factory workers, janitors, small-medium enterprise employees, gas pump attendants, sales representatives, security staff and informal domestic household staff.

INSURANCE UNDERWRITER SELECTION

In the SPP a competitive bid was publicly announced and a tender notice was advertised in both local and national newspapers. Four insurance companies responsed to the tender: Saudi-Pak Insurance, Pak-Qatar Takaful, Jubilee Life Insurance and Allianz-EFU health insurance company. The product design specifications were predefined in the tender and a rating system was used by SGAFP (administrators of the SPP grant on behalf of USAID) to rank the insurance company bids on a variety of attributes and services.

The basic parameters of the insurance coverage were as follows:

- annual hospitalization coverage limit: PKR 150,000 ($1500)
- hospital-affiliated outpatient care coverage of 30 days pre- and post-hospitalization
- maternity coverage included (at least 50% of the target population had to be women per the household eligibility criteria)
- annual insurance premium not to exceed PKR 1800 ($18)

Based on the scored-ranking system, the bid was awarded by SGAFP (the USAID grant administrator) to Allianz-EFU.

Allianz-EFU was formed in 2000 as a joint venture between Allianz of Germany and EFU Group. It is Pakistan's first specialized health insurance company, and the largest in terms of annual premium income, number of corporate clients, and number of insured lives.

Allianz
efu
HEALTH
ALLIANZ EFU HEALTH INSURANCE LTD

SULTANABAD CLINIC OPERATIONS, INSURANCE DISTRIBUTION & MEMBER ENROLMENT

In Sultanabad, community mobilizers from within the local community were activated to conduct a baseline survey of ~25,000 beneficiaries within a predefined area. The baseline survey evaluated the following variables:

The baseline survey evaluated the following variables:

- Age
- Gender
- Individual Income level of head of household
- Number of people in household

The selection criteria for eligibility to enrol in the NAYA JEEVAN health plan included:

- ✓ Individual Income level less than PKR 15,000/month
- ✓ 3 < Total number of family members in household < 8
- ✓ Number of women in household >50% of total family members
- ✓ Age of primary insured (head-of-household) < 60

A total of 4137 households met the above eligibility criteria. From this overall eligibility pool, 867 households (5000 lives) were randomly selected with the following characteristics:

Table 1: Profile of Insured by age, gender & disease history (n=5000)

	Insured	% of Total	National health indicators
Age			
25th Percentile	8 years	-	
Median	15 years	-	
75th Percentile	33 years	-	
Gender			
Male	1,843	36.86%	
Female	3,157	63.14%	
Disease History			
Arthritis	125	2.50%	2.88%
Asthma	15	0.30%	0.56%
Congenital Heart Disease	9	0.18%	0.22%
Diabetes	9	0.18%	3.50%
Hepatitis	21	0.42%	3%
Hypertension	233	4.66%	12.30%
Tuberculosis	14	0.28%	0.18%

Table 2: Gender distribution by education status

	Female	Male	Grand Total
Grade 12	30	12	42
Grade 10	116	52	168
Middle School	97	55	152
Primary School	158	82	240
Uneducated	2775	1622	4397
Post Graduate	1		1
Grand Total	3157	1843	5000

Table 3: Gender distribution by marital status

	Female	Male	Grand Total
Divorced	2	1	3
Married	811	646	1457
Single – Adults	470	140	610
Children	1856	1045	2901
Widow/ Widower	18	11	29
Grand Total	3157	1843	5000

Table 4: Gender distribution by age group

	Number of Unique Patients	
Age Group	Male	Female
Less than 18	1,045	1,856
18 - 24	41	391
25 - 34	136	360
35 - 44	270	313
45 - 64	296	191
Over 64	55	46
Total	1,843	3,157

BENEFICIARY UTILIZATION

Insured beneficiaries could call the Naya Jeevan Healthline at any time on the number printed on their health cards and be guided by community health 'navigators'. When insured beneficiaries reported an urgent illness via the telehealthline or were referred for hospitalization from the SCHC, they were navigated towards two nearby network hospitals - Ziauddin Keamari Hospital (ZKH) or Burhani General Hospital (BGH) and were admitted on a cashless basis (without any copayments).

Doctors from the Naya Jeevan team were also available, where necessary, to visit the two hospitals for additional support.

4. RESULTS

Clinical Utilization (January 1 2013 - December 31 2013)

Total number of primary care visits: 7901

Total Number of primary care visits by insured: 6634

Total Number of primary care visits by non-insured: 1267

% of clinic visitation of primary care by non-insured = 1267/7901 = 16.04%

Monthly Patient Frequency/Primary care utilization at SCHC Clinic = 7901/12 = 658.42

CLINICAL PAYMENTS

Total primary care co-payments made by insured: PKR 99,795 ($997.95)

Total primary care co-payments made by non-insured: PKR 28,690 ($286.90)

Average primary care co-payment per insured member: PKR 99,795/6634 = PKR 15.04 ($0.15)

Average primary care co-payment per non-insured member: PKR 28,690/1267 = PKR 22.64 ($0.23

SECONDARY & TERTIARY CARE UTILIZATION

N.B. For the purposes of this study, the definition of secondary care = outpatient consultant/specialist care (can be delivered on an ambulatory basis in a hospital)

For the purposes of this study, the definition of tertiary care = inpatient, hospital-based care

All differences between claims submitted and claims paid were absorbed by providers (hospitals/specialists) i.e. no balance billing occurred.

PROJECTED CLAIM COSTS VERSUS ACTUAL COSTS

Original Budget Allocated to Secondary Care: PKR 5,550,000 ($55,500)

Claim Ratio for Secondary Care = 5168126/5550000 = 93.97%

Original Budget Allocated to Tertiary Care: PKR 9,000,000 ($90,000)

Claim Ratio for Tertiary Care = 6,828,328 /9,000,000 = 75.87%

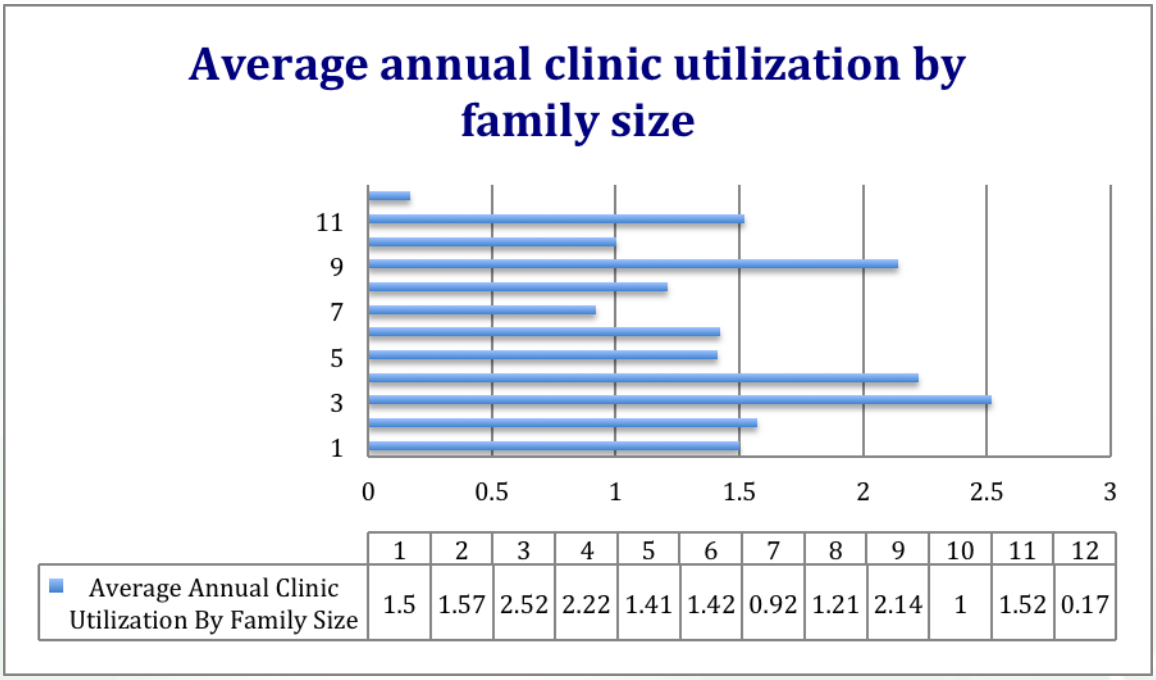


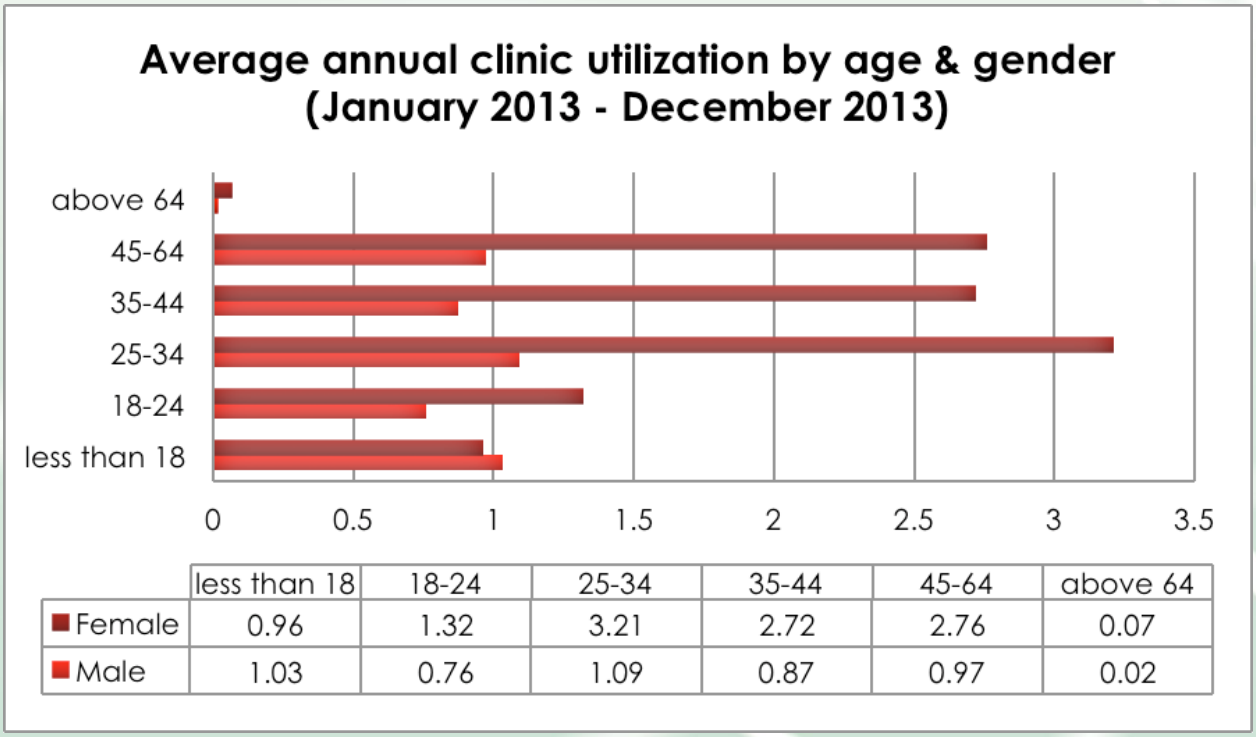
Table 5: Annual clinic utilization by family size (January-December 2013)

Family size	Number of visits to clinic	Number of families in sample	Ratio of annual clinic visits to family size	Average annual clinic utilization per member
1	6	4	1.50	1.50
2	47	15	3.13	1.57
3	212	28	7.57	2.52
4	755	85	8.88	2.22
5	1,249	177	7.06	1.41
6	1,953	229	8.53	1.42
7	1,299	202	6.43	0.92
8	821	85	9.66	1.21
9	135	7	19.29	2.14
10	80	8	10.00	1.00
11	50	3	16.67	1.52
12	2	1	2.00	0.17
Total	6,609	844	7.83	1.20

Note: There were 1,292 observations with missing data on family size.

Table 6: Annual clinic utilization by age & gender (January-December 2013)

Age Group	Number of visits			Number of unique individuals			Average annual utilization per person	
	Male	Female	Visit ratio F/M	Male	Female	Gender ratio F/M	Male	Female
Less than 18	1,073	1,789	1.67	1,045	1,856	1.78	1.03	0.96
18 - 24	31	516	16.65	41	391	9.54	0.76	1.32
25 - 34	148	1,157	7.82	136	360	2.65	1.09	3.21
35 - 44	235	852	3.62	270	313	1.16	0.87	2.72
45 - 64	288	527	1.86	296	191	0.65	0.97	2.76
Over 64	1	3	3	55	46	0.84	0.02	0.07
Total	1,776	4,844	2.73	1,843	3,157	1.72	0.96	1.53



	less than 18	18-24	25-34	35-44	45-64	above 64
Female	0.96	1.32	3.21	2.72	2.76	0.07
Male	1.03	0.76	1.09	0.87	0.97	0.02

Clinical utilization ratio of female/male = 4844/1776 = 2.73

Table 7: Primary, secondary & tertiary care claims summary

Observation	Primary care	Secondary care	Tertiary care
Total number of claims made by insured	6634	2969	534
Annual Incidence rate of Events	132.6%	59.38%	10.68%
Number of unique members (utilisers)	4573	432	244
Average number of claims/utiliser/year	1.45	6.87	2.19
Total claims submitted by providers ($)	n/a	53959.60	74,186.94
Total claims paid by insurance ($)	n/a	51,681.26	68,283.28
Average claim submitted by providers ($)	n/a	18.17	138.93
Maximum claims paid out to 1 family ($)	n/a	3312.87	1334.05
Minimum individual claim submitted ($)	n/a	1.08	17.96
Average claim paid by insurance ($)	n/a	17.41	127.87
Maximum individual claim paid ($)	n/a	2077.60	1322.64
Average claim submitted by providers ($)	n/a	124.90	304.04
Average Claim paid by insurance ($)	n/a	119.63	279.85
Cost of claims submitted/member	n/a	10.79	14.84
Cost of claims paid /member	n/a	10.34	13.66

% Insured utilizing Primary care = 4573/5000 = 91.46%

% Insured utilizing Secondary care = 432/5000 = 8.64%

% Insured utilizing Tertiary care = 244/5000 = 4.88%

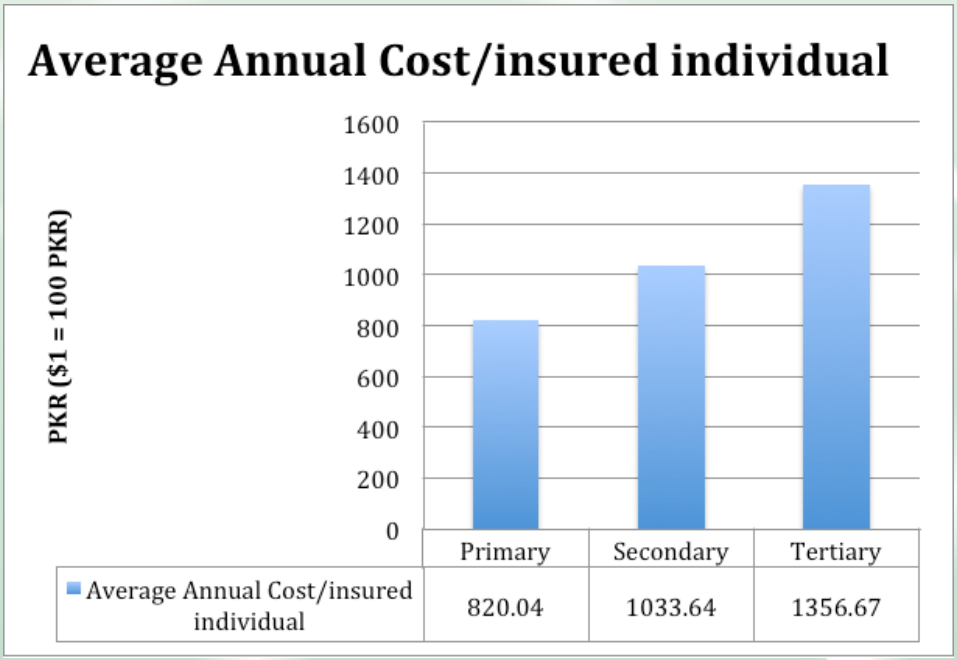
Table 8 : Primary, secondary & tertiary care cost comparison

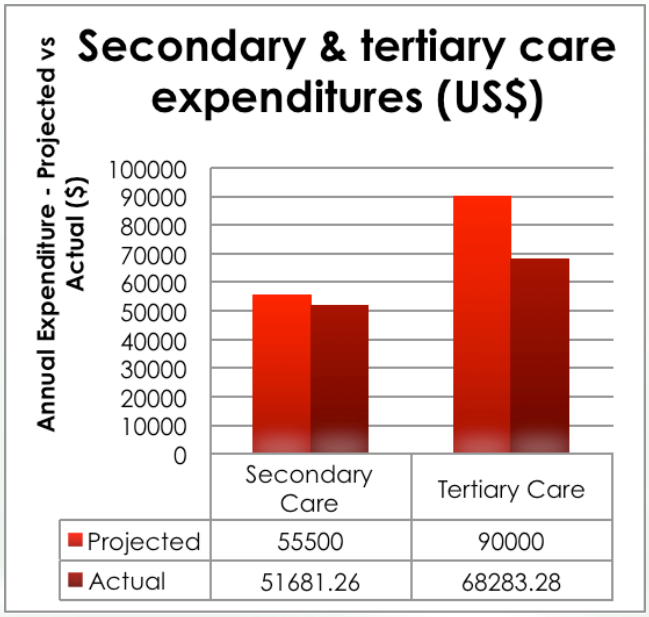
	Total encounters	Total # unique users (members)	Total costs (USD)	Average cost/visit (USD)	Average cost/unique user (USD)	Average annual cost/member (USD)
Primary[1]	6,634	4,573	40972.05	6.18	8.97	10.80
Secondary	2,969	1,017	51681.26	17.41	50.82	10.33
Tertiary	534	374	68283.28	127.87	182.58	13.67

Note

[1] Net primary-care costs = USD $42000 - $1026.55 (= clinic operating costs @$3500/month - clinic revenues from both insured and non-insured). Based on the current capacity of the clinic, all operatings costs (personnel, equipment, etc) are non-variable.

[2] Total insured lives amount to 5,000 members.





HIGH-UTILIZERS OF PRIMARY CARE

- % of primary care expenditure utilized by top 20 users = 9.39%
- % of secondary care expenditure utilized by top 20 users = 18.90%
- % of tertiary care expenditure utilized by top 20 users = 16.35%
- % of total health expenditure utilized by top 20 users = 17.34% 2 = 658.42

Table 9: Top 20 most frequent utilizers of primary care (ranked in descending order)

Cert ID	Primary-care visits	Primary-care costs (USD)	Median patient age	Secondary-care visits	Secondary - care costs (USD)	Tertiary-care visits	Tertiary - care costs (USD)	Total expense
00356	65	8.70	20	42	515.76	8	1335.04	1859.50
00976	61	5.90	6	23	3312.87	3	360.40	3679.17
00844	58	8.60	20	35	565.45	1	955.0	669.55
00510	57	7.10	32	30	292.32	3	404.61	704.03
00374	56	9.00	20	33	479.92	8	1200.61	1689.53
00059	53	8.70	19	25	458.61	4	244.29	711.60
00538	50	5.70	18	26	321.67	4	486.10	813.47
01006	49	5.70	13	22	265.52	3	167.90	439.12
00856	47	5.70	53	17	731.44	3	240.81	977.95
00802	47	4.50	16	17	187.41	3	379.51	571.42
00891	47	3.80	3	20	191.61	3	264.97	460.38
00124	46	3.30	45	32	482.75	5	527.27	1013.32
00820	44	8.40	32	28	560.49	7	2942.79	3511.68
00971	43	5.90	14	19	259.86	4	1254.54	1520.30
00511	42	5.10	26.5	9	18,542	3	385.16	575.68
00852	41	4.80	9	13	18,465	2	68.07	257.52
00012	40	7.80	22	22	461.69	1	385.39	854.88
00404	40	4.45	8	17	93.62	2	214.92	312.99
00397	40	3.90	13	30	219.95	9	884.26	1108.11
00585	39	3.60	22	28	426.80	2	285.09	715.49
Sum	965	120.65	13	488	10197.81	78	12127.23	22445.69
Total costs	7,901	1284.75		2,969	53958.60	534	74186.94	129430.29
Average cost		0.16			18.17		1389.26	
% of total	12.21%	9.39%		16.44%	18.90%	14.61%	16.35%	17.34%

5. FINDINGS & DISCUSSION

A major gender Imbalance may have been caused by family self-selection

Unlike previous studies with tribal communities in South Asia[7], this study, surprisingly, had a significant gender skew in favor of women with females outnumbering males by 2:1. This may be attributable to two factors: a) the community is mainly comprised of Pahstun migrants/refugees who have fled violence-prone regions of Northern Pakistan (KPK/FATA) in which a higher proportion of male civilians may have lost their lives (their widows would, according to their tribal tradition, have remarried and therefore would not have been uniquely identifiable in the baseline survey (they would be classified as married) and b) self-selection by the community. Community mobilizers may have inadvertently leaked the enrolment selection criteria within the original target population of 5000 households (~25,000 lives) that were surveyed at baseline. Selection criteria were applied to these 25,000 lives in which families eligible for the health plan were families that were comprised of at least 50% females. Of the original 5000 households, a significant number (4137 households) satisfied this gender criterion. Households were then randomly selected from these 4137 eligible households until the 5000 life enrolment threshold was met (a total of 867 households were selected randomly). It is conceivable that these families may have over-reported women (both under 18 and above 18) in the household as the health plan came with one full, complimentary year of health insurance and was therefore considered to have considerable value). Only the head of the household was required to provide photo ID at the time of initial enrolment. Future studies of this nature should ensure that either photo identification or biometric verification is conducted of all insured members to reduce the possibility of inappropriate enrolment and utilization.

The relative youthfulness of the population may explain the reduced disease prevalence observed in this urban slum

Given the relative youthfulness of the population (50% of the population was under 15, 25% was between the ages of 15 and 33 years and only 2.5% was above 64 years compared to 4.11% reported in 2006 by the Federal Bureau of statistics[8]), it is not surprising that the prevalence of non-communicable diseases (NCDs) as measured during the baseline survey were comparatively low: 4.5% for hypertension versus 15.7% for urban areas reported in the 2006 National Health Survey[8].

Age, gender & family size all impacted primary care utilization

While the average family utilization was 1.2 primary care visits/family member/year (± 0.52 STDv), the only family size that was significantly (more than 2 standard deviations) away from the mean was a family size of 3 with an average of 2.52 visits/family member/year. One plausible explanation for this is that these families may typically consist of 2 adults + 1 child and are, presumably, more likely to avail mother-child healthcare available at the clinic. Perhaps, having more than one child may make it more logistically challenging and more expensive for the primary care giver to provide access to the same quality of care to multiple children.

Comparison of projected vs actual utilization of secondary/tertiary care by Sultanabad community health plan members in 2013 & the role of disease surveillance screening

At the beginning of the SPP, the utilization was projected to be the following:

- Secondary care: USD $ 60,000 – Allianz Administrative Fee (7.5%) = USD $ 55,500
- Tertiary care: 80% (projected claim ratio) for 5000 lives x $18 (premium/life)] = USD $ 72,000

The claim ratio for secondary care was realized at 93.97% which is reflective of the intensive hepatitis screening mobilization campaign that occurred at the SCHC during April 2013 – July 2013. Prior to the activation of this disease surveillance screening, the secondary care claim ratio was just 17% (instead of the projected 25%) and the tertiary care ratio was 16% (instead of the anticipated 20%). During these 4 months, 32 patients were referred to secondary consultants for further evaluation and antiviral, interferon therapy where appropriate and 14 patients received six months of interferon therapy, at an average cost of $500/patient. This type of aggressive disease surveillance screening would not normally occur in a health microinsurance plan and was a factor in driving up secondary care utilization.

The overall claim ratio for tertiary care was realized at 75.87% which is slightly lower than the 80% claim ratio that was projected and is also lower that one might predict from the high utilization rate/incidence rate of tertiary care (over 10%) observed for this population. A more careful analysis of the tertiary claim experience in the context of the demographic profile of the target community (youthful age, female-dominated, low prevalence of NCDs) supports the premise that tertiary care utilization was probably driven by hospitalization for trauma and for common infectious disease such as acute diarrheal illness (ADI), acute gastroenteritis and acute respiratory infection

(pneumonia). A thorough review of the presenting complaint(s) and hospital discharge summaries is warranted to corroborate or refute the above assessment.

SCHC PRIMARY CARE CLINIC SUSTAINABILITY: SCENARIO ANALYSIS

Scenario	A	B	C	D	E
Number of Patients visiting Clinic/month	1000	1500	1000	1000	700
Co-Payment Per Basic Clinic Visit ($)	1	1	1.5	1	1
Revenues from Basic Primary Care ($)	1000	1500	1000	1000	700
Monthly Revenue from Additional Clinic Services ($)	500	500	500	1000	500
Total Revenue from Clinic Operations ($)	1500	2000	1500	2000	1200
Add Savings from Intensive Risk Management of High Risk Cohort* ($)	372.07	372.07	372.07	372.07	372.07
Less Cost of Operating Clinic ($)	3500	3500	3500	3500	1500
Net Profit (Loss) on Clinic Operations ($)	-(1627.93)	-(1127.93)	-(1627.93)	-(1127.93)	72.07

- Scenario A: Status quo
- Scenario B: Increase patient volume through extension of hours (with male and female staggered shifts)
- Scenario C: Increase patient premium for primary care portion to $1.5/person/month
- Scenario D: Introduce ultrasound and blood/lab tests into clinic
- Scenario E: Reduce cost sructure by eliminating male portion of clinic and operating the clinic as a mother-child clinic+

*calculated as 20% reduction in total of secondary + tertiary care used by top 20 utilizers

+70% of all clinic visits during 2013 were by women and children

6. CONCLUSIONS & RECOMMENDATIONS

(i) Clinical revenues can not be raised sufficiently to achieve sustainability (even if non-insured members are recruited to the clinic during extended evening hours): Extending clinic hours until the late evening should enable a much larger cohort of non-insured working males to access the clinic. They are currently unable to use the clinic as they mostly work off-site as construction workers and return by 7pm after the clinic has closed. In order to maintain clinic operating costs, the male doctor/nurse and medical assistant catering to men could be rescheduled to work an afternoon to evening shift (e.g. 2pm to 10pm) while a regular shift (9am to 5pm) staffed by female healthcare providers would cater to mostly women and children. The clinic currently has the operational capacity to cater to 1500 patients/month and is currently providing services to ~600 members/month but the current cost structure ($3500/month) is to high to be sustainable. Therefore even thought there is significant room to expand the clinic's revenue base by attracting pay-per-use uninsured users during extended hours, the clinic needs to reduce its cost structure in order to become sustainable.

(ii) Primary care should be integrated into Health Microinsurance (HMI) plans: the findings of this study reinforce previous reports by the CARE Foundation[6] and RSBY[7] which demonstrate the significant, tangible value that primary care adds to a HMI plan. The challenge, of course, is to implement such an integrated HMI plan in a cost-effective, sustainable manner which is where convergent public-private-NGO partnerships can play a pivotal role. We do not believe that HMI is currently sustainable AND profitable in the absence of primary care.

(iii) Clinic revenue should be increased by offering additional clinical services: By introducing additional diagnostic imaging and blood laboratory services at the clinic (e.g. handheld ultrasonography), the SCHC will be able to charge additional service fees from non-members which will make the clinic more financially sustainable and reduce the premium charged for primary care services to members

(iv) High-risk & high-utilizer patients should be managed intensively on an outpatient basis: As Table 9 illustrates, the top 20 utilizers (0.25% of the insured population) of the SCHC primary care facility also utilized 18.9% of the cumulative secondary care cost and 16.35% of the cumulative tertiary care cost. One can expand this group of high utilizers to include the top 100 utilizers (2% of population) as well as those patients with advanced, chronic disease such as cardiovascular heart disease, cerebrovascular disease, diabetes and chronic renal disease. These high-risk patient should be managed intensively, leveraging the 24/7 telehealth line as well as home visits by both nurses and community mobilizers/social workers to assist in treatment compliance and disease management. While there may be a few cases of malingering, most of these high-utilizer cases have genuinely complex comorbid conditions requiring polypharmacy. An intensive lifestyle regimen should also be instituted to include diet, exercise and smoking cessation (where applicable). For intensive risk management, community-health worker (CHW) or nurse-assisted telemedicine that connects patients to doctors via tablets or smart-phone enabled video has demonstrated early signs of cost-effectiveness and is technologically feasible in urban slums. NAYA JEEVAN has started testing this technology using remote, home-based female doctors who can provide diagnosic and curative healthcare services to patients, assisted by nurses or community health workers.

(v) Cost structure should be reduced by converting SCHC to a mother-child clinic: During the 2013 calendar year, clinic operations were supported by USAID. From January 2014 to June 2014, a six-month restricted extension was awarded in which Naya Jeevan proposed to convert the clinic into a mother-child center while eliminating the need for a male doctor, nurse, male paramedic, male clerk and two community mobilizers. This adjustment was made on the observation that 70% of the clinic volume was women and children and 95% of this patient population utilized the clinic between 9am and 3pm (6 hours). The subsequent reduction in work-force (both personnel and clinic hours) led to an operating cost savings of ~USD 2000/month which will enable the clinic to achieve financial sustainability at a primary care premium of $0.9/member/month ($10.8/member/year) for 2000 members (assuming a 40% attrition in female membership and 100% attrition in male membership). For men, we are exploring the idea of re-introducing a male nurse-assisted telemedicine system in which male doctors 'on-call' will be able to virtually consult with patients. A proposed fee of $1.50/visit or $1/member/month will be introduced with ~60% of this fee paid to the 'on-call' teledoctor and 20% to the nurse.

(vi) Mobile-enabled premium collection should be automated & outsourced to community leaders: In order to make this integrated health insurance scheme financially viable, it is necessary to ensure at least 60% of the insured community (3000 lives out of a total 5000 insured). However, given the significant gender imbalance observed in the SPP (although this could be an artifact of the study as explained earlier), one will have to be quite vigilant about the health status and risk profile of the voluntary 'opt-in' population in order to mitigate the effects of anti-selection. There has been previous discussion of outsourcing automated premium collection to a community-based organization (CBO) which is represented by the community leaders. The Sultanabad leaders have shown interest in assuming responsibility for this function and ensuring that all community participants maintain sufficient mobile bank balances to enable weekly, pre-authorized auto-deductions[9] (the default setting will be weekly but insured members will have the option to switch to a monthly, quarterly or annual payment schedule). This autodebit process is likely to be activated for the 2015 calendar year. If weekly/monthly payment default rates are high, then the community will need to revert to annual pre-payments. While we anticipate significant attrition if we mandate annual prepayments, community leaders have reassured us that advance pre-payments are affordable and can be made by community members who are earning between $6/day and $15/day.

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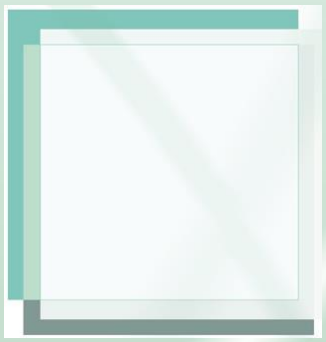

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Housed at the International Labour Organization's Social Finance Unit, the Microinsurance Innovation Facility seeks to increase the availability of quality insurance for the developing world's low income families to help them guard against risk and overcome poverty. The Facility was launched in 2008 with generous support from the Bill & Melinda Gates Foundation to learn and promote how to extend better insurance to the working poor. Additional funding has gratefully been received from several donors, including the Z Zurich Foundation and AusAID