

Health Status and Access to Health Care of Migrant Workers in China

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SYNOPSIS

Objectives. We explored living and working conditions, health status, and health-care access in Chinese rural-to-urban migrants and compared them with permanent rural and urban residents.

Methods. A questionnaire was administered to 1,958 urban workers, 1,909 rural workers, and 4,452 migrant workers in Zhejiang Province, Eastern China, in 2004. Blood samples for human immunodeficiency virus (HIV) and syphilis were taken from the migrant and urban workers.

Results. Migrants were young, worked very long hours, and their living conditions were very basic. Nineteen percent had some form of health insurance and 26% were entitled to limited sick pay compared with 68% and 66%, respectively, for urban workers. Migrants had the best self-rated health and reported the least acute illness, chronic disease, and disability, after controlling for age and education. There were no HIV infections detected in either the migrant or urban workers. However, 15 urban workers (0.68%, 95% confidence interval [CI] 0.35, 1.02) and 20 migrants (0.48%, 95% CI 0.26, 0.66, $p=0.06$) tested positive for syphilis. The high cost of health care in the city was a barrier to health-care access in the last year for 15% of the migrants and 8% of the urban workers. Forty-seven percent of the migrants were unwilling to make contributions to health insurance.

Conclusions. These migrants demonstrated the “healthy migrant effect.” However, poor living conditions and inattention to health may make migrants vulnerable to poor long-term health. Because health insurance schemes will remain limited for the foreseeable future, attention should focus on providing affordable health care to both uninsured migrants and the urban poor.

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Rural-to-urban migration takes place in China on a massive scale. The numbers have increased from 50 million in 1990 to 120 million in 2000,¹ and by 2010 there will be 160 million,² accounting for approximately 25% of the country's working population. Migrants provide an important mechanism to cope with fluctuating labor demand in urban sectors and surplus rural labor. They make a major contribution to China's industrial development, in-flow of foreign investment, and economic growth. And their remittances support the rural economy, accounting for more than 5% of the gross domestic product of some poor provinces.³

Because of the Chinese system of household registration, or *hukou*, migrants are classified as temporary residents in cities irrespective of their length of stay. By law, all individuals must have *hukou*, which ensures certain rights (i.e., free education and access to social welfare) in the place where the registration is held—typically the individual's place of birth. With very few exceptions, migrants keep their rural *hukou* and are therefore denied some citizens' rights at their urban destination. Though apparently discriminatory, the system prevents the large-scale movement of rural populations to the cities on a permanent basis, thus reducing pressure on China's crowded cities.⁴

Migrants are frequently marginalized in urban communities, are targets of discrimination, and are blamed for social disorder and rising urban crime rates.^{5,6} Concerns for migrants' health have centered on the consequences of poor quality and crowded housing, with limited access to clean water and sanitation⁷ and dangerous working conditions with high occupational health risks⁸ and poor access to health care.⁹ It is also thought that the movement away from stable rural communities may lead to risk behaviors, such as alcohol abuse and illicit drug use.

But evidence for the actual health consequences of migration is sparse.¹⁰ In particular, there have been no studies making comparisons with permanent urban and rural residents. Available studies are predominantly case series, or draw-on routine reports.¹¹⁻¹³ For example, migrants are disproportionately represented at sexually transmitted infection (STI) clinics and in sentinel surveillance figures for human immunodeficiency virus (HIV).¹⁴ It is now acknowledged that the health of the massive migrant workforce has implications not only for the migrants themselves, but also for the society as a whole.

Migrants' health problems were described as a national priority at the Communist Party Congress in Beijing in March 2002, where it was acknowledged that unless their problems are addressed, they could

present a threat to public health, sustained economic growth, and social stability. City governments were urged to determine migrants' needs and ensure that they have equal rights with the local population, particularly in terms of access to health care.¹⁵ This study was conducted by Zhejiang University in collaboration with University College London in answer to this call. The goal of the study was to explore the living and working conditions and to assess the health needs of rural-urban migrants in Hangzhou—a major destination center for migrant workers in Eastern China—and to compare these conditions with permanent urban and rural residents.

METHODS

This study was a cross-sectional survey comparing three population groups: rural-urban migrants, permanent urban dwellers, and permanent rural dwellers. The study was conducted from January to December 2004 in Hangzhou, the capital of Zhejiang Province, which typifies the booming cities of the east coast—attracting large numbers of migrant workers from rural areas. It has a population of 6.2 million with a migrant population of about 800,000.¹⁶ The study was conducted in two districts of the city: suburban Xiaoshan and inner-city Xihu. In each district, a list of work units employing at least 30 workers and providing formal, unskilled employment for both migrants and local people was drafted, giving 31 in Xiaoshan and 42 in Xihu. A convenience sample of 50% of these work units was selected to represent a range of types of work units in terms of type of manufacturing, type of service provider (hotel or restaurant), and ownership (government or private) to include the major occupations of migrant workers. In all, 16 work units in Xiaoshan and 21 in Xihu were invited to participate and none refused.

Although we used convenience sampling, we have no reason to believe that the non-selected work units were substantially different. Migrants were defined as individuals who hold rural *hukou* and who have worked at the urban destination for three months to 10 years. Urban controls were drawn from the same work units as the migrants. Sample-size calculation was based on best estimates of HIV prevalence in the three groups obtained from the authors' previous work¹⁷ and indicative data from the National Sentinel Surveillance.¹⁴ These were an urban prevalence of 0.05%, rural of 0.001%, and migrant of 0.5%. Because migrants were the population of primary interest, recruitment was conducted on a 2:1:1 basis. The minimum sample size required to obtain a statistically significant difference

($p < 0.05$) in HIV prevalence among the three groups, at a power of 80% using a 2:1:1 ratio, was 3,190 migrants and 1,590 rural and urban dwellers.

Rural sampling took place after the migrant data were obtained, as the goal was to include areas from which a large number of the migrants originated: 29% were from Zhejiang and 20% were from Anhui Province. Thus, six villages from two counties in the border area between western Zhejiang and eastern Anhui were selected as "typical". In the villages, households were randomly sampled from lists held by village authorities. Adults in the selected households who were between 16 and 52 years of age on the day of the survey (to match the age range in the migrant and urban samples) were included.

We developed a questionnaire covering a wide range of health and lifestyle issues that drew heavily on existing tools previously validated for China.^{17,18} However, the final tool was specific for the study because of the range of areas that were covered. It was piloted across a sample of work units before it was amended and finalized. Research assistants helped with specific queries about individual items, but they did not write anything for the respondents; this was strictly disallowed because of the bias it might introduce. Blood samples for HIV and syphilis were taken from migrants and urban workers. (Permission to collect blood for this purpose was refused in the rural communities.) This testing was conducted largely because of widely held beliefs that migrants are a major source of spreading STIs. Before blood samples were taken, all participants were provided with an informational leaflet about HIV and syphilis. All who tested positive were offered free consultation and treatment. HIV testing was offered on an anonymous or named basis using the same protocol as is used in the United Kingdom for antenatal HIV screening.¹⁹ Fifteen individuals (nine migrants and six urban workers) opted for anonymous testing. Finger-prick blood was collected onto filter paper and transported to a laboratory. Testing for antibodies to HIV-1 and syphilis was carried out using a gelatin particle agglutination technique using Serodia reagents.²⁰ All syphilis test-positives were confirmed by serum Venereal Disease Research Laboratory testing on referral to the city infectious diseases hospital.

Participants were assured anonymity, confidentiality, and the right to refuse participation. Approvals for the study were obtained from the Hangzhou Bureau of Public Health and the Ethics Committee of the Institute of Child Health, University College London.

Analysis was conducted using SPSS.²¹ We used cross-tabulations with the Pearson Chi-square test to compare

the three population groups. Logistic regression was used to identify predictors of health status and health care-seeking behavior after controlling for age and education level.

RESULTS

Sociodemographic characteristics (Table 1)

Complete results were obtained from 4,452 migrants, 1,909 rural dwellers, and 1,958 urban dwellers. Response rates were 97%, 95%, and 96%, respectively. The migrant population was the youngest and the rural population the oldest ($p < 0.0001$). Female migrants slightly outnumbered men, reflecting current gender patterns for migrants in Hangzhou with its large manufacturing sector.

Migrants originated from 27 of China's 33 provinces, but with 21% from other parts of Zhejiang Province and 56% from the poor inland provinces of Anhui, Jiangxi, Henan, and Hubei. Migrants were better educated than rural dwellers, but less well-educated than urbanites ($p < 0.0001$). Half of the migrants (50%) worked in the manufacturing sector, with 29% in the service sector (shops, hotels, and restaurants) and 27% of the men in construction. The major incentive for migration was financial (81%), but 19% also cited acquiring new skills and 8% the attraction of an urban lifestyle as incentives. The median length of time since first migration was 2.9 years (range: three months to 10 years) and the median number of migrant labor jobs done was three (range = one to 15), illustrating the migrant population's mobility.

Working/living conditions (Table 2)

Migrants worked very long hours (28% worked more than 12 hours per day), and 81% worked six or seven days per week. Migrant workers earned a mean of 850 Renminbo (RMB) per month compared with 1,050 RMB per month for urban workers (USD \$1 = 8 RMB). Seventy-five percent saved money and 70% planned to return to their hometown eventually, with 41% specifically saying they wanted to save sufficient capital to set up a small business. Almost all (96%) returned home at least once per year. Twenty-six percent of migrants, compared with 66% of urban workers, were entitled to sick pay, though in most cases (85%) this was not equivalent to full salary. Delays and apparently arbitrary reductions in salary payments were described by 61% of migrants, but by only 23% of urban workers. Migrants' living conditions were very basic for the majority, with most of them living in dormitory-style accommodations (sharing with several other workers)

Table 1. Sociodemographic characteristics of the sample by residence status and gender

		Number (percent)		Number (percent)		Number (percent)		Number (percent)	Number (percent)
		Male n=2,198	Female n=2,254	Male n=749	Female n=1,160	Male n=843	Female n=1,115	P-value for males	P-value for females
Age in years	Mean (SD)	36 (12.10)	34 (8.80)	39 (13.40)	35 (11.90)	29 (8.30)	25 (6.80)	0.003	0.001
Education	Primary school	253 (11.00)	265 (12.00)	378 (50.00)	915 (79.00)	88 (10.40)	93 (8.40)	<0.0001	<0.0001
	Middle school	1,259 (57.00)	1,459 (65.00)	250 (33.00)	187 (16.00)	278 (33.00)	425 (38.00)		
	High school	616 (28.00)	484 (22.00)	106 (14.00)	47 (4.10)	309 (37.00)	416 (37.00)		
	Tertiary	66 (3.00)	45 (2.00)	15 (2.00)	11 (0.90)	168 (18.00)	170 (15.00)		
Marital status	Single	934 (43.00)	1,201 (53.00)	85 (11.00)	38 (3.30)	172 (20.00)	134 (12.00)	<0.0001	<0.0001
	Married	1,203 (55.00)	1,032 (45.00)	626 (84.00)	1,041 (89.00)	661 (78.00)	946 (85.00)	<0.0001	<0.0001
	Other	61 (2.80)	21 (0.90)	40 (5.30)	81 (7.00)	12 (1.40)	35 (2.90)	0.002	<0.0001
Child/ren	Yes	1,105 (50.00)	867 (38.00)	642 (86.00)	1,101 (95.00)	617 (73.00)	920 (83.00)	<0.0001	<0.0001
Job	Agriculture	0	0	584 (78.00)	731 (63.00)	30 (3.50)	35 (3.10)	<0.0001	<0.0001
	Factory	903 (41.00)	1,322 (59.00)	16 (2.00)	58 (5.00)	546 (65.00)	457 (41.00)		
	Construction	596 (27.00)	1 (0.04)	0	0	22 (2.60)	5 (0.50)		
	Service	564 (26.00)	715 (32.00)	13 (2.00)	70 (6.00)	97 (12.00)	328 (29.00)		
	Transport	27 (1.20)	6 (0.30)	7 (1.00)	0	1 (0.01)	0		
	Domestic service	0	63 (2.80)	0	35 (3.00)	103 (12.00)	2 (0.20)		
	Self-employed	73 (3.30)	143 (6.30)	46 (6.00)	81 (7.00)	115 (14.00)	158 (14.00)		
	Other	35 (1.60)	0	83 (11.00)	185 (16.00)	103 (12.00)	109 (9.70)		

NOTE: Not all columns add up to *n* totals because of missing data (noncompletion of questionnaire).

SD = standard deviation

Table 2. Living and working conditions by residence status

	Migrant n=4,452 n (percent)	Rural n=1,909 n (percent)	Urban n=1,958 n (percent)	P-value
Working hours per day ^a				
≤8	1,866 (42.00)	N/A	1,562 (80.00)	<0.0001
9–11	1,336 (30.00)	N/A	213 (11.00)	<0.0001
≥12	1,249 (28.00)	N/A	183 (9.30)	<0.0001
Working days per week				
≤5	865 (20.00)	N/A	931 (48.00)	<0.0001
6	2,453 (55.00)	N/A	750 (38.00)	<0.0001
7	1,113 (26.00)	N/A	274 (14.00)	<0.0001
Salary per month in RMB ^b				
≤700	880 (20.00)	1,618 (85.00)	222 (11.00)	<0.0001
701–1,500	3,245 (73.00)	237 (12.00)	1,208 (62.00)	<0.0001
≥1,501	294 (6.60)	54 (2.80)	518 (26.00)	<0.0001
Median	850	500	1,050	<0.0001
Have you experienced delays with receiving salary payment?	2,715 (61.00)	N/A	450 (23.00)	<0.0001
Written contract with employer?	2,370 (53.00)	N/A	1,556 (79.00)	<0.0001
Do you have sick pay entitlement?	1,157 (26.00)	N/A	1,292 (66.00)	<0.0001
Accommodations				
Purchased house/apartment	2 (0.01)	1,431 (75.00)	352 (18.00)	
Workshed	540 (12.00)	0	0	
Dormitory room provided by work unit	2,182 (52.00)	0	156 (8.00)	
Apartment provided by work unit	0	0	293 (15.00)	
Rented accommodation	1,367 (32.00)	219 (11.00)	744 (38.00)	
Living with relatives/friends	34 (0.80)	45 (2.30)	332 (17.00)	
Amenities				
Inside tapwater	1,380 (31.00)	973 (51.00)	1,860 (95.00)	<0.0001
Inside toilet	1,692 (38.00)	822 (43.00)	1,644 (84.00)	<0.0001
Electricity	4,318 (96.00)	1,868 (98.00)	1,958 (100.00)	0.2

^aDetails of rural dwellers' working hours are not provided because of very variable working hours and the seasonal nature of their work.

^bUSD \$1 = 8 RMB

N/A = not applicable

RMB = Renminbo

with outside amenities (tapwater and toilets). Despite these conditions, the majority (62%) described the living conditions as adequate or good.

Health status and morbidity (Table 3)

Migrants had the best self-rated health, reported the least chronic disease and disability, were least likely to be taking regular medication, and reported the least acute illness in the last year. Migration status was an independent predictor of better self-reported health, (odds ratio [OR] = 2.1, 95% CI 1.8, 2.4, $p < 0.0001$), absence of acute disease (OR=1.4, 95% CI 1.2, 1.7, $p = 0.001$), absence of chronic disease (OR=2.5, 95% CI 2.2, 2.8, $p < 0.0001$), and absence of either acute or chronic disease (OR=2.1, 95% CI 1.7, 2.4) after adjust-

ing for age and education. A history of tuberculosis was reported by two rural residents but no urban or migrant workers. Migrants reported the most workplace injuries—significantly more than urban workers doing the same jobs ($p < 0.0001$); most of these injuries were in restaurant workers who reported cuts and burns.

HIV and syphilis

There were no HIV infections detected in either the migrants ($n = 4,148$) or urban workers ($n = 1,897$). Fifteen urban workers (0.68%, 95% CI 0.35, 1.02) and 20 migrants (0.48%, 95% CI 0.26, 0.66, $p = 0.06$) tested positive for syphilis, but with no significant difference between the groups. Of the 15 urban workers who tested positive for syphilis, eight were male and the

Table 3. Health status and morbidity by residence status

	Migrant n=4,452	Rural n=1,909	Urban n=1,958	P-value
Self-reported health status				
Excellent or very good	1,329 (30.0)	392 (21.0)	250 (13.0)	<0.0001
Good/OK	3,065 (69.0)	1,380 (73.0)	1,656 (85.0)	0.003
Poor	58 (1.3)	132 (6.9)	49 (2.5)	<0.0001
Do you have any type of chronic disease? ^a	463 (10.4)	439 (23.0)	711 (37.0)	<0.0001
GI problems	262 (5.9)	181 (9.4)	164 (8.3)	0.05
Hypertension	27 (0.6)	129 (6.7)	121 (6.2)	<0.0001
Bronchitis/asthma	31 (0.7)	49 (2.5)	24 (1.1)	0.009
GI ulcer	27 (0.6)	37 (1.9)	32 (1.6)	0.001
Hepatitis	18 (0.4)	12 (0.6)	26 (1.3)	0.001
Other or unspecified	98 (2.2)	31 (1.6)	344 (18.0)	<0.0001
Do you take regular medication?	283 (6.4)	367 (19.0)	326 (17.0)	<0.0001
Do you have any kind of disability? ^b	67 (1.5)	126 (6.7)	47 (2.4)	<0.0001
Have you ever had an injury at work?	1,023 (23.0)	190 (10.0)	313 (16.0)	<0.0001
Have you had an illness that you felt required treatment in the last year?	1,602 (36.0)	801 (42.0)	802 (41.0)	<0.002
Have you needed time off work for illness in the last year?	667 (15.0)	192 (10.0)	156 (8.0)	<0.0001

^aThe five most cited chronic diseases are listed.

^bThe most common disabilities cited were hearing and visual impairment.

GI = gastrointestinal

median age was 28 years (range: 20 to 47 years). Of the 20 migrants who tested positive, 14 were male and the median age was 27 (range: 19 to 46 years).

Access to health care (Table 4)

There were large differences in health insurance coverage among the three groups: 58% of urban residents, 9.5% of rural residents, and 19% of migrants had coverage. Coverage for urban workers was related to work unit, with 50% of work units providing coverage for all workers with urban *hukou* and the other 50% only providing it for workers on contracts for at least one year. Coverage for migrants was not associated with work unit, suggesting that it was up to the individual migrant to choose whether to get health insurance. But the amount of expected reimbursement varied from less than 10% to more than 90%, with 28% of all respondents not knowing the amount of reimbursement to which they were entitled.

Cost had been a barrier to accessing necessary health care in the last year for 15% of the migrants, 20% of the rural dwellers, and 8% of urban workers. Not surprisingly, low income (<700 RMB/month) was the strongest independent predictor of inability to access

health care after controlling for residence, education, and age (OR=1.8, 95% CI 1.5, 2.0, $p<0.0001$). The especially high cost of health care in Hangzhou was cited as a major barrier for both migrants and urban workers. Of the 257 migrants who had sought health care in the last year, one-quarter had attended a health facility in their hometown because of the high cost in Hangzhou. However, of those migrants who were uninsured ($n=3,280$), 53% were unwilling to join a health insurance plan. Of those who cited a reason ($n=2,134$), 71% said they preferred to pay out of pocket for what they used, rather than be burdened by regular payments.

DISCUSSION

Limitations

This study has a number of limitations. First, the study sampled work units in the formal sector and did not include the self-employed, such as hawkers and street traders, but it is estimated that these account for less than 2% of migrants in Hangzhou.¹⁶ Second, we used a convenience sample. It is possible that conditions are better in those work units that were involved in

the study, so we cannot claim that our sample is representative of the population of all migrants. Third, the working situations are not the most extreme experienced by migrants: for example, there are no mines in Hangzhou and at the two factories in our sample where toxic chemicals were used, appropriate physical protection was provided. Fourth, the urban controls were drawn from the same work units, so they represented the lower class of working urban society—not average urban workers or the unemployed.

Fifth, given the imperative to work, migrants may be more likely to ignore and underreport ill health than their urban or rural counterparts, thereby biasing the self-report results. Sixth, although the questionnaire as a whole is not a validated instrument, the component questions have been widely used in China and the health questions were drawn from validated sources.¹⁸ Finally, some of the more positive responses, such as satisfaction with poor living conditions, may have been influenced by the phenomenon of “social desirability,” whereby respondents will provide answers that will be regarded as acceptable²² even when the questionnaires are completed anonymously and confidentially.

The healthy migrant effect

Our study suggests that a healthy migrant effect is operating here and shows that migrants’ self-reported

health status is better—that they have lower levels of self-reported morbidity, chronic illness, or disability than permanent rural or urban inhabitants. The healthy migrant effect has been described in many migrant populations.^{23,24} It usually refers to the lower mortality of first-generation permanent migrants, which is attributable to self-selection of healthy migrants. The healthy migrant effect has also been attributed to the bias inherent in migrant studies: when migrants become ill they return to their place of origin, not only because they can no longer work, but also to access more affordable health care.²⁵ It clearly seems to apply equally to these de facto temporary migrants. Although there may be some self-selection of healthier individuals for migration in the first instance (the disabled and chronically ill don’t migrate), the return of the less healthy migrants to their places of origin exaggerates the healthy migrant effect. Given the enormous scale of rural-urban migration, this means that many rural areas are now inhabited predominantly by children, the elderly, the chronically sick, and the less healthy. This is further highlighted by the lower overall self-reported health status of the rural inhabitants in our study.

Some of the major concerns about migrants’ health have centered on the capacity for migrants to be conduits for the spread of infectious disease because of their cramped living conditions, their mobility, and

Table 4. Access to health care by residence status

	Migrant n=4,452	Rural n=1,909	Urban n=1,958	P-value
Do you have any kind of health insurance?	845 (19.0)	104 (9.5)	1,331 (68.0)	<0.0001
Percentage of health-care cost reimbursed through insurance? ^a				
≤10	19 (2.3.0)	0	1 (0.1)	
11–50	203 (24.0)	16 (15.0)	115 (8.5)	<0.0001
51–75	142 (17.0)	9 (8.6)	360 (27.0)	<0.0001
≥76	195 (23.0)	11 (10.0)	564 (42.0)	<0.0001
Don’t know	286 (34.0)	68 (67.0)	203 (15.0)	<0.0001
If not insured, would you like to join a health insurance scheme? ^b	1,541 (47.0)	962 (56.0)	445 (71.0)	<0.0001
Have you needed medical care for illness and been unable to afford it in the last year?	622 (15.0)	381 (20.0)	156 (8.0)	<0.0001
Is the high cost of treatment in Hangzhou a deterrent to seeking health care?	1,826 (41.0)	N/A ^c	568 (29.0)	
Do you have occupational injury insurance?	622 (15.0)	N/A ^c	470 (24.0)	

^aPercentages are of those who are insured.

^bPercentages are of those who are uninsured.

^cThese questions do not apply to rural dwellers.

N/A = not applicable

their apparent reluctance to seek treatment.^{8–10,26} During the severe acute respiratory syndrome epidemic, the cramped conditions of migrants, their failure to report symptoms, and their mobility were thought to have contributed to the wider spread of the disease.¹⁰ We could find no evidence for this in our study. In fact, the migrants reported less illness and time off work, refuting suggestions that infectious diseases are spreading among them. Likewise, migrants have also been blamed for the spread of STIs and HIV,²⁷ but our study finds them at no higher risk of acquiring syphilis or HIV than urban dwellers. There was no HIV in either group and the prevalence of syphilis was not significantly different between migrants and urban workers.

Long-term effects

However, although healthy at the outset, migrants may be vulnerable to poor long-term health because of their apparent inattention to health and reluctance to attend health-care facilities,⁹ which our study highlights. Without appropriate treatment, certain conditions will progress to worse pathology. Zheng has described the widespread use, among migrant workers in Beijing, of over-the-counter analgesics for conditions like gastric ulcer (one of the five most common chronic conditions cited by migrants in our study), which requires specific treatment to prevent deterioration.¹⁰ This inattention to health may have important implications, not only for the long-term health of the workforce, but also for the burden of ill health in rural areas, as migrants return to their hometowns when they become ill, as noted previously.

Access to health care

This study in particular documents discriminatory access to sick pay and health insurance, an issue that has rarely been quantified, and never in this population. Only 19% of migrants had any kind of health insurance, with varying percentages of reimbursement, and only 26% were entitled to some sick pay. Though low, these figures compare favorably with studies from Chengdu and Shenyang that showed that no migrants had health insurance.⁷ This lack of coverage is explained by the current urban health insurance system, which is work unit-based, with employers and employees making contributions (though the employer's contribution is often minimal). It is only mandatory for employees holding urban *hukou*,⁹ though many work units, as we have shown, still do not provide health insurance to their urban employees unless they are on longer contracts.

The problem of health access is compounded by the high cost of health care in the cities. Primary care is provided in hospitals on a fee-for-service basis, and there is a massive disparity between cost of care in rural and urban areas for equivalent treatments, often forcing migrants to return to their hometowns for treatment. This need to return to access cheaper care was mentioned by one-quarter of the migrants in our study who had required health care in the last year.

CONCLUSIONS

The fluctuating need for migrant labor means that informal, short-term employment will continue for the foreseeable future.²⁵ Despite long working hours, insecurity, and poor living conditions, there appears to be no shortage of rural inhabitants willing to migrate to cities to meet this need for cheap labor. From the employers' side, much could be done, for example, to improve workers' living conditions and rights to sick pay. But with the caveat of the influence of social desirability, workers seem mostly satisfied with the living conditions, and the casual nature of much of the employment makes enforcing workers' rights very difficult.

From the point of view of the health sector, however, measures can be taken. This study has shown that the combination of lack of health insurance and high cost of health care in Hangzhou is a deterrent to accessing health care, not only for migrants but also for poor urban workers. It has been suggested that the focus of policy should be in building a comprehensive work unit-based health insurance system,²⁸ but this is highly problematic in the context of migrant workers. The short-term, informal nature of their employment makes it a considerable challenge.

We therefore believe that policy should focus on the provision of affordable urban health care for migrants and the poor, rather than on building a comprehensive health insurance system. This provision could be on a subsidized fee-for-service basis. Tax revenues in Zhejiang have risen dramatically in the last decade, partly because of the economic boom created through the labor of migrant workers. As a result, there are resources that could be channeled into providing some form of community clinics that provide low-cost basic services with the capacity to refer to higher-level services, if necessary. In Hangzhou, discussions about such services are now underway.

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