

# **Mental health system in China: history, recent service reform and future challenges**

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*This paper summarizes the history of the development of Chinese mental health system; the current situation in the mental health field that China has to face in its effort to reform the system, including mental health burden, workforce and resources, as well as structural issues; the process of national mental health service reform, including how it was included into the national public health program, how it began as a training program and then became a treatment and intervention program, its unique training and capacity building model, and its outcomes and impacts; the barriers and challenges of the reform process; future suggestions for policy; and Chinese experiences as response to the international advocacy for the development of mental health.*

**Key words:** Mental health system, China, history, service, reform, challenge.

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The first officially documented management of the mentally ill in China was in the Tang Dynasty (618-907 AD), when homeless widows, orphans and the mentally ill were cared for in the Bei Tian Fang, a type of charity facility administrated by monks (1). The first Western style psychiatric hospital for the homeless mentally ill was established and funded in 1898 by an American missionary, John Kerr, in what is currently the Guangzhou Brain Hospital. In the next 50 years, psychiatric hospitals were built very slowly in a limited number of large cities. The number of psychiatrists gradually increased to 100, and the number of beds gradually amounted to 1,000.

After the founding of the People's Republic of China in 1949, psychiatric hospitals were gradually built in every province. The role of these early provincial hospitals was to maintain social security and stability. Following the first National Mental Health Meeting in 1958, community mental health work started in Beijing, Shanghai, Hunan, Sichuan and Jiangsu. Facilities were established in these areas to train professionals and to develop work plans for the prevention and treatment of psychoses, including early detection and treatment and relapse prevention (2).

Though community mental health programs almost ceased during the Cultural Revolution (1966-1976), work-rehabilitation centers for patients with psychoses and caring networks were organized by neighborhood committees (the lowest level of governmental facilities) in Shanghai (3), and a treatment model for 256 patients with schizophrenia and their families was developed in a suburb of Beijing (4).

In the 1980s, the health, civil affairs and public security

sectors set up a three-tier network (at city, district/county and street/town levels) for the prevention and treatment of psychoses. Successful experiences with treatment models, such as work-rehabilitation centers in urban communities in Shanghai and Shenyang, and family-based therapy in rural areas in Haidian District in Beijing and Yantai Shangdong, were extended to other places (2).

With the economic reform, hospitals were encouraged, as part of the market economy, to make a profit. Financially dependent mental health rehabilitation facilities closed or were transformed into small-scale psychiatric hospitals. In Shanghai, before 1990, there was at least one community-level rehabilitation facility in each district or town. By June 2004, the numbers of these facilities had decreased by 62% (5).

By the late 1990s, some psychiatrists started to doubt the rationale for large hospital-based and profit-making models for mental health service delivery, and the Ministry of Health began to reconsider principles and approaches for mental health care. Through advocacy by the Ministry, senior ranked officials facilitated the establishment of a mental health plan.

In November 1999, a high-level mental health seminar was convened by ten Chinese Ministries and the World Health Organization (WHO) in Beijing. The meeting resulted in a declaration that all levels of government would improve their leadership for and support of mental health care, strengthen inter-sectoral collaboration and cooperation, establish a mental health strategy and action plan, facilitate the enactment of a national mental health law, and protect patients' rights (6).



The first National Mental Health Plan (2002-2010) was signed by the Ministries of Health, Public Security and Civil Affairs, and China Disabled Persons' Federation (CDPF) in April 2002. It identified a series of detailed targets and indices to achieve the main goals of: a) establishing an effective system of mental health care led by the government with the participation and cooperation of other sectors; b) accelerating the process of mental health legislation development and implementation; c) improving the knowledge and raising the awareness of mental health among all citizens; d) strengthening mental health services to decrease burden and disability; and e) developing human resources for mental health services and enhancing the capacity of current psychiatric hospitals (7).

In August 2004, the Proposal on Further Strengthening Mental Health Work was approved by the Ministries of Health, Education, Public Security, Civil Affairs, Justice and Finance, and the CDPF. This proposal provides explicit instructions on interventions for psychological and behavioral problems for key population subgroups (including children and adolescents, women, the elderly and victims of disasters), treatment and rehabilitation of mental disorders, research on mental health and surveillance of mental disorders, and the protection of the rights of the mentally ill. The Proposal serves as the *de facto* Chinese national mental health policy.

The mental health service model proposed in the above two documents is led by psychiatric hospitals, supported by departments of psychiatry in general hospitals, community-based health facilities and rehabilitation centres.

## THE MENTAL HEALTH SCENARIO IN CHINA

### Mental health burden

In a large epidemiological study carried out in four provinces (Shandong, Zhejiang, Qinghai and Gansu) from 2001 to 2005, the adjusted 1-month prevalence of any mental disorder in people aged 18 years or older was 17.5% (95% CI 16.6-18.5), and that of psychotic disorders was 1.0% (95% CI 0.8-1.1) (8).

In health economic terms, the estimated total disability adjusted life years (DALYs) of ten psychiatric conditions, including unipolar depressive disorder, bipolar disorder, schizophrenia, alcohol use disorders, Alzheimer's and other dementias, drug use disorders, post-traumatic stress disorder, obsessive-compulsive disorder, panic disorder, and insomnia (primary), was 253,851,896 years in China in 2004 (9). This translates into a loss of gross domestic product (GDP) amounting to a country-wide total of CNY 2,681 billion, with schizophrenia and bipolar disorder accounting for CNY 532 billion.

The huge burden of mental disorders highlights the pressing need for improved mental health services. However, similar to most countries, the rate of treatment

gap of those with mental disorders is unacceptably high in China, with 91.8% of all individuals with any diagnosis of mental disorders never seeking help. For psychotic disorders, 27.6% never sought help and 12.0% saw non-mental health professionals only (8).

### Mental health workforce and resources

The vast majority of mental health professionals in China are psychiatrists or psychiatric nurses, with few clinical psychologists and social workers, and no occupational therapists. Psychiatrists and licensed psychiatric nurses are accredited by the Ministry of Health, psychological counselors by the Ministry of Human Resources and Social Security, and psychotherapists by both Ministries.

In 2004, there were 16,103 licensed psychiatrists and psychiatric registrars (1.24/100,000 population) and 24,793 licensed psychiatric nurses (1.91/100,000 population) (9). Relative to the global average mental health workforce (i.e., 4.15 psychiatrists and 12.97 psychiatric nurses per 100,000 population respectively) (10), mental health human resources in China are quite limited. The shortage of skilled mental health professionals represents one of the most critical issues facing the Chinese mental health system currently.

In 2004, there were 557 psychiatric hospitals. Among them, 359 (64.5%) had 100 or more beds, and 44 (7.9%) had 500 or more beds. The total number of psychiatric beds was 129,314, i.e. 1.00/10,000 population (11), which is significantly lower than the global average of 4.36/10,000 psychiatric beds (10).

### Structural issues

China does not organize its services in catchment areas. Specialist mental health services remain the predominant component of the system. China's community-based mental health system was largely eliminated with the introduction of the market economy. Therefore, mental health service provision has become primarily hospital-based. Patients can access tertiary psychiatric hospitals directly, bypassing the primary and secondary health care levels. This partly reflects the disproportionate concentration of health resources in large cities.

The funding model for the mental health system is complex, with hospital inpatient services provided by three ministries, Health, Civil Affairs and Public Security, while other facilities are administered under other ministries. According to the WHO, only 2.35% of the total health budget is spent on mental health and less than 15% of the population has health insurance that includes coverage of psychiatric disorders (10).

China is undergoing a rapid change, with an economic growth rate of 7.5-13.0% per annum in the last ten years



(12). However, the growth in wealth has not been equitably distributed, resulting in an increasing gap between the rich and the poor. It is evident that those with the greatest socio-economic disadvantage are often those with the highest mental health care needs (13).

## **NATIONAL MENTAL HEALTH SERVICE REFORM**

### **Policy change and inclusion of mental health in the national public health program**

In October 2003, supported by the Ministry of Health, an application process was initiated for specialized public health projects that would have investment from the Ministry of Finance. All relevant public health sectors were active in developing appropriate models with critical indicators and drafting proposals for funding.

Although several approaches and different models were considered, the mental health sector was yet to identify a suitable and practical model for China. A delegation led by Guihua Xu (Vice Director of China Centre for Disease Control) and three psychiatrists, Xin Yu, Hong Ma and Jin Liu from Peking University Institute of Mental Health, visited Melbourne, in order to build knowledge and understanding of the Victorian community mental health service system. The delegates and their Australian hosts also began to analyze the concept of community in China, and to investigate possible ways to integrate mental health care into secondary and tertiary facilities in the country. Complemented by other international exchanges with the USA, Norway, Thailand, Japan, UK and Germany, and guided by international benchmarks on mental health services by WHO and previous experiences in community mental health in China, a mental health sector model for reform emerged. The model has at its core a patient-centered approach that is community-based, seamless, function-oriented and multi-disciplinary.

Due to China's vast, multi-ethnic and diverse population, social harmony and stability is a well recognized concern for the Chinese government. The focus on psychoses, especially those associated with violent or socially disruptive behaviours, was considered as a critical step to engage government in mental health issues. Although community-based mental health services were the long-term goal, current lack of resources and capacity in community mental health and primary mental health, combined with the difficulty in attracting mental health professionals to work in the community, meant that a different, less ambitious and more targeted model needed to be followed initially. An integrated hospital and community treatment model for psychoses was suggested, and a pilot project that included monitoring, intervention, prevention and rehabilitation management of psychoses was proposed.

In September 2004, after competing with over fifty proposals and supported by a group of leading

sociologists, economists and psychiatrists in China, the program for mental health service reform was the only non-communicable disease program included in China's national public health program. This event became a major historical milestone for China: mental health became officially included into public health.

The mental health reform program formally received support from Ministry of Finance in December 2004, and was named the 686 Program after its initial funding of CNY 6,86 million. The National Centre for Mental Health of China located at Peking University Institute of Mental Health was authorized to be the implementing facility for this program by the Ministry of Health. The project was overseen by a national working group as well as an international advisory group with experts mainly from the University of Melbourne.

By early 2005, 60 demonstration sites were established, with one urban and one rural area in each of the 30 provinces of China, covering a population of 43 million. The priority in the first year was to build a capable mental health workforce through an extensive training program. A two-level training mode was adopted, first at the national level utilizing a train-the-trainer approach, and then with trained trainers delivering the programs at the provincial level. The contents of the training included guidance on project management, standardized treatment protocols, case management, information management, family education, and the training of police and neighborhood committees.

### **Treatment and intervention program**

In 2006, the 686 Program incorporated an intervention component into the training program, which was then called the National Continuing Management and Intervention Program for Psychoses. The aim was to consolidate the reform through the key provisions of continuity of care, treatment accessibility, and equitable mental health care. Four types of psychoses were included: schizophrenia, bipolar disorder, delusional disorder, and schizoaffective disorder.

Patients screened for possible psychosis were referred from psychiatric hospitals or departments, the CDPF, community and village health centres, and neighborhood or village committees. These patients were subsequently examined by psychiatrists, and those who met diagnostic criteria for psychotic disorders were evaluated for their risk of violence based on a 0 to 5 score scale established by the national working group.

The patients at risk of violence received monthly follow-up and, if they were socio-economically disadvantaged, were provided with free medication, laboratory tests, and a subsidy for hospitalization. About 5% of patients who received free medications were treatment refractory and were therefore provided with second generation



antipsychotics, mainly risperidone. In the event of any psychiatric emergencies or severe cases of medication side effects, the program provided free crisis management. Moreover, as some patients were physically restrained or chained at home, the program provided support for the unlocking and freeing of these patients, and hospitalization when necessary. After hospitalization, if patients lacked finances to pay for treatment, they were included in the free services mentioned above.

### Training and capacity building

A key challenge for successful implementation of the 686 Program was the limited capacity of the workforce to deliver the program at the local level. To meet this enormous challenge, a tripartite training program was collaboratively developed in 2007 by the Peking University Institute of Mental Health, the University of Melbourne and the Chinese University of Hong Kong. The primary aim of the program was to train up multi-skilled case workers by: a) developing understanding of the key principles of community-based mental health care in general and basic case management; b) providing practical skills in developing individualized service plans to maximize integration and continuity of care; c) exploring culturally appropriate ways to build partnerships with the patient, families and community; d) building skills to work in multidisciplinary teams; and e) providing opportunities to share ideas and plan for implementation.

Encompassing best practice principles drawn from allied health disciplines (nursing, social work, occupational therapy, psychology), a basic set of knowledge and skills for case management was outlined (14). A key underpinning for the training program was to provide a rehabilitation focus in a community setting. Field site visits to a range of community mental health facilities (e.g., day hospitals, half way houses, training centres, mental health support programs) and supervision by the community mental health team members provided direct opportunity for such clinical experience.

### Outcomes and impacts

The program needed to build broad partnerships that included different sectors and facilities into the mental health service system, including local government, health, civil affairs, public security, the CDPF and Women's Federation. In 2009, a total of 34,861 facilities participated in this program, including 44 provincial hospitals, 92 municipal hospitals, 168 district/county-level hospitals, 986 urban community health centers, 2,748 urban community health stations, 1,136 township clinics, 11,480 village clinics, 5,660 urban neighborhood committees and 12,547 village committees.

A multidisciplinary mental health team was also established. By the end of 2009, a total of 38,227 participants worked for the program. Among these, neighborhood/village committee staff, who were mainly responsible for helping finding the patients and leading community advocacy, accounted for 53.3%; case managers accounted for 25%; policemen, who mainly helped crisis intervention for violence, accounted for 7.1%; psychiatrists for 4.3%, psychiatric nurses for 3.9%, and officials/administrators at different levels for 3.4%.

Data from the police offices in 42 demonstration sites showed that the number of minor violent events declined from 531 in July-December 2005 to 140 in January-June 2006 (decrease of 73.6%), and that of major violent events declined from 223 to 72 (decrease of 66.7%).

By the end of 2009, 96.88 million general population in 112 cities were covered by this program. A total of 161,800 patients were registered; 42,400 patients received regular follow-up (the average longest one-way follow-up distance in demonstration sites was 75 km); 15,300 economically disadvantaged patients received free medication, 12,800 free crisis management interventions were provided, and 7,200 poor patients were given a subsidy for hospitalization; 340 previously restrained patients were freed.

In the first year of the 686 Program, a total of 602 training courses were conducted and nearly 30,000 people were trained, including psychiatrists, psychiatric nurses, community physicians, case managers, community workers, public security staff and family members.

To date, nearly 500 mental health professionals from 80 districts in China have participated in tripartite program training sessions. Ten groups of ten mental health professionals from mainland China have had practical training in Hong Kong and more than 100 hospital directors and heads of mental health departments have undertaken on-site study in Melbourne.

One of the most profound impacts of the program has been in the area of policy reform. This probably has the greatest influence on long-term sustainability. Along with the 686 Program, five vital national policies on mental health have been developed: the Guiding Compendium on Development of National Mental Health Work System (aimed to improve inter-ministerial coordination and reform mental health work system); the Government Work Report (for the first time in Chinese history, mental diseases were addressed in the annual report of the Central Government); the Short-term Strategy of Health System Reform (psychiatric hospitals were to be improved as part of public health service capacity building); the Opinions on Improving Gradual Equity of Basic Public Health Services (in which the management of psychoses was included as one of nine national basic public health service domains); and the Working Criteria on Management of Psychoses (in which responsibility of different sectors in the management of psychoses, and the relevant procedures were clarified).



## BARRIERS AND CHALLENGES TO THE REFORM PROCESS

A determined government is an essential element for achieving success in a short period of time in China. However, the magnitude and the complexity of the mental health problems as well as the changing situation are always threatening the achievement of mental health reform. All stakeholders of mental health services in China and readers of this article should be aware that, despite the significant progress, mental health service system development and service delivery in China still face many difficulties. Some of the main problems are the following:

*Disparity is huge in China.* Although national policies are quite comprehensive and instructive, a wide disparity exists among provinces and cities in terms of social, economical, and developmental levels. In some rich and reform-driven coastal or eastern areas, the mental health service system is being quickly reformed within whole provinces or cities. However, in some under-developed western areas, the reform process is slowed down by poor understanding, and lack of resources and skills. In those areas, the existing national mental health policies become just "well-written documents".

*Resources are not properly allocated between the community and psychiatric hospitals.* Though community mental health is strongly encouraged as part of the equalization of public health service, and national funding has been given to each province to cover registration and following up of the patients at community level, general physicians lack basic knowledge and skills for these tasks. In the next two or three years, CNY 15 billion will go to the construction of 550 psychiatric hospitals that are often located in less populous suburban areas, and the funding structure still remains primarily based on psychiatric hospital beds rather than care received from personnel and treatment programs. This will discourage hospitals to be involved in community services. In addition, social insurance policy only subsidizes the expenses of hospitalization, leading more patients to use unnecessary in-patient services.

*Some important outcomes are unclear about psychoses.* It is understandable that, from the social stability point of view, psychosis treatment and management is always the top priority of the government. However, due to the lack of relevant laws and regulations, involuntary admission is undertaken under the name of "caring about mentally ill". Social mobilization and resources re-allocation do increase the treatment rate of patients with psychoses. However, whether duration of untreated psychosis is shortened, or patients' functional levels are improved, are yet to be answered questions.

*Psychiatry is being made less attractive.* The focus on psychosis management makes psychiatry less attractive.

Fewer medical graduates are willing to be trained as psychiatrists, and psychiatric hospitals continuously lose professionals with higher levels of education, training and expertise. The government, therefore, is considering to transform psychiatric facilities into "public health institutions" in which staff are regarded as "paracivil servants". This may further discourage graduates from entry training in psychiatry.

*Partnership with other sectors is unsatisfactory.* Although the responsibility of each relevant ministry or sector has been stated in various documents, inter-organizational cooperation and collaboration is still not fully or firmly established, with the health and mental health sectors working in isolation in many areas.

## SUGGESTIONS FOR FUTURE POLICY

In a country with highly centralized government structures such as China, mental health development needs strong and continuous support from government at all levels. Without this support, the mental health sector will find it hard to fulfill the management of psychoses by itself. In addition, China needs to develop awareness of the importance of non-governmental organizations and their potential role in integrating various social resources and providing valuable supplementary services for mentally ill patients living in the community to enhance their recovery.

Community physicians in urban areas and village physicians in rural areas will require training in order to understand and develop individual care plans for four types of psychotic patients (similar to the 686 Program) at the primary care level, and to follow up stable patients at least four times per year.

Given the large number of patients with chronic mental disorders in China, community and home-based care for most patients needs to be encouraged and promoted. Family members should be supported to provide ongoing care in the community for their mentally ill relatives.

The limited amount of funding could only support the basic administration and transportation of staff in the national program, but the mental health facilities that employ these professionals have to make a profit in order to pay their salary. Mental health service fee for psychoses should be provided by the government as either salary of the service providers or insurance for the patients.

Government support and investment in clinical studies and health policy research are necessary to establish evidence-based treatment strategies and policy that are relevant in a Chinese context. Moreover, economic evaluations from the perspective of functional recovery and long-term outcomes and benefits for patients with mental disorders are needed to inform policies and reimbursement provided by the Social Security Department.



## CHINESE EXPERIENCES AS RESPONSE TO INTERNATIONAL ADVOCACY

This reform program in China is consistent with policy recommendations issued in recent years by the WHO and supported by other international authorities. In 2001, the WHO recommended that countries develop community-based services for people with mental disorders (15). This recommendation has been recently strengthened by a call for action to scale up services for people with mental disorders (16), the development of the Mental Health Gap Action Programme (mhGAP) (17), the activities of the WPA (18-20), and the guidelines published recently in *World Psychiatry* (21,22).

The work on the 686 Program and other developments in China are important steps in moving towards internationally agreed and accepted standards in mental health service provision. However, mental health services in China, as in many low- and middle-income countries (LAMIC), have a long way to go to meet the target of providing mental health care in the community.

Locally driven research provides relevant information to guide policy makers in the expansion of cost effective and culturally adapted health services (16). However, dissemination of this work to national and international audiences is hampered by the poor representation of publications from LAMIC in mainstream psychiatric journals (23,24). Recent work by WPA has demonstrated that, despite a significant level of scientific activity shown by China (as well as India, South Africa and South Korea), none of these countries, and indeed, no LAMIC in the African and Asian regions, is so far represented by a psychiatric journal in the main international databases (25,26). Internationally supported action to improve indexation of journals and research dissemination will aid the publication of data from this and similar projects. The WPA journal, *World Psychiatry*, and the recently indexed *Asia Pacific Psychiatry*, the journal of the Pacific Rim College of Psychiatrists, have the opportunity to bridge this gap.

## CONCLUSIONS

Although China's mental health service reform has focused only on psychoses so far, the scale of the reform, and the sheer numbers of psychiatric patients involved, represent a massive and ambitious program, which has had to overcome huge challenges. The reform began earlier than the reform of general health care in China, and is consistent with the Chinese public health strategy and the framework for country directions according to the WHO mhGAP.

With continued political commitment, timely assessment of needs and matching resources, development of appropriate public health policies, delivery of effective interventions, strengthening of human capacity, efficient mobilization of financial resources, rigorous monitoring

and evaluation, China will be in a favorable position to build and strengthen a national sustainable community mental health system and service for the benefit of the mental health of its population.

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