Mental Health Care in China: Providing Services for Under-treated Patients

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Introduction: The Significance of Mental Health in China

World Health Organization (WHO) has projected that mental diseases will account for 15% of total global disease burden by 2020. People with mental problems are more likely to be involved in weapon uses and criminal activities. Economic costs (i.e., negative externality) for family members and community residents are also high. Also, many suicide cases are associated with mental health as it is a result of under-treatment of mental diseases. Currently, mental health is a major public health issue in China, given its huge economic and social impacts.

The one-month prevalence rate of any mental disorder* for adults in China was about 17.5% from 2001 to 2005 (1). This rate indicates that over 170 million adults are suffering from at least a type of mental disorder in China. Of these patients with mental disorder, over 158 million adults have never received any treatment. It is also estimated that the number of people with serious mental diseases in China is 16 million.

* The one-month prevalence rate here refers to people who have mental disorder at any time during a month (WHO, World Health Report).
Economic cost for mental disorder in China is high. For depression alone, the cost was estimated to be over RMB50 billion in 2002 (2), including direct treatment cost, loss of productivity as well as costs imposed on family members. In the labor market, the likelihood of people with mental disorders being employed is 40% lesser than people with normal mental health status. Income is also estimated to be 30% lesser for the former than the latter (3).

Mental diseases can are associated with high suicide and crime rates. Suicide rate in China is estimated to be between 20 and 30 per 100,000 people, which is very high by international standard and suicide is the most significant reason for death between 19 and 34 years old in China (4). There are over 10,000 criminal cases involving patients with mental disorder every year.*

The utilization of mental health care in China has increased rapidly in recent years. The demand for mental healthcare is expected to increase even further in the future. However, there are constraints from the supply side including the lack of qualified doctors for mental health care and shortage of infrastructure. The increasing gap between the demand and supply of mental healthcare is one of the major reasons for large number of under-treated and under-reported patients with mental disorders.

Social stigma, rooted from the moral and political context, is another reason for under treating and under reporting of mental disorder in China. After disclosing their mental health condition, patients with mental disorders usually have difficulties to find a job.

The paper reviews the current condition of mental healthcare in China and we propose that the most urgent issue is the undersupply of mental health service. Since mental health is an important part of public health, the role of government is pivotal to providing and financing mental health care. Current government input for mental health only accounts for less than 1% of total health expenditure. According to the 12th Five-Year Program (FYP), the Chinese government will increase inputs for both the prevention and treatment of mental health care.

A draft of the National Mental Health Law, which was initiated in 1985, has yet to be endorsed by the National People’s Congress. The purpose of the legislation is to promote mental health, improve health service quality as well as protect patients with serious mental disorders. However, there are debates over financial coverage of patients with mental diseases and relevant regulations for involuntary admission of patients with mental disorder after releasing the draft.

Currently, the major concern for China is the capacity constraint of mental healthcare provision. There are some remaining issues to be addressed including the opportunistic behavior of both patients and suppliers of mental health care, the shortage of mental healthcare provision for vulnerable groups such as youth and migrant workers, and the high share of involuntary admitted patients.

The rest of paper is arranged as follows. In the next section, the significance of mental
healthcare in China is highlighted. Demand and supply condition for mental healthcare respectively are discussed in the following two sections. The role of state is very important to address the undersupply of mental health services. We are going to elaborate this point in the following section. Several concerns for future development are discussed in the last section.

**Mental Health in China as the Most Important Public Health Issue**

Mental health is defined by WHO as “[t]he successful performance of mental function, resulting in productive activities, fulfilling relationships with other people, and the ability to adapt to change and to cope with adversity; from early childhood until later life, mental health is the spring board of thinking and communication skills, learning, emotional growth, resilience, and self esteem.” (6).

Accordingly, mental health is regarded as a public health issue for several reasons. First, mental disorders are associated with criminal activities (7). Psychiatric patients are more likely to be linked to weapon uses and violent behavior. Second, huge economic and social costs are imposed on other members in the community including family and colleagues in the workplace. Family and community members need to take care of people with mental disorders by providing efforts and spending resources. Third, suicide is the major public health issue in the world. Mental disorders such as depression and schizophrenia are leading reasons for suicide (8).

In 2000, mental diseases accounted for 12% of disease burden in the world, and are projected to hit a high of 15% in 2020. It is estimated that one fourth of the world
population will suffer from a mental disorder at some time in life (8). In short, mental health is a public health issue given that social costs for mental disorder are much higher than private cost.

Mental health emerges as one of the most significant public health issues in China. It is estimated that between 2001 and 2005, the one-month prevalence rate of mental health for adults in China was about 17.5%. Of the estimated 170 million adults who have a mental disorder, over 150 million have not received any treatment (1). About 16 million of these patients are suffering from serious mental diseases.*

Economic cost of mental diseases is also very high. The likelihood of people with mental disorders being employed is 40% lesser than people with normal mental health status. Income is estimated to be 30% less for people with mental disorders and those without (3). According to a speech by the Minister of Health Chen Zhu in 2011, among all diseases, mental disease outranked the rest in terms of disease burden in China (i.e. it accounts for 20% of total disease burden).† The cost of depression was estimated to be over RMB50 billion in China in 2002, including direct treatment cost, loss of productivity as well as costs imposed on family members (2). In Shanghai, depression was ranked third in terms of disease burden in 2008. *

Apart from economic cost, people with mental diseases are also associated with

* The recent guideline from the Ministry of Health (April 2012) has listed serious mental illnesses as mainly including schizophrenia, schizoaffective disorder, bipolar disorder and mental retardation (see also Beijing Review, 13 April 2012).
* Shanghai Blue Book for Society 2010.
criminal activities. In 2004, a 52 year-old security guard of a kindergarten affiliated with Peking University in Beijing was diagnosed with serious mental illness in 1999 when he killed a child and stabbed another 17. In 2005, a man with mental disorder in Ganzhou city, Jiangxi province, killed three people who were family members and residents in a community. There are over 10,000 crimes associated with patients with mental disorder every year.

Mental health for youth is also an important concern. The prevalence rate of mental diseases among primary school and middle school students is between 21% and 32%, much higher than the international average of about 15%-20%. It is estimated that at least 30 million people under 17 years old have been diagnosed with mental disorders in China. Over 200 million migrant workers in China consist of another vulnerable group. Migrant workers, who are away from their family and have a heavy workload, are vulnerable to mental disorders. A recent self perception survey shows that over 40% of migrant workers have shown symptoms of mental disorder in Guangzhou.

Many suicide cases in China are believed to be highly associated with mental disorders. According to a research, 63% of suicide cases in China show symptoms of mental disorder (4). Although a decreasing trend, suicide rate in China is estimated to be


*China Youth Daily, 28 April 2011.*

between 20 and 30 per 100,000 people, which is still very high by international standard. It is estimated that about 200,000 suicide cases* and over 2 million suicide attempts occur every year in China. Currently, suicide is the most significant cause of death for people between 19 to 34 years old in China (4).

**Increasing Uses of Mental Health Care**

The utilization of mental health care is low in the pre-reform era as mental health is believed to be mainly a product of a capitalist society. People with mental disorders were usually regarded as having incorrect political attitude (9). Western treatment theory and practice for mental diseases were replaced by political education. Mutual assistance among patients or through more intensive study of Mao Tse-Tung’s work was advocated (9). In many cases, people with mental disorder usually do not realize the existence of mental diseases. Their visits to the doctor were usually a misinterpretation of mental disorder as physical pain. Also, there were not many psychiatrists before the 1980’s. In two surveys respectively conducted in 1982 and 1993, only 0.5 % of people were diagnosed with depression, which was much lower than the expected rate (i.e. 35 times lesser than that in the US) (10).

Since the 1980’s, the central planning system has been dissolved and the safety net for health care weakened. In particular, the utilization of mental health care services has decreased due to lower financial coverage by the government. In later 1990’s, over 40% of residents in urban areas and around 80% of residents in rural areas were not covered.

* Yangcheng Evening News, 13 September 2010.
by any insurance scheme (11). It is not surprising then that bed utilization rate in mental hospitals was reduced from 98.2% in 1985 to 73.6% in 2000. Average length of stay in mental hospitals was also reduced from 92.2 days in 1985 to 52.4 days in 2000 (11).

Since the 2000’s, after massive economic and social changes, the prevalence of mental diseases has been increasing. The incidences of mental diseases had increased from 27 per 1,000 in 1950’s to 175 per 1,000 in 2000’s.* Beds utilization rate increased from 73.6% in 2000 to 96.4% in 2010 (i.e. Figure 1). This high utilization rate suggests an increasing shortage of mental healthcare services.

--- Figure 1 approximately here ---

Many patients receiving mental healthcare are involuntary admitted, which refers to a situation where autonomy of patients themselves are violated. Patients can be admitted involuntarily by a hospital under the request of family members, their work unit as well as local government. Two major types of patients with mental disorders are admitted to the hospitals involuntarily and government budget will cover expenses for provision of services for these patients. First, patients satisfy the “three nos” classification (i.e., no home, no job and no accommodation) stipulated by hospitals managed by the Ministry of Civil Affairs. Second, mental health patients with “criminal records and the disposition to violence” are admitted to forensic psychiatric hospitals run by the

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* *China Daily*, 3 February 2012.
* By 2010, there were 24 such hospitals in China.
Ministry of Public Security. *

Unlike most western countries where the share of involuntary admission is less than 20% of total number of patients, it is estimated that over 80% of inpatients admissions were involuntary in China in 2002 (see Table 1) (12).

--- Table 1 approximately here ---

Overall, the admission number of mental patients to hospitals (including voluntary and involuntary admission) had increased by 12.4% in the recent three years. As Figure 2 shows, in 2011, the number of inpatients was over 1.2 million. The growth rate is close to the 13% growth rate for overall inpatient services. Figure 3 shows that the growth rate of outpatients for mental healthcare increases at a similar rate of 12.4%, which significantly outpaces the 8% growth rate for overall outpatient services. The volume of outpatient visits for mental healthcare reached 27 million in 2011.

--- Figure 2 approximately here ---

--- Figure 3 approximately here ---

* Due to limited capacity of hospitals managed by the Ministry of Civil Affairs and the Ministry of Public Security, many hospitals under the Ministry of Health also accept involuntary admitted patients since hospitals under the Ministry of Civil Affairs are short of resources. The number of beds of psychiatric hospitals managed by the Ministry of Civil Affairs was less than 40,000, but the number of beds in the psychiatric hospitals at the Ministry of Health was about 200,000 in 2010. See China Newsweek, 23 March 2009.
However, inpatient and outpatient services provided are not even enough to cover the patients with serious mental disorders (i.e. 16 million), let alone handle the 170 million people with mental disorders. Recent researches suggest that the demand for healthcare service can increase with growing income, education level as well as expanding urbanization and industrialization (13, 14). With greater awareness of the importance of mental health, the utilization of mental healthcare services is likely to increase in the future.

**Capacity Constraint for Mental Healthcare Service Providers**

Before 1949, there were only five psychiatric hospitals staffed by around 60 psychiatrists, an arrangement mostly initiated by western missionaries (15). Since the 1950’s, various types of psychiatric institutions have been built including day and night hospitals, community follow-up programs, home care services, etc (9). In 1985, the number of mental healthcare institutions was 320 with 64,000 beds. * The number of institutions further increased to over 1,100 by 2006.

The philosophy of treating patients was also changing. In pre-reform China, mental illness was regarded as a characteristic of a capitalist society and the number of people suffering from mental illness was expected to decrease in the socialist regime (16). Public health inputs thus focused on sanitation and infectious diseases rather than on mental health (10). After the 1980s, the treatment of patients with mental disorders has largely followed practices of western countries.

Figure 4 shows that the number of beds was over 210,000 in 2011 and the growth in the number of beds was about 9% in the recent five years. Yet, it cannot fully meet the demand of patients. There is about one bed per 100 patients with mental diseases and 15 beds per 100,000 people. Compared to international standard, the capacity to treat patients in China was above the world median number of 8 per 100,000 in 2011 but much lower than that of advanced countries. For example, there were a respective 73.3 and 150 beds per 100,000 people in the US and Germany in 2006 (17). In addition, for psychiatric care, the current bed utilization rate is over 96% and average length of stay for inpatients is about 54 days in China, which is much longer than the national average of 8.9 days for all diseases (11).

--- Figure 4 approximately here ---

Apart from the constraints of physical infrastructure such as beds in hospitals, human resource is another limitation. Currently, there are less than 20,000 registered psychiatrists in China. This makes it 1 psychiatrist per 900 patients and 1.46 psychiatrists per 100,000 people, which is about one third of the international average of 4.15 psychiatrists per 100,000. The quality of psychiatrists is another issue. For example, in 2007, less than 20% of psychiatrists in Sichuan province had completed tertiary education.

The increasing demand for mental health care has further put a strain on the provision of

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* "China Daily," 3 February 2012.
* "China Daily," 3 February 2012
* "Caixing" magazine, 7 July 2011.
mental healthcare services. Currently, it is estimated that over 70% of patients with serious mental disease did not receive proper treatment in China.\(^*\) Compared to international experiences, the under-treatment issue is a serious concern. For example, 67%, 66% and 52% of Germans, Dutch, and Canadians with serious mental illness were treated each year (17).

**Providing and Financing Mental Health Care: The Role of the State**

Given that mental health is a public health issue, the role of the state will be pivotal for providing and financing mental healthcare services. In OECD countries, the expenditure on mental healthcare accounts for between 5% and 14% of total health expenditure (17). In the US, the share was about 7.5% in 2003 while in the UK, the share was about 14% in 2002 (17). The world median for mental health expenditure as a share of total health expenditure is 2.82% (18).

Internationally, most mental healthcare expenditure is paid by the government. For example, the Australian government was responsible for over 90% of its mental healthcare expenditure in 2005, which accounted for about 6.8% of total health expenditure.\(^*\) In the US, 58% of mental health expenditure in 2003 was covered by the government, which accounted for about 4% of health expenditure. For China, the government input is definitely lacking. In 2007, total government expenditure on mental health care was RMB5.7 billion, constituting less than 1% of health expenditure (19). Government grant for mental health providers only accounted for 2.7% of total

\(^*\) *Guangming Daily*, 11 July 2011.

government grant for service providers or about 0.3% of total health expenditure in 2010 (11).

The legislation for mental health care, which is important for protecting and treating patients with mental disorder, is still in its draft stage in China. A total of 109 countries have mental health legislatures which cover issues including “access to mental health care and other services, quality of mental health care, admission to mental health facilities, consent to treatment, freedom from cruel, inhuman and degrading treatment, freedom from discrimination, enjoyment of a full range of civil, cultural, economic, political and social rights, and provisions for legal mechanisms to promote and protect human rights” (18).

Several cities including Shanghai, Beijing and Ningbo have released local regulation for mental healthcare recently. However, China is still waiting for the first national legislation for mental health care, which has been drafted since 1985. In June 2011, a draft for National Law of Mental Health was released. This legislation was still pending to be approved by the National People’s Congress by July 2012.

The delay in the legislation before 2009 is largely attributed to the difficulty in allocating responsibilities to the many government ministries and departments involved, including the Ministry of Health, Ministry of Public Security, Ministry of Finance, Ministry of Civil Affairs as well as China Disabled Persons Federation.

Two of the most debatable issues for the recent drafts of this legislation are financial coverage for patients and the involuntary admission of patients with mental diseases. First, the debate centers on the extent mental health services are to be financed by the government. In particular, in the draft, mental healthcare services will be provided free to patients with serious mental diseases. Given different local fiscal capacities, a uniform requirement for financial coverage of patients with mental disease is difficult.

The criterion for involuntary admission of patients with mental disorder is another major concern. Under current standard for involuntary admission, a patient can be involuntarily (compulsorily) admitted to mental hospitals under the request of family members, their work unit as well as local government, providing that the doctor thinks hospitalization is necessary. Admission is a pure medical decision and judicial endorsement is not necessary. Such regulation has been criticized by many legal scholars. Legally, involuntary (compulsory) admission of patients without a judicial process violates basic human rights and can be abused. Medical professionals, however, believe that the long judicial process only prevents patients with serious mental disorders from obtaining proper treatment and such under-treated patients may be a threat to public security in the community.

To meet these two challenges, WHO has made two major policy suggestions (8). First, mental health care provided in primary care clinics and community should complement

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and be substitutable for hospital care (17). The way to allocate responsibility between hospital and community care may depend on local institutions. There are great variations in the allocation of resources between hospital care and primary care even for similar levels of financial resources. For France and the US, for instance, the share of mental health care in their GDP is very similar; France spent 80% of mental health expenditure on inpatient service and the US spent 36% (17).

Second, expedite on the endorsement of national legislation on mental health care. Legislation is the key to maintaining a “significant and sustainable” action for patients with mental diseases. In other words, national legislation is a way to institutionalize the allocation of government budget for mental health care.

The draft for the guideline on National Mental Healthcare System between 2008 and 2015 had been released by 17 ministries including the Ministry of Health, Ministry of Finance and Ministry of Labor and Social Security in 2008.* According to this guideline, the government will have to increase its inputs for mental health care. By 2015, 60% of primary schools and middle schools in urban areas should have mental health clinics, and 85% of counties or cities should provide community level mental healthcare service. Preventative efforts should be set as a priority and most services will be provided from the community level.

Recent round of health reform initiated in 2009 highlighted the role of the government in financing and providing public health services including mental health care. The

recent 12th FYP (2011-2015) has also included a guideline submitted by China Disabled Persons Federation for the prevention and treatment of patients with mental diseases.\* The guideline stipulates prevention and treatment efforts for 7.8 million patients with mental diseases, with coordination from different government departments, healthcare service providers as well as other social organizations. Basic public health service will be provided to patients with mental diseases. The government will maintain a mental health profile and conduct mental health campaigns (at no less than RMB 0.15 per capita and RMB 0.5 for economic advanced regions).

**Concluding Remarks**

In spite of the efforts made by policy makers, several issues remain to be addressed. First, apart from the accessibility issue due to the supply constraint and increasing demand, one outstanding issue is the potential opportunistic behavior of patients as well as service providers after the increase in financial coverage for mental health care.

Since April 2012, patients with serious mental diseases have been granted more reimbursement from social health insurers.\* The better financial coverage of mental health services and drugs for patients will lead to an increase in demand for mental health service. According to studies conducted by Rand Corporation, the price elasticity of demand for mental health care (i.e. the price sensitivity of demand) is much higher than the elasticity for healthcare service in general (i.e. 0.8 versus 0.3) (17). It implies that a percentage reduction for out-of-pocket payment will increase 0.8 percent of

consumption of mental healthcare services. This raises the demand side and further squeeze the already under-supply of healthcare services.

Psychotropic drug expenditure is expected to increase even further with better financial coverage. Psychotropic drugs including antidepressants are used in the treatment of mental diseases. The current pricing policies for drugs allow a 15% price markup by hospitals.

A tablet of anti-depression drugs such as imported Prozac costs about RMB11, which is about 30 times more expensive than domestically made drugs (i.e. RMB0.35 per tablet). It implies high profit margins for service providers and psychotropic drug producers (10). Providers therefore have strong incentives to prescribe imported drugs for patients. The health expenditure for both the patient and government is expected to increase more rapidly after better insurance coverage. The government may thus need to address the supply side, in particular, the infrastructures and incentives of service providers.

Second, the current guideline for mental health care highlights the importance of community care. There are two policy implications for mental care at the community level. On the one hand, government may take effort to develop delivery services such as case management programs at the community level. On the other hand, more communication and patient education can be provided at the community level to reduce the social stigma to encourage patient as well as family members to seek for help and recognize symptoms. However, migrant workers as a major vulnerable group for mental diseases may not be effectively covered by regular community care as well as social
health insurance, given their changing residential status. This is another area yet to be addressed.

Third, the extraordinarily high share of involuntary admission of patients has raised some concerns. Some service providers may be incentivized by the higher allocation of hospital budget on per capita basis to admit more patients (12). Some governments on the other hand may also admit people with a tendency to commit crime to maintain social stability since hospitalization of these people will save (litigation) cost.* For both cases, the procedure for admission and discharge would be regulated with the passing of the national Mental Health Law.

Reference:
11 Ministry of Health, China Health Statistical Yearbook, Various years
TABLE 1 SHARE OF INVOLUNTARY ADMISSION TO ALL MENTAL HEALTHCARE INSTITUTIONS

<table>
<thead>
<tr>
<th>Country</th>
<th>Ratio of involuntary admission (%)</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denmark</td>
<td>4.6</td>
<td>2000</td>
</tr>
<tr>
<td>Belgium</td>
<td>5.8</td>
<td>1998</td>
</tr>
<tr>
<td>France</td>
<td>12.5</td>
<td>1999</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>13.2</td>
<td>1999</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>13.5</td>
<td>1999</td>
</tr>
<tr>
<td>Germany</td>
<td>17.7</td>
<td>2000</td>
</tr>
<tr>
<td>Sweden</td>
<td>30</td>
<td>1998</td>
</tr>
<tr>
<td>China</td>
<td>81.5</td>
<td>2002</td>
</tr>
</tbody>
</table>

FIGURE 1  BED UTILIZATION RATE IN MENTAL HOSPITALS

Source: China Health Statistical Yearbook, various years.
FIGURE 2  NUMBER OF INPATIENTS WITH MENTAL HEALTH DISORDERS IN CHINA (IN 1,000)

Source: China Health Statistical Yearbook, various years and Chinese Health Statistical Digest
FIGURE 3  NUMBER OF VISITS BY OUTPATIENTS WITH MENTAL HEALTH IN CHINA (IN MILLION)

Source: China Health Statistical Yearbook, various years and Chinese Health Statistical Digest 2012.
FIGURE 4     NUMBER OF BEDS FOR MENTAL HEALTH CARE IN HOSPITALS IN CHINA (IN 1,000 UNITS)

Source: China Health Statistical Yearbook, various years and Chinese Health Statistical Digest 2012.