Iran J Psychiatry 2021; 16: 1: 87-93

Original Article

Specialized Outpatient Services: Community Mental Health Centers (CMHCs)

Vandad Sharifi[1], Ahmad Hajebi[2], Behzad Damari[3], Atefeh Mohammadjafari[1]*

Abstract

Objective: The Iranian Mental Health Survey (IranMHS) in 2011 has demonstrated that almost 1 out of 4 adult individuals suffer from psychiatric disorders; however, more than two-thirds are left unrecognized and untreated and many of the services have poor quality of care. In this paper we present our experience in developing and employing community-based mental health services through community mental health centers (CMHCs), which has been incorporated in Iran's comprehensive mental and social health services (the Seraj program).
Method: The service model of the CMHCs was developed though an evidence-based service planning approach and was then incorporated as the specialized outpatient services model into the Seraj program in 2015.
Results: The CMHCs in the Seraj program provide mental health care to patients with common mental and severe mental disorders in a defined catchment area. The services include the collaborative care, the aftercare, and day rehabilitation. The collaborative care model works with primary care providers in the health centers to provide detection and treatment of common mental illnesses. In the aftercare, services are offered to patients with severe mental disorders following discharge from the hospital and include telephone follow-ups and home visits. Day rehabilitation is mostly focused on providing psychoeducation and skill trainings. During the first 4 years of implementation in 2 pilot areas, more than 6200 patients (10% having severe mental disorders) received care at CMHCs.
Conclusion: The main challenge of the implementation of the CMHC component in the Seraj program is to secure funds and employ skilled personnel. We need to incorporate Seraj in the existing national health system, and if successful, it can fill the treatment gap that has been so huge in the country.

Key words: *Aftercare; Collaborative Care; Community Mental Health Center; Day Rehabilitation; Primary Health Care*

1. Department of Psychiatry, Roozbeh Hospital, Tehran University of Medical Sciences, Tehran, Iran.
2. Research Center for Addiction and Risky Behaviors (ReCARB), Psychiatric Department, Iran University of Medical Sciences, Tehran, Iran.
3. Department of Governance and Health, Neuroscience Research Institute, Tehran University of Medical Sciences, Tehran, Iran.

***Corresponding Author:**
Address: Department of Psychiatry, Roozbeh Hospital, Tehran University of Medical Sciences, South Kargar Avenue, Tehran, Iran, Postal Code: 1333715914.
Tel: 98-21 55412222, Fax: 98- 21 55419113, Email: amohammadjafari@sina.tums.ac.ir

Article Information:
Received Date: 2020/03/03, Revised Date: 2020/07/15, Accepted Date: 2020/08/02

World Health Organization (WHO) reported that 20-25% of the global population suffer from mental disorders and that these disorders contribute to 12% of the total disability across the globe (1) and that these disorders contribute to 32.4% of years lived with disability (YLDs) and 13.0% of disability-adjusted life-years (DALYs) of global burden (2). According to the Iranian Mental Health Survey (IranMHS) in 2011, almost 1 in 4 individuals are affected with psychiatric disorders (3). It is also reported that these illnesses are the leading cause of disability among 10-40 year-olds in Iran (4).

Despite available effective treatments, there is a huge treatment gap, where about two-thirds of patients do not receive adequate treatments (5-7).

Therefore, there is a dire need of reallocation of mental care resources (6), and as WHO recommends, the policy and the budgets should move away from mental institutions and lay foundation for community mental health (5).

Over the past 40 years, an evolution was occurring in Iran's mental health care to move from the traditional hospital-based to community-based and primary mental health care (8).

Integration of mental health care into the primary care was one of them. In Iran, the National Mental Health Program, launched in 1988, was based on the integration of mental health into primary health services (8).

It achieved great accomplishments in rural areas, but it was not efficient enough in cities, especially in big metropolitan areas, mainly due to the lack of coordination between basic and specialized strong private sectors as well as poor monitoring (9, 10).

In the late 2015, the concept of establishment of community mental health centers (CMHCs) (11) was raised. The main objective of the CMHCs was to deliver comprehensive mental care, including treatment and rehabilitation of individuals with mental disorders, in a specified catchment area without relying on psychiatric hospitals (11, 12). Accessibility, comprehensiveness, multidisciplinary care, continuity of care, effective link between different levels of care, and a focus on prevention are the advantages of the CMHCs (11-13). We can find successful examples of implementation of CMHCs in the United States and Italy. In 1963, the United States established CMHCs which provided mental health care to defined catchment areas with about 75 000 to 200 000 inhabitants (14). Despite some inefficiencies, these centers accomplished significant success (15). The Italian National Reform Law in 1978 promoted the National Mental Health Plans. In these plans, people received mental health services in specified areas with 80 000 to 130 000 inhabitants (16). Subsequent research showed a clear improvement in mental health care following the introduction of these programs (17). There are some other successful examples in other countries like Australia (18) and Denmark (19).

In Iran, due to the weakness of mental health integration into primary care in cities, rapid urbanization, and incoordination between mental health professionals and services, CMHCs were proposed in 2004 in the Department for Mental Health and Substance Abuse Treatment at the Ministry of Health and Medical Education (20). The services of the Iranian model of CMHCs were designed and developed in 2007-2009, and in 2010, the first CMHC was established in the district 16 of Tehran. In the subsequent years, several other centers were established in Tehran, Zanjan, Tabriz, Kerman, Sanandaj, and several other cities. These CMHCs worked with private sector general practitioners (GPs) using a collaborative care approach to enhance detection and treatment of mental disorders in primary care. In addition, aftercare services were provided for patients with severe mental disorders in primary care that included home care and telephone follow-ups. Several studies have shown the effectiveness of these services in care delivery and patient satisfaction and improvement of general practitioners' performance in these centers (16-20). In 2015, the Ministry of Health and Medical Education incorporated the service model of CMHCs as the specialized outpatient services' model into the Seraj program, which is a comprehensive mental and social health services for Iranian communities (21). For the purpose of such incorporation into Seraj, services of the existing CMHCs were expanded to include rehabilitation services for severe mental disorders (see below).

The Seraj program

The Seraj program provides 3 packages of services for defined catchment areas: (a) basic mental health services in primary health centers, (b) specialized services through community mental health centers (CMHCs) supported by psychiatric wards of general hospitals (for psychiatric hospitalizations), and (c) a community action package (22). This program is designed and implemented to create a national model for provision of prevention, treatment, and rehabilitation services and social support for mental health of Iranian population. The aim of the program is to promote the quality of patient's life by improving service utilization and mental health services (including early illness detection, proper treatment, and rehabilitation) along with enhanced social support. As described elsewhere (22), the Seraj program has been set up in 3 cities (Oskoo, Bardsir and Quchan) as a pilot program. Because of its success, the program was expanded to include 8 cities (29).

In this paper we present our experience in developing and employing community-based mental health services through community mental health centers (CMHCs), which have been incorporated in the comprehensive mental and social health services (the Seraj program).

Materials and Methods

The CMHC service model was already developed and was incorporated later into the Seraj program. Here we present the methodology which was followed to develop the original CMHC model and its later incorporation into the Seraj program.

As described in detail in another paper (20), the following evidence-based service planning procedures were completed to come into the service model:

1) Need assessment and situation analysis that included reviewing existing documents and evidences about the current situation of mental health problems and services in the country, individual interviews and focus group discussions with key stakeholders, including the health authorities and primary care providers.
2) Systematic review of the literature to look for effective services to overcome the burden of mental disorders.
3) Selection of effective service models based on the following criteria: feasibility, budget impact, and effectiveness/cost-effectiveness data.
4) Adaptation to local context and development of the details of the service components.
5) Pilot implementation in Tehran and appropriate revisions according to the implementation outcomes.

Given the success of the implementation of the CMHC model in several cities in Iran (23, 24), the developers of the Seraj program decided to incorporate it into the new model which covers wider needs. The following key changes were made after another round of reviews of existing evidences, individual interviews, and focus group discussions with the stakeholders and the core Seraj team:

1) Substitution of private general practitioners with public primary care system in the collaborative care program to enhance detection and treatment of common mental disorders in the public primary health care system.
2) Addition of rehabilitation services to the specialized services for severe mental disorders to provide a more comprehensive care.
3) A more active social work that is linked with the Community Action of the Seraj program to cover the much needed psychosocial support for the more deprived group pf patients, especially those with severe mental disorders.

Results

Service model of CMHCs were incorporated into the Seraj program in 2015. The specialized outpatient services of the existing CMHCs were expended as mentioned below.

The CMHC Services in the Seraj Program

The CMHCs in the Seraj program provide mental health care to 2 groups of patients in a defined catchment area:

1) Patients affected with common mental disorders (including depressive and anxiety disorders).
2) Patients with severe mental disorders (including schizophrenia, schizoaffective, and bipolar disorders). The services include collaborative care for the former, and aftercare and day rehabilitation for the latter .

All these services are evidence-based and their effectiveness and applicability have already been documented in the past studies in Iran (25-27). These services are provided to improve patients' health, quality of life, and satisfaction with care. Below, each service component of the CMHCs is described in detail.

DAY REHABILITATION

Day rehabilitation services are used to provide care to patients with severe mental disorders by multidisciplinary teams. Psychiatrists and other mental health professionals visit all patients and tailor services to individual needs of patients during a specified period of time. The objectives of day rehabilitation are:

1) Improve patients' function and quality of life,
2) Prevent disability and deterioration,
3) Increase patients and families' knowledge and skills about severe mental illnesses, their treatments, and coping with the illness,
4) Prevent relapse and readmission and shorten the duration of rehospitalization.

Every rehabilitation session lasts about 60 to 90 minutes. Every patient receives at least 2 sessions a day and at least 3 days a week. Day rehabilitation clients routinely come to the center in the morning and leave in the afternoon. The specific rehabilitation services are listed in Table 1.

AFTERCARE

Aftercare includes telephone follow-ups and home visits along with patient and family psychoeducation for patients affected with severe mental illnesses. Each patient will receive either home visits or telephone follow-ups, depending on his/her needs. Those with high rehospitalization rate and/or poor compliance with treatments are offered with home visits, and others will receive telephone follow-ups.

Home Visits

In home visits, multidisciplinary teams are responsible for patient care after discharge from hospitals. Each team includes a psychiatrist, a general practitioner, and a psychiatric case manager who is either a psychiatric nurse, a clinical psychologist, or social worker. The teams deliver treatment and care to patients in their home. The case manager is responsible for coordination with other services, such as psychiatric wards/hospitals and other social services to facilitate utilization of services. The objectives of home visits are (1) to prevent relapse, readmission, and shorten the duration of rehospitalization, (2) enhance treatment adherence, (3) to increase patient and family satisfaction, and (4) to improve patients' function and quality of life.

The first home visit takes place within 2 weeks after discharge; then, patients are visited at least once a month. Unstable patients or patients in crisis are visited

in shorter time intervals or through emergency visits. Specific home visits services are listed in Table 1.

Telephone Follow-ups

A case manager of the aftercare team (usually a psychiatric nurse or a social worker) collaborates with hospitals to assess and enroll patients with severe mental disorders immediately following discharge. After discharge from the hospital, case managers make telephone calls to patients to increase adherence to outpatient visits and treatments. They remind patients and their families about the appointments and educate them to increase patients' treatment compliance. The objectives of telephone follow-ups are:

1) To enhance outpatient attendance and medication adherence,
2) Enhance patients' knowledge and attitude about mental illness,
3) To reduce relapses and readmissions and shorten the duration of rehospitalizations.

Case managers make calls a day before the appointments as reminders and then one day after the appointment to inquire about patients' adherence to appointments and to coordinate the next appointment. Eligible patients for home visit services will be excluded from the telephone follow-up services. Specific telephone follow-up services are shown in Table 1.

COLLABORATIVE CARE

In the collaborative care, the specialized psychiatry team in the CMHCs are responsible for the support of a number of primary health centers (PHCs) to improve detection and management of mental disorders in primary care. Mental health professionals, including psychiatrists and psychologists, provide ongoing training, support, monitoring, consultations and supervisions to general practitioners and health workers. Furthermore, an effective referral system will be shaped between PHCs and CMHCs, especially for referral of severe mental illnesses and difficult to treat illnesses who may need specialized care. The objectives of the collaborative care are:

1) To empower general practitioners to detect and treat mental disorders in primary care,
2) Establish an effective referral system between general practitioners and mental health specialists,
3) Reduce the burden of mental disorders on patients, families, and the society,
4) Reduce stigma of mental disorders.

The principles of collaborative care include ongoing training of general practitioners, patient care and follow up by case managers, use of evidence-based clinical guidelines, referring of severe and difficult to treat illnesses to mental health specialists, telephone consultation with the psychiatrist and psychologist, and setting up an electronic health record system .

The specialized services component of the Seraj program has an active collaboration with the two other components ;i.e., basic services and the community action program. The CMHCs are linked with the basic services through the collaborative care program (see above). The community action package facilitates social care through drafting Memoranda of Understanding (MoU) between different departments of the districts, setting up people's participation houses, self-reliance units, as well actions taken to battle the stigma of mental illnesses. The social worker of the CMHC has a proactive relationship with the community action package so that to refer patients and families from the CMHCs to the community action package in order to receive the needed social care.

Monitoring and Supervision

The Undersecretary of Health at Medical Universities as well as the supervision committee of the Seraj program are responsible for the monitoring of the services. Monitoring was done in written and in-person format at the provincial and national levels. Provincial health manager or his/her agent was defined as the provincial supervisor and national supervisors are selected by the central committee of Seraj program. Supervisors make field visit to the centers every 3 months to survey center environment, equipment, their staffs, documents, patients' files, and trimester report of weekly meetings. They complete monitoring checklists and indicators. They may need to make phone calls to some patients and their families for satisfaction assessment. Monitoring CMHC indicators cover all 3 services (aftercare, day rehabilitation, and collaborative care), and they include regular patients visits, program based patients care (telephone follow-up, home visit, rehabilitation), patients function level by assessment instruments, rehospitalization rate, patients and families' satisfaction, ongoing training of general practitioners (GPs), regular supervision programs for GPs, and feasibility of phone consultation with CMHCs. In addition, registry data are collected 3-monthly to monitor the processes.

CMHC Services Outputs

As presented in Table 2, in the first 4 years since the launching of the Seraj program (2016-2020) in 2 pilot areas, including Oskoo and Bardisr, more than 6200 patients received care at the CMHCs. As can be seen a sizeable number of these patients were those with severe mental disorders and the rest were patients with common mental disorders who were referred from the primary care physicians (V. Asl-Rahimi, A. Bahram-Nejad, personal communication). Since the care was mostly focused in urban areas and referrals from rural health centers were negligent, the proportion of patients to the urban population are reported as well .

Table 1. List of Specialized Services in the Community Mental Health Centers (CMHCs)

Service components		services
Day center		• Training social skills and daily life activities • Patient psychoeducation • Family psychoeducation • Cognitive rehabilitation • Family or patient group discussion • Group therapy • Occupational therapy • Recreational and art activities
Aftercare	Home visit	• Biopsychosocial assessment • Individualized treatment planning • Crisis intervention and emergency care during working hours • Pharmacotherapy • Non-pharmacological therapy (family education, rehabilitation, …) • Providing social work and supportive services • Coordination with other services • Referring patients to psychiatric wards/hospitals (if needed)
	Telephone follow-up	• Reviewing medication adherence • Reminding an outpatient appointment • Patient psychoeducation • Review the reasons of non-adherence • Booking new appointments • Referring patients to the psychiatrists and psychiatric wards/hospitals (if needed)
Collaborative care		• Psychiatric visits for severe or difficult to treat patients who were referred • Psychological interventions for referred patients (psychoeducation, psychotherapy) • Ongoing training of general practitioners by mental health professionals • Supervision of general practitioners' in detection and treatment of mental disorders by mental health professionals • Patients' follow-up by case managers in primary care

Table 2. A Summary of CMHC Services Outputs in Two Pilot Areas of the Seraj Program (2016-2020)

	Oskoo	Bardsir
Total population of the District (N)*	158,270	81,087
Urban residence (%)*	70.4	56.6
All CMHC patients (N)	4,750	1,455
CMHC patients to total urban population (%)	4.3	3.2
All CMHC patients with SMI (N)	360	265
CMHC patients with SMI to total urban population (%)	0.32	0.58

CMHC: Community Mental Health Center; SMI: Severe mental Disorder
*According to the 2016 census

Discussion

The history of psychiatry is intertwined with an endeavor to transfer mental health care form psychiatric hospitals to community-based services. Many high-income countries have established community-based mental health care programs and services, including CMHCs, as outstanding examples of this endeavor. However, for many others, including most low-income and middle-income countries, it remains an aspiration (28). The current paper outlined a history of the development of the CMHCs in Iran and how it has played out in the Seraj program, which is a comprehensive psychosocial program to address the psychosocial needs of the population. CMHC services in the Seraj program are currently ongoing and has been expanded to several cities across the country .

The high prevalence and burden of mental disorders in Iran demands appropriate response regarding mental health policy and program planning in the country. Although there has been some progress in the recent 4 decades, mental health services have not yet fully and comprehensively developed in Iran. CMHCs can work as an integral part of the health system, which can offer much needed outpatient mental health services,

especially for those with more severe illness and limited access. These services can address the unmet needs both for severe mental disorders through aftercare and rehabilitative services and common mental disorder through collaborative care working with primary care providers.

Limitation

Formal evaluations of the services of the CMHCs have shown their strengths and shortcoming (29). The main challenge of the implementation of the CMHC component in Seraj program is to secure funds and hire skilled personnel and keep these resources. Several issues should be considered when thinking of the scale up of the program. Sustainability and securing funds constitute the basic challenges. We may need to incorporate Seraj in the existing national health system to the extent that the health system accepts it as one of its essential ingredients and supports it to secure sustainable funds. Most of referrals to the CMHCs were from urban areas, which is understandable, since transportation from rural to urban CMHCs are quite difficult and no outreach service is available for residents of the villages. On the other hand, we have witnessed a huge population move from rural to urban dwellings in the last few decades, and thus mental health care in urban areas should be prioritized and the strategies should be reconsidered to achieve the goals, such as the establishment of the CMHCs (30). One of the issues that should be dealt with in future revisions of the Seraj program is to figure out how the CMHC services can be offered to rural residents as well. Telepsychiatric and outreach services are among the services that can be employed.

Conclusion

In conclusion, we can argue that successful implementation of the CMHC services can fill the treatment gap and decrease the burden of mental disorders that has been so huge in the country.

Acknowledgment

This project was funded by the Ministry of Health and Medical Education. We would like to extend our gratitude to Dr Alireza Raisi, Iran's Deputy Minister of Health, who have supported the launch and the scale-up of the Seraj Program. We also wish to thank Ali Bahrannejad and Vahhab Asl-Rahimi who have directed and supervised the pilot programs in Bardsir and Oskoo, respectively. Moreover, we are grateful to Marzieh Khoonani, Sedighe Khadem and Hoda Layegh who have contributed to this project.

Conflict of Interest

The authors declare that there is no conflict of interest.

References

1. World Health Organization. The World Health Report 2001, Mental health: new understanding, new hope. Geneva, WHO. 2001.
2. Vigo D, Thornicroft G, Atun R. Estimating the true global burden of mental illness. Lancet Psychiatry. 2016;3(2):171-8.
3. Sharifi V, Amin-Esmaeili M, Hajebi A, Motevalian A, Radgoodarzi R, Hefazi M, et al. Twelve-month prevalence and correlates of psychiatric disorders in Iran: the Iranian Mental Health Survey, 2011. Arch Iran Med. 2015;18(2):76-84.
4. Forouzanfar MH, Sepanlou SG, Shahraz S, Dicker D, Naghavi P, Pourmalek F, et al. Evaluating causes of death and morbidity in Iran, global burden of diseases, injuries, and risk factors study 2010. Arch Iran Med. 2014;17(5):304-20.
5. World Health Organization. The World Health Report 2001, Mental health: new understanding, new hope. Geneva, WHO. 2001.
6. Demyttenaere K, Bruffaerts R, Posada-Villa J, Gasquet I, Kovess V, Lepine JP, et al. Prevalence, severity, and unmet need for treatment of mental disorders in the World Health Organization World Mental Health Surveys. Jama. 2004;291(21):2581-90.
7. Wang PS, Aguilar-Gaxiola S, Alonso J, Angermeyer MC, Borges G, Bromet EJ, et al. Use of mental health services for anxiety, mood, and substance disorders in 17 countries in the WHO world mental health surveys. Lancet. 2007;370(9590):841-50.
8. Ministry of Health and Medical Education. National Mental Health Programme [In Persian]. In: Mental Health Office MoH, editor. Tehran1986.
9. Bolhari J. AH, Hajebi A. Evaluation of Mental Health Program Integration into the Primary Health Care System of Iran. IJPCP, 2012;17(4):271-8.
10. Bagheri Yazdi SA, Malek Afzali H, Shah Mohammadi D, Naghavi M, Hekmat S. Evaluation of functions of auxiliary health workers (Behvarzes) and health volunteers in mental health care delivery in the framework of PHC system in Brojen city, Chaharmahal and Bakhtiary province. Hakim Res J. 2001;4(2):100-9.
11. Munizza C, Gonella R, Pinciaroli L, Rucci P, Picci RL, Tibaldi G. CMHC adherence to National Mental Health Plan standards in Italy: a survey 30 years after national reform law. Psychiatr Serv. 2011;62(9):1090-3.
12. Keegan J. Community-based mental health care: bridging the gap between community care and primary care. Aust N Z J Ment Health Nurs. 1998;7(3):95-102.
13. Grunebaum H. The Practice of Community Mental Health. Boston: Little, Brown, and Co.; 1970.
14. Beigel A, Levenson A. The community mental health center. New York: Basic Books.1972.

15. Murthy RS, Burns BJ. Community mental health. Proceedings of Indo-US Symposium. Bangolare: Nimhans; 1992.
16. De Girolemo G, Cozza M. The Italian psychiatric reform: A 20-year perspective. Int J Law Psychiatry. 2000;23(3-4):197-214.
17. kemali D, Maj M, Crepet P. Hospital and community psychiatric care in Italian cities after the reform law. In: Parry-Jones WL, Queloz N, editors. Mental health and deviance in inner cities. Geneva: World Health Organization; 1991.
18. Whiteford HA. Australia's national mental health policy. Hosp Community Psychiatry. 1993;44(10):963-6.
19. Vendsborg PB. Community psychiatry in Copenhagen. Adaptation to increased needs. Ugeskr Laeger. 1998;160(23):3387-93.
20. Sharifi V, Abolhasani F, Farhoudian A, Amin-Esmaeili M. Community Mental Health Centers in Iran:Planning Evidence-based Services. IJPCP. 2014;19(3):163-76.
21. Damari B, Hajebi A, Sharifi V. Comprehensive Mental and Social Health Services; Study Protocol for a Pilot Experience in Islamic Republic of Iran. Iran J Psychiatry. 2020(this issue).
22. Damari B, Alikhani S, Riazi-Isfahani S, Hajebi A. Transition of Mental Health to a More Responsible Service in Iran. Iran J Psychiatry. 2017;12(1):36-41.
23. Amini H, Shakiba A, Sharifi V, Shirazi M, Sadeghi M, Abolhasani F, et al. Evaluation of the performance of general practitioners in a collaborative care program by employing simulated patients. Soc Psychiatry Psychiatr Epidemiol. 2016;51(9):1311-9.
24. Heidari E, Eslami S, Abolhassani F, Sharifi V, Taherzadeh Z, Daneshvar T. Association between Physicians' Adherence to a Pharmacotherapy Guideline and Continuity of Care for Patients with Depression and/or Anxiety Disorder. Arch Iran Med. 2017;20(5):308-13.
25. Sharifi V, Tehranidoost M, Yunesian M, Amini H, Mohammadi MR. Jalali Roudsari M. Effectiveness of a low-intensity home-based aftercare for patients with severe mental disorders: a 12-month randomized controlled study. Community Ment Health J. 2012;48(6):766-70.
26. Sharifi V, Abolhasani F, Farhoudian A, Amin-Esmaeili M. Which of Community-Based Services are Effective for People with Psychiatric Disorders? A Review of Evidence. IJPCP. 2013;19(73):79-96.
27. Mirsepassi Z, Tabatabaee M, Sharifi V, Mottaghipour Y. Patient and family psychoeducation: Service development and implementation in a center in Iran. Int J Soc Psychiatry. 2018;64(1):73-9.
28. Bouras N, Ikkos G, Craig T. From Community to Meta-Community Mental Health Care. Int J Environ Res Public Health. 2018;15(4).
29. Tabatabaee M, Sharifi V, Abolhassani F, Layegh H. Evaluation of “Community Mental Health Centers” program in Tehran, Kerman, Mashad, and Tabriz (KMT Project). 2017.
30. Sharifi V. Urban mental health in Iran: Challenges and future directions, IJPCP. 2009;3(1):9-14.