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The availability and affordability of long-term care for disabled older people in China: The issues related to inequalities in social security benefits

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Abstract

Background: China is experiencing increasing pressure from issues relating to an ageing population. The rationality of different eligibility criteria of the benefits within the social security system has been widely challenged; however, to date, no previous study has explored its association with the availability and affordability of long-term care (LTC).

Aim: This study evaluates the availability and affordability of Long-Term Care (LTC) services for disabled older people (aged 65 and above) in China, with special attention to the differences among groups in receipt of specific social security benefits.

Methods: The data of availability and affordability of LTC services for disabled older people is from a nationally representative sample Chinese Longitudinal Healthy Longevity Survey (CLHLS). Three different social security benefits were identified and their effects on the long-term care services for disabled older people were explored.

Results: The overall proportions of disabled older people who have only limited or no available or affordable LTC services were remarkably high, especially for those who have moderate or no social security benefits. Compared to those who are entitled to generous social security benefits, older people who have no social security benefits are 18.45 times more likely to be unable to afford health care expenses.

Conclusion: The findings imply that policy makers in China could focus on the LTC needs for the social security and socioeconomically disadvantaged ((who have limited or no social security benefits and in low household income) disabled older people which could reduce the gap between them and those who are entitled to generous social security benefits.

Keywords

Long-term care; Availability; Affordability; Equity; China

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Introduction

Long-Term Care (LTC) is important to frail older people as it provides a broad range of health and personal care which meets the needs of older people whose capacity for self-care is limited owing to chronic illness, injury, physical, cognitive or mental disability, or other health-related conditions (U.S. Department of Health and Human Services, 2013). Older people may receive formal or informal LTC services from trained professionals or non-professionals respectively in a variety of settings: from a home health agency, family members or friends at home; by visiting an adult day-care centre in a community; receiving help from assisted-living communities in residential settings; or access health and social care on a daily basis in institutions.

LTC needs are increasing in developing countries at a rate that far exceeds those experienced in industrialized countries (Brodsky et al., 2003). China is not an exception. In recent years, China is facing pressure of LTC needs caused by the increasing aged population. It has the largest ageing population (above 60 years of age) globally, which has surpassed 177 million or 13.26 percent of the total population in 2010 (Zhang, 2011). Further, it has been predicted that the ageing population will increase to 487 million (34.9% of the total population) in 2053 (Wu & Dang, 2014). Although studies reporting on long-term disability trends among Chinese older people are very limited, a conservative estimate revealed that the total number of older people with any Activities of Daily Living (ADLs), Instrumental Activities of Daily Living (IADLs) limitations will increase dramatically from 25 million in 2008 to 113 million in 2050, which constitutes almost a 4.5-fold increase (Hu, 2012). Although China has experienced rapid economic development, its economic power to improve its institutional buildings and social service provision infrastructure to support adequate formal care for older people is still limited; therefore, many older people need to rely on their family for informal care (Xie et al., 2012).

Although the ‘Law of the People’s Republic of China on the Protection of Rights and Interests of the Aged’ has formalized the essential role of family support for older people, with the expansion of urbanization and the increasingly ageing population in China, it is challenging for older people’s family member(s) in both urban and rural areas to balance their work with the care of their older parents, which makes the care of older people an interesting puzzle to solve (Zhang, 2011). Conversely, China’s one- child policy has significantly reduced China’s population growth in the last 30 years and it has also weakened the family’s ability to support its older members. It becomes less likely that informal LTC provided by their children will meet their needs as the vast majority only have one child to rely on for informal support (Zhan, Liu, & Guan, 2006). In addition, the increasing migration from rural to urban areas of young adults is another driving force of the weakening of informal support provided by younger family members (Phillips & Feng, 2015). As most rural older people rely on their family as primary source of social care owing to the cultural tradition of filial piety and severe scarcity of public resources (Wu, 2009), this is important for policy-makers to address. Previous studies found that older people are facing difficulties in accessing health and social care because of a decrease in the number of care givers; this is because of an influx of adult children who are migrating away from their rural homes to find work in cities (Du & Du, 2002; Sun, 2006; Zhang & Li, 2004). In rural

areas, the impact of the change in traditional living arrangements and reduced the frequency of contact and communication by adult children with their older parents has significantly affected the instrumental and emotional aspects of LTC for older people which adult children would most likely have provided when they remained at home. In 2013, it was estimated that migrant workers from rural areas who left their original town or province numbered 166.1 and 77.39 million respectively (National Bureau of Statistics of the People's Republic of China, 2014), and the number of older people left behind without an adult child living nearby reached nearly 50 million in 2012 (Wu, 2013). These figures indicate that a vast number of older people can no longer rely on their children as a source of social care because of the continuing trend in migration.

In addition to diminishing informal LTC mainly provided by family members for older relatives, the availability of formal LTC has also been affected by coexistence of shortage and wastage of available resources such as personnel, facilities and finance. There are three explanations for this. Firstly, the health sector is heavily profit- oriented, with an emphasis on treatment which is reactive and expensive, rather than cost-effective prevention, nursing or rehabilitation. Secondly, delivery and supervision of LTC services are extremely fragmented without consideration of the complicated care pathway for disabled older people. Various policies, programmes, organizations and personnel were administered separately and independently by different Government departments such as Health and Civil Affairs, with no integration of financing, delivery or payment systems, and are therefore unable to provide coordinated, seamless patient-centred services (Tang, 2012; Tang & Xu, 2013). Thirdly, the Social Security System has been widely criticized for creating inequalities among different population groups (Du & Zhang, 2008). Since the Social Security System was introduced by China's 7th Five-Year Plan in 1986, the medical services and retirement pensions of employees from the public sector and state-owned enterprises were fully covered by tax revenues, which enjoyed greater benefits than retirees from private enterprises. Further, the rural population and urban residents without a formal labour contract were not entitled to any government-sponsored medical or social retirement pension (Guan, 2013). Thus, the practical implications of the Social Security System has resulted in producing a three-tiered system within the Chinese population: those who are entitled to subsidised medical services and generous retirement pension equivalent to their in-service salary paid by government tax revenues, those who are covered by social insurance providing partial reimbursement of medical services and about 40 per cent of their in-service salary, and those who are not in receipt of health insurance and pension. In recent years, the Central Government has made efforts to reduce the disparity in social security benefit entitlement among different population groups; however, the inequalities are still exist (Wu, 2013). A number of local governments took steps to abolishing their publicly financed free healthcare system to establish a uniform social medical insurance system for employees regardless of whether the organization they worked for was public or private; whereas compromises were made to mitigate potential resistance by reserving an exclusive privilege for high-ranking officials from governments, public institutions and state-owned enterprises (both in-service and retired). In terms of the pension system for the rural population and the jobless urban residents, two national pilot projects were implemented in 2009 and 2011 respectively and were merged into a single scheme in 2014 by the Central Government (The

Central People's Government of the People's Republic of China, 2009; The Central People's Government of the People's Republic of China, 2011; The Central People's Government of the People's Republic of China, 2014). Nevertheless, the monthly pension paid is minimal, in particular for older people aged 60 and over. This is attributable to the design of the scheme, as individuals aged 60 and over were unable to pay insurance premiums and thus receive a pension at the standard rate. A basic pension was introduced in 2014 for those aged 60 and above by the Central Government of RMB 55 Yuan per month. In addition, in 2015, the Central Government vowed to end the special publicly funded retirement pension scheme for public sector employees and to consolidate it into a universal social insurance system, aiming to narrow the gap between benefits granted for public and private organizations' employees (The Central People's Government of the People's Republic of China, 2015). Social security benefits, as a major source of older people's ability to pay for health and social care of different levels of intensity, frequency, and techniques including healthcare such as skilled nursing, rehabilitation and social care, have been unequal for different population groups both historically and contemporarily. Consequently, shortage and wastage may appear and coexist during the utilization of LTC services according to different levels of social security benefits enjoyed by older people.

In addition, neither the social health insurance nor social retirement insurance is designed to cover the expenses of LTC services directly in China. Thus, many older people are referred to as bed blockers in order to obtain reimbursed accommodation and nursing services in the name of social health insurance by refusing to be discharged from community-based health centres. Once discharged, older people are faced with the reality that their pension income will be insufficient to pay for 24 hour care and support services in rest homes, whereas their adult children of working age will not be in a position to provide the care and support which is needed (Zhang et al., 2013).

Because of these specific issues concerning LTC for older people, an increasing number of disabled older people are unable to access the services which they need. The resulting effect has a notable impact on older people's quality of life, as well as affecting efficacy and efficiency of medical services (Liu et al., 2013; Kane, 2001). The rationality of different eligibility criteria of the benefits within the social security system has been widely doubted and challenged for a long time, but to date, no previous study has explored its association with the availability and affordability of LTC for older people.

This paper focuses on the differences among groups with distinct social security benefits (those who are entitled to subsidised medical services and generous retirement pension equivalent to their in-service salary, those who are covered by social insurance providing partial reimbursement of medical services and about 40 per cent of their in-service salary; and those who are not in receipt of social security benefits), and aims to evaluate the availability and affordability of LTC for older people in China and advocates necessary policy adaptations to address key issues in LTC faced by China's ageing population.

Data and methodology

This study uses the latest Wave (2011) of data from the Chinese Longitudinal Healthy Longevity Survey (CLHLS). The CLHLS is a national population-based survey which randomly selected samples of older Chinese from almost half of all the counties and cities of 23 out of the 31 provinces in mainland China. This survey was directed by the Centre for Healthy Aging and Family Studies in Peking University in China. The dataset is ideal for this study, as it includes information on physical functions of older people and in particular, LTC for disabled older people. Whether older people report ADLs were often used to measure functional independence and disability (Chatterji S et al., 2015). Thus, in this study, disabled older people are defined as those reporting as needing any assistance(s) among one, or more than one of six items of the self-reporting ADLs (bathing, dressing, using the toilet, indoor transferring, controlling urination and defecation, and eating). Therefore, the analytical sample for this paper includes 2,512 older people who need assistance with one or more ADLs.

Availability and affordability of LTC for disabled older people are two main concepts represented by four dependent variables in this study. Availability of LTC includes ‘Availability of social care’ which describes the degree to which the help received for by disabled older people can satisfy his/her needs in daily life, and ‘Availability of health care’ which describes the main source of health care when older people are sick. The former is divided into two groups including those who are moderately / not satisfied and fully satisfied. The latter is divided into three groups: without any healthcare, care from informal sources including family members, relatives, friends, and neighbours, and paid care from public or private social service providers. In terms of affordability of LTC, affordability of LTC includes two aspects ‘Affordability of social care’ and ‘Affordability of health care’. The former is a variable derived from two variables concerning the primary caregiver of the surveyed disabled older people and informal caregivers’ willingness to provide necessary daily help. Affordable is defined as whether older people have access to formal care from social service providers as their primary caregiver (Yes), while it is counted ‘unaffordable’ if the surveyed disabled older people do not have access to formal care and their primary caregivers from informal sources are unwilling or unable to help them (No). ‘Affordability of health care’ is also a derived variable which categories the surveyed older people into two groups: those who can pay their health care expenses themselves or through their health insurance (Yes), and those who cannot pay health care expenses or have to rely on their family member(s) to pay for them (No).

The key independent variable is social security benefits derived from those have pensions and public free medical services (Generous), those who have public old-age insurance or other old-age insurance and medical insurance (Moderate), and those who have no old-age insurance and medical insurance (No) (Only those older people whose former occupation was as civil servants or employees in institutional units receive a pension which is fully covered by the Central Government budget; the replacement rate of income as their pension benefits could be as high as 100%; the pension benefits for those who have public old-age insurance is dependent on the average income in their living areas, and it is much lower than the civil servants or employees in institutional units who receive a pension (Wu, 2013). The

other independent variables include age, gender, household income in the previous year (Quartiles: 0~7000, 7001~20000, 20001~36000 and 36000+ in RMB Yuan), education, and living arrangements as control variables.

The data analysis was conducted with the SAS 9.1.3 software (SAS Institute Inc., 2004). Descriptive statistics were calculated for the dependent and independent variables. The weight for different social security groups across each dependent variable was applied. Lastly, logistic regression models were used to estimate the impact of social security benefits factors on the availability and affordability of LTC for disabled older people after controlling the other independent variables.

Results

Descriptive Results

Table 1 presents descriptive information on the dependent and independent variables of disabled older people. In terms of dependent variables, more than 57% of disabled older people rated the help they received as moderately met or did not meet his/her needs, the proportion in urban and rural areas was 54.97% and 59.59% respectively; more than 93% of disabled older people received health care from informal sources, and only 6% of disabled older people could access formal sources. In rural areas, nearly 97% of disabled older people relied on informal sources and users of long-term health care services from formal sources were less than 3%. More than 91% of disabled older people could afford social care; while less than 40% of disabled older people could afford health care, and the proportions of disabled older people living in rural areas were much lower, 89.47% and 31.61% respectively, compared to those living in urban areas. In terms of independent variables, the average age of disabled older people in this dataset was 93 years: 65% of disabled older people were female, 70% of disabled older people were without formal education and more than 86% of disabled older people were living with family members. 17.57% of disabled older people had generous social security benefits, and less than 12% of disabled older people had no old-age insurance and/or medical insurance. There were vast differences in social security benefits between urban and rural areas. 28% of urban disabled older persons received generous social security benefits; while only 5% of rural disabled older people received generous social security benefits.

Different social security benefits groups across each dependent variable

Table 2 demonstrates the availability and affordability of LTC services by different social security benefits. Key differentials of the availability of social care can be found among groups with different social security benefits. More than 57% of disabled older people receiving generous social security benefits rated that the help with social care received moderately met or did not meet his/her needs; while less than 40% of disabled older people with moderate or no social security benefits rated that the help received moderately met or did not meet his/her needs. However, in terms of availability of health care, more than 90% of disabled older people within all three groups had to rely on informal sources for health care. 5.56% of disabled older people who were ineligible to receive social security benefits did not have access to health care. Disabled older people with generous social security

benefits were the most likely group to be able to afford social care and health care (93.6% and 88.15% respectively), compared to 79.4% and 23.3% respectively of disabled older people who are not in receipt of social security benefits.

Logit regression model results

Table 3 shows multivariate regression results of the factors associated with the availability of social care with generous social security benefits, the fourth quartile of income, and living with family as the reference, respectively. Gender, age, schooling years and residential area were removed during the backward stepwise logistic regression for the statistical insignificance. After potential confounding effects from factors like income, living arrangements were controlled, availability of daily care was positively associated with social security benefits received by the respondents. Compared to the group with generous social security benefits, the group with moderate or without social security benefits was 1.54 and 1.79 times respectively more likely to be only moderately or not satisfied in terms of LTC needs in daily life. Compared to the fourth quartile of income group which represents the highest household income, the third, second and first quartile was 1.19, 1.36, 1.57 times more likely to be only moderately satisfied or not satisfied. However, the differences between the fourth and third quartile were not statistically significant. Compared to those living with their families, older people living alone and in rest homes were 1.28 and 2.08 times more likely to only be moderately or not satisfied, respectively. It is worth mentioning that a lack of statistical significance was observed between older people living alone and living with their family.

Table 4 presents the factors associated with the affordability of health care with generous social security benefits, male, and urban residency as the reference. Income, schooling years, and living arrangements were removed from the model as there was no significant effect on the differences of these predictors on one’s ability to afford health care. While adjusting for all other covariates, older people with moderate or no social security benefits were 18.45 and 3.80 times more likely to be unable to pay for health-care related LTC services compared to their counterparts who received generous social security benefits. In addition, being female, having an advanced age, and residing in rural areas were factors which were also negatively associated with affordability of health care.

It is noteworthy to mention that factors associated with the affordability of social care and availability of health care were not reported owing to statistical inability during modelling of the multivariate logistic regression.

Discussion

In general, the results indicate that informal LTC services for disabled older people heavily relied on family members across different social security groups. 96.7% of disabled older people rely on family members as their primary care-givers. Due to the transformation of family structure brought about by the one-child policy (Zhang & Goza, 2006) and rural to urban migration, the traditional informal LTC supply from family members is likely to become vulnerable and unsustainable, and the shortage crisis is likely to continue to deteriorate over the coming decades.

Moreover, this study revealed that those who are entitled to generous social security benefits are more able to afford LTC services than those who have only moderate social security benefits, and the latter enjoy better affordability than those who have no social security benefits at all. For disabled older people without any social security benefits, the affordability of LTC services is challenging, particularly for those disadvantaged groups of the population, such as those who were not officially employed during their working life, for example casual labourers in rural areas, as well as those living in urban areas who were unemployed. As discussed in the Introduction section, new policy initiatives targeting these groups are still in the pilot stage and the benefits awarded are far from sufficient either to support a minimal standard of living, or to pay for any additional LTC services.

Other factors, such as income, living arrangements, and residential areas are also significantly associated with availability and affordability of LTC services. Socioeconomically disadvantaged older people, namely as those who have less household income or are rural residents, are more likely to be denied satisfactory access to daily social care and health care as they are unaffordable. Consistent with the results about disproportionate social security benefits, this result also revealed inequities in LTC provision. Moreover, it is worth mentioning that living in rest homes is not a protective factor but a risk factor. This may be caused by more complex needs of older people and their unwillingness to live in rest homes, as Chinese traditional values has been held for long that filial piety means old parents should be cared for by their children at home (Qu & Wu, 2013) and generally rest homes focus more on the physiological rather than psychological need of older people (Tang et al., 2009).

The growth of the LTC industry is limited by the shortage and poor quality of human resources in China and the rest homes, medical institutions and social medical insurance are controlled by different independent government departments such as civil affairs, health and social security, leading to the fragmentation of resources and services and hindering integration (Huang & Meng, 2014). Furthermore, LTC services, especially various forms of care including home-based personal care, community- based day care centre services and institution-based assisted living services for older people under the responsibility of the Department of Civil Affairs were neither covered by social medical nor by endowment insurance directly; therefore, disabled older people either have to rely on themselves and /or their families for the LTC expenditure or are compelled to seek other possible solutions. Reports of unnecessary hospital admissions and inappropriately delayed hospital discharge have been very common nationwide especially in community health centres, because few quality and affordable LTC services exist for disabled older people with multiple chronic diseases (Fu et al., 2013). Thus, without appropriate policy intervention, the sustainability of the LTC system is likely to face serious challenges and it is very likely that the already limited availability and affordability of LTC services will be eroded in the near future.

Therefore, Central and local Governments could implement policies aimed at encouraging and supporting the development of LTC services in different forms and settings to enhance the supply capacity on one hand, and consolidate various providers and services by focusing on patient pathway through business process reengineering to improve efficiency and quality. Besides the public services organized and provided directly by the government

sectors of Department of Health and Department of Civil Affairs, private capital should also be encouraged to play an important role in the emerging market. Financial subsidies, public purchase and private provision via public-private partnership, school education and on-the-job training could be policy options for fostering the LTC sector.

In addition, informal LTC provision is very likely to decline continuously in the next decades as the results of the one-child policy (Phillips & Feng, 2015). Although the Central Government has released two-child policy, guaranteeing citizens' free choice of a second child without any precondition seems insufficient to stimulate the society's willingness to have more children (Zhang & Wang, 2015; Feng & Li, 2016).

Policy implications

In light of the above findings, the development and integration of formal LTC services should be promoted. Policy makers could encourage formal LTC services provided by various sources to work together to enhance the overall supply capacity. Meanwhile, different kinds of LTC services administered by distinct government sectors such as Department of Health and Department of Civil Affairs should be integrated to provide coordinated and continuous care for the older people.

In order to increase the affordability and availability of LTC services for disabled older people, policy makers could consider to develop special social insurance for LTC services or additional insurance embedded within the existing social medical insurance. Secondly, the LTC needs of the population which are not covered by social security should be adjusted through subsidies based on means test. Moreover, a universal assessment process should be developed to encourage the optimal match between the severity of disability and the category of LTC services.

The social provision of LTC services is becoming indispensable as a result of the predominance of industrialization and urbanization in the economy and the weakening role of family in the traditional Chinese society. An integrated system including financing, provision and payment should be conceived, designed and developed to achieve better efficiency and equity and provide better care for the disabled older people, especially those socioeconomically disadvantaged.

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Table 1

Descriptive univariate information on the 2011 CLHLS sample

Variable Name	All (n=2512) % (Mean±SD)	Urban (n=1313) % (Mean±SD)	Rural (n=1199) % (Mean±SD)
Dependent variables			
Availability of social care			
Moderately satisfied or not	57.16	54.97	59.59
Fully satisfied	42.84	45.03	40.41
Availability of health care			
No	0.20	0.23	0.17
Informal source [a]	93.16	89.74	96.88
Formal source [b]	6.64	10.02	2.96
Affordability of social care			
No	8.73	7.11	10.53
Yes	91.27	92.89	89.47
Affordability of health care			
No	61.11	54.45	68.39
Yes	38.89	45.55	31.61
Independent variables			
Age			
Mean±SD	93.5±9.50	93.25±9.44	93.95±9.55
Gender			
Male	34.63	37.40	31.61
Female	65.37	62.60	68.39
Income (RMB Yuan)			
<7000	25.25	18.19	32.94
7000–20000	33.46	29.42	37.86
20000–36000	16.56	19.45	13.41
>36000	24.73	32.94	15.78
Education			
0 years	70.90	64.37	78.04
1–8 years	24.66	29.27	19.61
9+ years	4.44	6.36	2.35
Living arrangements			
With family	86.93	86.64	87.25
Alone	9.31	8.63	10.07
In rest homes	3.76	4.73	2.68
Social security benefits			
Generous	17.57	28.69	5.72
Moderate	71.35	57.93	85.65
No	11.08	13.38	8.63

[a] Informal source includes family members, relatives, friends, and neighbours.

[b] Formal source includes public and private social service providers.

Table 2

Availability and affordability of LTC services by social security benefits (Weighted percentages)

	All	Generous social security benefits	Moderate social security benefits	No social security benefits	Chi-square	*P*-value
	%	%	%	%		
Availability of social care						
Moderately satisfied or not	58.28	42.63	63.16	64.91	25.372	<0.001
Fully satisfied	41.72	57.37	36.84	35.09		
Availability of health care						
No	0.64	0.94	0	5.56	36.631	<0.001
Informal source	96.71	94.34	97.87	93.06		
Formal source	2.66	4.72	2.13	1.39		
Affordability of social care						
No	18.3	6.4	22.2	20.6	23.545	<0.001
Yes	81.7	93.6	77.8	79.4		
Affordability of health care						
No	46.62	11.85	54.38	76.71	145.1	<0.001
Yes	53.38	88.15	45.62	23.29		

Table 3

Multivariate analysis of factors associated with availability of social care

Parameter	ORs	95% CI		P value
Social security benefits				
Generous (ref:)				
Moderate	1.54	1.23	1.91	<0.001
No	1.79	1.3	2.46	<0.001
Income				
Fourth Quartile (ref:)				
Third Quartile	1.19	0.91	1.55	0.198
Second Quartile	1.36	1.09	1.69	0.006
First Quartile	1.57	1.23	2.01	<0.001
Living arrangements				
With family (ref:)				
Alone	1.28	0.94	1.74	0.123
In rest homes	2.08	1.3	3.32	0.002

Table 4

Multivariate analysis of factors associated with affordability of health care

Parameter	ORs	95% CI		P value
Social security benefits				
Generous (ref:)				
Moderate	3.8	3.01	4.80	<.0001
No	18.45	11.63	29.26	<.0001
Age	1.03	1.02	1.04	<.0001
Gender				
Male (ref:)				
Female	1.75	1.45	2.12	<.0001
Residential area				
Urban (ref:)				
Rural	1.38	1.14	1.66	0.001