

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/26775880>

Long-Term Care Arrangements in Rural China: Review of Recent Developments

Article in *Journal of the American Medical Directors Association* · October 2009

DOI: 10.1016/j.jamda.2009.07.008 · Source: PubMed

CITATIONS

32

READS

286

3 authors, including:



Bei Wu

Duke University

127 PUBLICATIONS 1,093 CITATIONS

SEE PROFILE

Long-Term Care Arrangements in Rural China: Review of Recent Developments

Bei Wu, PhD, Zong-Fu Mao, PhD, and Renyao Zhong, PhD

Developing long-term care systems for the elderly has become an increasingly urgent policy issue in China, especially in rural areas. This article provides an overview of the current status of long-term care development in rural China and discussion on the future development of institutional care and its policy implications. Formal long-term care systems are emerging but remain in the preliminary stages of development. Several policy considerations and practical implications deserve further

attention: increases in regional and national government funding, integration of long-term care with the acute health care system, and creating more multilevel and multifunctional LTC facilities with a well-trained and skilled workforce. (*J Am Med Dir Assoc* 2009; 10: 472–477)

Keywords: Long-term care; rural China; aging

Based on the Fifth National Census in 2000, the number of Chinese elders is increasing dramatically; most (65.8%) reside in rural areas. The overall rural elderly population is 90 million.¹ Within this aging population, the subgroup of elders aged 80 and older, known as the “oldest old,” is the fastest growing group, approximately 19.5 million individuals in 2007.² By 2050, China’s population aged 60 years and older is expected to swell to 438 million, representing approximately 33% of the total population. By that time, roughly 103 million people will be among the oldest old and will constitute 23.5% of all elders in China.³ This increase in the number of the oldest old will create a growing demand for long-term care (LTC). The oldest old are more likely to develop functional disabilities and will need to be cared for by family members or other paid workers at some time during their advanced age. Developing LTC systems for the elderly has become an increasingly urgent policy issue in China, especially in rural areas. This article provides an overview of the current status of LTC development in rural China and a discussion on the future development of institutional care and its policy implications.

Coupled with a growing oldest old population, increases in social mobility among young and middle-aged adults have resulted in difficulties meeting the needs of dependent older people through traditional filial responsibilities. Currently, care for elders is still almost solely the responsibility of family members, relatives, or other informal (unpaid) caregivers. However, the family support system for elders is becoming

a challenging issue, especially as an increasing number of young people are moving from rural to urban areas and leaving their elderly parents behind. This migration pattern disrupts the lifelong care networks that elders have traditionally relied on for assistance.^{4,5} In addition, because of decreased family sizes in recent decades, the availability of family members to provide care and support to elderly parents will most likely continue to decrease.^{4,6,7}

Another factor of concern is the increased gender imbalance within Chinese society. In a normal population, there are roughly 105 boys born for every 100 girls each year. In 2005, the ratio was 119 boys to 100 girls in China. This imbalance was even more severe in rural areas, with 130 boys to 100 girls in some regions. In addition, the population projections have shown no signs of narrowing the gap in the future.⁸ Similar to the familial caregiving patterns in other countries, daughters and daughters-in-law are the primary caregivers for frail elders—indicating that China’s large gender imbalance will exacerbate the challenge of providing LTC for the elderly population, especially in rural areas.

The country’s bifurcated health care and pension system also has a significant impact on LTC arrangements among rural elders. Until recently, only 9.5% of the rural population was insured compared with 42% for the urban population.⁹ The unequal health care insurance coverage, resulting in more limited access to health care for rural residents, contributes to the widening gap in health status between urban and rural elders in China.¹⁰ In addition, most urban residents have employer-sponsored pensions whereas few rural elders have pension coverage. According to a national survey, 88% of the rural elders aged 80 and older reported that family was their primary source of financial support.¹¹

Given the combination of these factors, informal family-based traditions of caring for the elderly—particularly the oldest old population—face great challenges. As a result, health care professionals and policymakers are in the process of expanding alternatives for elders’ LTC needs such as the development of institutional care programs for elders.

Gerontology Program, University of North Carolina at Greensboro, Greensboro, NC (B.W.); Department of Social Medicine, School of Public Health, Wuhan University, Wuhan, China (Z.-F.M.); School of Public Administration, East China Normal University, Shanghai, China (R.Z.)

Address correspondence to Bei Wu, PhD, Gerontology Program, University of North Carolina at Greensboro, PO Box 26170, Greensboro, NC 27402. E-mail: b_wu@uncg.edu

Copyright ©2009 American Medical Directors Association

DOI:10.1016/j.jamda.2009.07.008

Institutional care is a vital supplement to the constellation of LTC services, as it often provides a last resort for individuals who may be the most functionally disabled but who do not have appropriate care available in the community. This article aims to provide an overview of the current status of institutional care for elders in rural China and focuses primarily on service delivery, financing, and workforce issues that are global concerns in the development of LTC systems. The article also provides discussion on the future development of institutional care and its policy implications.

METHODS

We used an iterative approach to identify eligible publications for this review. We searched articles and research and policy reports published in English or Chinese between 1979 and May 2009. Two strategies were used to identify potentially relevant literature. First, we conducted a database search using 3 English literature databases: PubMed (which includes MEDLINE and other life science journals for biomedical articles), PsycInfo, and Google Scholar. For Chinese literature, we also searched the Chinese Academic Journals Full-text and *Baidu* databases. Given that various terms have been used to describe long-term care arrangements in China, we used many keywords for searches focused on long-term care and/or rural Chinese elders (ie, long-term care, elder care, elder home, institutional care, rural welfare institutes, nursing home, residential care facilities). Specific to the Chinese culture, our keyword search included the terms “*wubao* system” and “*wubao* elders.” *Wubao* elders are those eligible for a government-funded welfare system called the “Five Guarantee System” (in Chinese, *wubao* means “5 guarantees”). This support system guarantees that eligible elders (ie, *wubao* elders) receive the 5 basics of life: food, clothing, housing, medical care, and burial after death. Eligibility for entry into this system requires (1) no ability to work, (2) no income source, and (3) no children or other people with a legal responsibility for support and care (called “Three No”).

RESULTS

Limited studies have been conducted in the areas of LTC in China. Among the limited research, most studies have been concentrated on changing family structures and relationships,^{12,13} attitudes toward institutional care,^{4,14} community-based LTC,^{15,16} and institutional care in urban China.^{17,18} Most of the Chinese studies have focused on the need for LTC^{19,20} and the public challenges and policy recommendations for developing LTC.^{21,22} Few studies have examined the status and current development of LTC in rural China.^{23–25} Traditionally, there has been a notion that only *wubao* elders should be accepted into institutional care facilities and non-*wubao* elders should be taken care of by their family members.^{4,14} This view has been changing in some parts of rural China in recent years. In more developed rural areas, the view has become more accepted that frail elders should be admitted to an institutional care facility if family members are no longer able to provide adequate care.²⁶ The growing acceptance of institutional care, along

with the economic development of many rural areas, are the major driving forces of the recent emergence of LTC in rural China.

Long-Term Care Service Delivery Systems

Currently, China has 2 systems that provide institutional care for elders: the social welfare system and the medical care system. These 2 systems are run by separate agencies that have separate funding mechanisms and policies and draw their workforces from separate sources. Welfare institutes and homes for the aged are run by departments of civil affairs at national and regional levels. Over time, these organizations have played the most important role in providing LTC for rural elders but they have also undergone rapid changes in recent years. In addition, some private, nonprofit LTC facilities have been established to supplement public facilities. However, the services that all of these facilities currently provide are still very limited; most of the institutions only provide services to meet elderly residents’ basic daily needs (eg, providing shelters and meals). No programs and services, such as organized activities and rehabilitation services, are available in these facilities.

In the medical sector, geriatric hospitals and rehabilitation wards have recently emerged in urban hospitals and constitute the LTC service system; however, very few have appeared in rural areas. Most of these hospitals are managed by the local departments of health. Many medical expenses are covered by medical insurance, which most rural residents do not have. The main workforce is composed of health care workers (ie, physicians and nurses) and direct care workers without formal skilled training. Although health care workers receive general medical training, a great majority of these personnel receive very little specialized training in geriatric care.

In rural areas of China, LTC services have traditionally been carried out by welfare institutes that only accept *wubao* elders. Overall, close to 3 million *wubao* (or “Three No”) elders live in rural China, representing approximately 3.4% of the population aged 60 and older.²⁷ In recent years, the government has lifted the regulation of only accepting *wubao* elders for welfare institutes. In some areas near larger cities, an increasing number of welfare institutes have started to accept non-*wubao* elders. However, *wubao* elders remain the majority of the residents in welfare institutes. At the end of 2005, approximately 29,681 rural welfare institutes had a total of 895,000 beds. Among the institutionalized residents, about 87% were *wubao* elders.^{27,28}

The Chinese Ministry of Civil Affairs initiated the *Xing Guang* Project in 2001. One of the purposes of the project was to ask that departments of civil affairs at the central and local government levels fund building township residential care facilities for elders in rural areas in the next 5 years. The Ministry allocated 20% of social welfare lottery funds for this project. In 2006, the Ministry initiated another 5-year project called *Xia Guang* Project. This project again asked departments of civil affairs to allocate some proportion of the welfare lottery funds for building infrastructure for *wubao* elders in rural areas.²⁹ At the end of 2008, the number of beds in welfare institutes for elders reached 1.93 million, a 7.3%

increase over the previous year; while the number of institutionalized elders increased to 1.61 million, a 7.6% increase from 2007.³⁰ In the past decade, central and local governments have demanded more beds every year, under the assumption that more individuals will need to be institutionalized as the elderly population grows.

In addition, there has been a recent push to encourage *wubao* elders to enter institutions over the traditional reliance on support from neighbors. Revenues collected within villages to support community-dwelling *wubao* elders had been distributed by the local civic affairs bureau; however, economic reforms have led to more diversified revenue distributions to local and provincial governments. Local support for *wubao* elders has destabilized as village economies fluctuate and neighborhood support systems decline as a result of increased migration from rural villages to urban areas. Now, provincial governments have established a greater presence for LTC care for *wubao* elders through increased funding of and commitment to building new institutions.

Nationally, 1% of rural Chinese elders reside in an institution and *wubao* elders represent nearly 6 of every 10 residents. However, the proportion of institutional beds for the overall elderly population varies widely by region. For example, the proportion of beds in rural Shanghai areas in 2004 was 2.7% to 118.0% greater than the national average (1.24%). At the local level, the number of beds in each institution also varies a great deal. The Ministry of Civil Affairs requires each township to have 1 welfare institute and *wubao* elders from the township and nearby areas are offered beds before non-*wubao* elders. Typically, the number of beds in each welfare institute ranges from 30 to 100. Institutions that house only *wubao* elders are often smaller. In suburban areas of big cities or in east coast areas where the local economy is more developed, an increasing number of township welfare institutes have started to accept non-*wubao* elders when space is available.

Admission and Exclusion Criteria for Institutionalization

Admission into a welfare institute is relatively simple for *wubao* elders. For most of the current welfare institutes in rural areas, village committees identify *wubao* elders and staff members from local civil affairs bureaus confirm their “Three No” status and eligibility for admission, including an inability to pay for their care. Although one additional criterion for *wubao* elders is officially an inability to work, most of them actually continue to work in the field or complete household chores within the institution.

Admission criteria are more complex for non-*wubao* elders. The 3 most common exclusion criteria are (1) infectious disease(s), (2) mental illness (including dementia), and (3) functional dependency (ie, semi-bedridden or bedridden). Before admission to the institute, each individual must complete a health status form and sign a contract. The contract stipulates that these elders will be discharged from the institute if they develop any of these 3 conditions. As a result, many non-*wubao* elders have to rely on alternate sources—namely family or hospitals, which few rural farmers can do

because of associated costs. Reasons given for excluding non-*wubao* elders in particular include the lack of skilled personnel to meet their health care needs, safety concerns, and space constraints. Non-*wubao* elders are much more likely to be excluded from welfare institutes, whereas *wubao* elders are rarely excluded.

Financing of Long-Term Care

As of 2004, 36,890 elder care facilities in rural areas (96%) were sponsored by provincial or local township governments. Most of the facilities are welfare institutes. The local civil affairs bureaus and township committees provide buildings, office space, land, and key administrative staff. The government agencies allocate funds to institutes that admit *wubao* elders. In 2004, funding provided by local governments to welfare institutes across various regions ranged from 800 to 2500 *yuan* annually per *wubao* resident. This amount supplements staff salaries and covers elderly residents’ food, housing, clothing, medical expenses, and burial costs, if necessary. Recently, funding has increased significantly in part because of higher cost-of-living expenses; however, it is very likely that these institutes are still underfunded. Many welfare institutes raise pigs and tend vegetable gardens to supplement the government funds. Institutes that have not received land from the local township because they are located nearer to urban areas depend instead on admission fees from non-*wubao* elders who typically pay higher fees than *wubao* elders.

Each welfare institute is also responsible for *wubao* elders’ medical care, although the care they receive can be minimal. Medical care for institutionalized elders often follows a generalized pattern. As the need for care increases, residents will move from a small in-house “clinic” to a village clinic and then to a township hospital. Some welfare institutes arrange for village doctors to provide services for ill residents at the institute. In many cases, doctors visit once a month to see patients at the institute. An elder with a severe acute illness will be sent to a township hospital. Institutionalized elders who receive hospital care are generally covered by the New Collective Medical Insurance. However, this insurance covers only 40% of hospitalization expenses and the remaining 60% is split between the institute and the patient. In more economically developed areas, local governments may provide more coverage for *wubao* elders. Nonetheless, *wubao* elders’ chronic conditions are very likely to be neglected by welfare institute staff members because of the limited financial resources allocated for medical expenses. If any residents need to go to outside clinics or hospitals, institute staff will contact their families for approval because family members are often responsible for paying medical expenses, including prescription medications.

In the past decade, more private-run elder care facilities have been established, particularly in more developed rural areas. Private-run institutions are not required to accept *wubao* elders or to subsidize their admission fees. Instead, they rely almost exclusively on admission fees from residents, and in most cases, family members (ie, adult children) are responsible for this expense. Some elders in more economically developed rural areas are able to pay their own expenses. In

general, government-sponsored institutes have better infrastructures despite the higher fees charged by the private-run facilities. Some private elder-care institutes rent buildings or renovate older structures and the local governments encourage the development of private-run facilities by providing a one-time subsidy for each facility.

Regulations and Standards

Four different care levels have been established in elder care institutes. The third level of care is designated for those who live independently and do not need help from others. The second level is designed for those who are either aged 80 or older, or rely on a cane or wheel chair and need help from others. The first level is for those who are aged 90 or older, need other people's help to perform daily activities, or have mild cognitive impairment. Finally, a special care level is designated for individuals who are completely dependent on care from other people, or have moderate to significant cognitive impairment.³¹ Admission fees vary depending on the level of care needed by the individual. Although these criteria have been widely introduced in developed areas, such as rural areas of Shanghai, many institutes admit only individuals within the second and third levels of care because of space constraints or the inability to offer specialized care. Less developed areas have not implemented many of these regulations and standards. In most cases, care for *wubao* elders largely relies on *wubao* elders themselves and the staff takes responsibility for *wubao* elders who are severely disabled.

Regulations and standards for the workforce in institutional care settings are vague and loosely defined in China. In 2001, the Ministry of Civil Affairs published "Basic Regulations for Social Service Organizations for Elders"—one of the first sets of national written regulations in the field.³² Only 3 requirements were particularly related to the workforce. First, if it is possible in rural areas, administrators at residential facilities should have a college degree and have some basic knowledge and professional skills. Second, if it is possible, residential facilities need to have one individual with a college degree in social work and a professional therapist. Third, administrators and workers should have professional certification or professional training. Requirements for the quality of workforce training have not been formally operationalized and none of the requirements are explicitly related to the supervision of care delivery or the ratio of staff to residents. As a result, the ratio between the number of staff and elderly residents varies a great deal across residences, from 1:4 to 1:14. The staff size often depends on the financial status of the institute and the number of functionally dependent residents. In general, the residential care facilities in less economically developed areas are smaller than those in more developed areas and have fewer residents.

Recruitment and Retention of Workforce

Most frontline workers are recruited from the local population, particularly in inland areas. Thus, the workers and residents are most likely from the same village or community. Many workers can easily interact with residents and chat casually. In contrast, in more developed rural areas along the

eastern coast, many young workers are migrants from other rural areas. Residents and migrant workers most likely speak different dialects, have different cultural backgrounds, and cannot make personal connections easily.

The salary and benefits for staff and frontline workers varies widely across regions. Based on 2005 statistics, the frontline workers' monthly salaries typically ranged from 250 to 300 yuan with room and board provided in less developed rural areas. (The salary would be equivalent to US\$32 to US\$38 in 2005.) For administrators and other staff in these facilities, salaries ranged from 300 yuan to 500 yuan (equivalent to US\$38 to US\$64). Except for some administrators, workers in residential care facilities do not receive benefits (eg, pensions or medical insurance). In more developed rural areas, the monthly salary for frontline workers ranged from 300 to 700 yuan based on the care tasks they perform (US\$38 to US\$90). Salaries for administrators and workers also varied a great deal—ranging from 700 yuan to 2000 yuan (US\$90 to US\$256) based on their professional degree, position, years of services, and the financial status of the institute.

Seniority and experience are highly valued in the field. Many of the current administrators started their careers as direct care workers and worked in the same field for a number of years. To a large extent, workers in rural institutes are quite stable as a workforce, as their average incomes and social status are more than likely to be equivalent to the average incomes and social status of local farmers. By comparison, work in welfare institutes may be less intense and physically demanding than farm work. However, in some of the more developed areas, recruitment and retention is becoming increasingly challenging. Although the potential labor force is still available, their frontline workforce is generally composed of older workers. In developed rural areas, young people have more job opportunities. Many young people migrate, work in the city, or work in fast-growing local companies—many of which do not accept workers older than 40. Further, young people consider this type of work to be labor intensive and low paying compared with work in other industries. Therefore, elder care facilities in more developed rural areas on the eastern coast are having difficulty recruiting young people and are restricted largely to hiring and retaining workers who are older than 40. The same is true for medical institutions trying to recruit a skilled nursing staff.

Training

The Chinese Ministry of Civil Affairs (2007) requires that an administrator from each institute have at least a college-level degree and frontline workers have some basic training; however, many institutes cannot meet this requirement.³³ The great majority of the frontline workers from rural areas are semiliterate, have no more than primary education, and lack training before they start working in these residential care facilities.¹⁷ The training courses and materials that are provided vary a great deal across regions and may involve basic skills, safety, and ethics. In some of the more developed rural areas, civil affairs bureaus and labor and social security bureaus now offer professional training courses for staff in residential care facilities and require most frontline workers to

have basic certification. However, many migrant workers have previous work experience and usually do not wish to pay fees for either the training courses or the certifications. In the less developed rural areas, training courses focus primarily on safety regulations but few frontline workers receive any training from the county-level civil affairs bureaus responsible for the courses. Administrators are increasingly concerned that residents may be injured as a result of neglect or abuse by untrained workers.

DISCUSSION

Long-term care systems are emerging in rural China, particularly in wealthy areas near the eastern coast, but many of these systems are still in the preliminary stages of development. Additionally, the unequal development of China's economy continues to have a profound impact on the growth and development of various LTC systems across regions, in terms of facilities and infrastructure, residents' characteristics such as level of care needed, sufficient and appropriate staffing, uniform regulations, and professional training. The current development of LTC systems in more economically developed areas could serve as models for future development in less developed areas. The amount spent on social welfare services for older people across China has increased considerably over the past decade, but this has mainly taken the form of investment in infrastructure: building new residential LTC facilities and renovating old buildings to increase the number of beds available for an aging population. Several policy considerations and practical implications for the future development of institutional care for elders in China deserve further attention.

Public Funding for LTC

To date, the Chinese government has been a major source of support for institutional care for *wubao* elders. Although private facilities have emerged to care for non-*wubao* elders whose families can afford to pay fees, many poor and functionally disabled non-*wubao* elders also have LTC needs that require institutional assistance. As a result, there is a need to increase government funding to support institutional care for all elders who need LTC services. In the future, it is most likely that the government will continue to play a leading role in designing, developing, and establishing strategies and policies for institutional care. Subsequently, assessments of elders' health care needs (eg, standard health exams) should be the primary criteria for allocating public funds and ensuring the provision of appropriate services to meet the needs of frail elders. A call to reform the government funding mechanism is in place so that public funds would go directly to each eligible individual, which would allow both public and private facilities to provide care for *wubao* elders. All institutional costs would be subsidized indirectly as a result and a more equitable market competition would be created for organizations providing LTC services.

Workforce Training

Lack of skilled personnel is one of the main reasons that the overwhelming majority of facilities deny admission to frail

and demented elders. Government officials, experts, and facility administrators recognize the importance of introducing training programs covering a broader range of skills and adapted for various levels of the frontline workforce. To meet the increasing demand for institutional LTC in rural areas, regulations and training programs must be in place to improve workers' skills in nursing, geriatric care, and managing chronic disabilities or dementia. The civil affairs bureau requires workers to be trained in the field and has begun recently to conduct training programs in rural areas.

As China gradually develops its LTC system, it is essential for frontline workers to receive adequate, content-based training to ensure the quality of care for elders. However, training should be linked to the resident profile. The care needs of residents will affect the staff training objectives. To the extent that residents are more disabled and/or have more illnesses, the staff will require greater training. The requirements for workforce skills could also vary. Currently, in developed areas, more focus may need to be on training nurses and nursing aides. In the meantime, language skills are needed by many migrant workers so they may communicate better with residents. Another particularly challenging issue involves communicating with residents who may have hearing, speech, and cognitive impairments. Training can also prepare workers to show respect to residents, form better relationships with them, and be more positive in their daily interactions.

Integration of LTC with the Acute Health Care System

The Ministry of Civil Affairs has played a major role in providing residential care for elders. In addition, the Ministry of Health has some responsibilities for caring for long-term disabled elders in a hospital setting. These 2 programs are disjointed. Some discussion has taken place at both the national and local levels on how to consolidate funding to provide more integrated services to frail elders. Some researchers have suggested creating more multilevel and multifunctional LTC facilities to provide care (both medical and social services) for individuals with various levels of disability. There are a number of program components that can be integrated: finance, administrative responsibility, and organization of care, which includes gate keeping, assessment, and direct care provision. Also, although there are no special care units available for individuals with chronic conditions such as dementia, there is an increasing need to develop specialized LTC facilities to serve the elderly population and their families. In conclusion, although a formal LTC system is now emerging in China, special efforts should be devoted to developing community-oriented LTC facilities in rural areas by recruiting workers from local villages while improving the quality of the workforce in these facilities. Additional efforts should also be made to recruit part-time workers locally while they can work in both LTC facilities and as farmers.

CONCLUSIONS

With a growing population of elders, declining family sizes combined with a greater migration of young adults to cities and an increase of individuals' living standards, there is

a pressing need for LTC in China. In the meantime, rural elders and their families are more accepting of institutional care for elders than in the past, especially in more economically developed areas. In response to these needs, formal LTC systems are emerging but remain in the preliminary stages of development. Several policy considerations and practical implications for the future development of institutional care for elders in China deserve further attention: increases in regional and national government funding, integration of LTC with the acute health care system, and creating more multilevel and multifunctional LTC facilities with a well-trained and skilled workforce.

For this article, the authors used rural China as a case study to stimulate more discussion and draw attention to emerging LTC systems and related issues for an aging population in China. Other developing countries facing similar issues can benefit from the discussions prompted by emerging Chinese solutions to the many challenges of providing LTC for elder citizens. It should be noted that LTC systems in China are in transition; many of the issues addressed in this study may change in the near future. Additionally, although the issues discussed here reflect the situation in many rural areas, they should not be considered as representative of all areas in China.

ACKNOWLEDGMENTS

We thank Corely Remle, PhD, for his editorial assistance and Mrs. Zhang Xuan for her assistance in literature search.

REFERENCES

- China Daily. Poor Rural Elderly Deserve Attention. December 3, 2006. Available at: <http://www.globalaging.org/ruralaging/world/2006/chinese.htm>. Accessed December 4, 2007.
- National Bureau of Statistics of China. China Statistical Yearbook. 2008. Available at: <http://www.stats.gov.cn/tjsj/ndsj/2008/indexeh.htm>. Accessed June 20, 2009.
- Nations United. World Population Prospects: The 2006 Revision. New York: UN Population Division; 2007.
- Zhan HY, Liu GY, Guan XP, Bai HG. Recent developments in instructional elder care in China: Changing concepts and attitudes. *J Aging Soc Policy* 2006;18(2):85–108.
- China Development Research Foundation. China Human Development Report 2005. Available at: http://www.undp.org.cn/downloads/nhdr2005/NHDR2005_complete.pdf. Accessed December 4, 2007.
- Bartlett H, Phillips DR. Ageing and aged care in the People's Republic of China: National and local issues and perspectives. *Health Place* 1997;3(3):149–159.
- Qiao XC. From decline of fertility to transition of age structure: Aging and its policy implications in China. *Genus* 2001;57(1).
- National Population and Family Planning Commission of PR of China. Research Report on the National Demographic Development Strategy [in Chinese]. 2007. Available at: http://www.chinapop.gov.cn/fzgh/zlyj/200806/t20080626_154129.htm. Accessed January 11, 2007.
- Liu YL, Rao KQ, Hsiao WC. Medical expenditure and rural impoverishment in China. *J Health Popul Nutr* 2003;21(3):216–222.
- Zimmer Z, Kwong J. Socioeconomic status and health among older adults in rural and urban China. *J Aging Health* 2004;16(1):44–70.
- National Bureau of Statistics of China. 2005 National 1% Sampling Survey. 2006. Available at: <http://www.stats.gov.cn/tjsj/ndsj/renkou/2005/renkou.htm>. Accessed March 16, 2006.
- Ikels C. Economic reform and intergenerational relationships in China. *Oxford Development Studies* 2006;34(4):387–400.
- Sandar A. Gerontological research in China: The role of anthropological inquiry. *J Cross Cult Gerontol* 1989;4:199–224.
- Arnsberger P, Fox P, Zhang XA, Gui SX. Population aging and the need for long term care: A comparison of the United States and the People's Republic of China. *J Cross Cult Gerontol* 2000;15:207–227.
- Joseph AE, Phillips DR. Ageing in rural China: Impacts of interesting diversity in family and community resources. *J Cross Cult Gerontol* 1999;14:153–168.
- Wu B, Carter MW, Goins TR, Cheng CR. Emerging services for community-based long-term care (CBLTC) in urban China: A systematic analysis of Shanghai's community-based agencies. *J Aging Soc Policy* 2005;17(4):37–60.
- Chu LW, Chi I. Nursing home in China. *J Am Med Dir Assoc* 2008;9(4):237–243.
- Zhan HY, Liu GY, Bai HG. Recent developments in Chinese elder homes: A reconciliation of traditional culture. *Ageing Int* 2005;30(2):167–187.
- Fang XL. Need for community nursing care for rural elders in Chang Nan County. *Chinese Primary Health Care* 2009;23(2):24–25.
- Sun CF, Xia XC, Zhang YX, Li WX, Yang ZY, He GP. Needs for community nursing care among elders in Hunan Province. *Nurs J China PLA* 2007;24(12B):23–28.
- Du S. Challenges of developments of nursing home in rural China. *Journal of Shan Xi Finance and Economics University* 2008;30(1):267.
- He YM, Sun QM, Qie ZW. Development of geriatric nursing hospitals in rural areas. *Geriatr Health Care* 2001;74(4):247–248.
- Liu S. Workflow of the nursing homes in rural China: A case study of nursing homes in Ri Zhao City, Shandong Province. *Dong Yue Tribune* 2005;26(4):79–82.
- Wu B, Mao ZF, Xu Q. Institutional care for elders in rural China. *J Aging Soc Policy* 2008;20:218–239.
- Wu B, Caro FG. Workforce in residential care facilities in rural China. *Journal of Housing for the Elderly*. In press.
- Wu B, Mao ZF. Health seeking behaviors among rural and urban elders in China. *Gerontologist* 2005;45(Special Issue II):347.
- Li K. Social Welfare and Public Assistance. China's Civil Administration Development Report 2002–2003(Part 1). 2004. Available at: <http://unpan1.un.org/intradoc/groups/public/documents/APCITY/UNPAN019701.pdf>. Accessed March 22, 2006.
- Government of the People's Republic of China. The Development of China's Aging Field (White Paper) [in Chinese]. December 12, 2006. Available at: http://www.gov.cn/jrzq/2006-12/12/content_467201.htm. Accessed August 13, 2009.
- Chinese Ministry of Civil Affairs. Xia Guang Plan for Building Infrastructures for Wubao Elders in Rural China [in Chinese]. 2007. Available at: <http://dbs.mca.gov.cn/article/ncwb/zcfg/200711/20071100003495.shtml>. Accessed June 20, 2009.
- Chinese Ministry of Civil Affairs. Statistic Report for the Development of Civil Affairs in 2008 [in Chinese]. 2009. Available at: <http://cws.mca.gov.cn/article/tzgg/200905/20090500031426.shtml>. Accessed June 20, 2009.
- Shanghai Civil Affairs Bureau. Regulations for Social Welfare Institutes for Elders. Shanghai, China: Shanghai Civil Affairs Bureau. 2004.
- Chinese Ministry of Civil Affairs. Basic Regulations for Social Service Organizations for Elders [in Chinese]. 2001. Available at: <http://www.shmzj.gov.cn/gb/shmzj/node8/node15/node55/node230/node278/userobject1ai7933.html>. Accessed July 16, 2009.
- Chinese Ministry of Civil Affairs. Regulations for Social Welfare Institutes for Elders. Professional Standards for the People's Republic of China [in Chinese]. 2007. Available at: <http://fss.mca.gov.cn/article/ywbz/200712/20071200005097.shtml>. Accessed June 24, 2009.