ISLAMIC REPUBLIC OF IRAN

Nationwide integration of mental health into primary care

Case summary

Since the late 1980s, the Islamic Republic of Iran has pursued full integration of mental health into primary care. At village level, community health workers or *behvarzes* have clearly-defined mental health responsibilities, including active case-finding and referral. General practitioners provide mental health care as part of their general health responsibilities and patients therefore receive integrated and holistic services at primary care centres. If problems are complex, general practitioners refer patients to district or provincial health centres, which are supported by mental health specialists. The Islamic Republic of Iran's strong ties between its medical education and health sectors (originating from the Ministry of Health and Medical Education) have facilitated the training of health workers around the country. Further, mental health is regarded as an integral part of primary care, and therefore is treated similarly to other conditions that are included in the primary care package of services.

An important feature of the Iranian integration of mental health has been its national scale, especially in rural areas. A significant proportion of the country's population is now covered by accessible, affordable and acceptable mental health care.

1. National context

The Islamic Republic of Iran is one of the most populous countries in the region (see Table 2.24), with a large proportion of young people and one of the largest refugee populations in the world.[1] Its official language is Persian. The country is rich in human and natural resources. It is OPEC's second largest oil-producing member and has among the largest gas reserves in the world.[1]

Table 2.24 Islamic Republic of Iran: national context at a glance

Population: 69.5 million (67% urban) [a]
Annual population growth rate: 1.1% [a]
Fertility rate: 2.1 per woman [a]
Adult literacy rate: 77% [a]
Gross national income per capita: Purchasing Power Parity International $: 8050 [a]
Population living on less than US$ 1 per day: < 2% [a]
World Bank income group: lower-middle-income economy [b]
Human Development Index: 0.759; rank 94/177 countries [c]

Sources:

[a] World Health Statistics 2007, World Health Organization (http://www.who.int/whosis/whostat2007/en/index.html, accessed 9 April 2008).

[b] Country groups (http://web.worldbank.org/WBSITE/EXTERNAL/DATASTATISTICS/0,,contentMDK:20421402~pagePK:64133150~piPK:64133175~theSitePK:239419,00.html, accessed 9 April 2008).

[c] The Human Development Index (HDI) is an indicator, developed by the United Nations Development Programme, combining three dimensions of development: a long and healthy life, knowledge, and a decent standard of living. See Statistics of the Human Development report. United Nations Development Programme (http://hdr.undp.org/en/statistics/, accessed 9 April 2008).

The Islamic Republic of Iran is confronted with relatively high levels of inequality and income poverty[2] and has high unemployment, and low labour force participation by women (11% versus 76% for men).[1] The country is relatively advanced in health and education.[3]

2. Health context

Health indicators for the Islamic Republic of Iran are summarized in Table 2.25. Over the last 20 years, the country has achieved remarkable progress in the health sector, including the establishment of an elaborate system of health networks to ensure provision of primary care services, which has contributed to significant improvements in various health indices.[4] Disparities remain in accessing health services: populations residing in less-developed provinces have limited access and availability of health services, and poorer health indices;[5] more than 8% to 10% of the population at national level is not covered by an insurance scheme and must pay all health expenses out-of-pocket.

Table 2.25 Islamic Republic of Iran: health context at a glance

Life expectancy at birth: 68 years for males/73 years for females
Total expenditure on health per capita (International $, 2004): 604
Total expenditure on health as a percentage of GDP (2004): 6.6%

Source: World Health Statistics 2007, World Health Organization (http://www.who.int/whosis/whostat2007/en/index.html, accessed 9 April 2008).

The Islamic Republic of Iran is undergoing a demographic and epidemiological transition, which will have a significant effect on the evolution of the patterns of morbidity and mortality in the future. An ageing population and the rise in chronic, noncommunicable diseases represent major health challenges.[4] Both morbidity and mortality due to communicable diseases

have decreased. Maternal and child health have improved. Noncommunicable diseases and accidents have increased, with cardiovascular disease, hypertension, degenerative and stress-related disorders contributing to 46% of adult deaths, and accidents accounting for 15% of adult deaths.[4, 6] (This is compared with communicable disease-related deaths, which caused only 2% of deaths in 1999.[7])

The strong commitment of the Ministry of Health and Medical Education in prioritizing health sector reform, together with the government's control of pharmaceutical pricing and quality assurance and its national capacity to produce most basic medicines, are major strengths and opportunities.[4]

Mental health

The point prevalence of mental disorders in the Islamic Republic of Iran is estimated to be around 22%,[4, 8] affecting more women than men[4] and having increased considerably according to a recent national survey.[5, 9] An epidemiological study of substance abuse estimated the number of opioid users at more than 3.7 million (i.e. 5% of the population), among which 2.5 million suffer serious social and health problems and at least 1.1 million are dependant.[5, 10] An increasing proportion of drug users are switching from opium to heroin and from smoking to injecting, thereby increasing their risk of contracting HIV/AIDS and hepatitis.[5]

A National Mental Health Programme was formulated in 1986 and adopted by the Ministry of Health and Medical Education in 1988.[11] Strong links between mental health professionals and senior ministry administrators were central to the formal adoption of the programme and its subsequent implementation. A national policy and plan for mental health has been in place during the last 19 years, and was recently amended to expand and improve the programme in urban areas.[12] A disaster/emergency preparedness plan for mental health is available and was revised in 2004, following the Bam earthquake.[12]

There is a lack of comprehensive and coherent mental health legislation. Many areas such as involuntary hospitalization are not addressed in current laws.[7]

3. Primary care and integration of mental health

The basic unit of health provision in rural areas is the health house.[13] Each health house serves a population of 1000 to 1500 people (usually 2 or 3 villages), and is within a one-hour walk for its catchment population. At least one male and one female *behvarz* (a local person from the same village) work in each health house. *Behvarzes* have a general education up to secondary school level and two years training in health care, including one week of formal training in mental health. Most also attend refresher courses on health issues. They are a stable presence, remaining in the same health house throughout their careers; hence they acquire a deep insight and knowledge of the health of their catchment population.

The next level of care is the health centre (urban or rural), each serving a population of 5000 to 15 000 people. The 2322 rural health centres are staffed by up to three general practitioners, one disease control technician, one family control technician, and in some cases one nurse. General practitioners are highly mobile; they typically stay between 6 and 18 months in a rural health centre before moving elsewhere. The rapid turnover of general practitioners has

been a major impediment to successful implementation of integrated programmes. All cities have urban health centres. They are usually larger than their rural counterparts and serve a population of around 12 000 people. Staffing and responsibilities are similar to those of rural health centres.

At the central level, 317 district health centres typically serve populations of between 20 000 and 200 000 people. In some populated areas, district health centres serve up to one million people. The district health centre is the smallest autonomous unit in the Iranian health service, and is responsible for the planning, management, implementation, and supervision of activities within its district health network of rural and urban health centres, and health houses.

Mental health

Nationwide expansion of primary care during the 1980s provided a good opportunity for integration of other health programmes.[13] In 1989, mental health was integrated as a component of primary care, long before many other diseases.

In some districts, one psychiatrist is available to provide specialist mental health services. Otherwise, a specially-trained general practitioner provides mental health coverage. The district health centre accepts mental health referrals from urban and rural health centres, but sometimes refers difficult cases to the provincial health centre. There are 40 health centres in 30 provinces – some provinces have more than one medical university, which are responsible for both health services in the catchment area and medical education. The mental health units in these services are staffed by one psychiatrist and one psychologist, who are responsible for the technical, organizational, and administrative management of the services in the periphery. There are also specialist mental health services, mostly based in psychiatric hospitals or psychiatry wards of general hospitals, that provide mental health services to patients referred from district health centres and other urban services.

4. Best practice

An important feature of the Iranian integration of mental health has been its national scale, especially in rural areas. This best practice example therefore examines the nationwide growth of the service and the factors that made this possible.

Description of services offered

General practitioners in rural and urban health centres diagnose mental disorders and provide treatment as needed and if within their level of training and expertise. They provide mental health care as part of their general health responsibilities and patients therefore receive integrated and holistic services. General practitioners accept referrals from *behvarzes,* who have been trained to identify mental disorders. If problems are complex, general practitioners refer patients to district or provincial health centres. General practitioners also provide training to health workers at lower levels of the health system, such as disease control technicians and *behvarzes.*

Health workers at the district level include a mental health specialist, typically either a psychiatrist or a general practitioner who has undergone speciality training in mental health. Districts typically have 5 to 10 inpatient psychiatric beds in a general hospital.[14]

At village level, *behvarzes* have clearly defined mental health responsibilities, including community education, active case-finding and referral, follow-up, and maintenance of patient registries.

Mental health services in primary care are responsible for identifying and treating severe mental disorders, common mental disorders, epilepsy and mental retardation; among these conditions, severe mental disorders and epilepsy have been prioritized. In regions where suicide rates are high, practitioners receive further training on depression and suicide. The primary care approach, particularly in rural areas, is based mainly on the delivery of psychotropic medicines. The capacity of the service to provide counselling or other non-pharmaceutical interventions has been limited.

Process of integration

Community-based mental health services were introduced to the Islamic Republic of Iran in the 1970s, by the Society for Rehabilitation, which aimed to deinstitutionalize mental health services in urban areas. This society was dissolved in 1980; its training and research sections subsequently were joined to form the Tehran Psychiatric Institute. This institute became an important driver of decentralized mental health care in the country as a whole.

In the 1980s, two innovative and strategically important steps were taken that significantly advanced primary care for mental health. Interestingly, neither was mental health specific. First, health services and medical education were merged through the formation of the new Ministry of Health and Medical Education. This created a structure whereby primary care workers could receive ongoing support for mental health work. Second, a primary care network was established, reaching most remote parts of the country. As part of this network, a referral system was developed between the different levels of care, from health houses to specialized university facilities.

The integration of mental health into primary care was particularly challenging because initially, not everyone agreed that mental health was a real health issue. In addition, some were sceptical as to whether primary care practitioners would be capable of providing mental health care. An important turning point happened in 1985, when the WHO Eastern Mediterranean regional adviser for mental health visited the country. He shared an Indian experience of integrating mental health into primary care, after which a small national committee, composed mainly of senior psychiatrists, was established. The committee drafted the Iranian National Mental Health Programme, for which mental health integration was the main strategy. Importantly, several senior leaders were supportive of the strategy, including the Minister of Health, the Executive Director for the development of the National Health Network, and senior advisers.

Piloting the approach to integrate mental health into primary care

In 1986, before the national programme was approved officially, a pilot project was launched in Shahr-e-Kord by the Director of the Tehran Psychiatric Institute and other prominent psychiatrists, with support from the Ministry of Health. The pilot project included 22 villages with a population of 28 903 people.[15]

All primary care workers in the pilot area, including 27 *behvarzes* and five general practitioners, received mental health training. Pre- and post-training assessments showed that their knowledge improved significantly. The training also had a significant impact on clinical behaviour. Prior to training, the *behvarzes* detected 121 mental health cases with 46% misdiagnosis, whereas one year later they detected 266 cases with only 14% misdiagnosis. In contrast, detection rates remained unchanged in a control group who had not received training. General practitioners showed similar improvements in detection, diagnosis and treatment. A survey on attitudes about mental health showed large improvements in the group that received training, compared with no change in the group who did not receive training.[15]

A second pilot project was established by the Isfahan University of Medical Sciences in the city of Shahreza. This site served as an important example when possibilities for the expansion of mental health in primary care in the Islamic Republic of Iran, and elsewhere in the region, were discussed at a WHO technical meeting.

These pilot studies demonstrated that mental health issues could be managed alongside other health problems, and that primary care workers were indeed capable of providing mental health care.

Training and supporting general practitioners and *behvarzes* to deliver mental health treatment within primary care nationwide

Building on the success of the pilot projects, senior health officials in the Ministry committed to pursue the model of integrated primary care for mental health throughout the country. This required nationwide training of general practitioners and *behvarzes*. Training was completed on a province-by-province basis over two decades, and continues to this day for new health workers and for those who need retraining and upgrading of their skills.

Expansion of the primary care service was initiated by the hiring of a psychologist and the appointment of a psychiatrist (usually a faculty member of the local university) at the provincial level. Following health worker training workshops, the psychiatrist and psychologist initiated, supervised and scaled-up integration in their province.

The Islamic Republic of Iran's strong ties between its medical education and health sectors (originating from the Ministry of Health and Medical Education) facilitated the training of health workers around the country. The deans of the medical universities in every province are also in charge of the health of their population. As such, these medical universities, together with the Institute of Psychiatry (a WHO Collaborating Centre based in Tehran), provided strong scientific support for the programme. Moreover, the expansion of the integration was made possible by full collaboration from the senior provincial health administration, especially the directors of the primary care network.

All general practitioners who manage urban and rural health centres receive a one to two week training session in mental health, as well as refresher training every one to three years. This training is provided by a provincial-level psychiatrist. The general practitioners in turn train the disease control technicians in their catchment area, focusing on diagnosis, management and referral of mental disorders.

Behvarzes receive one week of training on mental health as part of their general curriculum. In addition, they attend refresher courses held by general practitioners, psychologists or psychiatrists at the provincial level. Learning by doing is most important, and to this end, they are continually supervised by more senior health workers.

Training manuals are available for all service levels. The manuals have undergone multiple revisions based on feedback on their effectiveness, and to cover new topic areas. For example, a recent general practitioner manual includes communication and counselling skills, and mental health prevention/promotion, compared with the purely disease management and pharmacological approach of older manuals.[16]

Funding and sustainability of the service

Mental health is regarded as an integral part of primary care in rural areas, and therefore is treated in the same way as other conditions that are included in the primary care package of services. For example, mental health programme funding and pharmaceutical supplies for mental disorders are managed in the same way as those for other conditions.

Integration of mental health indicators into the health information system

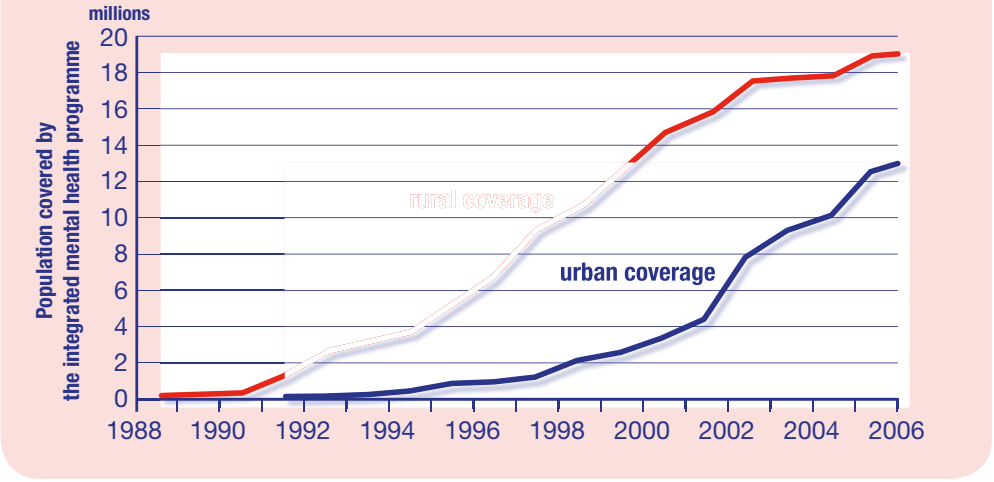
Five categories of mental disorders are included in the health information system and are reported by the provincial directors of disease control. The inclusion of these indicators and the high prevalence of mental disorders detected consequently have increased the commitment of senior health officials to expand mental health services and activities.

5. Evaluation/outcomes

Following the pilot projects, the mental health programme was expanded rapidly across rural areas. By 2001, the mental health programme covered 63% of the rural population and 11% of the urban population.[15] Nationally, 84% of district health centres, 54% of rural and urban centres and 70% of health houses were providing integrated mental health care.[15] By 2006, these figures had reached 82% and 29% of the rural and urban population respectively.

Integration of mental health into primary care has been more successful in rural areas than in urban areas (see Figure 2.3). In urban settings, the private health sector is strong and not well-regulated. Public–private partnerships are weak or nonexistent. Moreover, cities do not have *behvarzes,* who are essential to the programme's success in rural areas. The government has taken steps to improve mental health care in urban areas, for example through the recruitment of health outreach volunteers and the creation of community-based mental health centres, but until now coverage has been low and impact has not been formally evaluated.

Figure 2.3 **Islamic Republic of Iran: cumulative coverage of mental health services, 1988–2006**



Source: Ministry of Health and Medical Education, Islamic Republic of Iran

The most recent independent evaluation of the service, conducted by WHO in 2001,[17] identified the following main strengths in the country's rural areas:

- the strong and easily-accessible network of health services;
- the integrated management of physical and mental health issues, which reduces stigma;
- the *behvarzes*, who have local knowledge and are widely-accepted by their communities;
- health workers' clearly defined mental health tasks, including active case-finding and follow-up;
- the adequate quality of health workers' education and of the treatment they provide;
- changed community attitudes;
- changed mental health care seeking patterns, from traditional healers to primary care;
- regularly-scheduled training, which is supported by manuals developed for this purpose;
- evidence-based interventions for psychosis, mental retardation, and epilepsy.

Weaknesses were also identified in both rural and urban areas. At the health centre level, weaknesses included the high mobility of general practitioners particularly in more remote areas, general practitioners not adhering to recommended recording practices and not achieving the weekly visiting schedule to outlying satellite clinics. At the district, provincial and higher levels, identified weaknesses were poor supervision, inadequate monitoring and evaluation, insufficient involvement of psychiatrists, and inadequate attention to mental health issues within the medical education system.

Research on treatment pathways indicates that the expansion of mental health care into primary care has reduced assistance sought from traditional practitioners. Across several areas, first contact with a traditional health practitioner for a mental health problem has shifted from 40% in 1990[15] to 14% in 1998[18] and 16% in 2000.[19]

Behvarzes have demonstrated that they are able to identify psychosis (severe mental disorders), epilepsy and mental retardation, and to a lesser extent common mental disorders. Their case detection is better than that of urban health volunteers.[20] Nonetheless, they fail to identify a

considerable proportion of the cases that are found in epidemiological studies. The extent to which health centre practitioners are able to identify mental disorders has not been assessed.

Almost all interventions provided at primary and secondary level, and most at tertiary level, are pharmaceutical. Capacity to deliver counselling or other non-pharmaceutical interventions has been limited.

Nonetheless, this model of mental health integration has provided the foundation to expand the scope of service to other areas. For example, a national suicide prevention programme was implemented through training general practitioners in the treatment of depression, referral of suicidal patients, follow-up of people who have attempted suicide, and control of potential social contagion. In four pilot areas where the programme was introduced, suicides declined.[21] Efforts have also been made in some provinces to integrate substance abuse prevention into primary care services. The integrated mental health system also proved helpful in the implementation of the national disaster mental health plan.[22, 23]

6. Conclusion

Through the integration of mental health into general health care, a significant proportion of the population of the Islamic Republic of Iran is now covered by accessible, affordable and acceptable mental health care. The growth in services since 1988 has been impressive. In particular, millions of people in rural areas now receive mental health care without being sent far away to psychiatric hospitals with inhumane conditions. *Behvarzes* have been pivotal in destigmatizing mental disorders and facilitating treatment and care for people in need. General practitioners have also been central to the programme, through providing medical and in-depth treatment, and referring to higher levels if required.

Key lessons learnt

- A strong primary care network in rural areas was important for integration of mental health care.
- Mental health was the first example of a previously vertical service that was successfully integrated into primary care. As such, the programme received strong support from all levels.
- Dedicated professionals in the medical universities and the Ministry of Health and Medical Education, who believed in mental health integration, were important for the success of the programme. Support was not confined solely to mental health professionals.
- Multipurpose health workers in rural areas *(behvarzes)* have been pivotal for the programme's success. They know the local community, and with mental health training, they are able to identify people with mental disorders and refer them to the local health centre. This facilitates early intervention and increases the number of people who receive treatment. The role of *behvarzes* explains why integration of mental health into primary care has been more successful in rural areas than in urban areas.
- Stronger monitoring is needed, especially with regard to quality and costs.
- The programme has been focused mainly on disease management and secondary prevention. As such, it is not yet clear to what extent the same model will be efficient in implementing mental health prevention/promotion programmes, which have been planned in recent years.

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