

**Health Care and Insurance
Among the Elderly in China:
Evidence from the CHARLS Pilot**

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Abstract

There has been a major spread of health insurance in both urban and especially rural areas of China in the past 8 years. In the CHARLS pilot data some 90% of our sample report having some type of insurance, with the New Cooperative Medical Scheme insurance being the most prevalent. Reported premiums actually paid are low in rural areas, averaging 20 Yuan per year per person, though higher in urban areas. As of 2008, in Zhejiang and Gansu, these schemes covered mainly inpatient care, and the reimbursement rates topped out at 64% for respondents in Zhejiang having an urban hukou. For those with rural hukou, reimbursement rates are lower, ranging from 23% to 35% in Zhejiang and Gansu. There is much variation across county-units. Reimbursement rates tended to be higher for higher total health care costs, but do not rise enough to be said to offer very complete coverage for catastrophic illnesses. Outpatient service is just beginning to be covered by insurance in Zhejiang province, especially in urban areas and among those holding urban hukou, but not much yet in Gansu province. Simple descriptive regressions show that respondents with lower incomes as measured by *per capita* expenditure (*pce*) have a lower chance of being insured, as do migrants, older women and widows. There is a lot of variation across communities in coverage, and reimbursement rates, as reported in earlier studies.

For inpatient use, having higher *pce* matters positively for both men and women, and it is also positively correlated with utilization for outpatient services for women. Unobserved community effects also are strongly correlated with utilization. Finally, although we cannot call it a causal relationship, having health insurance is positively correlated with inpatient use for men.

1. Introduction- Health insurance and reform in China

We are concerned in this paper with measuring health insurance, who has it, which types, what are the key parameters of the insurance and who uses inpatient and outpatient facilities using new data from the China Health and Retirement Longitudinal Study (CHARLS) Pilot. These are important issues in China now, with many changes having been instituted recently in programs having to do with their availability and generosity.

In very recent years, there has been a large set of reforms begun regarding health insurance and health care and a growing literature has analyzed these reforms (see, for instance, a recent issue of *Health Economics* devoted to this topic, Wagstaff et al., 2009). The older rural system, the Rural Cooperative Medical System, collapsed with the advent of the Household Responsibility System (Brown and Theoharides, 2009; Wagstaff et al., 2009). Because of this massive change, health insurance was virtually nonexistent in rural areas after the economic reforms and before 2003.

In general, urban health insurance coverage was directly tied to formal employment status, with coverage of other family members not provided. Previous government and state-owned enterprise insurance programs have been subsumed by the Basic Medical Insurance program in urban areas, which is funded by employer and employee contributions (6-10% and 2% of wages) split between individual medical savings accounts and socially pooled accounts. Growing informalization of the urban labor market caused by the closing of many State Owned Enterprises starting in the late 1980s, led to falling health insurance coverage rates in urban areas. In 2005, only 47% of those living in cities and 33% of those living in towns were covered by health insurance (World Bank, 2009). The problem of low health insurance coverage was exacerbated by rising health care costs (which were then not covered) caused in part because

doctors had a strong incentive to over-prescribe treatments and medicines to generate income (World Bank, 2009).

Recent reforms have aimed to increase health insurance coverage of the population. In urban areas, coverage has been extended to the non-employed (e.g., students, children, elderly, those unemployed or out of the labor force) by a new voluntary Urban Resident Basic Medical Insurance Scheme which was introduced in September 2007 in 79 cities. It enrolled 43 million people by year-end 2007, and was planned to be expanded to 229 cities in 2008 (Lin et al., 2009; World Bank, 2009).

In rural areas, a new rural health insurance program, the New Cooperative Medical Scheme (NCMS), was established on a pilot basis in 2003 and expanded nationally over time. When the program began, the health insurance coverage rate in rural China was about 20%, but by the end of 2007 the NCMS had grown to reach 2,451 counties (86% of all counties nationwide) (World Bank, 2009). The program is underwritten by both the central and provincial governments, but the county-unit governments have the responsibility for setting parameters of the program, such as user fees and premiums and reimbursement rates. Many counties have fixed the fees at 10 Yuan per person per year, supplemented with a local government contribution of at least 20 Yuan per person, plus a central government contribution also of typically 20 Yuan per person (Brown and Theoharides, 2009).¹ However, a number of concerns have also been raised about the new program, including large differences across

¹ For the premiums, the central government contributes a certain amount and also has a minimum requirement on how much the local government should pay. The amount has increased over time: From 2003-2004, the central government paid 10/person/year and required the local government to pay at least 10; in 2005-2007, these numbers were 20; in 2008-2009, they were raised to 40 and in 2010, they were 60. The actual contributions of the local governments differ depending on their economic capability, but it must satisfy the minimum requirement. The minimum individual contribution was 10 in 2003-2007, it was raised to 20 in 2008 and then 30 in 2010. It was waived for very poor households such as those receiving Wubao, a welfare program.

counties in coverage (which hospitals permit coverage and for what) and percent reimbursement. Discussion has ensued about low and unreliable reimbursement procedures and lack of coverage of outpatient expenses (World Bank, 2009; Yi et al., 2009; Brown and Theoharides, 2009). Yi et al. (2009) found lower reimbursement rates for higher medical costs in the five provinces their study covers, which means that major medical bills are not well covered. In April 2009, the Chinese government announced a plan to spend 850 billion Yuan over the next three years to improve the health care system, with a goal of covering 90 percent of the population with basic health insurance by 2011.

Regional variation in the implementation and timing of pension, health insurance, and social assistance programs provide opportunities to study the impact of policies and programs. China is in a critical phase of designing and reforming its social insurance programs, and CHARLS will be able to track whether programs are reaching the elderly and evaluate how such programs are affecting the behavior and welfare of the elderly. In this paper we take a first look from the CHARLS pilot data at Zhejiang and Gansu provinces, fielded in the summer of 2008.

We find that the overwhelming majority of our respondents over 45 years do report having health insurance of some kind, particularly the new rural insurance scheme. Premiums that are paid by individuals are low in rural areas, though higher in urban areas, which reflects the high degree of government subsidization, higher in rural areas. Most importantly, the schemes as they have been instituted so far, cover mostly inpatient use, not outpatient. Reimbursement rates for inpatient services range from 30-40% in rural and urban areas respectively. These new schemes are not covering catastrophic illnesses, at least not on average, and have no major medical insurance component. Incomes are very highly correlated with

inpatient service use, and having insurance is also positively correlated with inpatient use for men.

In the rest of this paper, we briefly discuss some data issues, then the results, starting with the insurance results and then utilization. Finally we conclude.

2. Data

We use the CHARLS pilot data, which is described in Zhao et al. (2009). CHARLS was designed after the Health and Retirement Study in the US as a broad-purposed social science and health survey of the elderly in Zhejiang and Gansu provinces. These provinces were chosen because they represented the extremes of living standards in China at the time: Zhejiang being among the richest and fastest growing provinces, and Gansu being the poorest. The pilot survey was conducted in July-September 2008. The CHARLS pilot sample is representative of people aged 45 and over, and their spouses, living in households in Gansu and Zhejiang provinces.

The CHARLS pilot sample was drawn in four stages. In each province, all county-level units were stratified by whether they were urban districts (*qu*) or rural counties (*xian*), and by region within each classification. Both urban districts and rural counties can contain both urban and rural communities, but the concentration of urban and rural populations is quite different in the two. With a goal of sampling 16 county-level units per province, the number of counties to be sampled in each stratum was determined based on population size. Before the pilot survey, the Beijing CHARLS Office first obtained a list of county units and their populations in each of the provinces from official statistics. Counties were randomly selected within each stratum with probabilities proportionate to size as measured by population.

After the county units were chosen, the National Bureau of Statistics helped us to sample villages and communities within county units using recently updated village level population

data. Our sample used administrative villages (*cun*) in rural areas and neighborhoods (*shequ*), which comprise one or more former resident committees (*juweihui*), in urban areas as primary sampling units (PSUs). We selected 3 PSUs within each county-level unit, using PPS (probabilities proportional to size) sampling. Note that rural counties contain both rural villages and urban neighborhoods and it is also possible for urban districts to contain rural administrative villages.

In each PSU, we selected a sample of dwellings from our frame, which was constructed based on maps prepared by advance teams with the support of local informants. For rural villages, in many cases the lead persons on the advance teams were able to use maps drafted for the agricultural census in 2006 as a starting point and then updated them in consultation with local leaders. For urban communities, existing building maps were frequently used as the basis for the frame. All buildings in each PSU were numbered, and dwellings within each building were listed and coded using standardized methods. The advanced team verified that all buildings in the PSU had been properly identified, and that dwelling units within multi-dwelling buildings had been correctly coded before choosing the sample of households.

Once the sampling frame for a PSU was completed and entered into the lead person's computer, they used CAPI (computer assisted personal interview laptops) to sample the households automatically. The number of households sampled was greater than the targeted sample size of 16 households per PSU in anticipation of non-response and sampled households' not having any members aged 45 or older. The number of households sampled was 36 in urban PSUs and 30 in rural PSUs. We interviewed all age-eligible sample households in each PSU who were willing to participate in the survey, ultimately interviewing 1,570 households containing 2,685 respondents aged 45 and over and their spouses.

We use data on all respondents 45 year of age and older.² Tables and figures are weighted using individual sample weights.³ All figures are nonparametric and drawn using LOWESS. Regressions are run unweighted since the sample selection is independent of our dependent variables. All analyses are disaggregated by gender. Health outcomes have long been known to differ by gender and they do for the elderly in China (see, for instance, Strauss et al., 2010). Hence it is natural to explore whether health insurance coverage and health care utilization also differ by gender.

3. Results

Insurance Coverage

In the five years before 2008, a major change began in terms of the availability of health insurance to the Chinese population. We can see this in Table 1, which shows the fraction of the men and women separately who claim they have some health insurance (public or private). Overall 91% of our sample over 45 has some insurance. By age the fraction with insurance stays fairly constant, with a slight drop among those over 75 years. There are no major differences between men and women. Among those who do not have insurance, a small fraction, 15% of men and 13% of women, lost their insurance recently,⁴ but most never had any after the collapse of the old system. Five years prior to 2008 very few people would have had insurance coverage, especially in rural areas.

We examine the different types of publicly provided insurance separately in Table 2, for men and women respectively. There are three new public insurance programs that had come into

² Spouses who are under 45 years old are dropped from this analysis.

³ Here we use the sample weights allowing for household non-response, see Zhao et al. (2009) for details.

⁴ In the CHARLS Pilot we asked respondents who did not have health insurance if they had lost any coverage.

existence in the 5 years prior to 2008.⁵ The New Cooperative Medical Scheme is the insurance designed for rural areas and is the most prevalent of the three. Two insurance schemes dominate urban areas: the Urban Employee Medical Insurance and the Urban Resident Basic Medical Insurance, the Urban Employee Medical Insurance being the more prevalent in our sample. The former is given mainly through the employer while the latter is a public program provided through the community. As one can see in Table 2, the rural insurance scheme is targeted to people with a rural hukou,⁶ not necessarily those living only in rural areas.⁷ While in rural areas there is little spillover from the rural to the urban insurance schemes, in urban areas there are many residents who have the rural insurance, because they are farmers and still have rural hukou. For example, Table 2b shows that 48.7% of men in urban areas have the New Cooperative Medical Scheme insurance, while only 7.4% have it for those with an urban hukou. There exists almost no difference for men in having some insurance by rural or urban area, or by having a rural or urban hukou. For women, Table 2c shows that having a rural hukou makes it a little more likely that they will have some coverage. For those with an urban hukou, women are much more likely to have the Urban Resident Basic Medical Insurance and men almost only have the Urban Employee Medical Insurance.

If we define a migrant as a person whose hukou is in a different county than they currently reside, migrants are severely disadvantaged. One-third of migrants, both male and female, have no insurance whatever, up from the nine percent in the general population.⁸ Clearly

⁵ Although there are other types of insurance in China, such as government medical insurance and private health insurance, these 3 types of insurance are the most common in China, so we only focus on them.

⁶ Hukou is a form of registration, attached to an area and agricultural or non-agricultural. People may live in urban areas with an agricultural, or rural, hukou, because many formerly rural areas have become urban. Migrants typically have their hukou in the place of origin. Not having a hukou for the place of residence results in some loss of public benefits.

⁷ The rural definition we use in this paper is the State Bureau of Statistics (SBS) definition. Some of the SBS urban communities are in fact rural in nature and many of their populations are farmers with rural hukou.

⁸ Note that the cell sizes are extremely small, especially for women.

migrants are a vulnerable population in this regard. If a migrant has insurance it is most likely the rural New Cooperative Medical Scheme insurance. This makes sense because their hukou are in most cases from rural places, even though they may live in an urban area.⁹

It is of some interest to examine whether the insured are in better or worse health than the non-insured. No causality can be attached to these correlations in this paper. We have many measures of health available to use, here we use a self-reported measure of general health on a scale of excellent, very good, good, fair, poor. While self-reported general health measures have biases (see Strauss and Thomas, 1998, for example), they also have signal, since they predict well future mortality (Banks et al., 2009). As shown in Table 3, there are no significant differences in insurance coverage among those in poor health versus those not in poor health. This is of interest for several reasons, among which, it appears that adverse selection is not a major problem in our sample, at least not for all programs taken together (Lin et al., 2009 do find adverse selection in their analysis of the Urban Resident Basic Medical Insurance. They do not focus exclusively on the older population).

Table 4 provide regression results for having any insurance for men and women respectively. We start in column 1 with a model that includes major SES variables: a set of dummy variables for age group (under 55 years the left out group), for education levels completed (no schooling the left out group) and a linear spline in log of *per capita* expenditure (*pce*).¹⁰ *PCE* is preferred to income because income is measured with much more error than *pce* (see Lee, 2009, for instance) and because *pce* is a better measure of long-run resources because it

⁹ Note that if we define migrant as having a rural hukou but living in an urban area, the insurance coverage of this population is nearly identical to non-migrants. In part this is a function of these people not really being migrants, but just being farmers and living in urban areas which are arguably rural.

¹⁰ A linear spline allows different slopes to the left and right of the knot point with the two lines being joined at the knot point. The first coefficient reported is the slope to the left of the knot point and the second coefficient is the change in the slope from the left hand portion.

is smoothed in the face of annual income shocks. The knot point for the spline is at the median of $\log pce$. We also include dummies for province interacted with rural area of residence. In Column 2 we add a set of variables that are arguably endogenous: a dummy for migrant status (not a migrant being left out), and dummies for being widowed and being divorced or never married (the two are both very small in number and cannot be statistically distinguished in our data). Column 3 replaces province-rural dummies with community fixed effects.¹¹ The idea here is that each community has factors that will affect insurance and health care utilization, that are not captured by the provincial dummies interacted with rural or urban. These factors will include health care prices, inherent healthiness of the area, public health infrastructure and other factors. F-tests for all combinations of dummy variables are reported as well.

Regressions are all OLS. For binary dependent variables this represents linear probability (LP) models. LP models consistently estimate average treatment effects, which is what we are interested in. Furthermore, all of our standard errors are calculated for robustness to heteroskedasticity and allow clustering at the community level. The robustness makes our standard error estimates consistent when we are estimating LP models (Wooldridge, 2002).

For men, age dummies are weakly significant (at the 10% level), except when we add community fixed effects, and show that men aged 55-64 are about 3% more likely to have insurance than younger men. For women, the age dummies are highly significant (at the .001 level) and older women, over 75 years, are 10-14% points less likely to be insured, a large impact.

For men, education does not seem to have significant effects on possessing any insurance, but for women it does; raising the likelihood of having insurance. On the other hand,

¹¹ Since the binary dependent variables cannot be all 1 or 0 for a given community, some communities had to be aggregated.

for men, higher *pce* is associated with a higher probability of having some insurance, but not for women.

Reporting poor general health is not correlated with having insurance for men, but is weakly (at the 10% level), positively correlated for women; some evidence of adverse selection for women.

Being a migrant male is associated with a 22 percentage point decline in the likelihood that they are insured, a very large difference; the difference for women is similar in magnitude and significance. The NCMS generally does not reimburse migrants for their medical expenses incurred in urban areas where the migrants are working, so the incentive for them to participate in NCMS is low. The two major urban insurance schemes also do not cover migrants. In May 2006 a separate medical insurance pooling fund was set up to cover expenses for migrants, but the effectiveness of this program has not been evaluated to date.

Being widowed also is associated with a large (10 percentage point) decline in the odds of being insured for men, though a much less large difference for women and not significant in most cases.

Men and women who live in rural Gansu have a somewhat higher chance of having health insurance, once one controls for these individual and household SES factors. This is interesting, and one might have expected the reverse. However, even the unconditional probabilities of having insurance are a bit higher in rural areas of Zhejiang and Gansu. When we add the community dummies in column 3, they are jointly significant at the .001 level for both men and women.¹² Now the migrant dummy loses magnitude and significance for women and

¹² With community fixed effects, testing the joint significance of the community dummies is not straightforward. Because there are in our case few observations per cluster, we cannot cluster the standard errors after estimation using community fixed effects and use an F-test to test for the joint significance of clusters (Wooldridge, personal

its magnitude drops by 30% for men. Apparently there exist important, unmeasured factors at the community level that affect access to insurance for those who do not get it.

In results not shown we repeat the regressions for respondents who have a rural hukou and are thus eligible in principal to join the New Cooperative Medical Scheme (NCMS).¹³ Most of the results for the rural insurance are similar to the main results, older women, migrants and male widowers are substantially less likely to be insured with this scheme. However the associations of education and *pce* with belonging to the NCMS are generally not significant, except for women for being able to read and write, but not for those with more schooling.

Health care utilization

About 16.5% of men over 45 and 21% of women say they used outpatient service at least once over the past one month (Table 5).¹⁴ Most of those who went used a hospital or a village or private clinic. Township hospitals and health care posts were also important destinations, especially in rural areas. Table 5 shows that inpatient use over the past one year was less frequent, 6.7% for men and 6% for women. Virtually all of the inpatient use was of hospitals, general hospitals being the most important destination by far, followed equally by specialized hospitals, Chinese medicine hospitals and township hospitals.

Regressions for outpatient utilization (Table 6) show that for men being older and more educated have positive associations with use, while for women, having higher *pce* is positively

communication). To test the community dummies we re-estimate the model with community dummies and just robust standard errors, without clustering, and do the F-test.

¹³ Sample sizes for people with urban hukou and thus eligible for the urban insurance schemes we consider too small to analyze with regressions. Lin et al. (2009) find that income has a U-shaped association with having the Urban Resident Basic Medical Insurance, with low and high income persons being more likely to have it.

¹⁴ While these outpatient rates may seem high, they correspond closely to other populations. In the Indonesia Family Life Survey, wave 4, for instance, 15% of men and 21% of women over 45 years used an outpatient service over the same one month period. The inpatient usage rates in Indonesia are lower, only 4.7% of men and 3.5% of women over 45 years.

related to outpatient service use, as is living in rural Gansu, controlling for SES. The community dummies are highly significant for women, though not for men. Again, unmeasured factors at the community level are important for women seeking outpatient care.

For inpatient care (Table 7), income (*pce*) is highly significant and positively related to care for both men and women. Other factors being equal, being in Gansu, rural or urban, is associated with more inpatient care use for women and living in urban Gansu for men. It is of course of prime interest to examine how having insurance is associated with outpatient and inpatient care. The problem is that having insurance is endogenous, and there is no good way with these data to identify a structural relationship. Still looking at the correlations is of interest. Insurance is positively and significantly correlated with inpatient use by men, though it is not significant for women and it is not significantly related to outpatient use. A man with insurance is 4.5% more likely to seek inpatient care than a man without any insurance. These results are consistent with the results of Gao et al. (2007) and Wagstaff and Lindelow (2008), who also find a positive correlation of insurance with inpatient use.

Health Insurance Parameters and Reimbursement

Of course having health insurance does not tell us anything about the nature of that insurance. The CHARLS pilot collected data about some of the characteristics of the insurance, in particular about the premiums paid and for those who had insurance and who went for inpatient or outpatient services, what fraction of their total costs they anticipate would be reimbursed. For the Urban Resident Basic Medical Insurance, not enough respondents reported their premiums so our sample is too small to report. For the Urban Employee Medical Insurance and the New Cooperative Medical Scheme insurance, we report mean premiums in Table 8.

The mean reported premium for the New Cooperative Medical Scheme is about 20RMB per year. The mean premium is lower in rural Gansu, only 13RMB and higher in rural Zhejiang, about 28RMB. These are remarkably low premiums even compared to low rural incomes in Gansu, of 5,000RMB *pce*. Even in Zhejiang, both rural and urban, about 20% say they did not pay any premiums for their New Cooperative Medical Scheme insurance. For the Urban Employee Medical Insurance scheme premiums are much higher, around 300RMB per year in urban Gansu, about the same for women in urban Zhejiang, but much higher, 600RMB per year in urban Zhejiang. Even these levels, however, are not large relative to annual *pce* of between 7,500RMB and 10,000RMB per year in Gansu and Zhejiang. We have to be a bit careful because our cell sizes are not large, but it is quite interesting that for this insurance plan, unlike the rural plan, premiums are lower for women, particularly in urban Zhejiang. We do not know why as yet. The other point to note from Table 8 is that in urban Zhejiang a little over 10% get their Urban Employee Medical Insurance without any premium.

Another important parameter of the new insurance schemes is the re-imbusement rate. Reimbursements depend on the plan and on the parameters, which are set at the county or district level.¹⁵ These vary greatly across county-units and depend on many factors, such as total medical expenditures, which type of facility the respondent went to and whether that type of facility is covered by the particular insurance policy, and the specific treatment received. For the NCMS, there are four models of how patients are reimbursed for in- and outpatient services (Lei and Lin, 2009). The most frequent model, used in 2/3 of the rural counties, uses a medical savings account. Each household has its own medical savings account, with household members

¹⁵ In the national baseline survey conducted in 2011, there is a special policy module which is administered at the county or district level and which collects detailed plan information. Since there are 150 county-units in the national baseline, these can be analyzed at the county-unit level. In the pilot survey data we use in this paper that is not possible

depositing their contributions into this account and then spending money from it. Only household members are entitled to the funds in the account, which is used mainly for outpatient services.

There is a deductible and a reimbursement cap for using a medical savings account.

Traditionally, the reimbursements for the NCMS have put more emphasis on inpatient services than outpatient services. However, more recently, there has been a general trend toward including outpatient services and physical check-ups in patient reimbursements (Du and Zhang 2007). In addition, some counties provide insurance coverage for an annual physical examination. Overall, there has been an increasing trend in the amount of coverage per capita and an increase in the range of services offered (Du and Zhang 2007).

We calculate individual reimbursement rates by first asking the respondent, if they went for outpatient service in the last month or inpatient service in the last year. If the answer is yes, we get details about the last visit, including the total costs of the service, including medicines. We then ask how much they expect to pay, not just what they have paid to date.¹⁶ One could reasonably worry how well respondents can answer these cost questions, but they were thoroughly pretested and it is our judgment that these answers are reliable. For the cost repayment estimates we aggregate men and women to maximize our cell sizes, which are small. We also use only those respondents who report that they have insurance, as otherwise this question does not make sense.¹⁷

The reimbursement rates for inpatient service are 40% and 30% in urban and rural areas respectively (not, however, significantly different at standard levels), being similar between

¹⁶ Respondents who report a visit were asked for their last visit “What was the total cost of medical treatment?” and “How much will you eventually pay out of pocket for the total costs of the visit?” This was followed by equivalent questions about medications from this visit.

¹⁷ The number of respondents who report going to for inpatient care and who do not have insurance is too small to separately and reliably report their expenditures. For outpatient care, samples size for those without insurance is very small, just 34, but in general their total costs are somewhat lower than for those with insurance.

Gansu and Zhejiang (Table 9). By hukou status, the reimbursement rates are 58% for urban hukou holders and 28% for rural (these are significantly different at the .01 level). By hukou there are some important differences across provinces; the rates for rural hukou holders are higher in Gansu (35% against 23%), while the rates among urban hukou are much higher in Zhejiang (64% compared to 46%). Furthermore, the standard error of the reimbursement rate is much higher for urban hukou in Zhejiang than for Gansu (12.4 versus 7.3).¹⁸ This is important because the county-level units are allowed to set the parameters for the health insurance and apparently there is a wider variance of experience related to reimbursement rates going on in urban Zhejiang than in urban Gansu. Also since Zhejiang is far richer than Gansu there is more scope for higher reimbursement rates should the county-unit choose.

We checked the variation in reimbursement rates between and within counties, using an analysis of variance (ANOVA), and find between counties account for 24% of the variation for inpatient rates in Gansu and 56% for Zhejiang. Our finding that more variation is between counties in Zhejiang than in Gansu makes sense given that there seems to be more experimentation in insurance policy parameters among counties in Zhejiang than in Gansu, in part perhaps because of their greater wealth.¹⁹ When we disaggregate plans and run an ANOVA for inpatient respondents with NCMS, we find 41% of the variation in Zhejiang is between counties and 30% in Gansu. We do find important variation between counties, as we expect since counties have control over setting parameters of the programs, but even more variation within. Reasons for this include we are aggregating over different insurance schemes (because of sample size consideration), but also because even for a given program, reimbursement depends on

¹⁸ This is not due to outliers, even the interquartile range is much larger in Zhejiang.

¹⁹ If there is little systematic variation between counties in Gansu in reimbursement rates, that will result in a lower R^2 when regressing reimbursement rates on county dummies.

factors such as the particular reason (illness) for going to a health facility, the type of facility visited and the total cost. These factors vary by individual and are apparently important.²⁰

Yi et al. (2009) report that in the five provinces they did their study (which did not include either Gansu or Zhejiang), as total costs of inpatient treatment increased, reimbursement rates fell for the New Cooperative Medical Scheme, often to quite low levels, around 10%. If total costs is taken as a proxy of severity of the health problem, then this strongly suggests that the major new rural health insurance scheme is not covering catastrophic illnesses well, and is certainly not adequately covering catastrophic health expenditures.

The CHARLS pilot data show a very interesting, and somewhat different, story. We start in Figure 1 by nonparametrically plotting reimbursement rates for inpatient services against total inpatient costs, using data on respondents with any insurance who reported inpatient utilization over the past year.²¹ It is clear that reimbursement rates rise, not fall, as total costs rise. Reimbursement rates rise from 31% to a plateau of 40% at a total cost of 10,000 Yuan, which is right at the 75th percentile for the total cost distribution. Mean *pce* for our households is approximately 8,000 Yuan, and the median is 5,800, so an expense of 10,000 is quite large compared to mean *pce*. For costs above 10,000 Yuan, though, reimbursement rates stay flat at 40%. If the system was effective in covering catastrophic health expenditures, the reimbursement rates should continue to rise; they do not.

So the glass seems to be half full. There is nontrivial coverage for inpatient expenses, that do rise some as total costs rise, at least up to a point. Furthermore, when this situation is

²⁰ Of course, measurement error will also contribute to within county variation.

²¹ Our sample size is only 129. These are respondents who went for inpatient service (and so we have cost data for them) and who have insurance (so we have reimbursement data). Some caution needs to be taken because of the limited sample size. When we plot the figure for those who have NCMS insurance, some 96 observations, the curve slopes gently upwards at high levels of total cost, but has a peak of only just over 30%.

compared to the period before 2003, this represents a large improvement. Finally we note that further reform and experimentation is ongoing, so this is not the final story.

For outpatient reimbursement the story is quite different. The new health insurance schemes, particularly the rural scheme, were initially designed to help with inpatient service, so many county-units are apparently choosing not to reimburse for outpatient service (Table 10A). The mean rural reimbursement rate is only 8.5%, being slightly higher in Zhejiang. The urban rates are considerably higher, a mean of 30%, but more than double in Zhejiang (36%) than in Gansu (14%). The urban reimbursement rates are significantly higher than the rural ones in Zhejiang and aggregating both provinces. Again, the standard error is much higher in urban Zhejiang than in urban Gansu, suggesting more experimentation in urban Zhejiang.²²

If we split the sample by rural and urban hukou, the differences in reimbursement rates become more stark (Table 10B). Now 63% reimbursement rates are faced by urban hukou holders in Zhejiang, while among urban hukou holders in Gansu it is 17%, which is still double the reimbursement rates for rural hukou holders in Gansu. Urban-rural hukou differences are significantly different at .01.

If we look only at reimbursement rates for people holding rural insurance, the New Cooperative Medical Scheme insurance (results not shown), we see a similar pattern to the rural population. Rates of reimbursement are about 10% for urban residents and 8% for rural. Now the provincial differences are quite small. Clearly this insurance scheme was not designed to cover outpatient service, just inpatient. However it remains to be seen in the future whether these same patterns hold. It may be that over time reimbursement rates may rise for outpatient service, as they have been for the urban plans in Zhejiang.

²² Some 35% of the variation in outpatient reimbursement rates in Zhejiang is between counties, but only 7% for Gansu. A high fraction of rural outpatients in Gansu have a zero reimbursement rate, which partly accounts for the low between variation.

Table 11 reports regressions on the cost share paid, separately by men and women, for outpatient service.²³ The sample is those persons who used outpatient services in the last one month and who have insurance that could be used to get reimbursement. The SES variables, education and *pce* are insignificant in all cases. Age is important for men, but not women. Older men have lower out of pocket costs as a percent of the total. The regional dummies are significant, with lower repayment rates in urban Zhejiang, as we saw in the previous tables. The community dummies are also significant.²⁴ This is interesting because as discussed in Brown and Theoharides (2009), most of the choice regarding insurance parameters is set at the county-level. Thus there is great scope for experimentation, which is evidently ongoing.

4. Conclusions

There has been a major spread of health insurance in both urban and especially rural areas of China in the five years prior to the CHARLS Pilot in 2008. In the CHARLS pilot data some 90% of our sample report having some type of insurance, with the New Cooperative Medical Scheme insurance being the most prevalent. Reported premiums actually paid are low in rural areas, averaging 20 Yuan per year per person, though a good deal higher in urban areas. So the degree of public subsidy is high. At the moment, in Zhejiang and Gansu, these schemes cover mainly inpatient care, and the reimbursement rates top out at 64% for respondents in Zhejiang having an urban hukou. For those with rural hukou, reimbursement rates are much lower, ranging from 23% to 35% in Zhejiang and Gansu. Reimbursement rates rise with total visit costs for all plans in the aggregate, and for the New Cooperative Medical Scheme in particular. The rise in reimbursement rates with total costs stops when rates reach 40% at

²³ The sample sizes for inpatient service we considered too small to get meaningful results.

²⁴ The significance of the community dummies does not come from differences across provinces. Even using data from only Zhejiang or only Gansu, the community dummies are jointly significant.

10,000 Yuan in total costs, aggregating over all insurance types. For the NCMS scheme reimbursement rates top out at just over 30% for costs of 20,000 Yuan. In either case, for people with high medical costs, they are still having to pay a large part of costs and are thus at risk of losing significant assets or not being able to pay. Outpatient service is just beginning to be covered by insurance in Zhejiang province, especially in urban areas and among those holding urban hukou, but not much yet in Gansu province.

Simple descriptive regressions show that respondents with lower incomes as measured by *per capita* expenditure (*pce*) have a lower chance of being insured, as do migrants, older women and male widowers. Education has little significant correlation with being insured. There is a lot of variation across communities in coverage, and reimbursement rates, as reported in earlier studies.

For inpatient use, having higher *pce* matters positively for both men and women, and it is also positively correlated with utilization for outpatient services for women. On the other hand, education is not correlated with utilization, conditional on *pce*. Unobserved community effects also are strongly correlated with utilization. Finally, although we cannot call it a causal relationship, having health insurance is positively correlated with inpatient use for men.

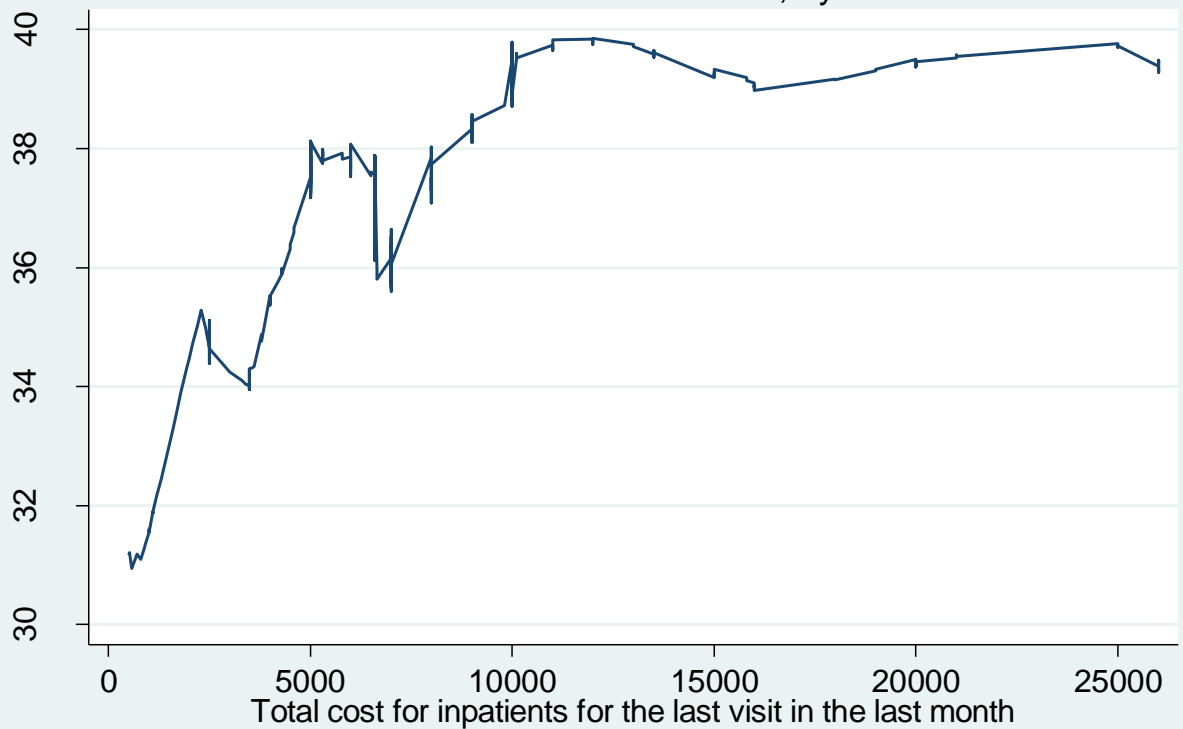
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FIGURE 1 Reimbursement rates for inpatients with any insurance for the last visit in the last month, by total cost.



Note: bandwidth = .9

TABLE 1 Insurance Coverage, by Age and Sex

	Men		Women		All	
	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>
45-54	90.3 (2.5)	447	92.0 (1.9)	493	91.1 (1.9)	940
55-64	94.3 (1.6)	423	93.4 (1.9)	404	93.8 (1.6)	827
65-74	90.9 (2.5)	279	90.1 (2.1)	229	90.5 (1.7)	508
75+	86.1 (4.2)	119	81.3 (4.8)	112	83.5 (3.3)	231
Total (45+)	91.1 (1.5)	1268	90.5 (1.5)	1238	90.8 (1.3)	2506

NOTE: Standard errors in parentheses.

SOURCE: CHARLS pilot data.

TABLE 2 Coverage of Different Insurance Types

PANEL A Both Men and Women

	Urban Employee Medical Insurance	Urban Resident Medical Insurance	New Cooperative Medical Insurance	Other Insurances	Without Insurance	<i>N</i>
Urban Hukou	53.7 (5.9)	16.2 (3.0)	9.9 (2.8)	18.1 (4.8)	10.3 (2.3)	497
Rural Hukou	0.9 (0.3)	0.3 (0.2)	88.6 (1.5)	2.7 (0.7)	8.9 (1.4)	2010
Urban Area	24.7 (5.1)	7.7 (1.5)	51.6 (6.3)	10.8 (2.8)	10.3 (2.2)	1106
Rural Area	1.4 (0.3)	0.2 (0.2)	89.3 (1.6)	1.8 (0.5)	8.2 (1.5)	1401
Total	12.4 (2.8)	3.7 (0.8)	71.5 (3.6)	6.1 (1.5)	9.2 (1.3)	2507

PANEL B Men

	Urban Employee Medical Insurance	Urban Resident Medical Insurance	New Cooperative Medical Insurance	Other Insurances	Without Insurance	<i>N</i>
Urban Hukou	63.0 (5.8)	11.4 (2.6)	7.4 (2.3)	18.3 (3.5)	7.9 (2.2)	268
Rural Hukou	1.1 (0.4)	0.4 (0.3)	87.4 (1.8)	3.5 (1.2)	9.2 (1.6)	1001
Urban Area	30.2 (6.1)	5.7 (1.4)	48.7 (6.1)	11.6 (2.4)	9.2 (2.5)	541
Rural Area	2.2 (0.6)	0.4 (0.4)	87.0 (1.9)	2.8 (0.8)	8.8 (1.7)	728
Total	14.9 (3.1)	2.8 (0.7)	69.7 (3.5)	6.8 (1.3)	8.9 (1.5)	1269

PANEL C Women

	Urban Employee Medical Insurance	Urban Resident Medical Insurance	New Cooperative Medical Insurance	Other Insurances	Without Insurance	<i>N</i>
Urban Hukou	43.5 (7.2)	21.5 (5.0)	12.6 (4.3)	18.0 (7.3)	12.9 (3.3)	229
Rural Hukou	0.6 (0.3)	0.1 (0.1)	89.9 (1.7)	1.9 (0.6)	8.5 (1.6)	1009
Urban Area	19.4 (4.8)	9.5 (2.3)	54.4 (7.0)	10.1 (4.1)	11.3 (2.5)	565
Rural Area	0.4 (0.2)	0.0 (0.0)	91.9 (1.8)	0.8 (0.5)	7.6 (1.9)	673
Total	9.8 (2.7)	4.7 (1.2)	73.4 (4.2)	5.4 (2.2)	9.5 (1.5)	1238

NOTE: Standard errors in parentheses.

SOURCE: CHARLS pilot data.

TABLE 3 Coverage of Insurance for Men and Women, by Self-reported Health

	Men				Women			
	With Insurance (%)	Without Insurance (%)	<i>N</i>	P-Value	With Insurance (%)	Without Insurance (%)	<i>N</i>	P-Value
Poor health	89.7 (3.1)	10.3 (3.1)	241		92.5 (1.8)	7.5 (1.8)	341	
Non-poor health	91.1 (1.7)	8.9 (1.7)	872		90.2 (1.7)	9.8 (1.7)	781	
All	90.9 (1.6)	9.1 (1.6)	1113	0.658	90.8 (1.5)	9.2 (1.5)	1122	0.221

NOTE: Standard errors in parentheses. P-values are from tests of equality of insurance coverage between people having poor health and non-poor health, separately for men and women.

SOURCE: CHARLS pilot data.

TABLE 4 Regression for Having Any Insurance, Men and Women

	Men			Women		
	(1)	(2)	(3)	(1)	(2)	(3)
Aged 55-64	0.031*	0.027	0.017	0.019	0.019	0.016
	(0.018)	(0.019)	(0.016)	(0.022)	(0.024)	(0.021)
Aged 65-74	0.037	0.044*	0.025	-0.018	-0.013	-0.016
	(0.023)	(0.026)	(0.026)	(0.024)	(0.025)	(0.024)
Aged 75 and over	-0.002	-0.006	-0.008	-0.124***	-0.081*	-0.113**
	(0.035)	(0.043)	(0.042)	(0.047)	(0.047)	(0.049)
Can read and write	0.026	0.032	0.032	0.057**	0.058**	0.047**
	(0.022)	(0.022)	(0.021)	(0.025)	(0.027)	(0.021)
Finished primary	0.021	0.032	0.033	0.025	0.023	0.002
	(0.024)	(0.025)	(0.022)	(0.032)	(0.033)	(0.031)
Junior high and above	0.034	0.044*	0.030	0.087***	0.096***	0.067**
	(0.022)	(0.024)	(0.023)	(0.030)	(0.031)	(0.026)
logPCE (< median)	0.034*	0.021	0.010	0.001	0.003	0.002
	(0.017)	(0.017)	(0.013)	(0.012)	(0.012)	(0.013)
logPCE (> median, marginal)	0.001	0.019	0.012	0.013	0.014	0.008
	(0.027)	(0.027)	(0.022)	(0.030)	(0.035)	(0.029)
Migrant		-0.262***	-0.197**		-0.302**	-0.188
		(0.076)	(0.079)		(0.118)	(0.144)
Widowed		-0.105***	-0.128***		-0.053	-0.044
		(0.038)	(0.037)		(0.032)	(0.033)
Divorced or never married		0.088***	0.081***		-0.075	-0.140
		(0.019)	(0.016)		(0.141)	(0.147)
Having poor health		0.011	0.017		0.022	0.026*
		(0.020)	(0.022)		(0.016)	(0.015)
Rural Zhejiang	0.007	0.005		0.043	0.045	
	(0.032)	(0.033)		(0.039)	(0.041)	
Urban Gansu	-0.021	-0.021		-0.093	-0.091	
	(0.047)	(0.051)		(0.057)	(0.055)	
Rural Gansu	0.079***	0.076**		0.070*	0.072	
	(0.026)	(0.030)		(0.042)	(0.046)	
Community FE	NO	NO	YES	NO	NO	YES
F-test for all age dummies	2.02	1.66	0.66	3.06**	1.82	2.70**
(p-value)	(0.117)	(0.181)	(0.576)	(0.032)	(0.149)	(0.050)
F-test for all education dummies	0.88	1.19	1.04	3.56**	3.98**	3.30**
(p-value)	(0.453)	(0.320)	(0.379)	(0.017)	(0.010)	(0.024)
F-test for all logPCE splines	5.17***	2.91*	1.61	0.16	0.27	0.15
(p-value)	(0.007)	(0.060)	(0.206)	(0.855)	(0.761)	(0.857)
F-test for all marital status dummies		17.73***	19.60***		1.53	1.33
(p-value)		(0.000)	(0.000)		(0.223)	(0.268)
F-test for all location dummies	4.23***	3.44**	1.98***	3.23**	3.57**	1.84***
(p-value)	(0.008)	(0.020)	(0.000)	(0.026)	(0.017)	(0.001)
Observations	1262	1107	1107	1233	1118	1118

NOTE: Robust standard errors in parentheses, all clustered at community level. * p<.1 ** p<.05 *** p<.01.

logPCE (>median, marginal) represents the change in the slope from the interval for logPCE below the median.

SOURCE: CHARLS pilot data.

TABLE 5 The Percentage of People Who Use Medical Service in the Last Month, by Age and Sex

	Outpatient						Inpatient					
	Men		Women		All		Men		Women		All	
	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>
45-54	11.7 (2.0)	395	20.0 (2.4)	459	15.6 (1.4)	854	2.9 (0.8)	395	4.5 (1.0)	459	3.7 (0.7)	854
55-64	23.6 (4.0)	374	23.6 (3.8)	367	23.6 (3.1)	741	9.3 (1.9)	374	5.1 (1.4)	367	7.1 (1.2)	741
65-74	15.4 (2.5)	249	16.7 (2.6)	204	16.0 (1.9)	453	10.3 (2.6)	249	7.3 (2.6)	204	8.9 (1.9)	453
75+	17.4 (4.9)	92	25.6 (6.5)	94	22.1 (4.3)	186	6.5 (2.8)	92	9.5 (4.1)	94	8.2 (2.7)	186
Total (45+)	16.5 (1.7)	1110	21.2 (2.1)	1124	18.9 (1.5)	2234	6.7 (0.9)	1110	5.9 (0.9)	1124	6.3 (0.7)	2234

NOTE: Standard errors in parentheses.

SOURCE: CHARLS pilot data.

TABLE 6 Regression for Using Medical Service for Outpatient

	Men		Women	
	(1)	(2)	(1)	(2)
Aged 55-64	0.082*** (0.030)	0.073** (0.030)	0.009 (0.029)	-0.009 (0.030)
Aged 65-74	0.072** (0.033)	0.060 (0.037)	0.010 (0.036)	-0.014 (0.037)
Aged 75 and over	0.084* (0.044)	0.097** (0.047)	0.111* (0.058)	0.099 (0.060)
Can read and write	0.078** (0.030)	0.081** (0.034)	-0.017 (0.034)	-0.025 (0.038)
Finished primary	0.036 (0.033)	0.035 (0.038)	0.026 (0.047)	-0.001 (0.055)
Junior high and above	0.067* (0.036)	0.073* (0.038)	0.012 (0.045)	-0.023 (0.045)
logPCE (< median)	0.016 (0.014)	0.022 (0.014)	0.022* (0.013)	0.019 (0.012)
logPCE (> median, marginal)	0.024 (0.027)	0.005 (0.029)	0.058* (0.035)	0.047 (0.034)
Having any insurance	0.040 (0.035)	0.021 (0.037)	0.004 (0.043)	-0.004 (0.051)
Rural Zhejiang	0.001 (0.030)		0.010 (0.034)	
Urban Gansu	0.019 (0.033)		0.078 (0.048)	
Rural Gansu	0.061 (0.037)		0.119*** (0.041)	
Community FE	NO	YES	NO	YES
F-test for all age dummies (p-value)	3.00** (0.035)	2.46* (0.068)	1.23 (0.304)	1.15 (0.334)
F-test for all education dummies (p-value)	2.37* (0.076)	2.30* (0.083)	0.25 (0.861)	0.20 (0.893)
F-test for all logPCE splines (p-value)	2.09 (0.129)	1.59 (0.210)	6.65*** (0.002)	4.50** (0.014)
F-test for all location dummies (p-value)	1.08 (0.360)	1.12 (0.231)	3.58** (0.017)	1.84*** (0.000)
Observations	1104	1104	1118	1118

NOTE: Robust standard errors in parentheses, all clustered at community level. * p<.1 ** p<.05 *** p<.01.

logPCE (>median, marginal) represents the change in the slope from the interval for logPCE below the median.

SOURCE: CHARLS pilot data.

TABLE 7 Regression for Using Medical Service for Inpatient

	Men		Women	
	(1)	(2)	(1)	(2)
Aged 55-64	0.051*** (0.018)	0.058*** (0.018)	0.001 (0.019)	0.005 (0.019)
Aged 65-74	0.078*** (0.028)	0.087*** (0.029)	0.013 (0.020)	0.013 (0.020)
Aged 75 and over	0.043 (0.030)	0.053 (0.033)	0.054 (0.034)	0.057* (0.034)
Can read and write	0.019 (0.023)	0.019 (0.024)	-0.023 (0.016)	-0.024 (0.017)
Finished primary	-0.020 (0.020)	-0.021 (0.021)	0.007 (0.024)	0.009 (0.025)
Junior high and above	-0.017 (0.022)	-0.013 (0.022)	-0.026 (0.024)	-0.025 (0.023)
logPCE (< median)	0.014* (0.008)	0.016** (0.008)	0.004 (0.005)	0.007 (0.006)
logPCE (> median, marginal)	0.038 (0.025)	0.032 (0.024)	0.062*** (0.021)	0.060** (0.023)
Having any insurance	0.046** (0.021)	0.053* (0.028)	0.024 (0.023)	0.020 (0.024)
Rural Zhejiang	0.012 (0.021)		0.007 (0.016)	
Urban Gansu	0.098*** (0.036)		0.049** (0.020)	
Rural Gansu	0.019 (0.018)		0.046** (0.022)	
Community FE	NO	YES	NO	YES
F-test for all age dummies (p-value)	3.68** (0.015)	4.62*** (0.005)	0.98 (0.407)	0.99 (0.400)
F-test for all education dummies (p-value)	1.20 (0.313)	1.17 (0.325)	0.99 (0.403)	1.10 (0.353)
F-test for all logPCE splines (p-value)	5.21*** (0.007)	5.78*** (0.004)	6.06*** (0.003)	5.88*** (0.004)
F-test for all location dummies (p-value)	2.46* (0.068)	1.09 (0.337)	2.72** (0.049)	0.71 (0.890)
Observations	1104	1104	1118	1118

NOTE: Robust standard errors in parentheses, all clustered at community level. * p<.1 ** p<.05 *** p<.01.

logPCE (>median, marginal) represents the change in the slope from the interval for logPCE below the median.

SOURCE: CHARLS pilot data.

TABLE 8 Mean of Premium of Different Medical Insurances

		Urban Employee Medical Insurance		New Cooperative Medical Insurance	
		Men	Women	Men	Women
Gansu Urban	Mean	289.0 (116.4)	337.4 (114.6)	18.1 (6.0)	18.7 (6.5)
	= 0	6%	0%	1%	0%
	<i>N</i>	41	20	67	86
Gansu Rural	Mean			13.0 (0.7)	12.9 (0.7)
	= 0			0%	0%
	<i>N</i>			368	340
Zhejiang Urban	Mean	608.1 (173.3)	324.3 (158.9)	18.2 (3.6)	24.1 (6.2)
	= 0	12%	11%	18%	17%
	<i>N</i>	70	52	211	220
Zhejiang Rural	Mean			28.2 (4.7)	26.8 (4.6)
	= 0			20%	22%
	<i>N</i>			267	273
Total	Mean	495.4 (127.4)	318.3 (123.4)	20.3 (2.1)	21.8 (2.6)
	= 0	5%	3%	10%	10%
	<i>N</i>	122	76	913	919

NOTE: Standard errors in parentheses. "= 0" represents the number of people whose premium is zero.

SOURCE: CHARLS pilot data.

TABLE 9 Inpatient Cost for People with Insurance

PANEL A by Urban/Rural and Province

	Urban				Rural				P-value
	Total Cost Mean	The Share of Out-of-pocket Cost (%)	Reimbursement Rate (%)	<i>N</i>	Total Cost Mean	The Share of Out-of-pocket Cost (%)	Reimbursement Rate (%)	<i>N</i>	
Gansu	3329.3 (658.5)	57.6 (5.9)	42.4 (5.9)	33	3631.6 (732.4)	67.9 (5.7)	32.1 (5.7)	37	0.210
Zhejiang	14591.7 (4844.3)	61.2 (9.7)	38.8 (9.7)	34	9449.0 (1316.4)	70.2 (6.0)	29.8 (6.0)	25	0.431
Total	10562.9 (3223.4)	59.9 (6.5)	40.1 (6.5)	67	6981.1 (995.8)	69.3 (4.2)	30.7 (4.2)	62	0.226

PANEL B by Hukou and Province

	Urban Hukou				Rural Hukou				P-value
	Total Cost Mean	The Share of Out-of-pocket Cost (%)	Reimbursement Rate (%)	<i>N</i>	Total Cost Mean	The Share of Out-of-pocket Cost (%)	Reimbursement Rate (%)	<i>N</i>	
Gansu	4080.7 (974.1)	54.4 (7.3)	45.6 (7.3)	17	3284.6 (592.2)	65.2 (4.8)	34.8 (4.8)	53	0.211
Zhejiang	18165.4 (9372.0)	35.6 (12.4)	64.4 (12.4)	14	10086.0 (1430.0)	76.9 (3.9)	23.1 (3.9)	45	0.003
Total	13247.0 (6131.9)	42.1 (8.9)	57.9 (8.9)	31	7351.6 (1012.1)	72.4 (3.2)	27.6 (3.2)	98	0.002

NOTE: Standard errors in parentheses. P-values are from tests of equality of reimbursement rates between rural and urban residents or rural and urban Hukou, separately or jointly for Gansu and Zhejiang provinces.

SOURCE: CHARLS pilot data.

TABLE 10 Outpatient Cost for People with Insurance**PANEL A Outpatient Cost for People with Insurance, by Urban/Rural and Province**

	Urban				Rural				P-value
	Total Cost Mean	The Share of Out-of-pocket Cost (%)	Reimbursement Rate (%)	<i>N</i>	Total Cost Mean	The Share of Out-of-pocket Cost (%)	Reimbursement Rate (%)	<i>N</i>	
Gansu	229.4 (73.1)	85.6 (4.7)	14.4 (4.7)	58	180.8 (36.9)	92.5 (2.3)	7.5 (2.3)	131	0.186
Zhejiang	318.0 (59.1)	63.6 (9.8)	36.4 (9.8)	96	614.6 (178.1)	90.5 (1.7)	9.5 (1.7)	76	0.009
Total	293.4 (46.0)	70.1 (7.5)	29.9 (7.5)	154	413.0 (99.6)	91.5 (1.5)	8.5 (1.5)	207	0.006

PANEL B Outpatient Cost for People with Insurance, by Hukou and Province

	Urban Hukou				Rural Hukou				P-value
	Total Cost Mean	The Share of Out-of-pocket Cost (%)	Reimbursement Rate (%)	<i>N</i>	Total Cost Mean	The Share of Out-of-pocket Cost (%)	Reimbursement Rate (%)	<i>N</i>	
Gansu	192.0 (28.1)	82.6 (8.6)	17.4 (8.6)	41	201.6 (44.9)	92.3 (2.4)	7.7 (2.4)	148	0.301
Zhejiang	250.6 (67.0)	37.3 (9.7)	62.7 (9.7)	41	526.5 (114.5)	89.6 (1.9)	10.4 (1.9)	131	0.000
Total	231.4 (46.3)	53.6 (10.1)	46.4 (10.1)	82	400.5 (73.7)	90.7 (1.5)	9.3 (1.5)	279	0.000

NOTE: Standard errors in parentheses. P-values are from tests of equality of reimbursement rates between rural and urban residents or rural and urban Hukou, separately or jointly for Gansu and Zhejiang provinces.

SOURCE: CHARLS pilot data

TABLE 11 Regression for the Share of Out-of-pocket Cost in the Total Cost of the Last Visit for Medical Service for Outpatient in the Last Month

	Men			Women		
	(1)	(2)	(3)	(1)	(2)	(3)
Aged 55-64	-0.083 (0.050)	-0.085* (0.050)	-0.047 (0.053)	-0.039 (0.046)	-0.031 (0.047)	-0.027 (0.040)
Aged 65-74	-0.225*** (0.071)	-0.232*** (0.070)	-0.206*** (0.068)	-0.109* (0.061)	-0.102* (0.059)	-0.131** (0.065)
Aged 75 and over	-0.362*** (0.112)	-0.380*** (0.111)	-0.298** (0.119)	-0.053 (0.084)	-0.025 (0.090)	-0.040 (0.084)
Can read and write	-0.042 (0.083)	-0.039 (0.084)	-0.045 (0.085)	0.055 (0.045)	0.061 (0.046)	0.048 (0.053)
Finished primary	-0.066 (0.088)	-0.055 (0.086)	-0.040 (0.089)	-0.099 (0.091)	-0.094 (0.092)	-0.091 (0.081)
Junior high and above	-0.116 (0.084)	-0.108 (0.084)	-0.048 (0.085)	-0.092 (0.073)	-0.087 (0.074)	-0.082 (0.075)
logPCE (< median)	-0.018 (0.044)	-0.014 (0.047)	-0.017 (0.043)	0.007 (0.018)	0.008 (0.018)	0.005 (0.018)
logPCE (> median, marginal)	0.037 (0.096)	0.030 (0.097)	0.036 (0.098)	-0.057 (0.063)	-0.056 (0.064)	-0.051 (0.063)
Widowed		0.064 (0.077)	0.063 (0.080)		-0.026 (0.053)	-0.018 (0.062)
Divorced or never married		0.018 (0.105)	-0.014 (0.096)		0.206*** (0.069)	0.040 (0.088)
Rural Zhejiang	0.232** (0.091)	0.233** (0.090)		0.137** (0.064)	0.143** (0.066)	
Urban Gansu	0.320*** (0.102)	0.316*** (0.102)		0.166** (0.081)	0.172** (0.083)	
Rural Gansu	0.237** (0.093)	0.230** (0.091)		0.123* (0.069)	0.133* (0.073)	
Community FE	NO	NO	YES	NO	NO	YES
F-test for all age dummies (p-value)	4.99*** (0.003)	5.39*** (0.002)	4.00** (0.011)	1.07 (0.368)	1.01 (0.395)	1.37 (0.257)
F-test for all education dummies (p-value)	0.71 (0.548)	0.65 (0.588)	0.12 (0.949)	1.13 (0.342)	1.15 (0.334)	0.86 (0.467)
F-test for all logPCE splines (p-value)	0.09 (0.918)	0.05 (0.952)	0.08 (0.923)	0.41 (0.667)	0.38 (0.688)	0.33 (0.722)
F-test for all marital status dummies (p-value)		0.34 (0.713)	0.34 (0.714)		4.55** (0.014)	0.18 (0.834)
F-test for all location dummies (p-value)	3.23** (0.027)	3.25** (0.027)	5.09*** (0.000)	1.59 (0.198)	1.62 (0.191)	2.79*** (0.003)
Observations	162	162	162	226	226	226

NOTE: Robust standard errors in parentheses, all clustered at community level. * p<.1 ** p<.05 *** p<.01.

logPCE (>median, marginal) represents the change in the slope from the interval for logPCE below the median.

SOURCE: CHARLS pilot data.