Evaluation of Community Psychiatric-Home Visit Treatment versus Outpatient Treatment of Chronic Schizophrenic Patients in Bahrain.

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Abstract

Background: Schizophrenia has a high rate of relapse. Treatment compliance is challenging in the long-term management of schizophrenia. The outcomes of previous studies on Community Psychiatry Service – Home Visit Treatment (CPS-HVT) are inconclusive.

Aims: To evaluate the effectiveness of CPS-HVT in (a) reducing the number of admissions and (b) duration of admissions of chronic schizophrenic patients.

Methods: A retrospective analysis by auditing files of all cases of adult schizophrenic patients in Bahrain who underwent CPS-HVT treatment. A total of 10 years follow-up (5 years of outpatient treatment before the referral to the community service and 5 years follow-up in the community service after the referral) was carried out. The number of admissions and the duration of admissions were compared.

Results: Of the total number of 232 patients 51 (22%) fulfilled the inclusion criteria. The sum total of 77 admissions during 5 years before the referral to the CPS-HVT was 2577 days (50.5 d/patient). After the referral to the CPS-HVT the sum total of 48 admissions was 1383 days (27.1 d/patient), and no patient had more than 3 admissions. The number of non-hospitalized patients doubled during the 5 years follow-up in the CPS-HVT (n=13; 4 males vs. n=27; 10 males). The proportion of males was 47.1% (n=24).

Conclusions: CPS-HVT is effective and superior to standard outpatient treatment of chronic schizophrenic patients in reducing the number and duration of admissions, in Bahrain. Future studies should evaluate a wide range of other outcomes, including the cost effectiveness of CPS-HVT. Considering the massive impact of community-based care on patients, caregivers, clinicians and the community at large, such studies are urgently needed.

Introduction

Schizophrenia is a relapsing illness, with a high rate of relapse within five years of recovery from the first episode. The cumulative first relapse
rate is 81.9% and the second relapse rate is 78.0%, and after recovery from the second relapse, the cumulative third relapse rate is 86.2% \(^{(1)}\).

Discontinuing antipsychotic therapy increases the risk of relapse by almost five-fold for an initial relapse \(^{(2)}\).

Some of the factors associated with relapse are non-compliance with medication, stress, inadequate social support and substance abuse \(^{(1)}\). Non-compliance with medication is high in schizophrenic patients. It has been estimated that 40-65\% of schizophrenic out-patients stop their regular oral medication within six weeks \(^{(3)}\). Both patient-related and disease-related factors may strongly influence medication compliance \(^{(4)}\).

Also, noncompliance and partial compliance with antipsychotic medication are associated with higher rates of relapse and hospitalization of schizophrenic patients \(^{(5,6)}\). Although the use of depot antipsychotic medication makes it clear whether the patient is medication compliant, not all those who are prescribed depot medication keep their injection appointments \(^{(3)}\).

Adherence to recommended treatment programs is essential to their effectiveness, but maintaining adherence is particularly challenging in the long-term management of both chronic and episodic disorders among patients, who are often ambivalent about diagnosis or treatment \(^{(7)}\).

Secondary prevention is defined as the early identification and prompt treatment of an illness or disorder \(^{(8)}\).

Community Psychiatric Service - Home Visit treatment (CPS-HV treatment) provides a significant improvement in reducing the admissions and duration of admission of chronic schizophrenic patients. In Bahrain CPS-HV treatment started in 1977 for severely mentally ill patients, particularly for those who are either noncompliant with the medication and have frequent admissions or noncompliant with the appointment due to transport difficulties. This retrospective study has investigated whether CPS-HV treatment reduced the admission and the duration of admission of chronic schizophrenic patients compared to the previous out-patient treatment (OPD-treatment).

**Subjects and Methods**

This retrospective study was carried out by reviewing the files of all (n=232) Bahraini adult patients on CPS-HV treatment using pre/post test study design.

After the referral of patient to CPS-HV treatment, a health care team comprising a psychiatrist, a nurse, and a psychiatric social worker visited the patient at his/her home.

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Subsequently, the nurse continued visits at least once every two weeks. The frequency of home visits gradually decreased if patients were stable, up to once every 8 weeks. The visits by the psychiatrist depended on the patient’s condition and varied between every week to at least once every 6 months. The whole team met regularly to review patient progress assessed by the nurse during the home visit the previous day.

The inclusion criteria were: Chronic schizophrenic patients; 10 years follow-up (five years follow-up while on out-patient treatment before the referral to the community service, five years follow-up in the community service after the referral). The variables analyzed were the number of admissions in each five years of follow-up for each patient and the duration of admission in days, age at the time of this study and gender.

Among a total of 232 patients, 51 (22%) fulfilled the inclusion criteria. The proportion of males was 47.1% (n=24) and the female 52.9% (n=27). Each patient was given a code to ensure confidentiality of the information collected. Data analysis was carried out with SPSS program. Data were checked for accuracy and missing information before performing the statistical analyses. Pre- versus post-CPS-HV treatment differences were analyzed with two-tailed t-test. Patient confidentiality was ensured.

<table>
<thead>
<tr>
<th>No of admission before referral to CPN</th>
<th>Duration of admission before referral to CPN</th>
<th>No of admission After referral to CPN</th>
<th>Duration of admission after referral to CPN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sum</td>
<td>77</td>
<td>2577</td>
<td>1383</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>1.332</td>
<td>50.53</td>
<td>41.49</td>
</tr>
<tr>
<td>Mean</td>
<td>1.51</td>
<td>50.53</td>
<td>27.12</td>
</tr>
</tbody>
</table>

During the five years follow-up after the referral to the CPS-HV treatment patients had fewer number of days of hospitalization compared with the...
five year follow-up with the OPD treatment before referral to CPS-HV treatment. The sum of days hospitalized was 2577 days (50.5 d/patient) in a total of 77 admissions in the five years before referral to the CPS compared with 1383 days (27.1 d/patient) in total of 48 admissions after the referral to the CPS-HV treatment (P=0.000). No single patient had more than three admissions.

Number of non-hospitalized patients doubled during the five years follow-up in CPS-HV treatment (n=27; 10 males and 17 females vs. n=13; 4 males and 9 females).

Discussion
This study shows the effectiveness and the superiority of the CPS-HV treatment of chronic schizophrenic patients to standard OPD treatment in reducing the admissions and the duration of the admissions. Most of the previous studies have demonstrated that the community psychiatry approach reduces the admission rate and the duration of admission compared to the OPD treatment \(^{(9,10)}\). However, others have confirmed the efficacy of such intervention only in reducing the admissions but not the duration of admission \(^{(11)}\). A systematic review has concluded that the effectiveness of home treatment remains inconclusive \(^{(12)}\). One of the reasons for such divergent findings is due to variations in community psychiatric programs used in different countries and the study designs used.

We found that the number of admissions declined significantly from 77 to 48 (62% reduction) and the duration of admission from 2577 days to 1383 (47% reduction). Nearly 53% of patients on CPS-HV treatment did not require admission at all. In contrast, Finland Home-Based Psychiatric Treatment study showed a decrease in hospitalization by nearly four-fifths and 50% of patients did not require admissions\(^{(9)}\). The reason for these remarkable improvements in treatment outcomes can be explained on the basis that the CPS-HV treatment ensures compliance with appointments, whereas the visit adherence to the OPD treatment was found to be poor for chronically ill patients with longer inter-visit intervals\(^{(7)}\).
Poor drug compliance is associated with greater risk of hospitalization over and above any other risk factors for hospitalization (5). Use of emergency psychiatry services, arrests, violence, victimization, poorer mental functioning, poorer life satisfaction, greater substance use and is associated with poorer functional outcomes (13). On the other hand, the CPS-HV treatment received greater patient acceptance (9) which can be attributed to factors such as better therapeutic relationship between the team the patient and the family, better family education to ensure better support and avoid the high or low expression of emotion. Noncompliance with the OPD treatment appointments can be also due to lack of transport facilities, the nature of the schizophrenic in particular the negative symptoms (lack of initiation and motivation) and the lack of full insight, and antipsychotic adverse effects. On the contrary, during regular home visit the CPS-HV team would have identified and managed the early symptoms of relapse. Further studies are needed to evaluate comparative effectiveness of first and second generation antipsychotics in CPS-HV treatment protocols (14).
Conclusions

CPS-HVT is effective and superior to standard outpatient treatment of chronic schizophrenic patients in reducing the number and duration of admissions, in Bahrain. Future studies should evaluate a wide range of other outcomes, including the cost effectiveness of CPS-HVT.

Considering the massive impact of community-based care on patients, caregivers, clinicians and community at large, such studies are urgently needed.

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References


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