Obrela JOURNAL Dialogues in Clinical Neuroscience & Mental Health

e-ISSN: 2585-2795 • Printed-ISSN: 2654-1432
DOI 10.26386/obrela.v4i4.120

The scope of the interventions of an interdisciplinary mental health service in the treatment of psychotic disorders in rural Greece

Vaios Peritogiannis & Panagiota Gioti

Mobile Mental Health Unit of the Prefectures of Ioannina and Thesprotia, Society for the Promotion of Mental Health in Epirus, Ioannina, Greece

Abstract

In contemporary clinical practice and service policy, mental health care is patient-oriented and is being delivered in the less restrictive environment that is the community. However, rural and remote areas may still not receive adequate mental health care. The Mobile Mental Health Units (MMHUs) in rural Greece have been launched to address the service shortages in those areas, and they prioritize patients with psychotic and other severe mental disorders. Through the description of a patient with schizophrenia this paper aims to illustrate the broad scope of the interventions that are applied by the interdisciplinary MMHUs. Team working involves antipsychotic drug prescription and monitoring; co-operation with social services and local civil authorities; allocation of other available resources; patients' referral to the primary care setting for the monitoring of their physical health; and close co-operation with local psychiatric wards, in cases of patients' hospitalization. Due to this multidimensional approach a substantial number of patients with disability and poor functioning may live independently and adjust in local environments. Current challenges for the MMHUs are the care of refugees and immigrants, and the response to the population needs during the COVID-19 pandemic. The effectiveness and cost-effectiveness of this model of care needs to be further evaluated.

Key Words:

Community mental health, mobile mental health units, psychosocial interventions, rural areas, schizophrenia spectrum disorders

Corresponding author: Vaios Peritogiannis, Mobile Mental Health Unit of the prefectures of Ioannina and Thesprotia, Society for the Promotion of Mental Health in Epirus, Ioannina, Greece, 54 T. Pashidi Str, Ioannina, Greece, Email address: vaios.peritogiannis@medai.gr, Phone number: +302651021227

DOI 10.26386/obrela.v4i4.120

Introduction

In recent years, treatment of severe mental illness has shifted from management and stabilization of symptoms, to the much broader goal of achieving functional recovery [1]. Subsequently, in contemporary health systems, mental health care became patient-oriented and is being delivered in the less restrictive environment that is the community [2]. Over the last decades, most Western countries have launched a number of generic and specialized community mental health services, aiming to prevent and treat mental disorders in the community, and to avoid hospitalizations [3]. The traditional physician-centered model of care tends to be replaced by team working and interdisciplinary approach. An important reason for this shift is cost, which is high for specialized psychiatrists in Western countries, and the limited availability of highly trained psychiatrists in a variety of settings, including rural areas [4, 5].

Patients residing in rural, remote and deprived areas may not receive adequately mental health care for several reasons, such as socioeconomic factors and distant facilities [6, 7]. To address the rural areas' mental health needs the Greek state has launched several multidisciplinary teams, the so called Mobile Mental Health Units (MMHUs) over the last decades. MMHUs are low-cost services because they deliver generic mental health care and they use the infrastructures and resources of the well-established primary healthcare system in those areas [8-10]. Patients with severe and chronic mental disorders, such as psychotic disorders, may be mostly in need for various psychosocial interventions that go well beyond the necessary drug treatment [11]. Accordingly, those patients are prioritized by MMHUs in rural Greece. However, MMHUs may indeed treat all referred patients, regardless of diagnosis, since they may be the only available mental health services in those areas [12].

The aim of the present paper is to illustrate the scope of the multidimensional care that is delivered by interdisciplinary mental health services in rural areas in Greece. An additional aim is to highlight the importance of team working in the treatment of severe mental disorders; and to stress the significant contribution of other, except to psychiatry, specialties. Finally, the present article aims to refer to the co-operation of different health and social services in the holistic management of severe mentally ill patients. The full range of interventions is presented through the case description of a patient with schizophrenia. Several details of the case have been changed, and others have been omitted so as to ensure anonymity.

Case presentation

The case involves a 48-year-old woman with a 15-year history of schizophrenia, who has been followed-up by the MMHU I-T for more than 10 years. The patient was living alone, after the death of her parents. She was first referred by her director at work (she worked as a public officer) due to hostility and aggressive behavior toward her colleagues. The patient then refused any need for treatment and finally she was involuntarily committed and hospitalized in the local psychiatric ward. The main symptoms were delusions of persecution and aggressive behavior. It was only after 3 subsequent involuntary hospitalizations and loss of her work that she accepted to receive treatment by the MMHU I-T. Despite initial engagement to treatment the patient displayed poor adherence to medication and 3 involuntary hospitalizations followed shortly.

During the last hospitalization it became clear that the patient's housing was very poor. Her house was damaged and unsafe with no heating, whereas basic domestic appliances, such as the fridge and the cooker were broken. The MMHU I-T cooperated closely with local social services to co-ordinate a number of initiatives by local authorities, such as the Municipality and the Church, as well as community volunteers who were willing to help the patient. The local Church funded the replacement of the domestic appliances, whereas the local Municipality allocated personnel to repair the patient's house and the heating. Moreover, during the patient's hospitalization a member of the interdisciplinary team was regularly visiting the patient and there was a close cooperation with the psychiatric ward for the organization of the aftercare, and the transition of the patient back to the community.

Over the follow-up she was hospitalized involuntarily only once and she was also admitted to hospital due to physi-

DOI 10.26386/obrela.v4i4.120

cal problems. Due to lack of insight and poor adherence to antipsychotic medication, the patient had been prescribed a long-acting injectable (LAI) antipsychotic. Over the follow-up period the interdisciplinary team arranged a number of visits to the primary care setting and co-operated with the primary care physicians for the management of the patients' physical morbidity, since the patient was obese. Accordingly, a number of regular blood tests had been arranged. Importantly, after losing her job the patient had no income. Yet she refused to apply for a disability pension, as he had no insight on her mental health condition. However, after persistent efforts of the interdisciplinary team she finally accepted to apply for- and received the disability pension. Currently the patient regularly attends the follow-up appointments with the MMHU I-T. Despite persistent negative symptoms, cognitive disturbances, lack of insight, and social and occupational disability she is able to live independently. Co-operation of the MMHU I-T with community volunteers, primary care physicians and local social services is ongoing for this patient.

The interventions of the interdisciplinary MMHU I-T in this case are summarized in table 1. Indeed, these interventions are applied in various combinations in all similar cases of patients with severe mental disorders and increased needs.

Table 1. The interventions of the MMHU I-T in patients with psychotic disorders
Prescription and monitoring of antipsychotic drug treatment
Psychosocial treatment and patient support
Family psychoeducation and support*
Patient support in using social services and claiming social benefits
Liaison and co-operation with the inpatient ward in cases of hospitalization
Close co-operation with primary healthcare (for the management of physical morbidity and for routine examinations)
Co-operation with local social services
Education of the local community-detection of possible resources
Co-operation with local civil authorities and the church
* Not applicable in the present case, as the patient had no family

Discussion

This paper aimed to illustrate the scope of the interventions that are delivered by interdisciplinary mental health services in rural and remote areas in Greece. The case that was presented here is a rather typical case of a patient with chronic psychotic disorder. In such cases, services have to deal with the patients' symptomatology (i.e. negative symptoms, cognitive disturbances, attenuated positive symptoms), lack of insight, poor social functioning and disability, physical health problems, and limited resources. Through interdisciplinary care and support, patients may be able to live independently and adjust to the local environment. However, care must be continuing in these patients, if we are to prevent relapse and subsequent hospitalization. This could be feasible through the range of interventions that has been briefly presented in table 1, and will be further discussed.

Medication prescription and monitoring

Antipsychotic medication is the cornerstone in the treatment of psychotic disorders. However, rates of poor adherence to the medication and disengagement from services may be high in those patients [13]. Indeed, a recent 11-year study found that continuity of care of people with schizophrenia declined over time, and this was associated with worse clinical outcomes [14]. It has been previously shown that MMHUs may be effective in engaging patients with chronic psychotic disorders to long-term treatment [15]. This probably accounts for the decrease in both voluntary and involuntary hospitalizations in those patients, as well as the decrease in hospital length of stay [16]. In this case the patient had a long history of relapses and involuntary hospitalizations, as the result of poor insight and medication non-adherence. Indeed, the patient still has no insight on her mental health problem, yet adherence to medication was ensured with the introduction of a LAI in her treatment regimen and monitoring. A recent meta-analysis demonstrated that LAI antipsychotics were associated with improved medication adherence and reduced hospitalizations and emergency visits compared with oral antipsychotics [17].

DOI 10.26386/obrela.v4i4.120

Management of physical morbidity

Patients with psychotic disorders have increased risk for premature death, mostly due to natural causes and preventable physical morbidity [18, 19]. Moreover, physical morbidity has been associated with psychiatric [20] and non-psychiatric [21] hospitalizations and prolonged inpatient treatment [22]. Accordingly, efforts to monitor physical health and to address physical morbidity are particularly relevant in those patients. Patients are encouraged to undergo physical examination and laboratory tests regularly, but this may not be sufficient for the adequate monitoring of their physical health. Indeed, it has been suggested that physical monitoring is poorly implemented in everyday clinical practice, and there is little evidence to suggest that it improves physical health [23].

It has been argued that mental health nurses have an important role in coordinating annual physical health checks for patients with psychotic disorders, to ensure that emerging health problems are detected early and managed properly. They could also assume health education interventions so as to improve patients' health literacy [24]. Accordingly, in the context of a MMHU, nurses assume a more proactive role in monitoring physical health of patients with psychotic disorders. They often arrange patients' primary care visits, and co-operate with primary care physicians. Indeed, the co-operation of primary care physicians with the MMHUs is warranted for the optimal treatment of medical comorbidities in those patients [25]. This is facilitated by the fact that MMHUs are fully integrated in the primary healthcare system [26].

Addressing other aspects and consequences of psychotic disorders

Despite continuing treatment and psychosocial interventions, a substantial proportion of patients with chronic psychotic disorders have unfavorable long-term outcomes and poor functioning [27]. This is also the case of patients in rural areas in Greece [28, 29], and this was the case of the patient that was presented here. The potential of the MMHU I-T to employ multidisciplinary working is particularly relevant in the management of patients who are mostly in need, such as patients with psychotic disorders. Those patients may have significant difficulties in navigating through a bureaucratic health and social services system, due to their persistent symptomatology, mostly negative and cognitive symptoms, that affect functioning [30, 31]. Without substantial support they may be unable to benefit from social care. This, in turn may have negative effects on their welfare, given their inability to work. Moreover, rehabilitative interventions in those patients target important aspects such as activities of daily living, independent housing, social functioning, family relationships, work, education, and leisure [32]. Notably, for aged patients with psychotic disorders, care may be home-based, with regular domiciliary visits by the MMHUs [33, 34].

Effectiveness and cost-effectiveness of the MMHUs

MMHUs in rural Greece prioritize patients with psychotic disorders. It has been shown that community mental health teams are more effective in the treatment of severe mental disorders rather than common mental disorders [35]. Importantly, there is some evidence that when rural patients with psychotic disorders receive specialized care, they may have better outcomes than urban patients [36]. With regards to rural Greece, there is some evidence that treatment by the MMUHs may reduce the number and the duration of both voluntary and involuntary hospitalizations in patients with psychotic disorders [16]. Another recent study suggested that such care may be cost-effective. The authors argued that MMHUs appear to overcome the existing structural inefficiencies of the national health system and minimizing public expenditures as well as patients' income and productivity losses, by improving their mental health status [37].

Differences among the MMHUs

MMHUs are mental health services that deliver care according to the principles of social and community psychiatry. However, there may be noticeable differences among the various MMHUs in terms of staff, implementing institution and clientele [38]. Those differences have been recently recorded in detail, and may be better explained by the avail-

DOI 10.26386/obrela.v4i4.120

ability of resources. That is, the MMHUs deliver services in diverse rural settings, such as small towns and villages in the mainland, as well as in islands, and there may be differences in the availability of other mental health services in different catchment areas [39].

Evolving challenges for the MMHUs

As already mentioned, although MMHUs in rural Greece prioritize patients with psychotic disorders, they indeed treat all referred patients, regardless of diagnosis. Evolving challenges for MMHUs are the coronavirus pandemic and the increased needs of refugees and migrants, with the later to be already a major mental health concern in islands. Refugees are subjected to extremely stressful and traumatic events. Moreover, they often confront poverty, hostility and racism, as well as low social support and isolation in hosting countries. The detention of immigrants and refugees in camps has been reported to produce further psychological harm. Accordingly, these people may be at increased risk of developing several psychopathological manifestations. Indeed, rates of post-traumatic stress disorder, depression and anxiety are high in this population [40].

With regards to the COVID-19 pandemic, it has been suggested that the psychological distress due to the pandemic affects many people [41]. It is possible that the MMHUs will have to deal with increased demands for mental health treatment of those that have been mostly affected by the pandemic, over the next months. Moreover, MMHUs may assume a critical role in encouraging patients with psychotic disorders to get vaccinated, because they may be unable to accurately process the information regarding the benefits of vaccination. Importantly, there is some evidence that patients with mental disorders are more vulnerable to the COVID-19 infection and to adverse outcomes [42, 43].

Conclusion

The range of interventions of the interdisciplinary MMHUs in rural Greece is broad and may help patients with chronic and severe mental disorders to live independently in the community. Through team working those services may address clinical symptomatology, and can also help patients to benefit from social services and to attend primary healthcare settings. Both are relevant in the care of those patients, given the disability that often accompanies psychotic disorders and the high rates of physical morbidity in those patients. More research is needed with regards to the effectiveness and feasibility of such interdisciplinary approach in rural areas in Greece. This could inform policy regarding the optimal mental health delivery in remote and deprived areas.

References

1. Vita A, Barlati S. The Implementation of Evidence-Based Psychiatric Rehabilitation: Challenges and Opportunities for Mental Health Services. Front Psychiatry 2019; 10:147. doi: 10.3389/fpsyt.2019.00147
2. Thornicroft G, Deb T, Henderson C. Community mental health care worldwide: current status and further developments. World Psychiatry 2016; 15: 276–286. doi: 10.1002/wps.20349.
3. Semrau M, Barley E, Law A, Thornicroft G. Lessons learned in developing community mental health care in Europe. World Psychiatry 2011; 10: 217–225. doi: 10.1002/j.2051-5545.2011.tb00060.x.
4. Cohen C, Feiner J, Huffine C, Moffic HS, Thompson K. The Future of Community Psychiatry. Community Ment Health J 2003; 39: 459-471. doi: 10.1023/a:1025865020185.
5. Moore T, Sutton K, Maybery D. Rural mental health workforce difficulties: A management perspective. Rural Rem Health 2010; 10: 1519.
6. Thornicroft G, Semrau M, Alen A, Drake RE, Ito H, Mari J et al., (Eds.). Community Mental Health: Putting Policy into Practice Globally, Willey-Blackwell, New York, NY, USA, 2011.
7. Morales DA, Barksdale CL, Beckel-Mitchener AC. A call to action to address rural mental health disparities. J Clin Transl Sci 2020; 4: 463–467. doi: 10.1017/cts.2020.42
8. Peritogiannis V, Mantas C, Alexiou D, Fotopoulou V, Mouka V,

DOI 10.26386/obrela.v4i4.120

Hyphantis T. The contribution of a mobile mental health unit in the promotion of primary mental health in rural areas in Greece: a two-year follow-up. Eur Psychiatry 2011; 26: 425-427. doi: 10.1016/j.eurpsy.2010.07.001

9. Peritogiannis V, Mavreas V. Community mental health teams in Greece: The paradigm of Mobile Mental Health Units. Arch Hell Med 2014; 31: 71-76.
10. Stylianidis S, Pantelidou S, Poulios A, Lavdas M, Lamnidis N. Mobile Mental Health Units on the Islands: The Experience of Cyclades. In: Stylianidis S, editor. Social and Community Psychiatry. Springer; 2016. p. 167-191.
11. Armijo J, Méndez E, Morales R, Schilling S, Castro A, Alvarado R et al. Efficacy of community treatments for schizophrenia and other psychotic disorders: a literature review. Front Psychiatry 2013; 4: 116. doi: 10.3389/fpsyt.2013.00116.
12. Peritogiannis V, Manthopoulou T, Gogou A, Mavreas V. Mental healthcare delivery in rural Greece: A 10-year account of a Mobile Mental Health Unit. J Neurosci Rural Pract 2017; 8: 556-561. doi: 10.4103/jnrp.jnrp_142_17.
13. Vega D, Acosta F, Saavedra P. Nonadherence after hospital discharge in patients with schizophrenia or schizoaffective disorder: A six-month naturalistic follow-up study. Compr Psychiatry 2021; 108:152240. doi: 10.1016/j.comppsych.2021.152240.
14. Macdonald A, Adamis D, Craig T, Murray R. Continuity of care and clinical outcomes in the community for people with severe mental illness. Br J Psychiatry 2019; 214: 273–278. doi: 10.1192/bjp.2018.261.
15. Peritogiannis V, Tatsioni A, Menti N, Grammeniati A, Fotopoulou V, Mavreas V. Treatment engagement of psychotic patients with a mobile mental health unit in rural areas in Greece: a five-year study. Schizophr Res Treatment 2013; Article ID 613956. doi: 10.1155/2013/613956.
16. Peritogiannis V, Gioti P, Gogou A, Samakouri M. Decrease of hospitalizations and length of hospital stay in patients with schizophrenia spectrum disorders treated in a community mental health service in rural Greece. Int J Soc Psychiatry 2020; 66: 693-699. doi: 10.1177/0020764020924462.
17. Lin D, Thompson-Leduc P, Ghelerter I, Nguyen H, Lafeuille MH, Benson C, Mavros P, Lefebvre P. Real-World Evidence of the Clinical and Economic Impact of Long-Acting Injectable Versus Oral Antipsychotics Among Patients with Schizophrenia in the United States: A Systematic Review and Meta-Analysis. CNS Drugs 2021; https://doi.org/10.1007/s40263-021-00815-y
18. Saha S, Chant D, McGrath J. A systematic review of mortality in schizophrenia: is the differential mortality gap worsening over time? Arch Gen Psychiatry 2007, 64:1123–1131. doi: 10.1001/archpsyc.64.10.1123.
19. Lee E, Liu J, Tu X, Palmer B, Eyler L, Jeste D. A Widening Longevity Gap between People with Schizophrenia and General Population: A Literature Review and Call for Action. Schizophr Res 2018, 196: 9–13. doi: 10.1016/j.schres.2017.09.005.
20. Šprah L, Dernovšek MZ, Wahlbeck K, Haaramo P. Psychiatric readmissions and their association with physical comorbidity: a systematic literature review. BMC Psychiatry 2017; 17:2. doi: 10.1186/s12888-016-1172-3.
21. Sara G, Chen W, Large M, Ramanuj P, Curtis J, McMillan F et al. Potentially preventable hospitalisations for physical health conditions in community mental health service users: a population-wide linkage study. Epidemiol Psychiatr Sci 2021; 30: e22, 1–10. https://doi.org/10.1017/S204579602100007X
22. Masters G, Baldessarini R, Öngür D, Centorrino F. Factors associated with length of psychiatric hospitalization. Compr Psychiatry 2014; 55: 681–687. doi: 10.1016/j.comppsych.2013.11.004.
23. Ilyas A, Chesney E, Patel R. Improving life expectancy in people with serious mental illness: should we place more emphasis on primary prevention? Br J Psychiatry 2017, 211: 194-197. doi: 10.1192/bjp.bp.117.203240.
24. Bradshaw T, Pedley R. Evolving role of mental health nurses in the physical health care of people with serious mental health illness. Int J Ment Health Nurs 2012; 21: 266–273 doi: 10.1111/j.1447-0349.2012.00818.x
25. Peritogiannis V, Lixouriotis C, Mavreas V. The patient with psychosis in the primary health care setting. Arch Hell Med 2018; 35: 446-453
26. Peritogiannis V, Lixouriotis C, Mavreas V. The integration of mental health services into primary health care in Greece. Arch Hell Med 2014; 31: 669–677.
27. Peritogiannis V, Gogou A, Samakouri M. Very long-term outcome of psychotic disorders. Int J Soc Psychiatry 2020; 66: 633-641. doi: 10.1177/0020764020922276.
28. Peritogiannis V, Grammeniati A, Gogou A, Gioti P, Mavre-

DOI 10.26386/obrela.v4i4.120

as V. Very long-term outcome of community-dwelling patients with schizophrenia spectrum disorders in rural Greece. J Nerv Ment Dis 2019; 207: 1012–1018. doi: 10.1097/NMD.0000000000001068.

29. Peritogiannis V, Nikolaou P. Functioning in community-dwelling patients with schizophrenia spectrum disorders in rural Greece. Int J Soc Psychiatry 2020; 66: 111–117. doi: 10.1177/0020764019882709.
30. Rabinowitz J, Levine SZ, Garibaldi G, Bugarski-Kirola D, Berardo CG, Kapur S: Negative symptoms have greater impact on functioning than positive symptoms in schizophrenia: Analysis of CATIE data. Schizophr Res 2012; 137: 147-150. doi: 10.1016/j.schres.2012.01.015.
31. Jones MT, Harvey PD. Major Neuropsychological Impairments in Schizophrenia Patients: Clinical Implications. Curr Psychiatry Rep 2020; 22: 59. doi: 10.1007/s11920-020-01181-0.
32. Drake R, Green A, Mueser K, Goldman H. The History of Community Mental Health Treatment and Rehabilitation for Persons with Severe Mental Illness. Community Ment Health J 2003; 39: 427-440. doi: 10.1023/a:1025860919277.
33. Peritogiannis V, Lekka M, Grammeniati A, Gogou A, Fotopoulou V, Tatsioni A et al. Home-based mental health care for the elderly in a rural area in Greece. Psychiatry Clin Neurosci 2013; 67: 458–459. doi: 10.1111/pcn.12068.
34. Peritogiannis V, Tatsioni A, Manthopoulou T, Mavreas V. Mental healthcare for older adults in rural Greece. Int Psychogeriatrics 2016; 4: 698-700. doi: 10.1017/S1041610215001829.
35. Laugharne R, Eaves S, Mascas A, Psatha K, Dinnis G, Trower J et al. Desperately seeking outcomes: Quantifying the effectiveness of community mental healthcare using Health of the Nation Outcome Scales. BJPsych Open 2018; 4; 91–94. doi: 10.1192/bjo.2018.3.
36. Peritogiannis V, Samakouri M. Research on psychotic disorders in rural areas: Recent advances and ongoing challenges. Int J Soc Psychiatry 2021. Online ahead of print. doi: 10.1177/00207640211019456.
37. Lykomitrou A, Geitona M, Stylianidis S, Pantelidou S, Souliotis K. Economic Evaluation of Mobile Mental Health Units in Greece: The Case of Cyclades Islands. Health 2020; 12: 891–903. https://doi.org/10.4236/health.2020.127066.
38. Peritogiannis V. Mental healthcare in rural Greece: An overview. Dialogues in Clinical Neuroscience and Mental Health 2019; 2: 155–162. doi: 10.26386/obrela.v2i3.126.
39. Peritogiannis V, Rousoudi S, Vorvolakos T, Gioti P, Gogou A, Arre A et al. A comparative study of two Mobile Mental Health Units in different catchment rural areas in Greece. Int J Soc Psychiatry 2021. Online ahead of print. doi: 10.1177/0020764020985896.
40. Christodoulou G, Abou-Saleh M. Greece and the refugee crisis: mental health context. BJPsych Int 2016, 13: 89-91. doi: 10.1192/s2056474000001410.
41. Parlapani E, Holeva V, Voitsidis P, Blekas A, Gliatas I, Porfyri GN et al. Psychological and Behavioral Responses to the COVID-19 Pandemic in Greece. Front Psychiatry 2020; 11: 821. doi: 10.3389/fpsyt.2020.00821.
42. Wang Q, Xu R, Volkow ND. Increased risk of COVID-19 infection and mortality in people with mental disorders: Analysis from electronic health records in the United States. World Psychiatry 2021; 20: 124-130. doi: 10.1002/wps.20806.
43. Mohan M, Perry BI, Saravanan P, Singh SP. COVID-19 in People With Schizophrenia: Potential Mechanisms Linking Schizophrenia to Poor Prognosis. Front Psychiatry 2021; 12:666067. doi: 10.3389/fpsyt.2021.666067.