Archives of Psychiatry and Psychotherapy, 2009 ; 4 : 43–50

The effectiveness of community care for people with severe mental disorders

Katarzyna Prot-Klinger, Małgorzata Pawłowska

Summary

Background. A constant effort is observed all over the world to displace treatment from mental hospitals and other long stay institutions to a community form of care. Community care is poorly developed in Poland. This induces surveys estimating the effectiveness of community care recently formed.
Aim. The aim was to estimate the efficacy of a new community model of treatment of patients with schizophrenia. It was expected that community care decreases hospitalizations and enables better functioning in the environment, which in turn improves their quality of life.
Method. The study was carried out on 37 patients and 25 caregivers assessed at the referral to the community care and after one year in care. The study uses PANSS, Birchwood Scale and the Quality of Life Scale. Polish questionnaires: Family Burden Questionnaire and Questionnaire of Burdensome Behaviour were used to measure family burden in the patients' and their relatives' views. The focus group was used to evaluate treatment satisfaction. Cost assessment was made using the data form Administrative Departure of the institution.
Results. Improvement in psychic state, contacts with family and satisfaction from life were achieved. Reduction in destructive behaviours was noted. Improvement occurred in withdrawal and undertaking social roles. Reduction in costs occurred due to a major decrease in the length of hospitalisations.
Conclusions. Community care enables social inclusion through improving social functioning and subjective quality of life and sense of freedom. The community model is cost effective as a result of reduction of hospitalisations.

community care / cost effectiveness / schizophrenia

INTRODUCTION

It is well documented that community care is associated with improvement of patients' quality of life, guarantees the true respect of human rights as well as better balance of costs and benefits. A constant effort is observed all over the world to displace treatment from mental hospitals and other long stay institutions to this form of treatment [1, 2]. Large and centralized psychiatric institutions should be replaced by mental health units that are better adjusted to the patients' needs [3, 4].

In Poland, the predominant model of health care is hospital centred with coexisting ambulatory care. Community care is poorly developed, community care teams are sparse and have a marginal meaning. The main problem is the predominant model of thinking, which assumes the importance of institutional care - hospitalisation or long term units and eventually only joining some of the community elements. In this context it is of crucial interest to determine the effi-

Katarzyna Prot-Klinger[1], Małgorzata Pawłowska[2]: [1]Head of the Centre of Mental Health – Institute of Psychiatry and Neurology, Warsaw, Poland, [2]Assistant in the Centre of Mental Health – Institute of Psychiatry and Neurology. Correspondence address: Katarzyna Prot-Klinger, Centre of Mental Health – Institute of Psychiatry and Neurology, 9 Sobieskiego Str., 02-957 Warszawa, Poland, E-mail: k.prot@wp.pl

Source of Founding: Institute of Psychiatry and Neurology, Warszawa, Poland.

cacy of community treatment while developing new forms of this kind of care. The programme of community treatment presented in the study is relevant to the new National Programme of Mental Health in Poland, supporting and initiating the growth of various community forms.

As a new model of treatment, the Community Mobile Team in Warsaw was founded to provide intensive community care for people suffering from psychosis in one of Warsaw's districts. The Community Mobile Team started its work in 2004 as a part of the Centre of Mental Health at the Institute of Psychiatry and Neurology which is involved in clinical research and teaching activity. Until now the Institute was mainly based on inpatient treatment. The Community Mobile Team is able to reach its goals mainly through providing a continuity of care. It works on the bases of a community model which primary indicates interventions in patients' environment, including family relations.

In order to describe the Community Mobile Team region and system service, the European Service of Mapping Schedule - brief version was conducted [5]. There are 2 psychiatrists, 2 psychologist, 2 psychiatric nurses and 1 social assistant working in the team treating 150 patients diagnosed with psychotic disturbance, age between 18 - 64. The Community mobile team offers home visits and individual visits in the office. The mean number of visits made by the team during the week is 50-75, of which 36 to 50 occur in the office and 11 to 40 are take place in the community. Community services are organized on the basis of a catchment area with 144,114 inhabitants. The area is located on 43.8 square kilometres. CMT offers crisis interventions and also provides non-acute community and out-patient care. They routinely include home visits, assertive outreach and early interventions for psychosis. Patients are offered diagnostic procedures, both psychiatric and psychological. Treatment procedures are accessible, both pharmacology and psychotherapy (individual, maintenance psychotherapy, psycho-education). Rehabilitation activities are offered on a limited scale (training in social and cognitive skills, occupational therapy workshops). There is a possibility to participate in a support group for patients' families. The Community Mobile Team assists in obtaining social benefits, along with the co-operation of the social care services. The Community Mobile Team operates during the week from Monday to Friday in the formal hours which is a result of a small service and lack of possibility to work in the 24 hours system.

On account of evaluation the unit's effectiveness, it is important to determine the goals of its functioning. Owing to the recommendations of NIMH, the results of schizophrenia treatment should be evaluated in four categories: clinical, rehabilitation, humanitarian and related to public health [6, 7]. The clinical area refers to psychopathology and treatment. The rehabilitation area refers to social functioning and the humanitarian area refers to the quality of life. The area related to public health concerns a wider convinced public health concern of the relation with patient's rights and society, assertion of freedom as well as safeness.

It was hypothesized that the community form of treatment reduces cost of treatment through reduction of hospitalisations, it does not influence the symptoms in such a short period of time, though it enables patients' better functioning in the environment, in result improving quality of life.

MATERIAL AND METHOD

The study group consisted of schizophrenia patients admitted to the Community Mobile Team and their relatives. Although the participation in the study was proposed to all family members (30), some of them refused to take part in it (5). The baseline evaluations were measured in the first year after admittance to the Community Mobile Team (CMT). It is noteworthy that only 41% of the patients were admitted after previous discharge from the hospital. Follow-up questionnaires' assessment was completed in the second year of staying under the care of CMT.

Social functioning was measured using the Birchwood Social Adjustment Scale for patient and family [8].

Quality of life was evaluated using the Quality of Life Scale [9, 10].

Family burden was assessed using two Polish questionnaires: the Family Burden Question-

Table 1. Quantitative measures

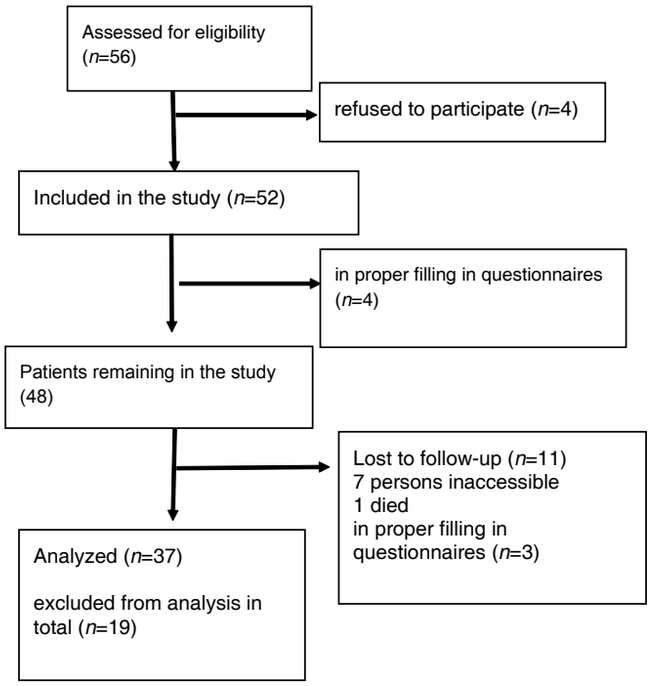

Table 2. Psychopathology symptoms were measured by the psychiatrist, using PANSS.

Factors to be measured	Client	Relative	Therapist	Measures
psychopathology symptoms			x	PANSS
social functioning	x			Birchwood Social Adjustment Scale (SAS)
quality of life	x			Quality of Life Scale (QLS)
family burden		x x		Family Burden Questionnaire (FBQ) Questionnaire of Burdensome Behaviour
costs			x	administrative data

naire (FBQ) and Questionnaire of Burdensome Behaviour (QBB), which were filled in by close relatives. Both tools were designed at the Institute of Psychiatry and Neurology [11]. QBB describes 14 diverse types of burdensome behaviours occurring in the family and qualified by the family member on 3 dimensions scale (often, sometimes, never). The questionnaire's queries refer to inactivity, contact avoidance, realization of obscure actions, starting quarrels or fights, destruction of objects, expression of suicide thoughts, suicide attempts, self-mutilation, alcohol or medication abuse, hygiene neglect, behaviours not adequate with commonly accepted norms and legal standards. The overall level of burden presented by the patients is the sum of all questions of the questionnaire, ranging from 0 to 28 points. FBQ includes 8 dimensions indicating the nature of family burden. The level of burden is qualified on a 3 dimension scale (never, sometimes, often). This instrument is composed of two diverse areas indicating different causes of burden experienced. Four out of eight questions refer to protective activities such as assistance with maintaining hygiene and eating, handling of official matters on behalf of the patient or the necessity to resign from ones own matters because of the necessity to take care of the patient . The other four dimensions refer to family's emotional reactions on patient' behaviours (tension, shame, sense of danger). The overall level of burden is the sum of each question and is ranging from 0 to 16 points. The Family Burden Questionnaire measures behaviours that are related to long term malfunction.

Cost assessment was made using the data from administrative departure of the Institute. The following data was included: costs of hospitalization in the psychiatric department, day hospital, also costs of visits in the outpatient clinic and in community care.

The SPSS programme was used to asses the results. Student t-test was used to discover if there is a significant difference in psychic state, quality of life, social functioning and family burden, before admittance to the CMT and one year after.

Qualitative method

The focus group was used to evaluate treatment satisfaction. It took place in the frame of the Mental Health Europe Project "Good Practice in the field of counteracting social exclusion to the people with mental health problems". Our study was included in this project. Patients from our study and their families took part in the fo-

cus group. The goal of the group was to describe the patients' experiences using the Community Mobile Team as well as comparing it to the other, known service in the mental health care.

RESULTS

Of the 37 patients participating in the study 24 were women. The average age was 46 for women and 39 for men. 25 caregivers participated in the study.

During the study period there was an improvement in psychic state on the scope of global symptoms (t(36)=3.699, P<0.001), negative symptoms (t(36)=3.058, P<0.005) and positive symptoms (t(36)=2.281, P<0.05).

There was a significant improvement in the quality of life on measures of relations with the family (t(33)=-2.055, P<0.05) and how is it getting along with the family (t(33)=-3.187, P<0.005) as well as general categories of life satisfaction (t(33)=-2.815, P<0.01) and freedom (t(33)=-3.304, P<0.005).

In the patients' opinions they had observed a significant improvement on the dimension of "withdrawal" (t(35)=-2.282, P<0.05) and on the dimension of "pro-social activities" (t(35)=-3.343, P<0.005). On the caregivers' opinion, patients improved on the dimension of "pro-social activities" as well (t(24)= -2.824, P<0.01). Both patients and caregivers saw the positive differences in their functioning after one year of treatment in the Community Mobile Team, but those differences didn't reach statistical significance.

There was a significant reduction on the Destructive Behaviour Scale (t(19)=3.142, P<0.005), especially on the "fights" scale (t(19)=2.179, P<0.05) and "untidiness" (t(19)=2.333, P<0.05).

There was an almost three time reduction in the number of hospitalizations after one year of treatment in the Community Mobile Team when comparing to the number of hospitalisations before referral to CMT (t(36)=3.732, P<0.001) and a significant reduction of the time spent in the day-ward (t(36)=2.191, P<0.05).

Savings estimation was made in the frame of direct costs. Indirect costs, like care and maintenance, are very difficult to estimate at the present situation, since staying in the hospital does not mean throwing costs from family to the hospital. For example eating portions are too small in the patients opinion, which means that bringing food by the family indicate sharing costs of maintenance. Cost savings are a result of reduced costs of hospitalisation, despite higher costs of the Community Mobile Team than the Out-patient clinic costs.

Table 3. Cost analysis 1 year before admittance to the CMT and 1 year after admittance to CMT.

Type of care		Before CMT	After 1 year in CMT
Hospital		2030 Euro	595 Euro
Day ward		440 Euro	6.6 Euro
Out-patient clinic	including time of hospitalization	47.5 Euro	none
	excluding time of hospitalization	37.2 Euro	
CMT		none	365 Euro
TOTAL		2507 Euro	966.6 Euro

In the calculation of costs, only direct costs were taken into account as follows – the costs of hospitalization and outpatient care and the costs of hospitalization and community care. After one year of admittance to the community mobile team, the costs of hospitalisation amount to 595 Euro, the costs of staying at the day-ward amount to 6.6 Euro and the cost of the community mobile team amount to 365 Euro, if the time of hospitalisation was also considered (therapist visits patient in the hospital, family is participating in the support group, therapist is in contact with other institutions in the patient's businesses). The total annual cost amount of 966.6 Euro. It implicates a 63% reduction of direct costs of treatment. This reduction is related to the reduction in the number of hospitalizations.

All participants of the focus group encouraged their support for the inclusion of a new model of the community mobile team and to promote and spread the examples of "good practices". The New Community Mobile Team was admitted to be "a very good form of help".

The participants comparing other forms of care with the new community mobile team stated that:

"In out-patient clinics, where we were previously treated, the visits were once a month or once a two months".

"...We become a broader family. If someone is not present at the appointment, his therapist is making a telephone contact with him/her".

"In the crisis situation we are able to receive help immediately".

"It is important that the therapist comes to our homes. They talk with the family and with the ill member. If someone has family problems, the therapist helps with it".

Participants concluded that it would be the best if mobile teams take the place of ambulatory clinics. They spontaneously compared the community mobile team with private care and assumed that private care was not effective and of high costs.

DISCUSSION

The study showed a huge reduction in the length of hospitalisation, demonstrating the effectiveness of community work. That result is of much significance regarding that the work was done by a small team, without intensive, 24 hour service, during only a year, manifesting the weakness of the system of mental health care. This kind of treatment differs from the counselling unit, where good accessibility of ambulatory service favours hospitalisations [12], furthermore patients using out-patient service, are frequently hospitalized more often [13]. This is due to the superiority of passive counselling which results in directing to the hospital in case of worsening, as a dominant function of the counselling unit. The overview of the research on the efficacy of community treatment shows that the main effect of the interventions made by the assertive community treatment is hospitalisation reduction.

As described in other studies, the effectiveness of a community form of treatment offered by multi-professional teams, is associated with a hospitalisation decrease [14, 15], although this effect does not occur in teams not offering 24 hour service [16, 17]. In spite of this, Polish studies demonstrated hospitalisation reduction in teams that do not offer 24 hour service [18].

Hospitalisation decrease is related with cost reduction which corresponds with other naturalistic studies, one of these being the Mannheim Programme [19], as well as the Friern and Claybury' studies [20, 21]. Our, nearly 60% cost reduction, is higher than usually received in other studies [22, 23]. That outcome difference might be related to the early phase of team functioning (the Howthorn effect). Such reduction achieved in other countries is related to deinstitutionalisation, when the cost of community care is compared with cost of permanent stay in the hospital [24, 25]. The results of more recent studies show that the costs of community care is the same [26] or even higher [27] than usual care.

A minority of the surveys focused on community treatment noted improvement in social functioning, moreover in pro-social activities [28]. This refers to less emphasis put on rehabilitation along with independence, yet focused on direct needs satisfaction. Our study showed that community treatment reduced social withdrawal and improved pro-social activities. This outcome doesn't mean finding an employment in the open labour market (only one person managed this), instead of which patients are hired in the workshops of the occupational therapy or came back to the function of a house wife.

There is an important outcome referring to family burden, demonstrating that decreasing hospitalisation doesn't mean transferring cure form professionals to the family. Relatives feel less burden, especially in the field of hard and violent patient's behaviours as well as untidiness, which is consistent with other researches showing a decrease in family burden caused by intensive community interventions [29, 30].

Quality of life is a subjective variable and independent from the intensification of the psychopathology symptoms related to schizophrenia [31, 32, 33, 34]. In the EPSYLON programme survey review, positive correlation was found between the quality of life and positive symptoms' increase, though a negative correlation was noted among quality of life and depressive syndromes. It is seen that quality of life is not markedly influenced by treatment [35, 36]. In our study, the change occurs in the areas of special interest of community interventions. Interventions take place at the patient's home, include family in the process of treatment, where one of the main goals of treatment is improvement in family relations. Progress in this area provides

that goals are realized in this sphere. Patients treated in the community team, instead of institutional care, experience more freedom, possibility of deciding about themselves which prove the deep realization of the community treatment idea.

It is noteworthy that the improvement achieved in the negative and positive symptoms stays in contradiction to results of worsening in the negative symptoms obtained in the Verona Study [36], especially when considered that only 41% of patients in the Polish study were admitted to the programme after hospitalisation. Our outcome should be verified in a longer time.

Outcomes of the focus group reveal great satisfaction from treating patients, as well of the family.

The main limitation of the study is its small study group and short follow-up time. It implicates the need for repeated the research after longer time, since the study overviews show that effectiveness from community treatment grow over time [11].

REFERENCES

1. World Health Organization. The World Health Report 2001. Mental health: new understanding, new hope. Geneva: WHO; 2001.
2. World Health Organization. Mental Health Declaration for Europe and Mental Health Action Plan for Europe. Geneva: WHO; 2005.
3. World Health Organization. Organization of services for mental health Geneva: WHO; 2003.
4. Thornicroft G, Tansella M. What are the arguments for community based mental health care? Copenhagen: WHO Regional Office for Europe, Health Evidence Network; 2003.
5. Johnson S, Kuhlmann R and the EPCAT Group. The European Service Mapping Schedule (ESMS): development of an instrument for the description and classification of mental Heath services. Acta Psychiatr. Scand. 2000, 102(suppl.405): 14–23.
6. Lehman AF. Developing an Outcomes-Oriented Approach for the Treatment of Schizophrenia. Journal of Clinical Psychiatry 1999, 60(supp.19): 30–35.
7. Attkisson C, Cook J, Karno M, Lehman A, McGlashan TH, Meltzer HY, O'Connor M, Richardson D, Rosenblatt A, Wells K, et al. Clinical Services Research. Schizophrenia. Bull.1992, 18: 561–626.
8. Birchwood M, Smith J, Cochrane R, Wetton S, and Copestake S. The Social Functioning Scale. The development and validation of a new scale of social adjustment for use in family intervention programmes with schizophrenic patients. Br J Psychiatry 1990, 157: 853–859.
9. Baker F, Intagliata J. Quality of life in the evaluation of community support system. Evaulation and Program Planning 1982, 5: 69–79.
10. Corten P, Mercier C, Pelc I. Subjective quality of life: clinical model for assessment of rehabilitation treatment in psychiatry. Social Psychiatry and Psychiatric Epidemiology 1994, 29: 178–183.
11. Słupczyńska-Kossobudzka E, Boguszewska L, Wójtowicz S. Skuteczność leczenia środowiskowego w czterech ośrodkach – katamneza dwuletnia. Postępy Psychiatrii i Neurologii 2001, 10: 289-299.
12. Słupczyńska-Kossobudzka E. Wpływ czynników związanych z organizacją opieki psychiatrycznej na czas hospitalizacji chorych z psychozami endogennymi. Biuletyn Instytutu Psychiatrii i Neurologii 1986, 4: 29–38.
13. Załuska M. Funkcjonowanie społeczne i zapotrzebowanie na opiekę środowiskową w schizofrenii. Warszawa: Wydawnictwo Instytutu Psychiatrii i Neurologii; 2000.
14. Bustillo J, Lauriello J, Horan W, Keith S. The psychosocial Treatment of Schizophrenia: An Update. Am J Psychiatry 2001, 158: 163–175.
15. Burns T, Knapp M, Catty J, Healey A, Henderson J, Watt H, Wright C. Home Treatment for Mental Health Problems: A Systematic Review. Health Technol Assess. 2001, 5: 1–139.
16. Holloway F, Carson J. Intensive case management for the severely mentally ill: controlled trial. Br J Psychiatry 1998, 172: 19–22.
17. Issakidis C, Sanderson K, Teeson M, Johnston S, Buhrich N. Intensive case management in Australia: a randomized controlled trial. Acta Psychiatrica Scand. 1999, 99: 360–367.
18. Słupczyńska-Kossobudzka E., Boguszewska L. Effects of Community Mobile Team Intervention in the Drewnica Hospital Catchment Area 1. Patient Outcome. International Journal of Social Psychiatry 1999, 45: 207–215.
19. Häfner H, an der Heiden W. Evaluating effectiveness and cost of community care for schizophrenic patients. Schizophr. Bull. 1991, 17: 441–453.
20. Knapp M, Beecham J, Anderson J, Dayson D, Leff J, Margolius O, O'Driscoll C, Wills W. The TAPS project. III: Predicting the community costs of closing psychiatric hospitals. Brit. J. Psychiatry 1990, 157: 661–670.
21. Leff J. Do long stay patients benefit from community placement? In: Freeman H, Hederson J. eds. Evaluation of comprehensive care of the mentally ill. London: Gaskell; 1991. p. 79–91.

22. Prot-Herczyńska K. Wpływ różnych form opieki poza szpitalnej na koszty leczenia pacjentów z rozpoznaniem schizofrenii. Postępy Psychiatrii i Neurologii 1995, 4: 299–313.
23. Marshall M, Crowther R, Almaraz-Serrano A, Creed F, Sledge H, Roberts C, Hill E, Wiersma D, Bond GR, Huxley P, Tyrer P. Systematic reviews of the effectiveness of day care for people with severe mental disorders; 1) Acute day hospital versus admission; 2) Day hospital versus outpatient care. Health Technology Assessment 2001, 5(21):1–75.
24. Häfner H, an der Heiden W. Evaluating effectiveness and cost of community care for schizophrenic patients. Schizophr. Bull. 1991, 17: 441–453.
25. Lapsley HM, Tribe K, Tennant C, Rosen A, Hobbs C, Newton L. Deinstutionalisation for Long-Term Mental Illness: Cost Differences in Hospital and Community Care. Aust. N Z J Psychiatry 2000, 34: 491–495.
26. McCrone P, Killaspy H, Bebbington P, Johnson S, Nolan F, Pilling S, King M. The REACT study: cost effectiveness analysis of assertive community treatment in North London. Psychiatric Services 2009, 60(7): 908–913.
27. Morse G, Calsyn RJ, Klinkenberg TH, Helminiak TW, Wolff N, Yonker RD, Lama G, Lemming MR, McCudden S. Treating homeless clients with severe mental illness and substance use disorders: costs and outcomes. Community Mental Health Journal 2006, 42(4): 377–404.
28. Bustillo J, Lauriello J, Horan W, Keith S. The psychosocial Treatment of Schizophrenia: An Update. Am J Psychiatry 2001, 158: 163–175.
29. Roick C, Heider D, Toumi M, Angermeyer MC. The impact of caregivers' characteristics, patients' conditions and regional differences on family burden in schizophrenia: a longitudinal analysis. Acta Psychiatr. Scand. 2006, 114: 363–74.
30. Jarema M, Konieczyńska Z. Quality of Life in Schizophrenia: Impact of Psychopathology, Patients' Gender and Antipsychotic Treatment. Int. J Psychiatry Clin. Pract. 2001, 5: 19–26.
31. Barry MM, Crosby C. Quality of life as an evaluative measure in assessing the impact of community care on people with long-term psychiatric disorders. Br J Psychiatry 1996, 168(2): 210–6.
32. Konieczynska Z, Jarema M, Cikowska G. Badanie jakości życia zależnej od stanu zdrowia chorych leczonych z powodu schizofrenii na oddziale dziennym. Psychiatr. Pol. 1997, 31: 323–31.
33. Lehman AF. Measures of quality of life among persons with severe and persistent mental disorders. Soc Psychiatry Psychiatr. Epidemiol. 1996, 31: 78–88.
34. Gaite L, Vazquez-Barquero JL, Borra C, Ballesteros J, Schene A, Welcher B, Thornicroft G, Becker T, Ruggeri M, Herran A, EPSILON Study Group. Quality of life in patients with schizophrenia in five European countries: the EPSILON study. Acta Psychiatr. Scand. 2002, 105(4): 283–92.
35. Jarema M, Konieczyńska Z, Murawiec S, Szafrański T, Szaniawska A. Zmiana jakości życia i obrazu klinicznego w schizofrenii. Psychiatria Polska 2002, 3: 393–402.
36. Ruggeri M, Lasalvia A, Tansella M, Bonetto C, Abate M, Thornicroft G, Allevi L, Ognibene P. Heterogeneity of outcomes in schizophrenia. 3-year follow-up of treated prevalent cases. Br J Psychiatry 2004, 184: 48–57.