

Integrated mental health services in China: challenges and planning for the future

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Abstract

Eager to build an integrated community-based mental health system, in 2004 China started the '686 Programme', whose purpose was to integrate hospital and community services for patients with serious mental illness. In 2015, the *National Mental Health Working Plan (2015–2020)* proposed an ambitious strategy for implementing this project. The goal of this review is to assess potential opportunities for and barriers to successful implementation of a community-based mental health system that integrates hospital and community mental health services into the general healthcare system. We examine 7066 sources in both English and Chinese: the academic peer-reviewed literature, the grey literature on mental health policies, and documents from government and policymaking agencies. Although China has proposed a number of innovative programmes to address its mental health burden, several of these proposals have yet to be fully activated, particularly those that focus on integrated care. Integrating mental health services into China's general healthcare system holds great promise for increased access to and quality improvement in mental health services, as well as decreased stigma and more effective management of physical and mental health comorbidities. This article examines the challenges to integrating mental health services into China's general healthcare system, especially in the primary care sphere, including: accurately estimating mental health needs, integrating mental and physical healthcare, increasing workforce development and training, resolving interprofessional issues, financing and funding, developing an affordable and sustainable mental health system, and delivering care to specific subpopulations to meet the needs of China's diverse populace. As China's political commitment to expanding its mental health system is rapidly evolving, we offer suggestions for future directions in addressing China's mental health needs.

Keywords: Integrated care, mental health services, China

Key Message

- China has made remarkable progress in recent mental health reform and is now moving towards building an integrated and community-based mental health system. We highlight major challenges (assessing the needs, restructuring the system, human resources, financing, and other China-specific issues) for achieving this policy goal.

Introduction

Although mental disorders are significant contributors to global health problems, most people affected in low- and middle-income countries do not have access to treatment (Whiteford *et al.* 2013; World Health Organization [WHO] 2013). Even in some high- to moderately high-income countries such as China and the USA, mental health disorders and their treatment remain significant burdens. To close the gap in access to mental health services worldwide, WHO, in its *Comprehensive Mental Health Action Plan 2013–2020* (WHO 2013), highlighted an objective for all countries to achieve by 2020: ‘to provide comprehensive, integrated and responsive mental health and social care services in community-based settings’.

Several global initiatives reaffirm that integrating primary care and mental health services is one of the most viable options for improving healthcare (WHO and World Organization of Family Doctors 2008). Because most people around the world seek psychiatric help from primary care facilities (and conceptualize and manifest their illness both physically and mentally), integrating physical and mental health services can be an effective method to coordinate care, increase referrals, decrease stigma and improve mental health treatment outcomes (deGruy 1996; Collions *et al.* 2010). For instance, the USA is currently making advances in improved patient-centered care by integrating mental and physical health services in the primary care setting (Barry and Huskamp 2011; Bao *et al.* 2013; Smith *et al.* 2013; Domino *et al.* 2015). Integrated care programmes in the USA contain several elements: screening, patient education, patient self-management, psychotherapy, mental health specialist availability, clinical and adherence monitoring and standardized follow-up care (Butler *et al.* 2008; Scharf *et al.* 2013; Manderscheid and Kathol 2014).

A systematic review of 57 trials treating a variety of psychiatric illnesses found that integrated chronic care models can improve mental and physical outcomes for individuals with mental disorders across a wide variety of care settings without increasing cost (Woltmann *et al.* 2012). The review also showed that integrating services can lead to improved access to and quality of care, detection and prevention efforts, coordination and communication, cost-effective streamlining of services, and informed treatment models that take into account comorbid physical and mental health issues (Woltmann *et al.* 2012).

China has shown a strong commitment to mental health reform. In December 2004, the national ‘686 Programme’, named after the initial funding allocation of 6.86 million yuan (Chinese currency; equivalent to US\$1 million today), also called ‘Central Government Support for the Local Management and Treatment of Serious Mental Illness Project’, was initiated to integrate hospital and community services (Ma 2012). Then on 1 May 2013, China’s ‘Mental Health Law’ went into effect (Chen *et al.* 2012; National People’s Congress 2012), the first-ever national law on mental health and a landmark policy for protecting patient rights and improving mental health services (Xiang *et al.* 2012).

Despite these historic milestones, implementation of these initiatives and their potential to create reforms remain uncertain. Many challenges still exist in closing treatment gaps for both serious and common mental illnesses. For common mental disorders, contact (i.e. patients having contact with any general or mental healthcare providers) is low, as is provision of mental health services (i.e. delivery of evidence-based interventions, patient adherence to treatment and retention in care and clinical and social outcomes). Even for serious mental illnesses, the effective coverage is low. Large disparities

also remain in mental health coverage between rural and urban areas and across regions (Patel *et al.* 2016).

To improve access to care, reduce stigma, and manage physical and mental health comorbidities, it has been argued that integrating mental health services into China’s general healthcare system, especially the primary care sphere, needs to be a top priority (Tse *et al.* 2013; *The Lancet* 2015; Wong *et al.* 2014). China has also demonstrated a political commitment to integrating mental health services into its general healthcare system, as proposed in the first ‘National Mental Health Working Plan (2002–2010)’ and the latest ‘National Mental Health Working Plan (2015–2020)’ released on June 18, 2015 (The State Council 2002, 2015a). However, integrating mental health services into primary care for both serious and common mental illnesses remains an as-yet unfulfilled aspiration for the government (Ministry of Health of the PRC 2008a; Tse *et al.* 2013). Remaining obstacles include perceived stigma in seeking mental health services, an inadequate mental health workforce, insufficient funding resources, and a fragmented hospital-centered mental healthcare delivery system (Patel *et al.* 2016; Tse *et al.* 2013; Yu *et al.* 2010).

Integrating mental health services into the general healthcare system is aligned with the goals of China’s current healthcare reform. Since 2009, the country has invested substantially in expanding its healthcare infrastructure (e.g. primary care facilities) and achieved nearly universal health insurance coverage (Yip and Hsiao 2014). The World Bank Group, WHO, and three ministries of the Chinese central government [the Ministry of Finance, the National Health and Family Planning Commission (NHFPC) (previously known as the Ministry of Health), and the Ministry of Human Resources and Social Security] recently released a report entitled ‘Healthy China: Deepening Health Reform in China, Building High-Quality and Value-Based Service Delivery’. This report recommended that China adopt a reformed delivery model, referred to as ‘people-centered integrated care (PCIC)’ (The World Bank Group 2016). People-centered care is ‘an approach to care that consciously adopts the perspectives of individuals, families, and communities and sees them as participants as well as beneficiaries of trusted health systems that respond to their needs and preferences in humane and holistic ways’ (WHO 2015). Integrated care consists of ‘health services that are managed and delivered in a way that ensures people receive a continuum of health promotion, disease prevention, diagnosis, treatment, disease management, rehabilitation and palliative care services, at the different levels and sites of care within the health system and according to their needs throughout their life course’ (WHO 2015). The backbone of the proposed PCIC model is a well-functioning primary care system that is integrated with large hospitals through ‘formal linkages, good data, and information sharing among providers and between providers and patients’. Implementing the proposed reforms can also offer a window of opportunity to transform China’s mental health services into an integrated community-based mental healthcare delivery system, which can also become a model for China’s future healthcare reform.

To our knowledge, no in-depth review has been undertaken on the potential windows of opportunity for or barriers to providing integrated mental health services for patients with serious or common mental illness in China. The goal of this review, therefore, is to assess the potential opportunities for and barriers to successful implementation of an integrated community-based mental health system based on integrating mental health services into the general

healthcare system (especially the primary care sphere) and on integrating hospital-based with community-based mental health services. Thus, we first review the basis for China’s future integrated mental health services and then review its recent mental health reforms, which could become the foundation for building an integrated community-based mental health system. We also review the current challenges to integration and offer future directions for addressing China’s mental health needs.

Methods

Data sources and search strategy

Systematic reviews can inform policymaking by clarifying the problem and its causes, assessing potential policy options, and identifying implementation considerations (Langlois *et al.* 2015). In this study, our search strategy was informed by the WHO Health Systems Framework (WHO 2007). This framework was developed as both a tool to understand health systems and as a guide to strengthen them. According to this framework, a health system has several building blocks: service delivery; health workforce; information; medical products, vaccines, and technologies; financing; and leadership and governance (stewardship). The overall goals of a healthcare system consist of improved health, responsiveness, social and financial risk protection and improved efficiency. Access to and coverage of health services, along with quality and safety of care, can also influence how a health system achieves its goals.

The search strategy sought to identify publications related to the burden of mental illness, financing of mental health services, the mental health workforce, governance, and delivery of mental health services in China (see Table 1). Because of the relatively limited number of peer-reviewed papers discussing mental health services in China, the scope of this review is intentionally wide.

We searched papers published from 2000 to 2016 using (i) English-language sources, including PubMed, Web of Science, Google, and Google Scholar for English publications, and (ii) Chinese-language sources, including the China Knowledge Resource Integrated Database, Wanfang Data through the National Library

of China, the National Social Science Database and Baidu Scholar for Chinese publications. Most academic and grey literature on China’s mental health policy was in Chinese.

Online searches of the grey literature (e.g. policies, reports, web-pages) were performed by reviewing the publicly accessible repositories of key Chinese government agencies, bilateral/multilateral agencies, and other relevant organizations/institutions active in the country. These included the NHFPC of the People’s Republic of China (PRC) (formerly the Ministry of Health), the Ministry of Civil Affairs of the PRC, the China Disabled Persons’ Federation, WHO, and Peking University’s Sixth Hospital. Additional relevant sources of grey literature were identified through snowballing of references.

Study selection and data abstraction

We included original studies, as well as studies and publications of commentaries, views, and experiences related to the mental health burden, comorbidity of physical and mental disorders, mental health services (access, cost, quality, financing, delivery, and monitoring), and mental health policies and programmes. We excluded publications on mental health services within other systems (e.g. education, substance abuse) and focused primarily on mental health services within the healthcare system. We also excluded publications related to the Chinese population outside the mainland (e.g. immigrants in the USA) and studies with small sample sizes (e.g. case studies) (see Figure 1).

We found a total of 2897 English-language articles and 4169 Chinese-language articles. Relevant studies were identified by title and abstract screening. After excluding duplicate and irrelevant papers by reviewing titles and abstracts, 235 papers were reviewed in full text for this article (Supplementary Appendix).

Retrieved studies were abstracted by all three authors according to publishing characteristics (e.g. year of publication, location of research). Additionally, the study design and main findings were extracted for original studies, and key arguments were abstracted for other types of publications (e.g. commentaries) according to the WHO Health Systems Framework (WHO 2007).

Although the first author did a large portion of the searching and abstracting and all of the translating, the second author checked and also abstracted papers specifically in the area of US mental health and mental health policy implications, and the third author checked and abstracted papers that compared mental health in the USA and China. Notably, the first author, whose native language is Chinese, did the screening and abstracting of all Chinese-language publications.

Results

Why an integrated and community-based mental health system in China is needed

Treatment gaps in serious and common mental illnesses

To close treatment gaps in mental health is one of the most important reasons for integrating the mental health services system into China’s general healthcare system. We focused on access to care, as little research existed on the quality of available mental health services in China. Only a very small proportion of patients with mental disorders actually sought professional care in China. The Chinese World Mental Health Survey (2001–02) conducted in Beijing and Shanghai found that only 3.4% of respondents with a psychiatric disorder sought professional help during the previous 12 months (Shen *et al.* 2006). Similarly, in a large epidemiologic study conducted in four provinces [Gansu, Qinghai, Shandong and Zhejiang (2001–05)]—63 004 participants aged 18 years or older in 96 urban neighborhoods

Table 1. Key words and components search strategy using the WHO health systems framework

Components	Example of key terms
Leadership/ governance	‘China AND mental health policy,’ ‘China AND mental health law’
Healthcare financing	‘China AND mental health AND financing,’ ‘China AND mental health AND health insurance’
Health workforce	‘China AND mental health AND specialty,’ ‘China AND mental health AND human resources,’ ‘China AND mental health AND training’
Information and research	‘China AND mental health,’ ‘China AND psychiatric disorders’ and ‘China AND mental health AND comorbidity,’ ‘China AND mental health AND children,’ ‘China AND mental health AND urbanization,’ ‘China AND mental health AND ethnic minority’
Service delivery	‘China AND mental health services,’ ‘China AND community-based mental healthcare,’ ‘China AND integrated mental healthcare,’ ‘China and integrated mental health services,’ ‘686 Programme,’ ‘China AND mental health AND aging,’ ‘China AND mental health AND primary care’

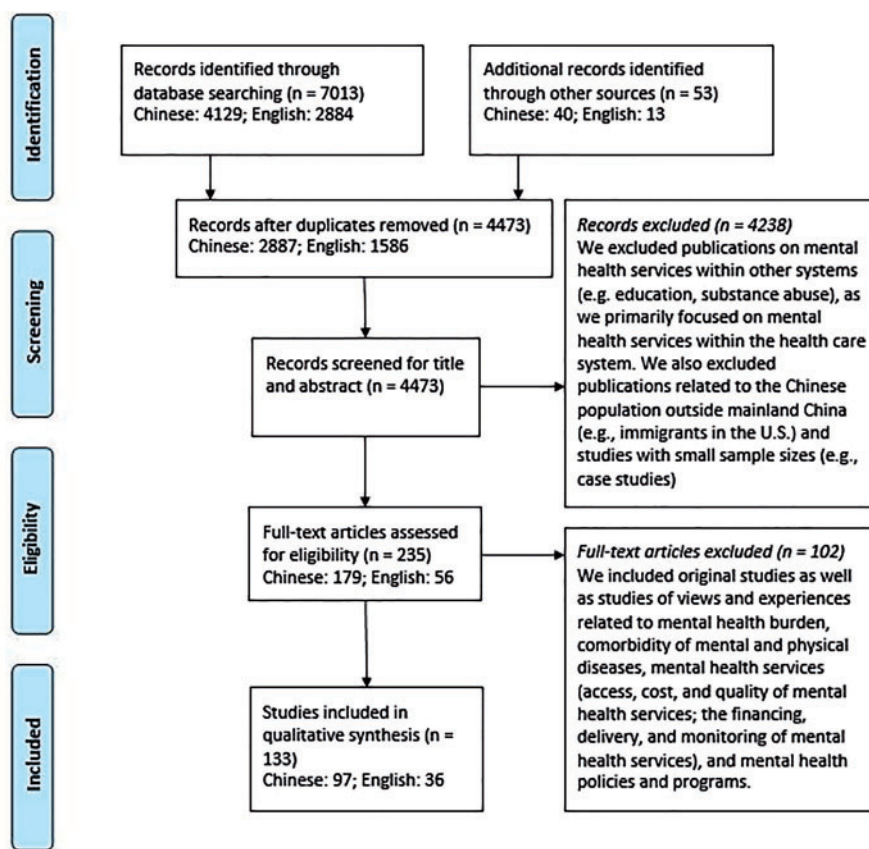


Figure 1. PRISMA flow diagram for selection of articles for review

and 267 rural villages], only 8% of individuals with mental disorders sought professional help within the general healthcare settings, and only 5% sought help from mental health professionals (mainly hospital-based psychiatrists) (Phillips *et al.* 2009) (see Table 2).

When mental health patients, especially those with non-psychotic disorders, did seek professional care, most of them did so first within general health care settings (Zhang *et al.* 2013). However, only a small proportion of these patients actually received an in-time referral or appropriate psychiatric treatment. For example, in 2007 at the Peking Union Medical College Hospital (China's most prestigious hospital), where the prevalence of depressive and anxiety disorders among medical outpatients ranged from 12.4 to 33.4% (across outpatient neurology, gastroenterology, cardiology and gynecology), only 18.9% of patients were prescribed medication or referred to psychiatrists (Shi *et al.* 2011). In an inpatient study conducted in 40 general hospitals in Beijing (2003–04), only 9.8% of depressed patients had ever received psychiatric treatment (Wang *et al.* 2006). In another study of outpatients in 50 general hospitals in Beijing (2003–04), only 14% of depressed patients had ever received psychiatric treatment (8% were treated by their physician and 6% by psychiatrists) (Zhang *et al.* 2006). It is important to note that most studies were conducted in tertiary hospitals in metropolitan areas by the best-trained physicians in China, who are more likely to provide higher-quality care compared with physicians in other settings. Few studies with explicit and rigorous research design examined the prevalence of comorbid mental disorders in primary care and non-hospital settings, where recognition and treatment of comorbid conditions are low (see Table 2). Integrating physical and mental health services could effectively improve access

to care among patients with non-psychotic disorders, who commonly present in general healthcare settings.

Limited access to mental health services: urban vs rural settings

Integrating mental health services into the existing general healthcare system is also a pragmatic goal. Mental health services in China suffer not only from a lack of resources, but also from inequitable distribution of those resources in urban vs rural areas (Chen *et al.* 2004; Xiao 2009; Hu *et al.* 2011; Liu *et al.* 2011a; Luo *et al.* 2014; Yang *et al.* 2015; Wang *et al.* 2016b). In 2006, 'blank areas' were uncovered in which no beds were available, affecting ~41.9 million people (Ministry of Health of the PRC 2008b). These regions are usually remote and poor and have few to no mental health professionals [e.g. in the Tibet Autonomous Region (TAR), no psychiatrists were available] (Cyranoski 2010). These uncovered areas are home to mainly ethnic minority groups (e.g. Uyghur, Mongolian, Hui, Hmong, Tibetan). From 2006 to 2015, although the number of mental health facilities (including psychiatric departments located in general hospitals) had grown from 1124 to 1650, two-thirds of counties in China still did not have psychiatrists (Ministry of Health of the PRC 2008b; Wei *et al.* 2008; NHFPC 2015a). In other words, people in two-thirds of China's counties, most of whom are rural residents, must travel to other counties to obtain mental health services. Thus, instead of building a separate infrastructure for mental health services, integrating mental healthcare into China's general healthcare system is the most feasible way to expand mental health services into 'blank areas'.

Table 2. Studies of prevalence of common mental disorders in China among outpatients in the general health settings

Location	Sample Size	Diagnostic instruments	Setting	Current prevalence of mental disorders	Referral
Beijing (Zhang <i>et al.</i> 2006)	2877	SCID	Primary, secondary, and tertiary hospitals	DD: 3.1% MDD: 1.97%	10% of MDD
Shenyang (Ai <i>et al.</i> 2007)	7448	SCID	Primary, secondary and tertiary hospitals	DD (tertiary): 11.22% DD (secondary): 10.4% DD (primary): 13.1%	NA
Beijing (Fu <i>et al.</i> 2007)	198	MINI	Tertiary hospitals	AD: 7.38% DD: 8.76%	NA
Shenyang (Qin <i>et al.</i> 2007a)	5750	SCID	Primary, secondary, and tertiary hospitals	AD: 4.92%	NA
Shenyang (Qin <i>et al.</i> 2007b)	1698	SCID	Primary, secondary, and tertiary hospitals	DD (traditional Chinese medicine unit): 16.2%	NA
Shenyang (Qin <i>et al.</i> 2007c)	7448	SCID	Primary, secondary, and tertiary hospitals	DD (general internal medicine unit): 11.01% DD (traditional Chinese medicine unit): 16.22%	NA
Shenyang (He <i>et al.</i> 2008)	5312	SCID	Primary, secondary and tertiary hospitals	AD (tertiary): 17.3% AD (secondary): 15.1% AD (primary): 14.2%	NA
Shenyang (Qin <i>et al.</i> 2008)	5312	SCID	Primary, secondary, and tertiary hospitals	DD (female): 12.09% DD (male): 7.98%	NA
Shenyang (Liu <i>et al.</i> 2008)	5312	SCID	Primary, secondary, and tertiary hospitals	AD (female): 5.50% AD (male): 4.04%	NA
Changsha (Peng <i>et al.</i> 2008)	1628	MINI	Tertiary hospital	AD: 4.42% DD: 7.13%	NA
Shenyang (Jin <i>et al.</i> 2009)	2458	SCID	Tertiary hospitals	AD: 5.93% DD: 10.90%	NA
Beijing (Shi <i>et al.</i> 2011)	621	MINI	Tertiary hospital	AD: 8.2% DD: 14.7%	18.9%
Chengdu (Huang <i>et al.</i> 2011)	1780	MINI	Tertiary hospitals	AD: 8.60% DD: 12.02%	15.43%
Chengdu (Li <i>et al.</i> 2011)	685	MINI	Tertiary hospitals	AD: 9.16% DD: 19.26%	7.32%
Guizhou (Huang and Wang 2011)	1200	MINI	County hospital	DD: 18%	8.8%
Xiangtan (Gu and Zhao 2012)	1761	MINI	Secondary hospital	AD: 4.0% DD: 7.5%	NA
Beijing (Li <i>et al.</i> 2013)	2074	MINI	Tertiary hospitals	AD: 7.6%	NA
Tai'an (Wu <i>et al.</i> 2014)	974	MINI	Primary care facilities	DD: 10.2%	5.1%
Guangzhou and Ningbo (Zhang <i>et al.</i> 2015)	876	SCID	Tertiary hospitals	DD: 16.60%	NA

Notes: MINI, The Mini International Neuropsychiatric Interview; SCID, Structured Clinical Interview for DSM-IV; AD, anxiety disorder (agoraphobia, generalized anxiety disorder, obsessive compulsive disorder, panic disorder, post-traumatic stress disorder, social phobia, specific phobia); DD, depressive disorder; MDD, major depressive disorder; NA, not available. The time frame for the current prevalence of DSM-IV diagnosis of anxiety disorder, depressive symptoms, and major depressive symptoms is 1 month.

Comorbidity of physical and mental illnesses

Improving the physical health of patients with mental illnesses is another rationale for integrating China's mental and general health-care systems. Studies found that 32–97.4% of inpatients in psychiatric hospitals had physical comorbidities, particularly elderly inpatients (Li 2006; Li and Yang 2009).

Few studies have examined the quality of physical healthcare of the mentally ill. Zhou (2010) found that in the Pudong New Area of Shanghai, patients with mental illness had higher mortality rates in all age groups than the general population, resulting in a 9-year gap in life expectancy. A study in Sichuan province reported that among all patients with serious mental illness that died in 2011–13, about half did not receive any healthcare before death (Wen *et al.* 2014). Although most of them died from physical conditions, only 0.62–1.15% were hospitalized during this period (Wen *et al.* 2014).

The '686 Programme' model: integrating hospital- and community-based services

At the beginning of the 21st century, China's mental health system was faced with an enormous mental health disorder burden, large treatment gaps and alarming disparities in access to and quality of care between rural and urban regions, as well as across provinces, because mental health resources were concentrated in specialty hospitals located in large cities (Chang and Kleinman 2002). Many of these challenges remain, as we discuss later in this article. A policy window opened after the SARS epidemic in 2003, when the Chinese government initiated funding for specialized public health projects and created an opportunity to fund the '686 Programme'. This was the first major programme designed to integrate mental health services into the primary care system, as well as to integrate hospital- and community-based mental health services for those with serious

mental illness (Ma *et al.* 2009). Because of limited resources, the Chinese mental health system placed its primary focus on psychosis, especially among those with violent or socially disruptive behaviours (Liu *et al.* 2011b). Many of these seriously mentally ill patients had never sought professional care before because of a complex set of barriers (Shen *et al.* 2006; Phillips *et al.* 2009).

The '686 Programme' was developed by China to be a pioneering demonstration model (i.e. a cooperative project designed to demonstrate the feasibility of mental healthcare reform). The primary goals of the programme were to:

- a. establish an integrated identification and treatment system for individuals with serious mental illness (especially those who are potentially violent);
- b. increase treatment retention for individuals with serious mental illness;
- c. improve community awareness about mental health (especially serious mental illness);
- d. increase the rates of successful recovery and rehabilitation; and
- e. alleviate the pain and suffering of mentally ill patients and their families (Ministry of Health of the PRC 2008c; Ma 2012).

The hospital-community continuous-care model informed by the original '686 Programme' has been implemented across China in the form of two national public health programmes: (i) the 'Central Government Support for the Local Management and Treatment of Serious Mental Illness Project' covering demonstration regions, and (ii) the management of serious mental illness programme included in the 'Basic Public Health Services' programme covering all other regions (for the sake of simplicity, these two programmes, which are much larger than the original '686 Programme', will be referred to as the '686 Programme' henceforth) (Ma *et al.* 2009; Ministry of Health of the PRC 2009; Liu *et al.* 2011b).

According to the 'Chinese Classification of Mental Disorders (CCMD-3)' (Psychiatry Branch of the Chinese Medical Association 2001), disorders that qualify as serious mental illnesses are schizophrenia, schizoaffective disorder, bipolar disorder, delusional disorder, psychotic disorder due to epilepsy and mental retardation with psychosis (Ministry of Health of the PRC 2012; NHFPC 2013). The primary goal of this model is to provide screening, identification, free treatment (for impoverished patients), and follow-up services for patients with serious mental illness (Liu *et al.* 2011b). However, different regions in China vary in their approaches to implementation. For example, in rural areas where available local resources are likely to be scarce, hospitals at the provincial/municipal level and village doctors provide '686 Programme' care; however, hospitals at county and township levels, and China's Center for Disease Control and Prevention (CDC), may or may not participate in the programme (Ma 2015). The result is great variability in care depending on where the person lives.

A number of papers hailed the '686 Programme' as the demonstration model to further build an integrated and community-based mental health system nationwide (Liu *et al.* 2011b; Wei *et al.* 2011; Ge *et al.* 2013). Current opinion is that the programme shows promise in improving outreach and medication management for patients with serious mental illness (Ma *et al.* 2011); however, it has not fully reached its ambitious goals. By the end of 2012, 249 000 registered patients had received free outpatient treatment and 41 000 had received free inpatient care (Zhu *et al.* 2014). At the end of 2016, 5.4 million patients were registered, and 88.7% of registered patients had been followed up and received recovery services in the

community (NHFPC 2017a). Three-quarters of registered patients had schizophrenia, and 57.2% lived in poverty (NHFPC 2017a).

Although the programme has probably improved access to care, the public health outcomes of the '686 Programme' are still greatly in need of rigorous and comprehensive evaluation. To date, the programme has been evaluated only by examining the rate of violating the 'Public Security Administration Punishment Law' and 'the Criminal Law' (Ma *et al.* 2011).

A number of questions remain about the '686 Programme', the answers to which could help in evaluating its effectiveness:

- a. Among people with serious mental illness in China, how many were included in the programme, and who were they?
- b. To what extent did the programme improve access to care for people with serious mental illness?
- c. Did the programme improve the functional status of patients?
- d. Was the programme cost-effective?
- e. Did the programme reduce or contribute to greater stigma about mental health as a function of emphasizing the social risks of serious mental illness? (Liu *et al.* 2011b)

Two key explanations have been put forward about why the '686 Programme' has not yet been evaluated, despite being in effect for >10 years: (1) outcome evaluation was not incorporated into the initial design of the programme, making it methodologically challenging to design an evaluation study; and (2) researchers might have had limited access to administrative data—or the data were of poor quality in terms of its completeness, accuracy, and timeliness (Zhou and Xiao 2015a,b). According to personal communications with mental health researchers in China, it is also possible that rigorous evaluations were conducted, but the authors were not permitted to publish their results.

The '686 Programme' has yet to establish a mature, integrated, community-based mental health system for those with serious mental illness (Liu *et al.* 2011b; Xiong 2012). The outreach, medication management, and follow-up services mentioned earlier had enormous regional variations, and available services in the community were very limited (Gan *et al.* 2012, 2013; Chang and Yang 2013; Fei *et al.* 2013; The State Council 2015a; Wang *et al.* 2016a). In the second decade of the '686 Programme', two recent policies might be promising in terms of further strengthening care delivery to patients with severe mental disorders. According to the 'National Mental Health Working Plan (2015–2020)', registration and management of patients should be improved, and major targets in the working plan should be part of the annual performance evaluation (*jixiao kaohe*). To implement the 'National Mental Health Working Plan (2015–2020)', China has been experimenting with innovative models to provide integrated community-based mental health services since 2015 under a project entitled 'National Pioneering Programs for Comprehensive Management of Mental Health' (NHFPC 2015b). Led by the central government, the goal of this project is to find a model to:

- coordinate leadership across government departments;
- build an integrated care model incorporating both treatment and recovery by setting up referral systems involving a multidisciplinary team of providers;
- provide community-based recovery services;
- alleviate the financial burden of patients through basic health insurance, catastrophic health insurance, medical aid and other funding resources;
- train and sustain human resources in mental health; and
- promote mental health in the general population.

All local demonstration programmes will be evaluated by the central government by the end of 2017 (NHFPC 2015c). However, without existing literature on these two policies, it is still too early to draw conclusions about the successful implementation and outcomes of these local programmes.

In summary, from its pragmatic beginnings, the '686 Programme' has become a prototype for providing community-based mental health services (Liu *et al.* 2011b). China is currently exploring suitable, practical models at the local level to build an integrated community-based mental health system nationwide (NHFPC 2015b,c). However, the projected plans discussed earlier should be interpreted with caution, as it remains uncertain whether they will actually be realized at the local level.

China's challenges to building an integrated mental health system

A number of areas critical to integrated healthcare reform that many countries have struggled with (e.g. how to fund services, train professionals, create an information system infrastructure, develop prevention programmes, institute a timeline for implementation) still need to be addressed in China's current reform plans (Kathol *et al.* 2010; Jenkins 2012). The question of whether China can accomplish mental health reform successfully depends on its success in addressing a number of challenges, including, but not limited to:

- improving understanding of China's mental health service needs,
- integrating mental health services into the general healthcare system,
- responding to workforce limitations,
- increasing financial support and
- addressing other China-specific issues.

This list of challenges is not meant to be exhaustive, but rather is intended to highlight critical areas to be addressed in order to improve and integrate mental health services in China.

Improving understanding of China's mental health service needs

To plan for and develop effective and sustainable policies that support an integrated healthcare system, it is important to accurately estimate China's psychiatric burden, unmet mental health service needs, and capacity to provide needed services. China's only two published national psychiatric epidemiologic studies, one in 1982 and the other in 1993, found that the lifetime prevalence rates of psychiatric disorders were quite low, ranging from 0.026 to 0.66% (Zhang *et al.* 1998; Huang 2008; Wei *et al.* 2008). It is thought that this low rate is due not to a lack of cases, but to methodological issues with the surveys, such as sampling, included disorders, diagnostic criteria, and diagnostic instruments (Shi *et al.* 2005). The China Mental Health Survey (CMHS), which was carried out from July 2013 to March 2015, is the first and most recent nationally representative community survey on mental disorders and mental health services in the country (Huang *et al.* 2016). A total of 28 140 respondents completed the survey with a 72.9% response rate (Liu *et al.* 2016). However, detailed results of the study were not published.

Recent psychiatric epidemiologic studies of smaller areas of China found higher rates of mental illness compared with national surveys published before the 21st century (Guo *et al.* 2011; Liu *et al.* 2016). The 'Chinese World Mental Health Survey (2001–2002)' conducted in Beijing and Shanghai found that the 12-month prevalence of any DSM-IV mental disorder among the 5,201 participants was 7.0% (Shen *et al.* 2006). In epidemiologic studies conducted

among 63 004 participants in four provinces of China (Gansu: 2005, Qinghai: 2005, Shandong: 2005 and Zhejiang: 2001), Phillips *et al.* (2009) found that the adjusted 1-month prevalence of any DSM-IV mental disorder was 17.5% (6.14% mood disorders, 5.63% anxiety disorders, 0.59% substance-abuse disorders, 0.95% psychotic disorders and 0.24% organic mental disorders). In contrast, in a study of 7206 people in the TAR in 2003, Wei found that the lifetime prevalence of psychiatric illness was 1.34% (Wei 2004). These results may be influenced by methodological biases (e.g. the high illiteracy rate in Tibet) and cultural differences in the conceptualization of mental illness (e.g. the survey was written in Mandarin Chinese, and the questions and responses were verbally translated by local Tibetan doctors). The 'National Mental Health Working Plan (2015–2020)' recommends that provinces rich in resources conduct province-level epidemiological studies of mental disorders once every five years. This may help generate better information about the prevalence of common mental disorders if standardized methods and effective quality-control measures are used across regions and studies.

Of concern is the limited existing epidemiologic data for some vulnerable population subgroups, such as children and adolescents, elders, and ethnic minority subpopulations. Depending on the local context, these groups are most vulnerable to stressors and other conditions that might put them at risk for mental and substance-abuse disorders (WHO 2001; Karlsen *et al.* 2005; Veling *et al.* 2007; Sawyer *et al.* 2012).

Except for some local epidemiologic studies conducted in the early 1990s, no national epidemiologic studies have been conducted on the prevalence of psychiatric disorders among children and adolescents (Zhong *et al.* 2010) in China. The first national child and adolescent psychiatric epidemiologic study began in 2012 and is still under way in six provinces (Beijing, Guangdong, Hunan, Jiangsu, Liaoning and Sichuan) (Wen 2012). This national initiative reflects the growing concern and the commitment to address the mental health needs of Chinese youth.

A lack of national epidemiologic data also exists on the prevalence of psychiatric disorders among the elderly (Simon *et al.* 2013). Such data are essential because China's aging population is growing, and later life is a particularly vulnerable time for the onset of dementia, depression, bereavement, grief, and health-related psychological disorders (Cole and Dendukuri 2014). According to a recent systematic review, the prevalence of all forms of dementia in China increased from 2.6% at age 65–69 years to 60.5% at age 95–99 years in 2010, resulting in ~9.19 million people with dementia (Chan *et al.* 2013). In a general nationwide study, those 55 years and older evidenced a 1-month prevalence for any psychiatric disorder rate of 24% (10.6% mood disorder, 7.97% anxiety disorder, 5.9% substance-abuse disorders, 0.77% psychotic disorders, 0.68% organic mental disorders and 0.43% other mental disorders) (Phillips *et al.* 2009). In contrast, the 1-month prevalence of any psychiatric disorder was 12.5% for those between the ages of 18–39, and 23.2% for those between 40 and 54. Besides epidemiologic studies, an emerging body of work indicates that suicide is becoming an increasing problem among the elderly in both rural and urban areas of China, but is particularly high in rural areas despite decreases in general population suicide rates, underscoring the need for data (Li *et al.* 2009; Jing *et al.* 2011; Liu 2013).

Another subpopulation understudied and at risk are ethnic minorities, whose needs have been overshadowed by the mainstream culture of the Han people. China's 55 ethnic minority subgroups compose ~10% of China's population (National Bureau of Statistics of the PRC 2011). Many of these minority groups live in

remote rural areas in the west, which are historically less modernized and have fewer economic and medical resources compared with China's eastern and middle regions (Ouyang and Pinstrip-Andersen 2012). Besides the lack of primary care and mental health facilities, cultural competency and provision of culturally effective care for people with distinct languages, religions, and cultures is a challenge that also remains unaddressed (Hwang 2006).

Currently, the National System of Basic Information Collection and Analysis for Psychoses (Ministry of Health of the PRC 2011), launched in 2011, is the only surveillance system for the collection of data on mental health in China. As the system is a part of the '686 Programme', cases of serious mental illness (schizophrenia, schizoaffective disorder, bipolar disorder, delusional disorder, psychotic disorder due to epilepsy, and mental retardation with psychosis, as mentioned earlier) are reported by providers in psychiatric hospitals, general hospitals with psychiatric departments, community health centres and village clinics. This system also collects information about patients' medications, risk of violence and history of crime and violent or disruptive behaviour. However, this surveillance system was not designed for research. Scholars have criticized the system because of its extremely difficult accessibility, lack of comprehensiveness and poor-quality data (Zhou and Xiao 2015a,b).

Integrating mental health services into the general healthcare system

China's public healthcare delivery system serves the entire population, ranging from the poor in rural areas to the rich in urban settings (Meng *et al.* 2015). The rural healthcare delivery system includes county-level hospitals and township and village clinics. The urban healthcare delivery system includes national-level hospitals, provincial-level hospitals, city-level hospitals, district-level hospitals and community health centres. Township and village clinics in rural China and community health centres in urban China are considered community-based primary care facilities.

Since China's first 'National Mental Health Working Plan (2002–2010)', the government plans to expand mental health services at all levels of the public healthcare system, including community- and hospital-based services (Liu *et al.* 2011b; Ministry of Health of the PRC 2008a; Ma *et al.* 2009). Provincial- and city-level hospitals should be equipped to provide acute mental health services, and district- and county-level hospitals should be equipped to provide chronic disease management and rehabilitation services for patients with mental illness; notably, all counties in China will have at least one department of psychiatry in their hospitals by 2020 (Ministry of Health of the PRC 2008a; The State Council 2015a). However, despite these goals, two-thirds of counties still did not have any psychiatrists (Ministry of Health of the PRC 2008b; Wei *et al.* 2008; NHFPC 2015a). In addition, primary care facilities in both rural and urban areas (community health centres and township clinics) will begin providing basic mental health services as a result of the '686 Programme' (Ministry of Health of the PRC 2008c; The State Council 2015a). According to 'National Mental Health Working Plan (2015–2020)', by 2020 each primary care facility in China should have at least one full-time or part-time mental health professional (drawn mainly from physicians and public health practitioners with additional mental health training) to manage patients with serious mental illness. It should not be assumed that these planned objectives will be achieved across all regions in China as little evidence indicates that additional workforce and training are in place.

Previously, only psychiatric specialty hospitals provided mental health services. Thus, expanding these services into the general healthcare system is a leap forward, although the major challenge of

a shortage of mental health workers persists. Yet another challenge is no clear evidence that China is actually making progress in implementing integrated healthcare. One randomized control trial in Shanghai that targeted elderly people with chronic disease and comorbid depression showed that coordinated care (e.g. health education, psychotherapy, case management, medication) was significantly more effective in reducing depression than medication alone (Wu *et al.* 2010). Worldwide, although no single best model for integrating mental health services into primary care exists, it is essential that primary care providers are adequately prepared and supported when providing services relevant to mental health. This is challenging for China because:

- routine screenings for non-psychotic disorders are rare in China;
- China's healthcare system is largely fragmented and has no well-functioning referral system;
- medical providers need additional mental health training to better identify and treat comorbid medical and psychiatric conditions or refer patients to specialists; and
- comprehensive information systems need to be built and well managed to share information between providers from different departments or facilities (WHO *et al.* 2008; Yip and Hsiao 2014).

Responding to workforce limitations

Shortage of mental health professionals. One of the most challenging barriers faced by China in providing high-quality integrated services is the shortage of psychiatrists, psychiatric nurses, social workers and counselling and clinical psychologists, along with a lack of training for primary care physicians to provide psychiatric medication (Liu *et al.* 2013). Specifically, China had only 1.49 psychiatrists per 100 000 people, while on average middle- and high-income countries worldwide have 2.03 psychiatrists per 100 000 (The State Council 2015a). According to the 'National Mental Health Working Plan (2015–2020)', by 2020 the number of psychiatrists in China will increase from roughly 20 000 to 40 000, providing some optimism that China can provide better mental health diagnostic and treatment services (The State Council 2015a). However, it appears doubtful that such ambitious goals will be realized by 2020.

These workforce problems are particularly challenging in the face of current training for psychiatrists, which varies widely. Among psychiatrists working in mental health facilities in China, 51% had a bachelor's degree in medicine, 29% had a technical school degree and 14% had no academic degree at all (Liu *et al.* 2013). In addition, post-baccalaureate general residency and specialty psychiatry residency are not required. In light of the seriousness of the mental health problems in China, psychiatrists should obtain at least a 5-year undergraduate bachelor's degree in medicine and enter a 3-year standardized residency programme (NHFPC 2014). Although this is a current recommendation, this transition toward a standardized training scheme will not be complete until 2020 (NHFPC 2014).

Another challenge is that a career in mental health services is stigmatized in China. Chinese psychiatrists report feeling professionally marginalized and geographically isolated (Yu *et al.* 2010). In comparison with other medical specialties, psychiatrists typically have a lower income and say they feel professionally stigmatized (Kleinman 1991; Phillips 2004). Consequently, very few professionals in China are willing to pursue a mental health career, leading to problems of recruitment and retention of psychiatrists and psychiatric nurses (Phillips 2004). Moreover, some 'psychiatrists' in China

are general medical practitioners that merely receive additional mental health training (Liu *et al.* 2013). Finding a way to provide incentives for medical professionals to specialize in mental health care and treatment continues to be a challenge.

Scope of practice. Psychiatrists and nurses working in specialty mental health hospitals are heavily relied upon to provide all of the professional mental health services in China (Liu *et al.* 2011b). According to the 'Mental Health Law' (Article 29) enacted on 26 October 2012 in China, psychiatrists are the only medical professionals that can render psychiatric diagnoses; no other professionals are allowed to diagnose mental illnesses (Chen *et al.* 2012). This is a significant impediment to providing mental health services because China has very few psychiatrists 'per capita', with rural areas having the lowest coverage (Xiao 2009; Liu *et al.* 2013).

Besides training more psychiatrists, a long-term task for China is to determine how to incorporate, train, accredit, provide continuing education for, ensure standards for supervision of and license different types of mental health professionals in order to successfully facilitate integrated and specialty care. In addition, the healthcare system would need to be redesigned to provide a broader range of mental health services.

In the USA, a variety of mental health providers (e.g. psychologists, social workers, marital family therapists) are engaged in mental health diagnosis, treatment and case management. Community mental health and primary care clinics have increasingly emerged as the major providers of mental health services, with psychiatrists providing medication management (Dixon and Schwarz, 2013). Psychologists in the USA practicing in underserved areas can obtain additional training and licensure to prescribe psychiatric medication (Drake and Latimer 2012). China offers no such options.

Because psychiatrists are the only medical professionals currently allowed to diagnose psychiatric patients in China, whether psychologists will be able to do so in the future is uncertain (Chinese Psychological Society 2012). In 1992, the Chinese Psychological Society and the Chinese Association for Mental Health recommended that national provisions for qualifications and professional standards for counsellors and psychotherapists be established (Chinese Psychological Society and Chinese Association for Mental Health 1993). Although to date this has not been accomplished, it is included in the 'National Mental Health Working Plan (2015–2020)'.

Another problem is regulation of 'psychotherapy' and 'psychological counsellors'. Psychotherapy is allowed only in medical facilities (Article 51). Psychological counsellors are not allowed to provide psychotherapy or diagnose or treat persons with a mental disorder (Article 76). Therefore, the infrastructure for where mental health treatment can take place (e.g. whether clinical psychologists can work independently in medical facilities without psychiatrists) is still unresolved (Chen *et al.* 2012). Most psychiatric care is provided in specialty mental health hospitals that are not co-located within general hospitals, which increases stigma and results in access barriers. Moreover, the 'Mental Health Law' did not provide a definition of 'psychotherapy' or 'psychological counsellor' (Chen *et al.* 2012). Such regulation is pragmatic in terms of protecting patients and ensuring quality of care, as many psychological counsellors in China have only non-standardized training courses with no supervised clinical experience (Chen *et al.* 2012); however, it also limits the number of providers that can deliver that care.

The role of social workers is also uncertain. Although the Ministry of Civil Affairs of the PRC reported that >20 000 undergraduates majored in social work, it has also been reported that,

currently, few social workers provide mental health services in China (Ministry of Health of the PRC 2008b; Ministry of Civil Affairs of the PRC 2012a). Graduates do not typically receive mental health training or, despite their training, do not become social workers because of lack of available jobs, low salaries and professional stigma (Ye and Gao 2012).

Increasing financial support

Globally, mental health spending varies dramatically across countries. For example, annual 'per capita' mental health expenditures in high-income countries (US\$44.84) are often many times greater than that of low-income countries (US\$0.59) (WHO 2011a). Moreover, high-income countries typically spend 5.1% of their total healthcare budget on mental health services, whereas low-income countries typically spend only 1.9% (WHO 2011a). In 2014, estimated 'per capita' mental health expenditure (excluding substance abuse) in the USA was US\$626, representing 7.0% of the US healthcare budget (Substance Abuse and Mental Health Services Administration 2008, 2014). In contrast, China's 'per capita' mental health expenditure is unknown, and China spent 3–4% of its total healthcare budget on mental health services in 2010 (WHO 2011b; Tse *et al.* 2013).

China's mental health system has three financial sources: government spending, public health insurance payments, and out-of-pocket expenditures. In general, the government funds the building of hospital infrastructure, supports the '686 Programme', and subsidizes public health insurance (Long *et al.* 2013). Mental health services costs are directly paid by public health insurance plans, as well as by out-of-pocket expenditures. Although China currently has universal healthcare coverage, disparities in insurance benefits, persistent financial burdens among patients, and the uncertainty of future funding may continue to be a problem that stymies efforts to create integrated care (The World Bank Group 2016).

Government spending. A long-term financial plan is necessary if China is to provide effective and sustainable integrated care (Kathol *et al.* 2010). The government promised to increase the mental health budget to 7–8% of the total national health budget by 2015 (Tse *et al.* 2013). If this promise is kept, it will represent a substantial commitment and budget increase given that developing countries that have few resources typically commit <1% of their healthcare budget to mental health (WHO 2001). In addition, the government has made significant financing efforts to support the '686 Programme'. From 2005 to 2014, funding of the programme from the central government increased from 6.86 million to 473.39 million yuan (accumulated funding: 943.41 million yuan). Funding from local governments for the programme increased from 1.36 million yuan in 2005 to 104.34 million in 2013 (accumulated funding: 321.31 million yuan) (see Figure 2).

However, although both China's 'Mental Health Law' and the 'National Mental Health Working Plan (2015–2020)' require that national and local government financially support mental health services (National People's Congress 2012; The State Council 2015a), neither the law nor the plan has specified an amount or the proportion of the government budget that needs to be allocated. This creates a significant implementation problem because shifts in priorities and changes in the economic environment of China and the healthcare system result in slow progress. With no guaranteed budget allocation, developing sustainable programmes and attempts at integrating care will be challenging, especially as government subsidies fluctuate. Only time will tell if these sustainable improvements

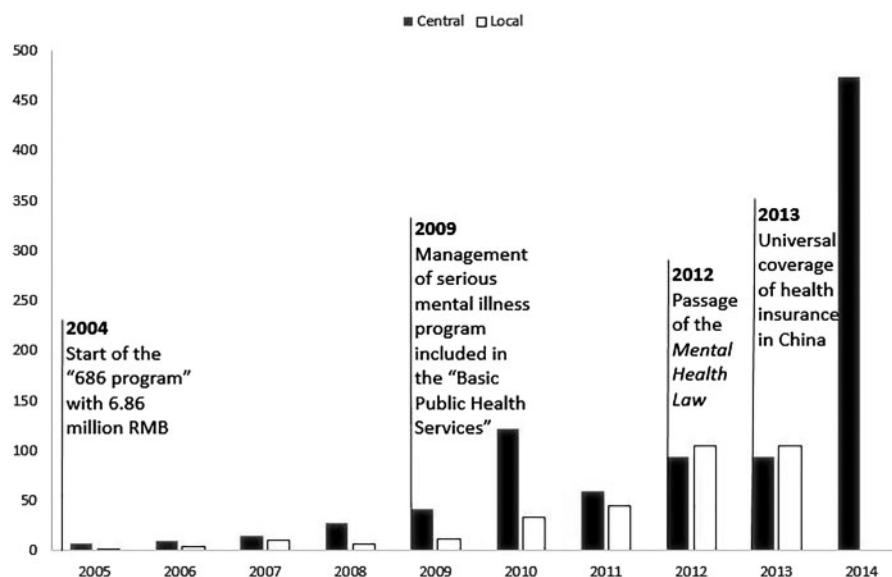


Figure 2. Funding from China's central and local governments for the 686 Programme

Note: The scale of a vertical axis: million yuan

Source of data: Ma (2015)

can increase the possibility of high-quality integrated care in China; however, without a budget that can support these efforts, implementation will continue to be slow.

Health insurance. Currently, China has three kinds of public health insurance: (1) the Urban Employee Basic Medical Insurance (which is paid for jointly by employers and employees to cover urban employees); (2) the Urban Resident Basic Medical Insurance (URBMI, which is largely subsidized by the government that targets vulnerable populations, such as the elderly, unemployed, self-employed and children in urban areas); and (3) the New Cooperative Medical Scheme (NCMS, which covers rural residents and is also largely subsidized by the government) (Yip *et al.* 2012). Mental health coverage provided by public health insurance varies by region and type of health insurance provided by local governments (Liang *et al.* 2011). Some regions have only limited benefits (e.g. high deductible, low reimbursement rate) for all outpatient services for both mental and physical conditions, while other regions have additional coverage for patients with diagnoses such as schizophrenia and depression (Liang *et al.* 2011).

In recent years, China's rapid expansion of health insurance increased the coverage rate and lowered the percentage of out-of-pocket health expenditures (Long *et al.* 2013). However, current public health insurance programmes (especially URBMI and NCMS) often do not provide adequate coverage for many major health conditions (e.g. cancer, serious mental illness). For example, the 2011 'National Health Services Survey' found that although 95.7% of people were covered by health insurance, only 12.9% of households had major medical expense coverage with an average share of inpatient costs reimbursed at only 46.9% (Meng *et al.* 2012). This low level of proportional reimbursement for severe medical problems has a potentially devastating effect on China's families. In 2013, the direct costs were estimated to be as high as US\$971.7 for an individual under both inpatient and outpatient psychiatric treatment (Xu *et al.* 2016). However, 57% of the 16 million people with severe mental disorders in China were estimated to live below the official poverty line (having a daily income of about US\$1

per day) (Zhu *et al.* 2014). Currently, only a small proportion of low-income patients receive free outpatient and inpatient treatment (The State Council 2015a). Improving affordability of care and reducing out-of-pocket expenditures has to be a priority if China is serious about improving access and decreasing impediments to care.

As mentioned earlier, according to the 'National Mental Health Working Plan (2015–2020)', by 2020 public health insurance plans and other funding resources will be combined to alleviate the financial burden of low-income patients with serious mental illness. However, it is still unknown how this plan will be implemented over time. Moreover, financial support for patients with non-psychotic disorders is also important for mental health services sustainability and reform. Currently, insurance pays for treatment with medication, but typically does not support psychotherapy, community recovery services, or preventive care. Estimating relevant costs and establishing mental health parity, rules for qualified care, and what disorders will be covered still need to be worked out as part of supporting integrated healthcare policies.

The USA was able to support psychotherapy by requiring parity of mental health services with services for physical health conditions. Although not ideal as access to psychotherapy may take time, nonetheless these services can be covered when justified. The US Mental Health Parity Act of 1996 and the Mental Health Parity and Addiction Equity Act of 2008 require equitable coverage for physical and mental illness (Barry *et al.* 2010). The question is whether it is possible and feasible for China to take a similar path in financing the cost of additional mental healthcare in the form of psychotherapy and behavioural health services. This would require development of a diverse set of mental health providers if such care could be reimbursed for services by nurses, psychologists etc. China's insurance plans would need to equate out-of-pocket expenditures for mental health services (e.g. copayments, deductibles, annual and lifetime limits) with those for physical healthcare (Barry *et al.* 2010).

Furthermore, the mental health system in the USA is primarily financed by employer-based private insurance, as well as by Medicare and Medicaid (Williams and Torrens 2007). The Affordable Care Act (ACA) also expanded Medicaid coverage in

some states and reduced financial barriers to accessing mental health services (Druss and Bornemann 2010). The ACA model encourages new financing methods to enhance the efficiency and continuity of care, such as adjusted capitation and bundled or episodic payments (Mechanic 2012). Although for many the ACA is not a perfect plan, it nonetheless was an important step in increasing access to mental health services and care in the US.

Addressing other China-specific issues

In addition to the challenges above, many other nation-specific issues unique to China have implications for high-quality mental health services.

Mental health in rural China. China faces challenges regarding the mental health of rural populations. Rural residents experience greater psychiatric burdens compared with urban residents, but have less access to care (Phillips 2013). Rural residents evidence higher rates of major depression (6.3 vs 5.7%), dysthymia (2.2 vs 1.5%) and alcohol dependence (2.6 vs 1.6%) than urban residents (Phillips *et al.* 2009). Although the rate of suicide in China has dropped dramatically from 17.65/100 000 in 1987 to 6.60/100 000 in 2008, rural residents still evidence greater risk for suicide than urban residents (Zhang *et al.* 2011). Specifically, in 2008 the suicide rate was 3.59/100 000 in urban areas, while 8.25/100 000 in rural areas (Zhang *et al.* 2011). This supports findings from research conducted in the late 1990s that found the rate of suicide to be 3.61 times greater in rural than in urban areas (Phillips *et al.* 2004). Phillips notes that the mental health delivery system in rural areas will face similar challenges as those of physical healthcare (e.g. lack of providers available, limited training and educational opportunities in these areas, resistance by urban providers to move to rural areas, financial difficulties, lack of insurance coverage, fewer medical and pharmaceutical facilities available) (Phillips 2013).

Migration. The rapid modernization and urbanization of China pose migratory challenges. The urban population nearly doubled from 26% in 1990 to 50.3% in 2010, mainly because of migration from rural areas (National Bureau of Statistics of the PRC 2011). In 2015, 277 million migrant workers moved to the city in search of financial, educational, vocational, and other opportunities (National Bureau of Statistics of the PRC 2016). Overall, evidence is mixed regarding the mental health status of migrant workers. In an exploratory meta-analysis of the prevalence of psychological symptoms in this subpopulation, greater severity was found in rural compared with urban residents (Zhong *et al.* 2013). A number of factors have been hypothesized about this increased risk, such as lower socioeconomic status, stress, family separation, long work hours, poor working conditions and the stigma and stereotyping of migrant workers as lower in social status (Li *et al.* 2006; Mou *et al.* 2013). Other studies found that migrant workers evidenced no differences in psychological symptomatology when compared with urban residents (Li *et al.* 2007). However, they usually have limited access to mental and physical healthcare because they are not allowed to register as urban residents in the 'hukou' registration system, even after many years of residence (Gong *et al.* 2012; Zhao *et al.* 2011).

In addition, migrant workers often leave their children in the care of grandparents, known as 'left behind children' and 'empty-nest elderly', respectively. Research indicates that these subpopulations experience greater risk for loneliness, loss of social support,

poor quality of life and depression (Liu and Guo 2007; Hu *et al.* 2008; Gao *et al.* 2010; Lv *et al.* 2012).

Social stigma and human rights. China also needs to address two overarching issues relevant to mental health globally: social stigma and the human rights of those with mental disorders. Social stigma functions as a substantial societal and cultural barrier to care and treatment in China (Yang *et al.* 2007; Yang and Kleinman 2008; Chen *et al.* 2013). Community education about mental illness is still quite limited, and misconceptions are widespread (Zhang 2008). Although both the 'Mental Health Law' and the 'National Mental Health Working Plan (2015–2020)' have policies to reduce stigma using mass media, additional efforts are necessary. In regard to human rights issues, China's recent 'Mental Health Law' makes it illegal to require patients to perform labor, to limit their communication with the outside world, or to use psychiatric admissions as punishment (Chen *et al.* 2012; National People's Congress 2012; Phillips 2013).

However, the healthcare and human rights consequences of the new legislation about involuntary admissions are in need of evaluation and monitoring to ensure it is working effectively. Some experts worried that the legislation could prevent patients from receiving timely treatment, while some were still afraid of their being institutionalized for reasons other than psychiatric conditions, such as family conflict (Sampson 2013; Shao *et al.* 2015). Moreover, experts were concerned that the '686 Programme' might fail to care for patients if it were primarily used as a means to keep society safe (Yu 2015). The Public Security Comprehensive Management Commission, now a dominant player in the '686 Programme', tends to manage patients with serious mental illness as a potential threat to public security. Thus, community mental health education and government reassurance of human rights protection are in need of monitoring.

Conclusions and recommendations

China has made significant strides in improving mental health services in the past decade, particularly recently with both the '686 Programme' and the 'National Mental Health Working Plan (2015–2020)'. Both represent significant strides for China and provide a unique opportunity for the country to revolutionize its mental health services and care provision.

However, despite these advances, China faces a number of implementation challenges, including the need for:

- precise estimates of potential care demands based on the actual prevalence of psychiatric disorders;
- increased mental health services through development of mental health and integrated care facilities;
- changes in the scope and system of inter-professional practice to better diagnose and treat mental disorders and create a larger mental health workforce;
- establishment of advanced training requirements among inter-professional groups to handle both serious and common mental disorders, treatment, diagnosis, and case management;
- increased financing and funding to expand mental health coverage in national programmes and services to treat non-psychotic disorders; and
- development of specific outreach and treatment protocols for rural, elderly, and other vulnerable subpopulations in China.

If steps were implemented to meet these challenges, the likelihood that the 'National Mental Health Working Plan (2015–2020)' will become a reality would greatly increase.

Finally, addressing barriers to monitoring and evaluation of legislated programmes is critical. One strategy is to ensure that as new policies and legislation are enacted, they include requirements and resources for evaluation. China may need to either include an evaluation unit in the government or contract with local evaluators to independently assess the effect of the legislation on accomplishing the goal of improved mental healthcare and services.

The following recommendations may be useful steps in addressing some of the challenges that mental health reform in China is experiencing:

Evidence building

1. Comprehensively evaluate the outcomes of the '686 Programme' and the implementation of the 'Mental Health Law': make the National System of Basic Information Collection and Analysis for Psychoses accessible and usable to researchers and establish a national surveillance system to collect data on all mental health disorders, types of care, and related expenditures. High-quality research is needed to assess the degree to which the many aspirational objectives outlined in policies and plans are met, as well as in-depth qualitative research to identify the reasons as to how and why they succeeded or failed to achieve these goals. Major targets of China's 'National Mental Health Working Plan (2015–2020)' and other mental health policies should be included in the annual performance evaluation of leaders in local governments, hospitals, and related agencies ([The State Council 2015a](#)).
2. Conduct additional research on mental health services needs for China's at-risk groups (e.g. children and youth, rural residents, the elderly, migrants, and ethnic minority subpopulations) ([The State Council 2015a](#)); develop methods to identify and screen elders at risk for suicide through the use of surveillance and/or health services data; and fund research into culturally adapting and tailoring mental health services for the diverse Chinese subpopulations to improve quality of care ([Hwang 2006](#); [Hwang et al. 2008](#)).

Capacity building

3. Strengthen community-based mental health services: build the capacity for gatekeeping of primary care providers by qualified professionals and health workers at primary care facilities; use appropriate incentives to improve referral systems (both from primary care to hospital settings and from hospital to primary care settings); set up a unified, seamless, standardized local and national system to measure and improve the quality of primary healthcare delivery, chronic disease management, and patient satisfaction ([The State Council 2015b](#)).
4. Build and maintain a well-trained and multidisciplinary inter-professional team of mental health professionals: create a licensing, accreditation, credentialing, and continuing education system for psychologists, social workers, and other allied mental health workers (e.g. marital family therapists) ([NHFPC 2017b](#)); allow psychotherapy to be conducted in nonmedical facilities or expand the definition of "medical facility" to include any institution or establishment that provides mental health treatment (e.g. schools, universities, places of employment, private practice offices); advance mental health training programmes at the undergraduate and graduate levels, and develop standardized psychiatry residency programmes; finally, reduce vocational stigma and increase financial compensation.

5. Expand and create specialty mental health infrastructure and facilities to address regional disparities in mental health resources, with particular attention to rural areas.

Delivery system reform

6. Integrate the mental health system with the general health system: improve mental health workforce co-location/collaboration and referral systems for psychiatric and medical comorbidities; increase insurance coverage for mental health services and psychiatric medications; and establish mental health parity laws ([NHFPC 2017a](#)).
7. Coordinate services for seriously mentally ill individuals and their families provided by different government agencies and organizations (e.g. China Disabled Persons' Federation).

Financial support

8. *Increase* funding by the government to finance mental health research; train and develop the mental health workforce; reduce the financial burden of care for patients with serious mental illness, as well as those with non-psychotic mental disorders; and develop community-based recovery programmes. Government budgets that specify a mental health allocation would facilitate investment in the mental health system.

Cultural change

9. Care for patients rather than view them as a potential threat to public security: the priority of *China's* mental health system should be keeping patients well rather than merely keeping the society stable. Actively implement the UN Convention on the Rights of Persons with Disabilities; protect confidentiality and privacy rights; and address such human rights issues as rules for hospitalization, institutionalization, and treatment of psychiatric patients, according to the 'Mental Health Law'. Establish employee laws and policies regarding psychiatric disability, worker compensation and leaves of absence due to psychiatric impairment.
10. Fight against stigma, using nationwide mental health stigma-reduction campaigns and mass and *social* media for mental health education programmes, and institute penalties for discrimination based on mental health status ([The State Council 2015a](#)). The stigma of mental illness not only impedes patients needing help, but also cripples development of the mental health workforce by discouraging young people from pursuing careers in mental health.

In summary, with the release of the 'National Mental Health Working Plan (2015–2020)', China has signaled its commitment to mental health reform and its aim to embrace WHO's 'Comprehensive Mental Health Action Plan 2013–2020' (WHO 2013) to provide integrated and responsive mental health services in community-based settings. China's mental health system is now rapidly expanding because of strong political commitment, substantial increases in government investment, and scaling-up of professional training ([Liu et al. 2011b](#); [Ma 2015](#)). Although still in need of evaluation, the success of this reform is nonetheless an excellent step in revolutionizing mental health services in one of the world's largest developing nations. In the midst of these changes, now is a good time to seriously consider adding the goal of integrated care ([Meng et al. 2015](#); [The World Bank Group 2016](#)).

As China rebuilds its system of mental health services, the next few years offer a window of opportunity to achieve these goals, as well as a crossroads for additional reform, considering the

challenges we have noted. As China's economic growth is predicted to slow down, economic strategies are advocated specifically to facilitate meeting increased spending for public services (The Organization for Economic Co-operation and Development 2016). Given the burden of mental health disorders and their contribution to lost productivity, mental health reform can further promote health and increase China's ability to create a stronger, healthier, more productive country.

China's commitment to making improved mental health services a priority portends well, not only as a building block to increased mental health, but also to the economic health of the country.

Supplementary Data

Supplementary data are available at HEAPOL online.

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