Microinsurance: Innovations In Low-Cost Health Insurance

Community-based arrangements offering low-cost health insurance can provide financial protection for poor households.

by David M. Dror, Ralf Radermacher, Shrikant B. Khadilkar, Petra Schout, François-Xavier Hay, Arbind Singh, and Ruth Koren

ABSTRACT: Microinsurance—low-cost health insurance based on a community, cooperative, or mutual and self-help arrangements—can provide financial protection for poor households and improve access to health care. However, low benefit caps and a low share of premiums paid as benefits—both designed to keep these arrangements in business—perversely limited these schemes’ ability to extend coverage, offer financial protection, and retain members. We studied three schemes in India, two of which are member-operated and one a commercial scheme, using household surveys of insured and uninsured households and interviews with managers. All three enrolled poor households and raised their use of hospital services, as intended. Financial exposure was greatest, and protection was least, in the commercial scheme, which imposed the lowest caps on benefits and where income was the lowest. [Health Aff (Millwood). 2009;28(6):1788–98]

Increasing awareness in India about the value of health insurance has led to a diversity of plans, including “microinsurance.” Microinsurance is low-cost health insurance based on a community or cooperative model, as distinct from conventional insurance. Microinsurance units can increase access to health care, improve equality among members, capture additional resources, and promote social protection and the development of financial systems. Most of them require reinsurance. Micro health insurance covered an estimated thirty-six million people worldwide in 2006.

We report on a study of three microinsurance arrangements operating in two Indian states. The three differ in target membership, benefits, and claims management practices. We identify the strengths and shortcomings of the different approaches as judged by their im-

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pact on financial protection and equitable access to expensive health care.

Unlike commercial insurers, affiliation with a microinsurance scheme is voluntary but is often open only to people who are linked with the group in other ways (which limits their scope for increasing membership). Some operate as mutual schemes, with members being both insured and carriers of risk. This model can attenuate potential conflicts of interest between insurer and insured. Solidarity-enhancing rules keep individual interests (which could increase adverse selection) restrained by group interests. We analyzed the microinsurance schemes’ operational results by how well each benefited its members.

**Description Of The Three Microinsurance Units**

**Bharatiya Agro Industries Foundation (BAIF).** In 2002 the Development Research Foundation launched a commercial health insurance plan at its rural outpost in Pune, India, for women ages 18–70 participating in so-called self-help groups. The annual premium was INR 131.75 (US$3) (plus an administrative fee of INR 25, or US$0.50); the benefit covered hospitalization up to INR 5,000 (US$113.65), plus concessionary prices for primary care at a BAIF center. Facing a 75 percent premium increase in 2003, the members launched a mutual scheme. The premium remained unchanged, with benefits capped at INR 5,000 (or less if all claims in any month exceeded one-twelfth of the annual premium). Claims not fully settled are eligible for reimbursement in future months when balances are positive. This “relative benefit” plan ensures that the scheme never runs a deficit; the claims loss ratio (the share of premiums used to pay claims) was 92 percent in 2005. A committee of members settles claims, monitors financial performance, and determines strategic direction. Membership grew when family members were added in 2004. By 2005, some 600 households had joined.

**UpLift Health.** UpLift Health began health insurance operations in 2003 in Pune City among slum-dwelling adults who borrowed from UpLift India’s microfinance mechanism. Membership in 2003 was 16,350; premiums were age-related, then (in 2004) standardized at INR 100 (US$2.27) per person per year, discounted to 50 percent if entire households joined. UpLift’s social workers collect premiums.

UpLift’s microinsurance reimburses up to 80 percent of hospitalization costs, capped at INR 5,000 per person and year. Different maximum limits apply for specific illnesses. Preexisting conditions and bills from out-of-network hospitals are excluded. UpLift pays income-loss compensation of INR 50 (US$1) per day (for days 3–18 of hospitalization). It negotiates discounts for outpatient care, organizes checkup camps and monthly prevention talks, and operates a 24/7 telephone “health hotline” giving medical guidance.

A members’ claim committee decides reimbursement; it can authorize humanitarian reimbursements (from a “solidarity fund”) for otherwise unqualified claims. The claims loss ratio was 42 percent in 2005.

**Nidan.** Nidan targets market vendors in Patna, Bihar; it had 10,189 members in 2005. Nidan’s microinsurance unit was launched in 2001, through an association with the Self-Employed Women’s Association (SEWA) (a Gujarat-based nongovernmental organization that acts as an agent of a commercial insurer). Nidan’s Plan A (chosen by 66 percent of members) costs INR 170 (US$3.86) per insured plus spouse, and reimburses 80 percent of hospitalization costs (from accredited hospitals only, except for emergencies) up to INR 2,000 (US$45); Plan B costs INR 350 (US$7.95) for coverage up to INR 6,000 (US$136). Preexisting conditions and maternity-related costs are excluded. People ages 18–55 can join; renewal is possible until age sixty. Nidan self-help groups do not process claims or make strategic decisions. SEWA scrutinizes claims, paying after about two months. The claims loss ratio was 43.5 percent in 2005.

**Study Data And Methods**

**Data.** The study was based on 2005 household survey data, obtained in areas cov-
Sampling followed three stages: (1) purposively selected schemes; (2) several villages or urban areas at each location; and (3) random selection of about ten insured and ten uninsured households in each village. Some 350 insured and 350 uninsured households were surveyed in each location. The sample size was fixed to obtain statistical significance of differences of at least 50 percent between insured and uninsured cohorts, based on rates of morbidity and hospitalization from the Indian National Sample Survey. Some details about the microinsurance units (for example, claims ratios) were obtained from their managers.

The questionnaire included household demographics, education, income (all sources of cash and in-kind), and expenditure (food, housing, apparel, transportation, and so forth), as well as health care use and costs (hospitalizations, number and cost of outpatient consultations, and drug costs). Respondents were also asked about their number of illness episodes in a specified time period. “Income per household member” and “non-health-related expenditure per member” were significantly correlated ($p < 0.01$).

**Analysis methods.** We calculated concentration indexes, following the World Bank method, to distinguish pro-poor from pro-rich distributions of results. We compared insured and uninsured cohorts and compared respondents across locations (the latter including both insured and uninsured, unless otherwise stated). For brevity, we refer to these as, for example, “BAIF insured and uninsured,” even though, by definition, there are no uninsured people in the BAIF microinsurance scheme. We used parametric tests ($t$-test and one-way analysis of variance, or ANOVA) and nonparametric tests (median test and chi-square). $p$ values less than 0.05 were considered significant, and values of 0.05–0.10 were considered marginally significant. Data were analyzed using SPSS (version 12).

**Health status.** The number and type of self-reported illness episodes during the three months preceding the survey, divided by the number of members to enable comparisons across households of different sizes, served as a proxy for perceived health status. This parameter is called “incidence of illness.” Respondents’ descriptions of an episode were sorted into three types: acute illnesses, chronic illnesses, and accidents.

**Study Findings**

- **Low socioeconomic status among clients.** Respondents from all three schemes earned less than US$1 per day (Exhibit 1); incomes in urban areas were even below the official Monthly per Capita Consumer Expenditure, reflecting UpLift’s targeting slum dwellers and Nidan’s targeting the very poor. The BAIF population (rural) seemed better off than average for residents of that state. Differences between insured and uninsured people were significant only in Nidan (the uninsured were wealthier), and income levels differed significantly across the three microinsurance units. Thus, the evidence does not uphold the claim that “insurance is for the richer” or that the insured systematically enjoy higher socioeconomic status than the uninsured. The Nidan population (both insured and uninsured) was less educated than the two other groups, and the insured were less educated than the uninsured. In UpLift, the insured cohort had attained higher education levels than the uninsured.

In summary, the direction and extent of differences between the insured and the uninsured were inconsistent and depended (at least partly) on the targeting of the microinsurance units.

- **Dissimilar illness patterns across schemes.** We observed significantly higher illness incidence among the insured cohort in BAIF and Nidan (supporting the notion that people who enrolled in health insurance perceived their health status as low), but not in UpLift (Exhibit 2). There was no significant difference in incidence of illness between BAIF and UpLift populations, but a marked difference with Nidan, which reported more than double the incidence of the other two.

We examined the distribution of illnesses by type. Among both insured and uninsured in...
all locations, 64–81 percent of episodes were acute illnesses. Chronic diseases were next (15–22 percent). There was no difference in the distribution of illness types between the insured and uninsured in BAIF and Nidan, but in UpLift the uninsured reported more chronic diseases than the insured. Although households were aware of prevalence and costs of chronic conditions, households with chronic illnesses were not more likely than others to enroll in the insurance program, perhaps because chronic conditions were excluded from coverage as “preexisting conditions.”

**Higher use of hospitals among the insured.** The data confirm that hospitalization was more common among insured households than among the uninsured during the two years preceding the survey (Exhibit 3). When all of the cohorts are aggregated (not shown), the incidence of hospitalization was 4.2 percent among the insured and 2.8 percent among the uninsured (significantly higher in all three locations). Our result for the uninsured is comfortably similar to the corresponding National Sample Survey rates of 2.3 percent in rural populations and 3.1 percent in urban populations.23

The greater use of hospitals is, however, associated with higher out-of-pocket spending. The average hospitalization cost before reimbursement for all insured people in BAIF was INR 4,868 (standard error: ±648); in UpLift, INR 4,515 (SE: ±699); and in Nidan, INR 3,764 (SE: ±454). However, some 25.5 percent of

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**EXHIBIT 1**

**Socioeconomic And Demographic Details Of The Insured And Uninsured Cohorts In Three Microinsurance Units, India, 2005**

<table>
<thead>
<tr>
<th>Cohort</th>
<th>BAIF</th>
<th>UpLift</th>
<th>Nidan</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Insured</td>
<td>Uninsured</td>
<td>Insured</td>
</tr>
<tr>
<td>No. of households surveyed</td>
<td>349</td>
<td>459</td>
<td>347</td>
</tr>
<tr>
<td>Total population surveyed</td>
<td>1,958</td>
<td>1,942</td>
<td>1,606</td>
</tr>
<tr>
<td>Annual household income per member (median)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income per household member (mean INR; SE)</td>
<td>15,621 (±1,193)</td>
<td>13,410 (±873)</td>
<td>11,054 (±339)</td>
</tr>
<tr>
<td>Income per household member (median INR)</td>
<td>11,120</td>
<td>10,172</td>
<td>10,500</td>
</tr>
<tr>
<td>House type (percent of households; chi-square)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kaccha</td>
<td>15.9%</td>
<td>20.6%***</td>
<td>2.6%</td>
</tr>
<tr>
<td>Semi-Pacc</td>
<td>33.7</td>
<td>37.7%***</td>
<td>38.8</td>
</tr>
<tr>
<td>Pacca</td>
<td>50.4</td>
<td>41.7%***</td>
<td>58.6</td>
</tr>
<tr>
<td>Education of household head (years; chi-square)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>14.0%</td>
<td>12.7%</td>
<td>8.7%</td>
</tr>
<tr>
<td>1–4</td>
<td>15.2</td>
<td>19.2</td>
<td>10.2</td>
</tr>
<tr>
<td>5–10</td>
<td>58.6</td>
<td>55.9</td>
<td>60.1</td>
</tr>
<tr>
<td>11+</td>
<td>12.2</td>
<td>12.2</td>
<td>21.0</td>
</tr>
</tbody>
</table>

**SOURCE:** Authors’ 2005 household survey data.

**NOTES:** Significance denotes difference between insured and uninsured. INR is Indian rupees (2006, one U.S. dollar equaled 44 Indian rupees). SE is standard error.

a Self-built structures from bricks, plastered with a mud mixture, requiring much maintenance.

b Strong structures with a solid base, but impermanent roof or floor material, built partly professionally and partly by the dweller.

c Strong structures, firm roof and floor to which a second level can be added; more expensive, and found in middle- and upper-income segments, as well as in government housing sites.

*p < 0.10  ***p < 0.01  ****p < 0.001
**EXHIBIT 2**  
**Patterns Of Illness Among The Insured And Uninsured Cohorts In Three Microinsurance Units, India, 2005**

<table>
<thead>
<tr>
<th></th>
<th>BAIF</th>
<th>UpLift</th>
<th>Nidan</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type of illness</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td>67.0%</td>
<td>64.4%</td>
<td>81.2%</td>
</tr>
<tr>
<td>Chronic</td>
<td>21.4</td>
<td>22.1</td>
<td>15.4</td>
</tr>
<tr>
<td>Accidents</td>
<td>1.4</td>
<td>4.3</td>
<td>0.4</td>
</tr>
<tr>
<td>Undefined</td>
<td>9.9</td>
<td>9.1</td>
<td>3.0</td>
</tr>
</tbody>
</table>

**SOURCE:** Authors' 2005 household survey data.

**NOTE:** A version of this exhibit showing standard errors is available in an appendix, online at http://content.healthaffairs.org/cgi/content/full/28/6/1788/DC1.

<table>
<thead>
<tr>
<th></th>
<th>BAIF</th>
<th>UpLift</th>
<th>Nidan</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hospitalizations (episodes per household member in the past 2 years)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of households</td>
<td>349</td>
<td>359</td>
<td>347</td>
</tr>
<tr>
<td>Mean incidence per household member</td>
<td>0.0776 (±0.007)</td>
<td>0.0479*** (±0.006)</td>
<td>0.0837 (±0.012)</td>
</tr>
</tbody>
</table>

**EXHIBIT 3**  
**Use Of Health Care Services Among The Insured And Uninsured Cohorts In Three Microinsurance Units, India, 2005**

<table>
<thead>
<tr>
<th></th>
<th>BAIF</th>
<th>UpLift</th>
<th>Nidan</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of illness episodes</strong></td>
<td>173</td>
<td>141</td>
<td>154</td>
</tr>
<tr>
<td>Mean consultations per episode</td>
<td>2.99 (±0.389)</td>
<td>2.647 (±0.247)</td>
<td>2.54 (±0.265)</td>
</tr>
<tr>
<td>Median</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

**SOURCE:** Authors' 2005 household survey data.

**NOTES:** Significance denotes difference between insured and uninsured. INR is Indian rupees (in 2006, US$1 = INR 44).

*p < 0.10  ***p < 0.01  ****p < 0.001
hospitalized people in BAIF had to pay, on average, INR 8,204 as costs above the cap, approximately 17 percent and INR 8,734 in UpLift, and approximately 43 percent and INR 5,475 in Nidan.24

Use of other services and insurance status. We asked respondents about health care use during the three months preceding the survey (Exhibit 3), to explore whether insurance status was associated with different health care–seeking patterns (based on a proxy for needs-adjusted access to care). We asked about the number and cost of consultations and the cost of drugs per illness episode. None of the three proxy parameters of needs-adjusted use of primary care was associated with insurance status, the differences across the three locations were striking.

Preference for private providers. Our survey uncovered an overwhelming preference for private hospitals, physicians (consultations), and pharmacies, in all locations by insured and uninsured alike (Exhibit 4), even though the government’s official policy is to provide free services. The difference between the insured and uninsured was noteworthy only with respect to hospitalizations among members of UpLift, where 18.2 percent of the uninsured but only 6.6 percent of the insured preferred public hospitals (UpLift reimbursed bills from many private hospitals).

Lower levels of inequality among the insured. Because insured people must pay expenses that exceed the cap of their coverage, does this imply that richer insured people would obtain more benefits than poorer insured people would? We examined income disparity by calculating Gini coefficients using income per household member.25 The data on income are in Exhibit 1, and the Gini coefficients are in Exhibit 5.

In general, we found some income inequality in all cohorts; inequality was higher among the uninsured cohorts. BAIF had the highest inequality (Gini coefficient 0.46), and Nidan, the lowest (0.33). Income inequality among the insured was lower than among the uninsured in UpLift and Nidan; in BAIF, it was indistinguishable from that of the uninsured.

We also examined the association between income and illness patterns or access to services, using concentration indices for illness episodes, incidence of hospitalizations, consultations (incidence and costs), and drug
costs (Exhibit 5). In four cohorts (BAIF and UpLift insured and uninsured) the concentration indices for the incidence of illness episodes were negative, indicating that poorer households experienced more illness. The Nidan concentration indices did not differ from zero.

We then examined the income-related distribution of hospitalizations. Insured households reported more hospitalizations per member than uninsured households. If cost is limiting access to hospitalization, we would expect a pro-rich bias among the uninsured and a correction of that bias among the insured; a study among microinsurance units in the Philippines found this to be the case. Concentration indices were not significantly different from zero in BAIF and UpLift, for both the insured and uninsured. In Nidan, the indices were positive and significantly different from zero for the insured but, curiously, not for the uninsured. This implies that in Nidan the more affluent insured households reported a higher increase in use of hospitals than the poorer households did, and far above their share in the population.

**Income and access to primary care.** We also examined the effect of income on needs-adjusted access to primary care. We measured first the concentration index for consultations per illness episode and found no deviation from income-related equality in either cohort in all locations. However, after examining the cost of consultations per illness episode, we found a positive and significant concentration index (pro-rich distribution) for the uninsured cohort in UpLift, absent in the insured cohort.

**Cost of drugs per illness.** Finally, we found a marginally significant positive concentration index, indicating pro-rich distribution, in the cost of drugs per illness episode (which the scheme does not cover) among the insured in BAIF. In Nidan, income was a significant determinant of purchases of medicines (a positive and significant pro-rich distribution in both cohorts). This could reflect the fact that compared to other areas, drugs were more expensive in Nidan (Exhibit 3), where the population was poorer (Exhibit 1).
Discussion

Limitations. A household was defined as insured when the respondent replied positively to the question, “Are you or any member of your household insured for health with the local [microinsurance unit]?” It is possible that some people counted as insured were in fact uninsured (even though there was supporting information that in most households more than one person was insured). Thus, we may have underestimated the impact of insurance.

We inquired about illness episodes during the three months preceding the survey and about hospitalizations during the previous two years. These intervals may have been subject to some recall bias.

Achievements of the units. All three microinsurance units aim to reduce their members’ financial exposure to the cost of hospitalization. Their health insurance activity is an extension of other activities for which these organizations were originally created. None of these schemes is exclusively or primarily a health insurer; none has developed overriding commercial interests for the health insurance, such as increasing the membership beyond the original catchment area of its (core) activities; none “cherry picks” good risks to maximize profits; none has developed revenue streams from providers in return for guaranteed volumes; and none received any subsidy (other than some undocumented in-kind contribution of the supporting nongovernmental organizations’ staff time). Therefore, we assessed their effectiveness first by their achievement in protecting their members’ finances.

Adequacy of coverage. Coverage has been limited to hospital bills up to a maximum of approximately US$112 in BAIF and UpLift and approximately US$45 in Nidan Plan A (which was chosen by most members). These levels are adequate for costs up to the cap but inadequate for higher costs. The degree of inadequacy of financial protection depends on the risk of incurring above-cap hospitalization costs, multiplied by the average out-of-pocket sum payable, relating this sum to income. We have developed a financial exposure index, which we use to measure the performance of the schemes on this count.

Financial exposure is calculated as the fraction of cases among the insured with costs above the cap, multiplied by the mean actual costs above the cap for the insured, divided by the mean income per household member in the insured cohort. A value of zero denotes no financial exposure, and a low value means better financial protection. The higher the financial exposure index ratio, the higher the exposure to financial risk. These values show that Nidan’s insured members were more exposed to financial risk, reflecting the combined effect of a lower cap and lower mean income.

The financial exposure index can be calculated without reference to premiums or to the parameters used for premium calculations, because it measures the unprotected share of costs rather than premium-to-coverage efficiency. The index is also independent of claims loss ratios reported by each microinsurance unit. For 2005, the loss ratios of BAIF, UpLift, and Nidan were 92 percent, 42 percent, and 43.5 percent, respectively; BAIF stands out as having performed best from the members’ viewpoint. This was no accident or “statistical blip”; rather, it was inherent in the BAIF “relative benefit” plan. Although this plan could entail uncertainty as to the actual reimbursement rate if claims exceed premiums, the trade-off is a higher payout in other cases and a guarantee of financial sustainability.

Access to hospitalization. The insured cohorts of all three microinsurance schemes reported greater use of the hospital than the uninsured did. However, when we compared the difference in the incidence of illness (Exhibit 2) to the difference in hospitalization between the insured and uninsured (Exhibit 3), we saw that needs-adjusted rates of hospitalization were higher only among the UpLift insured cohort.

Because incidence was not higher in UpLift, there is no evidence of adverse selection (unlike in BAIF or Nidan); this suggests that UpLift’s incentive to enroll entire families con-
tributed to reducing adverse selection. The higher utilization may indicate a transition from underuse to normal use. This is an important positive effect, considering documented underuse among the poor without health insurance, suggested by 1995–96 National Sample Survey data showing that in India, hospitalization rates among households in the highest quartile of consumption spending were almost double those of the lowest quartile, and by the 2004 data stating that 28 percent of people in rural India said that they did not seek treatment when ill because of financial problems.

- **Equitability of increased use.** The prevalence of chronic illnesses (the only costs that can be predicted with certainty) was not higher in any of the insured cohorts in this study, offering another indication that the microinsurance units contributed to normalizing underuse rather than being exposed to adverse selection. The practice of reimbursing costs for using private providers, which were overwhelmingly preferred by the surveyed population in all locations, also favored higher utilization. However, private providers cost more than public providers, which raises the question of how equitable the utilization has been. We found no evidence of pro-rich bias in hospitalization among the three uninsured cohorts. However, we found a strong pro-rich bias in the access to hospitalization among the insured in Nidan. This suggests that only the more affluent members could afford the high out-of-pocket cost required. Because illness was pro-poor but spending on hospitalization (and medicines) was pro-rich in Nidan, much of this gap could have been narrowed had more members chosen Plan B (with higher caps and a higher premium). Insufficient clarity about the value of insurance could explain why members opted for the lower premium as an intuitive way to reduce their loss if they did not file any claims. More effort on the part of Nidan to explain the value proposition of alternative plans could probably persuade members to choose more suitable coverage.

- **Adding and retaining enrollees.** The membership in all three microinsurance units has grown over time. Because they are active in only limited geographic areas, one way of increasing their size is high membership retention. However, renewal rates in UpLift and Nidan have been about 50 percent. In the UpLift cohort, 72.6 percent of insured households did not have a hospitalization during the two years surveyed, and officials speculated that most of their dropouts were those who did not file any claims. Of the insured households in the Nidan cohort, 59 percent did not experience a hospitalization in the reported period. In view of the high financial exposure index ratio calculated for Nidan, we assumed that at least some dropouts were members who submitted an insurance claim yet were frustrated by the insufficient coverage. The fact that reimbursement in Nidan usually took two months (compared to one month or less in BAIF and UpLift) probably obliged some members to borrow the money, and the associated interest reduced the value of insurance. This suggests that severe and extended financial exposure of insured people could discourage affiliation in ways resembling those of people with no claims: the nonclaimants might wonder what benefit they get from paying a premium, and the severely exposed might wonder why they should insure if insurance benefits are “too little and too late.”

- **Bottom-line results.** Nevertheless, the successes of the microinsurance units are telling signs that resource-poor people are aware of health insurance, are willing to join voluntarily and pay for it even without premium subsidies, and seek a role through a process they trust in enhancing the transparency of operations and reducing administrative costs. In all three schemes, the low caps (at the low end of coverage in India) protected the insurance scheme rather than resource-poor insured people. Consequently, insurance with too low a cap was associated with inequity, when it should normally reduce inequity.

The three schemes chose different ways to ensure continuity of operations. BAIF ensured that its microinsurance unit will never pay out more than its premium income through its “relative benefit” plan. UpLift constituted a re-
serve fund and vested the authority to control expenses with members acting as a committee and using local information, notably through case-by-case benefit curtailment. Nidan was most at risk of discontinuity of insurance as it depended on the commercial underwriter’s decisions to (dis)continue business with this group, on which Nidan had no say.

Finally, differences between the insured and uninsured may be influenced both by the practice of limiting affiliation only to people involved in the other activities of the “mother” organizations and by allowing those people the choice to opt out of (or not to join) the health insurance scheme. This may explain inconsistent socioeconomic differences between the insured and uninsured across the three schemes and the low renewal rates reported by two of them. UpLift directors suggested that most dropouts did not file any claims, while in Nidan, insured members who experienced high out-of-pocket spending (or high financial exposure) could also drop out.

From this study we conclude that low caps and loss ratios are counterproductive in extending insurance coverage, financial protection, and high renewal rates among the poor in India. We also conclude that the microinsurance units, despite less funding and professional resources than commercial insurers enjoy, have provided no less, and maybe more, protection to their insured populations, through mobilization of context-relevant social processes.

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NOTES


6. ILO-STEP. The role of micro-insurance as a tool to face risks in the context of social protection. Geneva (Switzerland): ILO/STEP and GTZ; 2006.


11. Dror DM, Armstrong J. Do micro health insur-
ance units need capital or reinsurance? A simulated exercise to examine different alternatives. Geneva Papers on Risk and Insurance. 2006;31:739–61.

12. Key-informant interviews with managers of the schemes.

13. The exchange rate (one U.S. dollar equals 44 Indian rupees) was valid at the time of the survey in 2005.

14. The following were capped at INR 5,000: cesarean section, paralysis of limbs, fracture, pneumonia, and critical surgery. The following were capped at INR 2,500: kidney stone operation, hernia, urinary infection, jaundice, and typhoid. The following was capped at INR 1,000: malaria.


19. The concentration index is twice the area between the concentration curve and the equality diagonal; values can vary between -1 and +1. Negative values denote a pro-poor distribution and positive values, a pro-rich distribution.


21. The income values observed in our study can be compared to Monthly per Capita Expenditure (MPCE) values published as part of the National Sample Survey's sixtieth round (2005). Accordingly, the MPCE in rural Bihar was INR 442 and in urban Bihar, INR 784. Compare this to our data, reflecting an aggregated rural-urban cohort that yielded INR 710. In Maharashtra the MPCE value was INR 569 (rural population) and INR 1,259 (urban population); in our study, the corresponding numbers were INR 1,208 for the rural cohort and INR 912 for the urban. (Exchange rate: 44 Indian rupees = one U.S. dollar.)

22. Bhat R, Jain N. Factoring affecting the demand for health insurance in a micro insurance scheme.