Provide Continuity of Care to Psychotic and Schizophrenic Patients Followed in Chud/Borgou

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Received: 24 March 2020; Accepted: 02 April 2020

ABSTRACT

Introduction: Continuity of care required for psychotic and schizophrenic patients increases their life quality significantly. The goal was to assess the specialized care system for psychotic patients followed in psychiatry department at Borgou’s Departmental University Hospital Center (CHUD/B) of Parakou.

Methods: This was a cross-sectional study which consisted in collecting 106 psychotic patients’ medical records followed in Psychiatric Department of CHUD/B from January 2008 to December 2017. Data were collected through an interview using a questionnaire, which includes the Continuity of care and ASK-20 adherence barrier survey scales.

Results: The sex ratio was 1.3 with a male predominance (56.60%). The mean age was 36.22 ± 10.56 years (11 to 63 years). Treatment adherence was 62.3% and determinants of care continuity were: treatment adherence, a medical professional follow-up and the participation of entourage.

Conclusion: Continuity of care for psychotic and schizophrenic patients is the result of the treatment adherence which depends on the participation of care process helpers.

Keywords
Continuity of care, Psychotic, Determinants, Life quality.

Introduction
Psychosis is a chronic mental illness that affects young population [1]. Schizophrenia is a severe form that presents a wide spectrum of clinical and biological manifestations [2]. It affects 1% of the world’s population, belongs to the first 10 global causes of disability and is a major factor of dissociation and precarity [3]. Psychotic patients were faced to the significant risk of relapse. Long-term follow-up of those patients suffering from schizophrenia was indispensable [4-6]. Their access to health care is often limited because of social stigmatization and discrimination, but also of questions relating to the development of mental health departments in the context of public health services [7].

Nancy Coover Andreasen [8-10] made a significant contribution to the better management of those patients, inaugurating the pathway of integrated psychological therapies [11]. Unfortunately, there is a poor compliance with those treatments. To resolve that problem, psychotic and schizophrenic patients should be maintained in a continuous care offer [12]. Continuity of care corresponds to continuous therapeutic relationship existence over time between patient and one or many caregivers, which is essential for psychiatry primary health care [13]. In this case the therapeutic relationship is no more deployed only between a physician and the patient but also between a team, a patient and his family. Communication with ambulatory care providers can be very helpful for psychotic patients who were not receiving ambulatory care before hospitalization [14]. The use of the term continuity implicitly refers to the need for coordination, especially...
information sharing [15,16]. But there is limited data available to assess care continuity in our psychiatric care system.

Conceptual framework on continuity of care for psychotic patients followed

Figure 1 describes the conceptual framework used to guide our analysis. This framework is based on the tripartite conceptualization of care required by Fontanella et al. [17].

![Conceptual framework of care continuity](image)

**Figure 1:** Conceptual framework of care continuity [17].

**Method**

It was a cross-sectional study conducted in two parts. First, psychotic and schizophrenic patients’ medical records followed in psychiatric department of CHUD/Borgou from January 2008 to December 2017 have been collected. Then an invitation with a reminder phone call was initiated from January 20th to September 21st, 2018 to eligible psychotic patients to assess their specialized care structure. A total of 106 patients have been collected. Their informed consent was required.

**Variables**

The dependent variables related to care continuity with the idea of an early treatment initiation [18]. It was a binary and qualitative variable with the following modalities:

- Yes; if continuity of care,
- No; if breach in continuity of care.

The independent variables were related to sociodemographic, therapeutic characteristics and to the participation of the patient’s entourage in the treatment.

**Data collection**

Consultation and hospitalization registers, medical records were used to identify schizophrenic and other psychotic patients. They underwent interviews using a pre-tested questionnaire, which includes the Continuity of care [19] and ASK-20 adherence barrier survey scales [20] to assess respectively care continuity and treatment adherence.

**Data processing and analysis**

For the stability and association study between care continuity and different factors, a multivariate analysis has been simultaneously included in a logistic regression model using down and step by step successive iterations. The comparison of factors between the dependent variable and factors associated has been made using chi-square test. Prevalence reports (PR) have been determined and the confidence interval CI at 95% to estimate the meaning, strength and stability of the association. The significance threshold for the output of results was 5%.

**Ethical considerations**

This study has been conducted after the approval of the local research board of Parakou University and in accordance with the ethical principles including in the World Medical Association’s Declaration of Helsinki [21].

**Results**

**Diagram of patients included recruitment flow**

The diagram below presents the recruitment flow of psychotic patients.

![Diagram of respondents' recruitment flow](image)

**Figure 2:** Diagram of respondents’ recruitment flow [22]

**Sociodemographic characteristics**

Sex ratio was 1.30 with a male predominance 60 (56.60%). The mean age was 36.22 ± 10.56 (11 to 63 years). Most of them came from urban areas 98 (92.45%) and were artisans 26 (24.53%), traders 16 (15.09%), officials 14 (13.21%), pupils/students 11 (10.38%), married 48 (45.28%), single 38 (35.85%), living common-law 11 (10.38%), divorced 5 (4.72%), widows/widowers 4 (3.77%). First of all, they consulted endogenous healers (45.3%) or Chinese therapists (6.6%), associated with prayers (34.91%) before they made the request in psychiatry (26.42%) after failure. Mystical origin (52.83%) of illness was mainly mentioned. Hospitalization rate was 58.49% because of insomnia (64.15%), delirium (62.26%), aggressivity (49.06%) and agitation (46.23%). Medicinal treatment (98.49%) was associated
Therapeutic characteristics (second part), participation of entourage and reintegration

Duration of illness, entourage support to treatment were statistically associated with continuity of care. Table III below presents distribution of psychotic and schizophrenic patients by therapeutic characteristics (second part), participation of entourage and reintegration according to care continuity.

### Table 3: Distribution of psychotic and schizophrenic patients by above-mentioned variables according to continuity of care; (psychiatric department / CHUD/B, 2018; n=44, n'=62) [22].

| Continuity of care | Duration of illness | PR [IC₉₅] | p  |
|--------------------|---------------------|----------|----|
|                     | < 5 years           | > 5 years|     |
| Yes n (%) | No n (%) | Yes n (%) | No n (%) | p  |
| No n' (%) | No n (%) | Yes n (%) | No n (%) |     |
| Rehospitalization (relapse) | | | | |
| Yes | 25 (56.82) | 53 (85.48) | 1 | 2.11 [1.40; 3.19] | 0.00 |
| No | 19 (43.18) | 9 (14.52)  | 1 | 0.38 [0.13; 1.09] | 0.03 |
| Attendance to follow-up appointments | | | | |
| Yes | 11 (25.00) | 35 (56.45) | 1 | | |
| No | 33 (75.00) | 27 (43.55) | 1 | 0.14 [0.03; 0.59] | 0.00 |
| Family reintegration | | | | |
| Good | 34 (77.27) | 45 (72.58) | 1 | | |
| Poor | 10 (22.73) | 17 (27.42) | 1 | 1.16 [0.66; 2.02] | 0.58 |
| Professional reintegration | | | | |
| Good | 17 (38.64) | 18 (29.03) | 1 | | |
| Poor | 27 (61.36) | 44 (70.97) | 1 | 1.27 [0.81; 2.00] | 0.30 |

### Limits of The Study

A study to assess care continuity for psychotic and schizophrenic patients should take into account the level of vulnerability, potential chronicity of symptoms and other health care services involved in repeated assessments in order to plan a real specialized health care structure for patients.

### Discussion

In this study, age range 44 to 55 years, secondary and higher level of study, are significantly associated with care continuity (Table 1). Fontanella et al. [17], had reported that age was associated with care continuity. As for psychotic profile, majority were young adults, frequently men, singles and without professional activity [23,24].

- **Rate of care continuity**

  On the Continuity of care scale, the rate of care continuity was 41.51% in psychiatry department of CHUD/B. According to Fontanella et al. [17], the rate of compliance with standard of care varied from 3.5 to 88%. Those authors specified that the lowest rate was observed among schizophrenic patients with concomitant addiction problem. Continuity of care for psychotic and schizophrenic patients followed in Parakou belongs to the reported interval. Rate of care continuity in accordance with standard of care required, would be an indicator of morbidity reduction due to psychosis. At the end of their work Hoertel et al. [25], conclude that death probability was significantly lower in patient with higher continuity of care.

- **Members of care continuity**

  Personal investment of the patient to stay in care continuity is mortgaged by an eventual comorbidity and addictive behaviors with psychotherapy (89.62%). They were often discharged after three weeks with a discharge planning (87.1%). But few patients were satisfied (33.3%). Patients engaged in continuity of care were 44 (41.5%), 66 (62.2%) patients were compliant with their treatment. Breach in care continuity was observed in 40 (37.7%) patients for the following reasons: Lack of financial means (70%), absence of local specialized center, absence of entourage support 21 (19.81%), lack of meaningful occupations (84.91) or non-membership of a support group (99.06) or leisure group (95.28).

### Age, level of education and therapeutic characteristics

In multivariate analysis, age range 45 to 55 years, secondary level, a health professional follow-up were statistically associated with care continuity. Tables 1 and 2 below show the distribution of psychotic patients by age, level of education, therapeutic characteristics according to care continuity.

#### Table 1: Distribution of psychotic and schizophrenic patients by age, level of education according to care continuity; (Psychiatric department / CHUD/B, 2018; n=44, n'=62) [22].

| Age | Continuity of care | PR [IC₉₅] | p  |
|-----|--------------------|----------|----|
|      | Yes n (%) | No n (%) |     |
| [11;22] | 1 (02.27) | 8 (12.90) | 1 |
| [22;33] | 13 (29.55) | 21 (33.87) | 0.29 [0.04; 1.93] | 0.12 |
| [33;44] | 18 (40.91) | 27 (40.32) | 0.27 [0.04; 1.82] | 0.09 |
| ≥55 | 2 (4.55) | 4 (6.45) | 0.33 [0.03; 2.91] | 0.29 |

| Level of education | Continuity of care | PR [IC₉₅] | p  |
|-------------------|--------------------|----------|----|
| None | 7 (46.67) | 3 (15.00) | 1 |
| Primary | 17 (70.83) | 16 (84.21) | 0.73 [0.43; 1.24] | 0.30 |
| Secondary | 12 (27.27) | 26 (41.94) | 0.19 [0.04; 0.90] | 0.02 |
| Higher | 08 (53.33) | 7 (85.00) | 0.48 [0.09; 2.66] | 0.40 |

#### Table 2: Distribution of psychotic and schizophrenic patients according to therapeutic characteristics (Existence of comorbidities, addictive behaviors, outpatient treatment, Breach of treatment, Health professional follow-up) according to care continuity; (psychiatric department / CHUD/B, 2018; n=44, n'=62) [22].

| Continuity of care | Existence of comorbidities | PR [IC₉₅] | p  |
|--------------------|---------------------------|----------|----|
| Yes n (%) | No n (%) | Yes n (%) | No n (%) |     |
| n=44 | n'=62 |     |
| No n' (%) | No n (%) | Yes n (%) | No n (%) |     |
| Existence of comorbidities | Yes | 1 (2.27) | 6 (9.68) | 1 |
| No | 43 (97.73) | 56 (90.32) | 0.32 [0.05; 2.04] | 0.23 |
| Addictive behaviors | Yes | 6 (13.64) | 10 (16.13) | 1 |
| No | 38 (86.36) | 52 (83.87) | 0.88 [0.45; 1.74] | 0.72 |
| Outpatient treatment | Favourable | 13 (29.55) | 31 (50.00) | 1 |
| Unfavourable | 31 (70.45) | 31 (50.00) | 2.38 [1.05; 5.39] | 0.03 |
| Breach of treatment | Yes | 12 (27.27) | 28 (45.16) | 1 |
| No | 32 (72.73) | 34 (54.84) | 0.61 [0.36; 1.05] | 0.06 |
| Health professional follow-up | Yes | 20 (45.45) | 10 (16.13) | 4.33 [1.76; 9.65] | <0.001 |
| No | 24 (54.55) | 52 (83.87) | 1 |
existence. Moreover, a health professional follow-up (Table 2), was a social determinant of care continuity in psychotic patients. According to Aarab et al., [26], main reasons for treatment discontinuation were frequent change of physician, lack of information about the illness, poor insight and side effects of antipsychotic medication. In Parakou as elsewhere, patients and their families complain about the lack of available proximity structures and the distance they are obliged to travel before consulting qualified personnel. Care continuity is a dynamic process influenced by health care structures connection and organizational change [12,15].

Duration of illness, relapses, adherence, attendance to the medical appointments
More than 5 years of duration was correlated with care continuity (Table 3). Anxiety and stress are often occasions for relapses. Hospitalizations in psychiatric institutions of CHUD/B are often made without those patients’ consent through a compulsory hospitalization, because of the potential danger for themselves or others with a denial of illness by patients. Patients often readmitted benefit from care continuity assessment and their hospital stay is for short duration. It is recommended to reduce the delay between the onset of illness and first consultation [18]. But it’s not the case now. First of all, Families had recourse to endogenous healers and a mean delay higher than one year is spent between the first positive psychotic symptom emergence (delirium, hallucinations …) and quality healthcare in psychiatric institutions.

As for the adherence to medicinal treatment, 84.09% of psychotic and schizophrenic patients benefiting from care continuity, estimate that they were compliant with their treatment. The majority of patients (83.8%) declared to have more control of their treatment after a phone call reminder. Odeh et al. [27], assure that phone calls from health care staff to support psychotic outpatients keep them in specialized care system for long and is a good clinical practice.

Attendance to medical appointments was a protective factor of care continuity for psychotic patients. To that can be added many factors; limited resources in public services for patient’s management, deinstitutionalization of people suffering from psychiatric disorders, restricted access to community care, emergence of addictive behaviors. Fear and rejection from emergency departments and societies lead to all kind of members’ appearance basing on obscurantist traditional representations of illness always alive in mentalities. As a result, surprised by psychotic crisis emergency, the only one economic mean for families is alternative medicine with unsatisfactory results. But when the patient’s entourage is enough aware for better engagement in care continuity, the psychotic patient finally integrates an adequate health care system. In psychiatric department of CHUD/B, entourage’s participation in health care was a determinant of care continuity for psychotic patients. Many authors have confirmed participation as a factor of good prognosis [28-30]. It’s also a guarantee of socioprofessional and family integration [31]. "On balance, research reveals substantial overall benefits in health outcomes from continuity of care in general practice" [32,33].

Conclusion
Patient compliance with treatment is a psychosocial determinant of care continuity for psychotic patients. It’s strongly related to the support of the patient by his close ones. Comorbidity and addictive behaviors of psychotic patients are causes of breach during care continuity. Effort in order to improve care continuity should focus on the proximity of psychotic and schizophrenic patients to a specialized staff, available family respondents and accessible geographic structures.

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